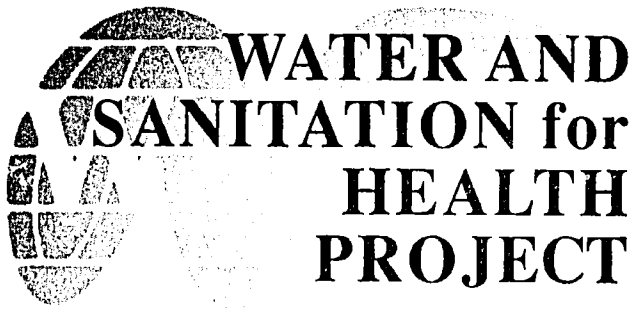


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**PRIVATE SECTOR PARTICIPATION  
IN URBAN WATER SUPPLIES  
ISSUES FOR INVESTMENT IN INDONESIA**

**VOLUME I—A STRATEGIC FRAMEWORK**

Field Report No. 330  
May 1991



Sponsored by the U.S. Agency for International Development  
Operated by CDM and Associates

**PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES**

**ISSUES FOR INVESTMENT IN INDONESIA**

**Volume I**

**A STRATEGIC FRAMEWORK FOR INCREASING  
PRIVATE SECTOR PARTICIPATION IN URBAN  
WATER SUPPLY IN INDONESIA**

**SUMMARY OF PRINCIPAL FINDINGS,  
IMPLICATIONS, NEXT STEPS**

Prepared for the USAID Mission to Indonesia  
under WASH Task No. 186

May 1991

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- B. Policy and PSP Project Development
- C. Identification of Private Financed Projects—Stage 1
- D. Project Preparation and Promotion—Stage 2
- E. Procurement of Offers—Stage 3
- F. Evaluate Offers—Stage 4
- G. Negotiation with Selected Bidder—Stage 5
- H. Prepare Memorandum of Understanding—Stage 6
- I. Prepare Joint Venture Agreements—Stage 7
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- A. Relevant Law and Regulation Related to PSPUWS
- B. Draft Model of JVC Agreement
- C. Proposed Structure of the Project Preparation Report

### VOLUME III

- Working Paper A: Private Sector Participation in Selected Urban Services
- Working Paper B: A Review of Indonesian Laws and Regulations Concerning Private Sector Participation in Urban Water Services
- Working Paper C: Public Policy and PSPUWS—Issues and Options
- Working Paper D: Institutional Constraints and Opportunities
- Working Paper E: Private Sector Investment Needs Assessment
- Working Paper F: Water Sector Financing: Selected Issues in Financial Assessment
- Working Paper G: List of References, Contacts and Glossary

## **PREFACE**

### **PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES: ISSUES FOR INVESTMENT IN INDONESIA**

The purpose of this study is to assess the prospects for increasing private sector participation in the Indonesian urban water supply sector. The analysis has concentrated on capital investments and particularly on the "build, operate and transfer" (BOT) model. Issues arising in three policy areas were addressed—financial, legal, and public policy and administration.

The report is organized into three volumes. Volume I provides a summary of findings, implications, and recommended next steps; Volume II sets forth proposed administrative guidelines for water authorities in dealing with a private investor; and Volume III comprises a series of Working Papers (A through F) which deal with specific policy areas that need to be addressed if the Government of Indonesia is to successfully involve the private sector.

The study was funded by USAID/Jakarta and conducted by the Water and Sanitation for Health (WASH) Project. Field work and preparation of the reports were undertaken in Indonesia from October 1 to December 15, 1990. Consultants involved in the preparation of the report (and their respective specialties) include the following: S. Watt (team leader and engineering), Jane Walker (project manager and finance), S. Biddle (public policy), G. Letterman (legal), Lisa Kulp (finance), Tantri Marbun (finance), B. Nainggolan (finance), R. Thabrani (legal), D. Soetjipto (legal), R. Roesli (public administration), Harayatiningsih (public policy), and M. Maulana (engineering).

The WASH project team would like to acknowledge the Municipal Finance Project Team, specifically Dr. James McCullough and Dr. John Taylor, for their invaluable assistance in the field work and their essential collaboration in the production of the report. WASH would also like to thank USAID Jakarta, in particular Mr. William Frej who initiated and guided the study and Mr. Peter Gajewsky who provided critical advice throughout the field work. WASH is also grateful for the time and assistance given to the team by the Directorate of Water Supply of the Ministry of Public Works, the Directorate General of Regional Government and Autonomy (PUOD) of the Ministry of Home Affairs, the Joint Technical Team for Water Supply Capital Investments and the Investment Coordinating Board (BKPM).

## ACRONYMS

<b>BOT</b>	Build, operate, and transfer (model)
<b>BPAM</b>	<i>Badan Pangelola Air Minum</i> . Interim Local Water Supply Organization under the auspices of the Ministry of Public Works
<b>GDP</b>	Gross Domestic Product
<b>GOI</b>	Government of Indonesia
<b>IUIDP</b>	Integrated Urban Infrastructure Development Program
<b>PDAB</b>	<i>Perusahaan Daerah Air Bersih</i> . Provincial water enterprise which develops multi-use water sources and sells water to PDAMs
<b>PDAM</b>	<i>Perusahaan Daerah Air Minum</i> . Regional water supply enterprise with autonomous status under local government jurisdiction
<b>PSP</b>	Private sector participation
<b>SOW</b>	Scope of work

**A STRATEGIC FRAMEWORK FOR INCREASING PRIVATE SECTOR PARTICIPATION  
IN URBAN WATER SUPPLY IN INDONESIA**

**EXECUTIVE SUMMARY**

**Background to the Study**

In the autumn of 1990, the Water for Sanitation and Health (WASH) Project carried out a three-month study to assess prospects for increased private sector participation (PSP) in urban water supply in Indonesia. The study, financed by the United States Agency for International Development (USAID), had two purposes: to set out the factors that should be considered by the Government of Indonesia in developing a strategy for increasing private sector participation in urban water supply; and to prepare administrative guidelines for water authorities in dealing with the private investor.

The consultants reviewed the scope of work at a three-day team planning meeting in Jakarta in October 1990 and followed this with discussions with the Government of Indonesia and USAID to clarify the terms of the assignment. The conclusion from these discussions was that the primary interest in PSP was in finding ways of tapping both domestic and foreign private investment capital to augment public funds for water supply projects. As a consequence, the analysis focused on mechanisms that provide significant "off-budget" private capital.

The study team considered the classic range of alternatives for PSP in the water supply sector, including service and management contracts, leasing arrangements, and the build, operate and transfer (BOT) model and divestiture. An important distinction in reviewing these alternatives rested on the objective of capital formation to increase water supply capacity and distribution facilities to deal with growing urban populations, about 60 percent of which remain unserved. The main PSP instrument investigated that delivered the objective of capital formation is the BOT model. In the review of the compendium of PSP options, there is a major threshold that is crossed in moving to the BOT/concession and divestiture options. This threshold is the actual commercial risk of equity participation and asset ownership in capital investment projects by the private sector.

Nevertheless, during the course of the study, it became apparent that other forms of PSP such as those that strengthen institutional and management efficiency could be of significant importance to the GOI in its efforts to improve the performance of the sector.

The study team prepared a series of working papers based on data from other urban sectors in Indonesia with PSP experience, several case studies of private sector initiatives in capital investment for urban water supply, and informal surveys of foreign and domestic private investors interested in the development of water supply facilities. The institutional structures and the numerous Indonesian laws and regulations affecting PSP were reviewed to assess their influence on the shape and likely outcome of strategies to increase private sector involvement in the urban water sector.

Investments in water supply projects were viewed against the backdrop of the current investment climate in Indonesia, which is robust for both foreign and domestic investment. New investment is concentrated in manufacturing and is characterized by links to foreign export markets, high rates of return on equity, and investment activities that are flexible and can respond to market changes. Domestic investors rely on short-term capital financing, say 3 to 5 years, due to the lack of a long-term equity market; the average size of domestic investment tends to be modest, between US\$ 10 to 12 million. This investment profile contrasts with the characteristics of investment in the water supply sector which tend to be capital intensive, inflexible in terms of alternative use, and reliant on well-established financing facilities that can provide long-term credit.

The study found two main types of private "off-budget" investment in water supply projects in Indonesia: supply-led source development projects; and "enclave" water supply development projects. The former are characterized by development initiated by firms with a vested interest in water supply projects from a management, design, or construction base. The commercial motivation behind these developments is the work created by the development and its subsequent operation and management. The latter type is developed by investors where water is part of a larger development; water supply is important but not the most critical component. These projects are associated with a larger initiative, e.g., a tourist development, industrial estate, or a private housing complex. The commercial motivation of "enclave" developments has been the profit to be realized from the related activity, e.g., industrial production, tourism, and improved land values.

Examples of private initiatives in water supply are not plentiful. Limited data from project investigations indicate that international financing resources are drawn to larger-scale projects (minimum US\$ 50 million), both supply-led and enclave types. Domestic financing appears primarily attracted to enclave projects. If the GOI wants to promote private sector investments in water supply, it needs to look realistically at existing market conditions and work within these parameters.

The study team reviewed important recent initiatives in PSP in other urban services. Lessons learned from transport, electricity, telecommunications, and solid waste removal indicate that proactive initiatives on the part of the GOI are required to stimulate activity. It was necessary, for example, for the GOI to restate and clarify policy regarding the desirability of private sector investment before the private sector would show interest. The private sector would be



unresponsive to investment opportunities until the public sector put in place a clear regulatory framework that the private sector considered unambiguous. More specific issues that would feature in any private sector negotiations include provision of guarantees in order to secure long-term financing; public or private control over changes in tariff levels and appeals on these charges; ownership of physical assets; and the need for an unambiguous legal framework. To date, the most successful example of private capital investment appears to be in telecommunications.

### *Key Characteristics of the Water Supply Sector*

The study team compiled a composite of the current legal, financial, and institutional characteristics of the water supply sector in Indonesia to give perspective to opportunities and constraints facing private sector initiatives. Overall a high percentage of water supply is already controlled by the private informal sector. For example, in Jakarta up to 80 percent of consumers use private wells for residential and industrial water supply; water vendors are also common.

### *Institutional Characteristics*

The formal urban water supply sector in Indonesia is administered by public agencies either reporting to the Ministry of Public Works (BPAMs) or under the broad jurisdiction of the Ministry of Home Affairs (PDAMs). The latter, in compliance with the GOI's policy of decentralization, are within the structure of local government. The BPAMs, who enjoy central government support, will continue to be part of the central government until they have reached a financial break-even point at which time they will achieve PDAM status. This process of transfer is supposed to be complete by the end of 1993, by which time all urban water supply will be under the PDAM structure. As a result of this change a number of PDAMs are performing a new and unfamiliar role. Though a number of water authorities have enjoyed autonomous PDAM status for a considerable period, over 20 years in some cases, the transition period creates uncertainties which may discourage private sector interests. Further, this complex and shifting organizational structure of urban water supply with a number of participating local, provincial and national ministries and legislative bodies may exacerbate difficulties in concluding joint venture arrangements.

The absence of an independent regulatory body that can objectively balance the conflicting interests of the public and private sectors may be the most significant institutional bottleneck to private sector investment participation. This issue is particularly important in rate setting and control over tariffs. At present these are approved by local leaders who also benefit from revenue sharing of a PDAM's positive cash flow through transfers to municipal governments. There is no recourse in law; for example, there is no appeal procedure for a private enterprise to challenge official decisions over rate changes. Further, PDAMs are required to pursue social goals, for example, a social tariff, while simultaneously achieving financial self-sufficiency. This dual mandate may have the effect of discouraging private sector

entrepreneurs whose main goal is commercial viability. Finally, vested interests in maintaining the status quo of PDAM functions may also discourage private sector initiatives. PDAMs are eligible for a number of benefits under the GOI umbrella that would be unavailable if the functions of the PDAMs were fully controlled by the private sector. These activities, for example training, would be paid for directly by the water users rather than indirectly through government subsidies. An increased role for the private sector in performing functions of the PDAMs will ultimately reduce the technical and financial functions which the PDAMs perform. Their purpose may need to be redefined and possibly evolve into a regulatory or oversight role.

### *Financial Characteristics*

Current policy is that PDAMs should operate on a full cost recovery policy. For PDAMs to reach PDAM status, they must also achieve a break-even point where costs of operation are completely covered by revenues from water sales, connections fees, etc. Evidence from a number of water utilities indicates that cost of capital replacement through depreciation allowances and maintenance of capital replacement funds are calculated but ignored in financial planning. Studies also indicate that expenditures for operation and maintenance are perhaps 30 percent below the necessary level to achieve optimum operation. These observations have two major implications. First, inadequate knowledge of the full cost of production provides a poor link between the cost and the price of water (the tariff). The failure to match the cost and price of water will undervalue the resource, lead to failures to invest at the appropriate time, and cause inefficient use. The private investor has a vested interest in knowing his full cost and will price and sell water accordingly. Second, despite the emphasis on financial viability, water pricing in Indonesia is designed to achieve social policy objectives and is not based on full cost recovery. As a consequence, the long-term financial soundness of water authorities is in doubt.

### *Legal Characteristics*

The study's legal research revealed numerous Indonesian laws and regulations at the national, provincial and local levels that will influence PSP in the urban water sector. They are clear in their statement of policy that such participation is encouraged; for example, Presidential Decree No. 21 of 1989 removed water supply from the restricted investments list. But they are far less clear in stating on what basis the private sector may participate, what standards the GOI will apply in evaluating applications, and how the GOI will ensure that its public policy aims are consistent with the commercial needs of the private sector.

The study team catalogued a number of contradictions and inconsistencies in the existing legal and regulatory framework, the most important of which are: limitations on the authority of PDAMs to enter into a joint venture with a private party and commit assets as equity; inconsistency between the Basic Law of 1945 and private ownership and management of a water utility; and apparent limitations on foreign private sector investment in water supply.

For the private sector investor, the consequences of legal and regulatory inconsistencies, the absence of a regulatory framework, and an unpredictable rate-making mechanism raise the perceived level of investment risk. This may particularly apply to the foreign investor. The study has demonstrated, however, that these investors are important and potentially can commit larger investment capital than local investors for single projects.

### *Models for Increasing Private Sector Investment Participation*

The study team examined ways of tapping private sector "off budget" capital, both international and domestic, for development of urban water supply systems. The variety of PSP instruments, including lease arrangements, management contracts, and the purchase of specified services such as bill collecting or the management of the accounting systems, tend to increase the stock of human rather than financial capital. They may strengthen the institutional capacity and could lead to long-term budgetary savings through more efficient operations, better revenue collection, a reduction in unaccounted-for water, and an increase in usage levels as a consequence of well-served and satisfied customers. The BOT approach, however, includes the critical element of capital formation and creation of new capital assets; it is on this approach that the study focused. While a detailed assessment of other instruments was not included in the study, the consultants believe that there are opportunities to employ these options in a selective fashion.

The concentration on the BOT approach is predicated on the understanding that this model is of primary concern to the GOI because it is an effective mechanism for attracting "off budget" capital, thereby freeing public resources for alternative investments. The BOT approach also is assumed to provide significant gains in construction and operating efficiencies through the introduction of private sector management and the continuous transfer of new technology over the concession period. A review of international BOT projects by the consultants indicated that the BOT financing approach is not the least-cost option when compared with public funding or funding that is guaranteed in some way through the public sector, e.g., World Bank loans. The cost of borrowing reflects higher costs for the private sector in terms of risk capital as well as expected rates of return on equity, given alternative investments in the market. The ability of a private consortium to raise debt and equity financing to cover the usually large investment costs of a BOT arrangement is dependent on reliable agreements with the end-users and on strong contractual guarantees concerning the revenue streams. The classic example of BOTs in water supply is bulk water purchase. The Umbulan Spring Project fits this profile. It is clear that debt financing guarantors would perceive that bulk water guarantees by the Government of Indonesia would be more reliable than those by the city of Surabaya alone. Further, "take or pay" agreements are essential to BOTs in the water sector; governments that do not wish to enter into such agreements must appreciate the difficulty of negotiating BOT arrangements with international financing.

The BOT model is attractive in that it provides capital infrastructure at no cost to the government because it is "off budget," but it imposes an increased cost on the consumer in the form of higher tariff levels. Current levels, for example, may be subsidized through the lack of sufficient allowances for capital replacement or depreciation. The higher cost of private sector water is predicated on the assumption that fully private water companies must be commercially viable without subsidies. Financiers who commit long-term equity must have confidence in the overall commercial structure and in the ability of the new company to generate revenues and provide a competitive rate of return on the investment. There is an understandable but misleading inclination to view a private facility in the water sector as analogous to a public enterprise. A profit-driven private BOT is an island in a sea of government facilities operating on a different set of assumptions, including the provision of a social tariff. It is apparent that the government must trade off consumer interests and private sector interests. The market reinforces this conclusion by drawing private sector investment to consumer categories that are less risky, such as industrial and tourist developments.

### *Main Implications for Strategy Design*

The findings of the study team have important implications on how the GOI should proceed in encouraging PSP in the water sector. The existing characteristics of the sector present a number of obstacles that may slow down this process. It is important for the GOI to distinguish between those constraints that can be eased (for example, financial guarantees and incentives, clarification of laws, and an independent regulatory system) and those that are inherent in all water supply projects (for example, the misfit between investment expectations of the private sector and the social service nature and traditional public sector financing of water supply).

The principal implications for the design of the privatization strategy based on the analysis of the sector are:

- The basic premise that private sector funds can help close the gap in investment capital needed to meet target coverage rates in urban areas is sound. The social and financial costs associated with the changes accompanying private sector involvement, for example, the costs of setting up an independent regulatory authority, must be appreciated at the outset. The alternative is ad hoc private sector development.
- Private participation should be viewed as one part of an overall game plan, not as an end in itself, to improve urban water supply. Private participation should be used where appropriate.

- Because of the conflict between private sector policy objectives of commercial viability and social equity considerations, private participation should be considered primarily in areas where consumers can bear the full cost of recovery. These include "enclave" developments such as industrial developments, tourists facilities, and private housing estates.
- Any strategy for PSP in the urban water sector must take its direction from market forces. The GOI, while keeping in mind public goals, must work with the private sector in its specific areas of investment interest. Disaggregation may be necessary in policy pronouncements in terms of size of investments and source of funding, e.g., international or domestic.
- The GOI should consider the creation of a regulatory framework to clarify ambiguous and contradictory laws and procedures and to mediate conflicts that could escalate and take on political significance. The absence of a clear regulatory framework may slow down the entry of private investors.
- In the financial area, the GOI must provide two main guarantees to make the urban water sector more attractive to private capital. The first concerns tariffs and includes the location of the authority to make tariff changes, the process for making such changes, control over the tariff, and whether it can be raised to compensate adequately the private sector investor. The second guarantee covers the quantity of water (volume sales) and is most specific to bulk water supply agreements.
- In the institutional area, especially with regard to the PDAM structure, attention needs to be given to how private sector enterprises will interact with PDAMs. For joint ventures with PDAMs, clarification is needed over the basic authority of PDAMs to enter into contractual relationships with a private entity, ownership of PDAM assets, the extent to which local governments can intervene and alter the content of a PDAM/private sector partnership, and the overall confidence that the private sector has in the managerial competence of the PDAMs. Further, the question needs to be raised whether private sector agencies can formally operate water supply installations outside the authority of the PDAMs but within GOI regulations for commercial enterprises.

## **Next Steps**

The central conclusion of the study is that PSP in urban water supply is feasible and desirable only if steps are taken to make the sector more attractive to prospective investors by removing or modifying the constraints identified and establishing a regulatory framework and related policies to protect the public interest.

It is clear that ad hoc private sector developments already exist in the water supply sector and several large private sector investors have demonstrated keen interest in certain water supply projects. The GOI must examine difficult policy choices in working with market forces to increase private sector participation. The study's recommendations for increasing private sector participation are:

### *Revalidate the Basic Policy*

This review should consider five difficult issues:

- The willingness of the GOI to modify various laws and regulations to facilitate private sector involvement
- The extent to which the GOI in its negotiations with prospective investors is willing to provide price and quantity guarantees
- The role of local government and the need for assurances that local governments will not intervene unilaterally
- The location of rate-making authority and the extent to which tariffs can be raised to ensure a profitable return to the private sector partner
- The role, location, and composition of a regulatory authority

### *Restate the Basic Policy*

The GOI should restate its policy on PSP, dealing directly with the five issues listed above and providing broad guidance at all levels of government regarding its intent and the steps it plans to take.

### *Address the Constraints and Devise Solutions*

The GOI should consider the seven major recommendations that follow:

1. Changes in laws and regulations to remove ambiguities and inconsistencies that discourage private sector investment
2. The types of guarantees prospective investors should and should not be given to encourage participation in the urban water sector
3. Local government assurances to prospective investors against unilateral intervention that at the same time preserve the authority of local government and legislative bodies
4. Definition of the authority and process for adjusting water tariffs so that the public interest in social equity and the private investor's interest in revenue protection are held in balance
5. The establishment of a regulatory structure that would define authority, the relationship between the investor and various local government bodies, and the review and approval process so as to safeguard both the public and private interests
6. A PSP plan that would establish the types of projects in which investment is encouraged; the standards of coverage and quality assurance to be met; the technical standards that are expected; and an organizational roadmap to assist the private sector in its search for profitable investment opportunities

This plan would outline: a policy for encouraging "enclave" developments in a manner consistent with other policy goals such as the financial viability of the PDAM structure and the maintenance of economies of scale in water supply; and a policy for BOT developments—mainly large projects such as bulk water supply or treatment suited to international market conditions for size of investment—that clarifies the terms acceptable to the GOI.

7. A review of measures to strengthen the institutional capacity of the PDAMs to ensure they are placed on an equal footing with private sector partners

The solutions to increase PSP depend on policy choices that only the GOI can make. It is recommended that a workshop be held for key officials from the ministries concerned and for representatives from the private sector to set out major issues and seek solutions.

**A STRATEGIC FRAMEWORK FOR INCREASING  
PRIVATE SECTOR PARTICIPATION  
IN URBAN WATER SUPPLY IN INDONESIA**

**1. INTRODUCTION**

**1.1 Purpose**

The purpose of the study is to assess prospects and recommend a strategy for increased private sector participation in urban water supply in Indonesia.

It was designed to investigate:

- Characteristics of the Indonesian water sector that could influence the nature and level of private sector involvement
- Policy issues that should influence the approach of the Government of Indonesia (GOI) to private sector participation
- The level and nature of private sector interest in the Indonesian water sector
- Institutional, legal, regulatory, and financial constraints that should guide the design of a strategy to increase private sector participation
- Lessons from other developing countries and different approaches to private sector participation that might be applied to the Indonesian situation.

The study was carried out between October 1 and December 15, 1990, by a WASH (Water for Sanitation and Health) Project consulting team financed by the U.S. Agency for International Development and composed of Indonesian and foreign consultants with specialties in engineering, law, economics, finance, and public administration.

The study consists of a summary of findings, implications, and recommended next steps (Volume I); suggested administrative guidelines for water authorities dealing with a private investor (Volume II); and Working Papers on issues the GOI must address if it is to successfully involve the private sector (Volume III). Volume I has three parts:



- It summarizes the key findings of the Working Papers (Volume III) produced during the study.
- It sets forth important implications for GOI policymakers that flow from these findings and must be considered in developing a strategy for increased private sector participation in urban water supply.
- It recommends an action plan to increase private sector participation in a manner consistent with Indonesian conditions and GOI policies.

## **1.2 Definitions**

The concept of private sector participation (PSP) includes instruments and public/private relationships ranging from the sale of a public enterprise to a private buyer (divestiture) to the purchase of private sector services by a public agency (service contracts), and reflecting varying market conditions. Table 1 sets out the forms of PSP frequently used in the water supply sector.

Since water supply is usually a natural monopoly and competition in day-to-day operations is not practical, public regulation or oversight is necessary. The more frequently competition can be introduced into the process, the less likely regulatory authority is needed. The presence of competition, which provides the incentive to maintain quality and minimize costs, is understood to be a prime condition underlying the efficiency of the private sector. The longer the period between periodic competition, say annually with service contracts, 2 to 3 years with managements contracts, or up to 15 years with BOT arrangements, the higher the degree of regulation and oversight necessary. Figure 1 graphically represents the increase in regulation required given the decrease in competition as the level of privatization increases.

The GOI's current and primary interest in PSP is in tapping private investment to augment public funds; the scope of work (SOW) for the study stressed that intent. As a consequence, the following analysis concentrates on mechanisms for the infusion of private capital, not on institution building or the provision of water by small-scale vendors. PSP, unless otherwise indicated, is limited to schemes such as build, operate, and transfer (BOT) that pursue that objective.

An important consideration in reviewing the alternatives of private sector participation is the objective of capital formation. In a review of PSP options, an important threshold is crossed in moving from service, management, and lease type contracts to BOT/concession options and divestiture. This threshold is the actual commercial risk of equity participation and asset ownership and is not a feature of models concerned with human capital formation, institutional strengthening, and efficiency gains. The significant equity requirements in large BOT projects cannot be overemphasized. This is reflected in a generalized way in Figure 1 showing the increase in commercial risk associated with a higher degree of private sector

**Table 1**

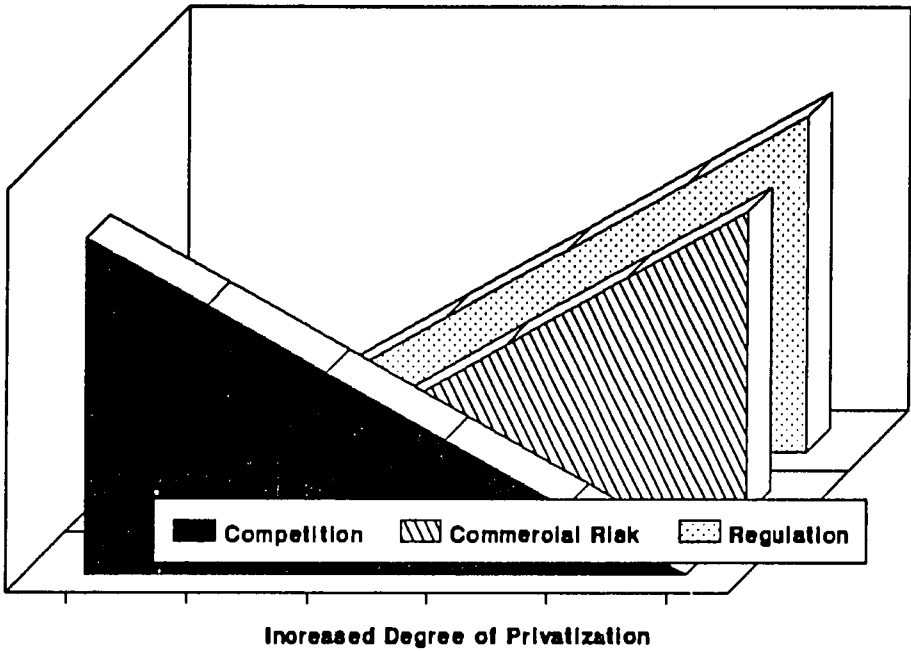
**Types of Private Sector Participation in Water Supply**

<b>TYPE</b>	<b>DEFINITION</b>
<b>Service Contract</b>	A public water company engages a private firm to provide specific operational services such as meter reading, billing and collection, and operating production facilities.
<b>Management Contract</b>	A contractor assumes overall responsibility for operation and maintenance of the water supply system, with freedom to make day-to-day management decisions.
<b>Lease Contract</b>	A private firm rents facilities from a public authority and assumes responsibility for operation and maintenance. The lessee finances working capital and replacement of capital components with a limited economic life (not fixed assets).
<b>Build, Operate and Transfer/Concession</b>	A private firm finances investments (fixed assets) in addition to working capital. Assets are owned by the firm for the period of the concession (say, 10-20 years) and are transferred back to the public authority at the end of this period.
<b>Divestiture</b>	The private sector takes complete control through the purchase of public sector assets.

**Source:**

Adapted from T. Triche, Infrastructure Notes, Infrastructure and Urban Development Department, PRS The World Bank September 1990.

**Figure 1**  
**Risk, Competition and Regulation**



participation, which in turn requires more rigorous regulation and oversight. (This observation is somewhat counterintuitive as it is expected that a competitive market would be more risky. For water supply, this is counterbalanced by the lumpiness of the investment.)

Nevertheless, it became apparent during this study that those forms of private sector participation intended to strengthen institutional and managerial efficiency could be of significant importance to the GOI in its efforts to improve the performance of the urban water sector. While institutional strengthening does not have a dramatic budgetary impact in terms of new capital formation, it is often an essential precondition to an effective working relationship with the private sector. Several of the Working Papers and the last section of this volume stress the point that it should be a part of any comprehensive strategy to increase private participation in urban water supply.

## 2. SUMMARY OF PRINCIPAL FINDINGS

### 2.1 Private Sector Participation in Urban Water Supply—Lessons Learned From Other Countries

There has been considerable international interest in public/private participation in the construction of public infrastructure through the application of the so-called build, operate, and transfer (BOT) formula. Although the list of exploratory discussions is long, the actual number of BOT investments that have begun operating is no more than perhaps two dozen worldwide. In Asia, most BOT projects have involved power generation or toll roads. Only Malaysia has attempted a water supply project involving a pipeline and a treatment plant.

There is an abundant literature on private sector participation and on the conditions and factors conducive to the design of successful public/private partnerships. Blending these insights with hard evidence from the few case studies available can provide useful guidance to senior policymakers. The lessons learned that are most applicable to the Indonesian situation are as follows:

- **Be ready for a long and complex process.** The design and negotiation of a large joint venture infrastructure project such as a water treatment facility is extraordinarily complex and may require several years of difficult planning and discussion.
- **Be clear about basic objectives.** Joint ventures of public/private partnerships are much more likely to be successful where there is government consensus on public policy goals and an appreciation of the costs and benefits of involving the private sector.

Policymakers need to agree about what they can expect from private involvement in order to identify unintended consequences, increase the likelihood of later support, and improve their future ability to evaluate progress. Where negotiations with private entrepreneurs have faltered or later misunderstandings have arisen, it is often because consensus did not exist.

- **Understand the private sector.** Public officials must understand the motivations and needs of the private sector partner if negotiations are to be successful and the subsequent relationship sustained.

Private firms exist to make a profit, not to provide a social service. Private management of a public enterprise gives a commercial firm a monopoly and the freedom to operate in a manner that may be

Inconsistent with social goals. Understanding this at the outset is essential if subsequent misunderstandings are to be avoided.

- **Balance costs and benefits.** A final determination of the wisdom of private sector involvement should be based on an objective balancing of benefits and costs. The benefits include the infusion of additional capital, the likelihood of more efficient operations, and the ability to reach public goals for service coverage more quickly. The costs include an erosion of government control and the strong likelihood of increased water tariffs.
- **Consider the question of "additionality."** An issue that has influenced the approach of other countries to PSP is whether the flow of external capital is really a net addition to the society's financial resources. If capital is simply diverted from some other purpose or if the cost of government guarantees exceeds the value of the investment, the society has not captured an absolute increase in financial resources.
- **Adapt to local conditions.** It is essential to adapt the form of PSP to local needs and conditions. A review of selected examples makes clear that the specifics of each BOT arrangement are carefully tailored to the special characteristics of each country and each project situation.

## 2.2 Special Characteristics of the Urban Water Sector

The urban water sector has its own social, economic, and financial characteristics that set it apart from other sectors, influencing the shape and nature of PSP and the success or failure of private/public negotiations. The conditions necessary to stimulate investment in the power sector, for example, may not be appropriate for water. An understanding of this difference is essential.

The study team felt the following characteristics were most applicable to Indonesia:

- **Water as a public good.** Water in many societies is viewed as a public resource to be shared by all without constraint. As a consequence, it may be hard to introduce the concept of commercial exploitation for private gain and to persuade public water authorities to accept practices designed to cover costs and allocate water according to market forces.

Partly because of the global environmental movement, these attitudes are beginning to change and societies are coming to realize that water is a scarce and valuable resource. But this recognition and the institutional changes that must accompany it are occurring slowly.

- **Subsidized price to achieve social goals.** It is common, although undesirable, for countries to subsidize the price of water in order to achieve the social goal of more equitable distribution of income. Not only is water often provided at less than the direct cost of production, but the indirect costs of pollution and aquifer depletion are frequently ignored. Ignoring the full cost of water will undervalue the resource, lead to failures to invest at the appropriate time, and cause serious misallocations among users. (And in the case of Indonesia, below-cost pricing impedes the program to place water authorities on a sound financial basis and undercuts efforts to decentralize government administration.)
- **Revenue loss and demand management.** Water consumption from piped sources tends to decline when prices are increased, because consumers either economize on consumption or seek cheaper alternatives. This can pose a serious problem for water authorities trying to bring costs and revenues into line, since an increase in tariff rates can result in a drop in total revenue.
- **Large and "lumpy" capital requirements.** In order to take advantage of economies of scale, water facility investments in source works, treatment plants, and pipelines tend to be very large and inflexible. Investment errors can be costly. Because of this, it is very important for private investors to be able to make realistic demand forecasts and reliable revenue projections.
- **Monopoly characteristics.** Water authorities are inherently monopolistic—they control an entire market and can manipulate prices and manage supply without fear of competition. Because water is an essential commodity and providing it has a social purpose, water authorities traditionally operate in the public domain. When private firms become involved, they do so within the framework of a regulatory process designed to balance public and private goals.
- **Water as an intermediate objective.** Private sector investment in water is often subordinate to some other commercial objective, and the provision of water is regarded as an intermediate goal. The principal return to the investor comes from a related activity of which

water is a necessary part. This form of private sector activity is important in any country's overall water sector strategy. However, since industrial and commercial development typically constitutes from 20 to 25 percent of total water usage, this type of private sector activity will satisfy only a modest proportion of total public consumption.

### **2.3 The Indonesian Investment Climate: General Considerations**

The current investment climate in Indonesia is robust for both foreign and domestic investment. Confidence in the economy is high and medium-term growth rates for non-oil GDP are now at 6 to 7 percent a year.

Indonesia has deregulated its banking system, relaxed import and licensing restrictions, made the rupiah freely convertible, allowed a gradual depreciation of the rupiah against the dollar, and taken aggressive steps to strengthen its non-traditional export sectors. As a consequence of these actions, both domestic and foreign investments have accelerated.

Total investment is now growing at the dramatic rate of 13 percent per year with the private component increasing by nearly 18 percent in 1989. New investments are concentrated in the manufacture of chemicals, paper and paper products, and textiles, although there is vigorous activity in virtually all sectors. Investment from domestic sources averages roughly \$12 million per activity, while investment from foreign sources averages roughly \$50 million per activity. Japan is the largest source of foreign industrial investment.

The current investment boom has the following characteristics:

- It is frequently linked to the foreign export market.
- The unit size of domestic investments tends to be modest (about \$10 million), reflecting the immaturity of capital markets and the commercial attractiveness of smaller-scale industrial activities.
- Investment choices concentrate on activities with the flexibility to respond to shifting market forces and to adjust the mix of capital and labor to these changes.
- Domestic investors tend to rely on short-term capital financing in the neighborhood of 3 to 5 years at real interest rates of 12 percent to 14 percent.



- Investors normally expect a relatively high rate of return on capital, in the area of 30 to 40 percent.

In sum, Indonesian investors deal with modest sums and demand a quick return, a high profit, and considerable flexibility to adjust to changing market conditions.

This contrasts with the characteristics of investment in the water sector which tend to be inflexible, capital intensive, and reliant on well-established financing facilities that can provide long-term credit. The position is clouded, however, when investment in water supply is part of a larger development like tourism, for example. The umbrella development may exhibit characteristics more closely matching the current investment climate—high profits and a quick return on investment.

#### **2.4 Urban Infrastructure in Indonesia: The Role of the Private Sector**

Urbanization is increasing rapidly in Indonesia. The population of its urban areas is expected to grow from 52 million in 1990 to 79 million by 2000 and to triple to 152 million by 2025.

The GOI has adopted a basic needs strategy designed to provide urban populations with a package of services including sanitation, solid waste removal, primary health care, education, and water supply. The strategy has been embodied in the Integrated Urban Infrastructure Development Program (IUIDP) which has formulated investment packages on a city-by-city basis. Currently, about one-third of urban infrastructure investment is for water. To finance future needs, the GOI plans to double the current level of investment over the next five years.

In addition, the GOI has embarked on an ambitious program of organizational and fiscal decentralization designed to encourage increased local financing. Despite these efforts, the gap between need and capacity to respond will continue to increase because of high population growth rates. In the case of water, the number of urban dwellers without safe potable water is estimated to increase from about 20 million in 1979 to roughly 40 million by 1999.

The GOI's commitment to the decentralization of municipal services began in the mid 1970s. Most of the attention focused on the transfer of responsibility from the central to local governments, with the most accelerated activity in the water sector. The role of the private sector in the devolution of responsibility is quite recent and began in the 1980s. Because the idea of private sector involvement in the provision of urban services is so new, it is not surprising that its role to date remains small.

However, there have been important recent initiatives in at least four areas: toll roads, electricity, telecommunications, and solid waste removal. Although these sectors are unique and it is risky to generalize, experience from them provides several lessons that may be useful in developing a strategy for greater involvement of the private sector in urban water supply.

- It has been necessary in at least two instances (toll roads and electricity) for the GOI to restate and clarify basic policy regarding the desirability of private sector investment before the private sector would show interest.
- The private sector was unresponsive to investment opportunities until the public sector had put in place a regulatory framework and a clear set of regulations and procedures that the private sector could rely on in determining whether or not to invest.
- In all instances the instruments for private sector involvement have been adapted to the specific situation. Standard off-the-shelf approaches have been tailored to the special needs of the sector and the Indonesian market.
- The most important issues that have dominated the negotiations are:
  - Whether and to what extent the government is willing to provide the guarantees that the private sector feels are needed for long-term financing
  - Whether responsibility for establishing tariff levels will be in public or private hands
  - Ownership of the physical assets of the facility
  - Continued rupiah depreciation
  - The need for an unambiguous legal framework
- To date, the most successful instance of private capital investment appears to be in telecommunications. The factors for success include: inherent profitability; a clear legal and implementation framework; the design of creative financial instruments fashioned to meet the needs of both private and public interests; flexibility in the scale of investments.

## 2.5 Key Characteristics of the Indonesian Water Sector

The Indonesian water sector has a number of key characteristics pivotal to the design of any strategy to increase private sector participation. These are described and analyzed at some length in the Working Papers and summarized below.

### *Water Resource Characteristics*

Both surface water and groundwater supplies in Indonesia are plentiful, although extraction and transmission can be complicated by poor quality, distance from urban centers, and seasonal variations in natural supply.

In 1980, water supply coverage in urban areas was only about 35 percent, among the lowest in Asia. By 1985, the percentage of urban housing provided with water had grown to 40 percent but, because of increases in the urban population, increased to only 41 percent by 1989, despite a goal of 75 percent and a doubling of the production capacity.

Water and water-related issues (wastewater, flooding, erosion, and groundwater) pose the most serious environmental challenges. They affect both rural and urban areas but are particularly acute in the metropolitan centers because of the impact of dramatic population growth. Problems include groundwater contamination, saline intrusion, aquifer depletion, poor sanitation, sea pollution, flash floods, and siltation. The water quality of the rivers of Java is poor, and not surprisingly Indonesia has experienced chronically high levels of diarrhea and other water-related diseases.

The growth in demand for water in urban areas is related to the growth rate of urban populations. Most projections suggest a doubling by early in the next century. Against this, the GOI has established a water coverage target of 85 percent for urban areas by the year 2010. To meet this target, water supply for small and medium cities would have to increase at a compound rate of 8.7 percent a year and for large cities by 6.8 percent a year. It is generally believed that these projections are highly optimistic.

There are two major inefficiencies in the management of water supplies:

- **Unaccounted-for water loss is high.** For water authorities in Java, unaccounted-for water varies from 20 to 65 percent of total piped water, and in Jakarta alone reaches 50 percent.
- **Groundwater extraction is largely uncontrolled.** At present, groundwater is extracted mainly by private users for residential or industrial purposes. In theory, licenses are issued, usage is metered, and charges are levied by the water authority. In practice, unlicensed wells are common and tariffs are both low and uncollected.

Underpricing in turn leads to wasteful consumption, a particularly serious issue in coastal areas, where saline intrusion is a problem.

### *Financial Characteristics*

The financial characteristics of urban water supply in Indonesia are central to the development of a strategy to attract private sector investment. They include:

- **An organizational emphasis on full cost recovery.** As part of the GOI's program to decentralize and rationalize government operations, water authorities are gradually being given autonomous status (the PDAMs) under the jurisdiction of local governments. These agencies are supposed to operate on the basis of full cost recovery, although there is substantial evidence that few have yet been able to accomplish that objective.
- **Poor linkage between the cost of water and the tariff structure.** Despite the emphasis on financial viability, water pricing in Indonesia (as in most developing countries) is designed to achieve social policy objectives and is not based on full cost recovery. As a consequence, the long-term financial soundness of the water authorities is in doubt.
- **Inadequate knowledge of full cost of production.** This is responsible for insufficient set-asides for operation and maintenance and capital replacement.
- **Close relationship between volume sold and price.** Domestic consumption of piped water is somewhat price elastic, i.e., increases in the price of water lead to a drop in consumption and a resultant drop in total revenue.
- **Intermediate capital requirement.** Capital costs identified for a number of water supply projects are below \$50 million. This is probably not enough to attract foreign investors but beyond the capacity of most domestic investors.

### *Institutional Characteristics*

Urban water supply in Indonesia is administered by public agencies either reporting to the Ministry of Public Works (BPAMs) or under the broad jurisdiction of the Ministry of Home Affairs (PDAMs). The latter, in accordance with the GOI's policy of decentralization, are part of the fabric of local government. The former will continue to be part of the central

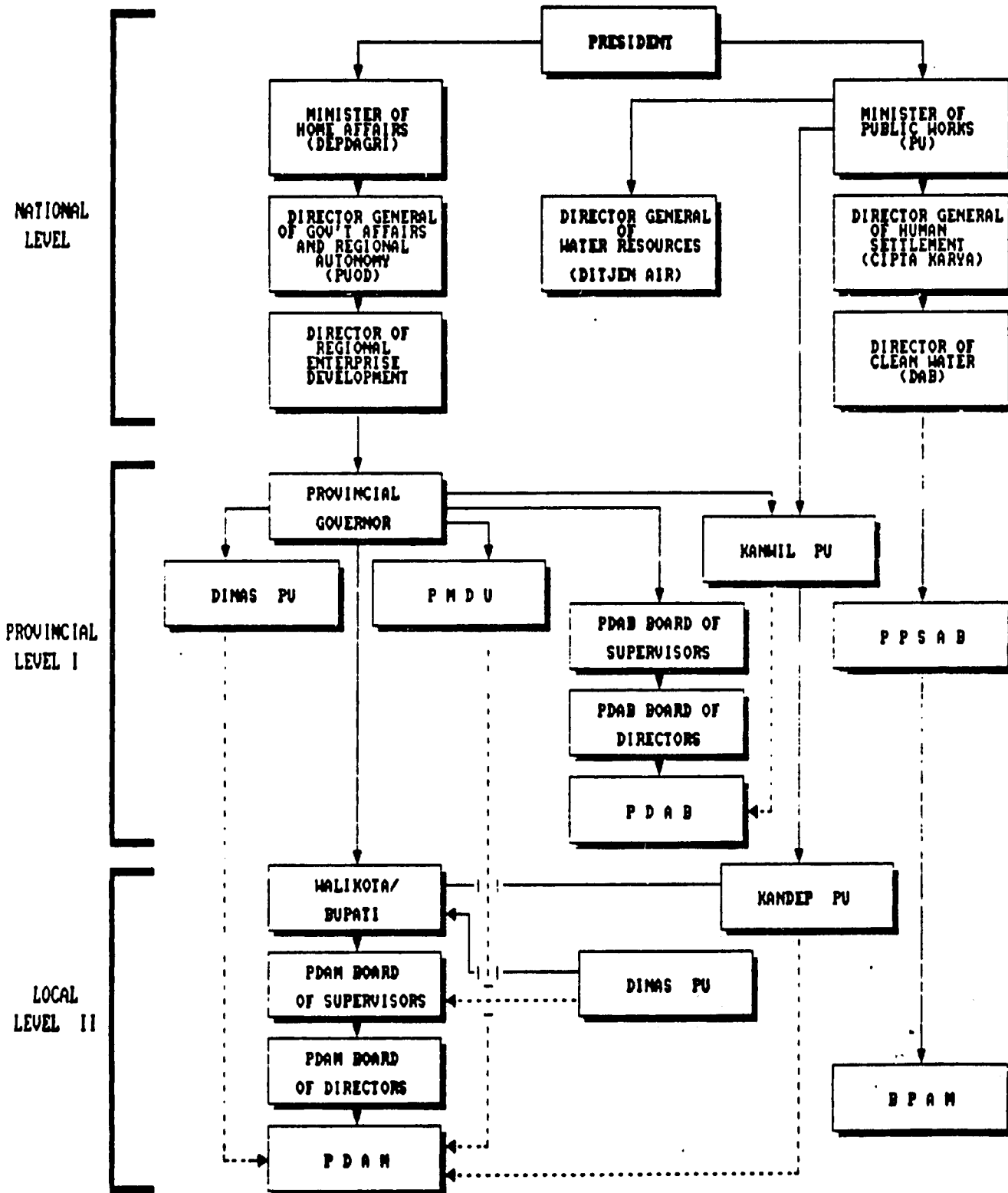
government until they have become financially self-sufficient, at which point they will be given PDAM status. The process is supposed to be complete by the end of 1993. Figure 2 sets out the organizational structure of the formal water sector.

There are several characteristics of the current institutional structure that will have a significant influence on the shape and success of any strategy to increase private sector involvement in the urban water sector:

- **The entire administrative apparatus is in a state of flux.** The majority of PDAMs are performing a new and unfamiliar role, while the BPAMs are preparing to graduate from their dependency on central funding from Public Works. These changes in the nature of operations make it difficult for outside investors to understand the water sector and create uncertainties that at least for the time being tend to discourage joint venture arrangements.
- **The organizational makeup of the water sector is extremely complex.** It includes a large number of local, provincial, and national ministries and legislative bodies whose functional responsibilities are often unclear and frequently overlap, adding to the inevitable confusion of the process of decentralization and the transition to financial autonomy that are still incomplete. Presented with this extensive amount of procedural red tape, prospective investors are unlikely to be enthusiastic.
- **There are a number of organizational issues of concern to prospective investors.** These include the managerial autonomy of PDAMs, the role of supervisory boards, and the extent to which local governments can intervene in the affairs of a PDAM. A related set of concerns arises from the virtual absence of an independent regulatory body that can mediate the conflicting interests of the public and private sectors. This is of particular importance because there is no appeal procedure to a court of law to assert claims or to challenge official decisions.
- **The basic mandate under which PDAMs function may have the effect of discouraging private sector interest.** PDAMs are required to pursue certain social goals on the one hand while achieving financial self-sufficiency on the other. In addition, many local governments expect their PDAMs to be a source of revenue. Achieving the proper balance between these conflicting goals is not easy under the best of circumstances. It requires an enterprise with clear objectives and a high degree of management autonomy.

**Figure 2**

**Organizational Structure for the Regulation of, and the Provision of Assistance to, BPAMs, PDAMs, and PDABs by the Government of Indonesia**



Because of the complicated institutional setting in which PDAMs function and the large number of stakeholders, many PDAMs lack effective authority to make decisions and to chart their own course.

- **Vested interest in maintaining PDAM functions within the GOI purview may discourage private sector initiative.** The perceived direction and control of PDAMs by the government make PDAMs eligible for a number of benefits such as donor technical assistance and training, subsidized loans, and grants that would be unavailable if the PDAMs were in the full control of the private sector. Trading these specific benefits for more generalized benefits like greater efficiency may be judged as too elusive or speculative to encourage active interest in formal private sector initiatives. Further, a higher degree of PSP in the water supply sector means less of a role for the functions PDAMs currently perform. Ultimately, if private sector models became the norm, PDAMs would cease to have a technical or financial function and possibly would assume a regulatory or oversight role.
- **PDAMs lack experienced, well-trained professionals who can evaluate the technical and financial soundness of proposed ventures and deal with private sector representatives on an equal footing.** Few PDAMs can afford to support staff training, to provide long-term career planning, or to hire experienced (and expensive) supervisory personnel. The consequence is that PDAMs are at a disadvantage when negotiating with commercial entities, and business firms are disinclined to enter into joint ventures with agencies that lack managerial skill.

### *Legal Characteristics*

There are numerous laws and regulations at the national, provincial, and local levels that will govern PSP in the urban water sector. These include the constitution, laws that define the responsibilities of the water authorities (PDAMs and BPAMs), laws that govern domestic and foreign private sector investment, regulations dealing with taxes and tariffs, and laws and regulations that govern the operation of public utilities.

The most important of these laws and regulations are:

- The Basic Law of 1945, which specifies that water resources are owned by the state and are to be managed and utilized by the government for the maximum benefit of the people.

- Law No. 5 of 1962, which specifies that water authorities are not permitted to cooperate with the private sector if this would undercut their managerial authority.
- Law No. 1 of 1967, which places limitations on foreign investment in the water sector.
- Presidential Decree No. 21 of 1989, which permits private sector investment in water supply.
- Regulation No. 4 of 1986 from the Ministry of Home Affairs, which permits cooperation between regional government bodies and the private sector.

The legal and regulatory framework has several features that will directly influence the level and nature of private sector involvement in urban water supply, some with a positive, others with a negative, effect:

- The laws and regulations regarding PSP in water supply are clear in encouraging such participation, although there are conflicting laws that would appear to restrict that participation in some ways.
- The policies, laws, and regulations regarding decentralization of government, the strengthening of local government, and the financial viability of local water authorities establish a positive climate for increased PSP.
- The GOI has made a deliberate recent effort to open the door to increased PSP in the water sector by removing water from the restricted list (Presidential Decree No. 21 of 1989) and by taking a related series of steps to make the water sector more attractive to private investors.
- The laws and regulations are far less clear in stating on what basis the private sector may participate in the water sector, what standards the GOI will apply in evaluating applications, and how the GOI will ensure that its public policy aims in the water sector are achieved in a manner that will be consistent with the commercial needs of the private sector.
- There are a number of contradictions and inconsistencies in the legal and regulatory framework. Because it is unclear whether these are inadvertent or reflect ambivalence with regard to the wisdom of PSP,



they will tend to discourage private investment unless they are clarified. The most important are summarized in Figure 3 and set out below:

- Apparent limitations on the authority of PDAMs to enter into a joint venture with a private party
- The apparent inconsistency between the Basic Law of 1945 and private ownership and management of a water utility
- Apparent limitations on foreign private sector investment in water supply

Indonesian laws and regulations are sometimes imprecise and their coverage—particularly with regard to commercial activity—tends to be uneven. In some instances the laws may appear to be in conflict, particularly to a foreign investor. Although these inconsistencies permit greater administrative flexibility, they pose difficulties for the private investor who wants predictability and certitude in the legal framework in which he operates.

There are several restrictions dealing with domestic borrowing, the ownership of property, the transfer of equity ownership, and the repatriation of capital and profits that affect foreign investment. The GOI is intent on attracting foreign capital, but through these restrictions sends prospective investors a discouraging signal.

Because Indonesia has no history of private involvement in public utilities, there are virtually no laws and regulations governing oversight. There is no independent regulatory body operating under clear and consistently applied rules to ensure that private investors receive a reasonable rate of return and that essential public policy goals are pursued.

A regulatory framework is important both to the government and the private investor because it protects the public interest but also provides the investor with a process by which concerns can be addressed and with a known set of standards that will be used in adjudicating disputes.

Figure 3

Possibly Conflicting Authorities—  
Private Sector Participation in  
Indonesian Water Supply Activities

**PROHIBITED OR RESTRICTED**

**Basic Law of 1945, Article 33**

Production branches which are important to the State and provide for the needs of the people must be under the control of the State and water is to be managed and utilized by the government for the maximum benefit of the people.

**Law No. 5 of 1962**

PDAMs (see Article 5) have no authority to cooperate with the private sector if this would relinquish "management" by the PDAM.

**Law No. 1 of 1967**

Foreign investment may not (see Article 6) "exercise full control" in activities in the drinking water sector, although [see para. (2)] foreign investment in this sector is not absolutely prohibited.

**PERMITTED**

**Presidential Decree No. 21 of 1989**

The private sector is permitted to participate in the water supply sector because "water supply" or "drinking water" is not listed as an area from which any form of new private sector investment is excluded.

**Regulation of Minister of Home Affairs  
Nos. 4 of 1990 and 3 of 1986**

Permits, inter alia, cooperation of prescribed types between regional enterprises and the private sector.

- These impediments and constraints raise the perceived level of risk for a private investor, who can be expected to seek a higher rate of return before investing capital, particularly equity, in the urban water sector. This, in turn, will increase costs to the consumer.

## **2.6 Private Sector Participation in Indonesian Urban Water Supply—Experience to Date**

The study found two main types of private "off budget" investment in water supply: supply-led source development projects, and "enclave" water supply developments. The first type is initiated by firms with a vested interest in water supply projects from a management, design, or construction base. An example is Umbulan Springs Bulk Water Supply. The second type features water as part of a larger development. Water supply is important but not the principal component. Projects of this type are associated with a tourist center, an industrial estate, or a private housing complex. Lhok Seumawe is an example. (See box below)

The commercial motivation in the case of "enclave" investments has been the profit to be realized from the principal component, to which the provision of water has been subordinate. The amount invested in water resources is a relatively small part of the total investment. "Enclave" investments are important to industrial development and in some instances are linked to high-income housing developments, but do not add significantly to water coverage for large urban populations.

Whether or not the Lhok Seumawe and Umbulan Springs ventures will materialize is still uncertain. In both cases impediments to successful negotiations have centered on the willingness of the government to guarantee a minimum level of consumption; control over rate-making authority; and the balance between the public goal of keeping rates "within the ability of the people to pay" and of subsidizing water costs to the poorest versus the commercial goal of covering costs and making a profit.

The potential for PSP is defined in government guidelines that envision joint public/private participation in water extraction, raw water transmission, clean water production, and clean water distribution. To encourage PSP, the government has sponsored 23 capital investment project identification studies that concentrate on providing capital to increase water supply capacity and distribution for urban areas. They can be categorized as supply-led developments.

Financing of private sector initiatives has come from both international and domestic sources. Table 2 shows current private investment "starts" in water supply by size of investment, source of finance, and type of project, and points up two basic market conditions. International financing is drawn to large-scale projects, both supply-led and enclave, whereas domestic financing is attracted solely to enclave projects.

## **Examples of Private Sector "Starts" in Urban Water Supply**

### **BOT/Concession**

#### *Umbulan Springs, Pasuruan, East Java*

This project is primarily the development of bulk water supply for the use of Surabaya City. The project's main component is a 65 km transmission pipeline from the spring to Surabaya. In 1987-1988 a study recommended that bids be requested from the private sector for the development of Umbulan Spring along the lines of a BOT type contract. Several consortia expressed interest and the Bromo Consortium, which included both local and international financing, was finally selected to negotiate for the concession to supply water to Surabaya. The concession agreement includes building the pipeline and operating it for a minimum of 15 years. The project's capital cost is substantial at about US\$ 125 million (1990).

### **Enclave Development**

#### *Lhok Seumawe, Aceh Utara*

This project is aimed at increasing the capacity of the water supply system in Lhok Seumawe to service a number of big industries including a paper making facility and a fertilizer factory. The works will include increasing the number of connections, expansion of the transmission and distribution network, and increasing the capacity of the bulk water supply. The water demand usage is estimated at 80 percent industrial and 20 percent domestic. The private sector investor group includes American, Dutch and local partners. The proposed concession period is 30 years. The capital cost of the investment is estimated at US\$ 70 million (1990).

**Source: Working Paper A—Private Sector Participation in Selected Urban Services.**

**Table 2**

**Private Investment in Water Supply Projects  
by Size of Investment, Source of Finance, and Type of Project**

Size of Investment	International Finance		Domestic Finance	
	Supply-led	Enclave	Supply-led	Enclave
Large-Scale Investment (> \$50 m.)	X	X	O	X
Small-Scale Investment (< \$10 m.)	O	O	?	X

Informal interviews with potential private sector investors, both international and domestic, uncovered mixed feelings toward the business opportunities offered by the urban water sector:

- Investors agreed that the GOI has been successful in stimulating private sector interest in the sector.
- However, they emphasized the importance of an operating environment with clear regulations, consistent administration of procedures, and mechanisms to ensure that agreements are enforced. They believe that urban water supply could offer attractive opportunities, but that present conditions are not favorable.
- Investors stressed the need for a reliable forecast of revenues from which they could calculate a rate of return on their investment. If they are not able to make accurate calculations, they will either shy away from the investment opportunity or demand a higher return to cover a higher perceived risk. Investors interviewed in this study felt that at present the urban water sector offers little predictability.
- In addition to these general reservations, prospective investors had a number of specific concerns centering on:
  - *The role and competence of the PDAM.* Investors raised questions about the division of authority in a joint relationship with a quasi-government entity, the responsibility for setting tariffs, the mechanism to balance the public service objectives of the PDAM and the commercial objectives of the private

sector partner, and the intrusive demands of local political interests. Also, they were uncertain about the managerial competence of PDAMs and whether or not a PDAM can legally become a shareholder in a joint venture company.

- *Availability of long-term financing.* The domestic market for large long-term capital investments is not yet mature. Most domestic investments are under \$10 million, less than what water supply operations generally require. Foreign investors, on the other hand, tend to prefer larger projects in the neighborhood of \$50 million. This suggests that water projects are likely to fall between the smaller projects financed locally and the larger projects favored by foreign investors.
- *Reducing investment risks by the adoption of regulations and the removal of constraints.* Investors would like to see specific inducements from the government, including guarantees on: water consumption and borrowing; the removal of legal and regulatory ambiguities affecting the authority of PDAMs to enter into joint venture arrangements; the conversion of the rupiah; and the repatriation of capital and profit.
- *More information and detailed feasibility studies.* Investors wanted more information about the sector and feasibility studies by an objective third party that would better identify the risks and returns.

## **2.7 Models for Increasing Private Sector Participation**

This study concentrates on ways of tapping private sector capital. Other methods of involving the private sector in urban water supply, listed in Table 1, call for an increase in the stock of human rather than financial capital. They strengthen institutional capacity and lead to long-term budgetary savings through more efficient operations, better revenue collection, a reduction in unaccounted-for water, and an increase in consumption by well-served and satisfied customers. A comprehensive strategy for increasing PSP would need to take all of these into account, using them selectively where warranted.

The BOT approach is currently of primary interest to the GOI. It includes the element of capital formation and the creation of new capital issues (investment) in the water supply sector. The Working Papers provide an exhaustive analysis of this model. Key points are as follows:

- The BOT approach is an effective mechanism for attracting off-budget capital, thereby freeing public resources for alternative and, presumably, more productive investment.
- The BOT approach also offers significant gains in operating efficiencies through the introduction of private sector management and the continuous transfer of new technology.
- The BOT approach is *not* a least-cost option, since revenue flows must cover the higher borrowing costs of the private sector as well as the margin of return to the commercial firm.
- The BOT model is predicated on the premise that cheaper, less risky, on-budget finance is not available. The BOT must bring extra funds or "additionality" to the sector to be justified.
- The ability of a firm to raise debt and equity financing to cover the large investment costs of a BOT arrangement depends on reliable agreements with the purchaser of the bulk water and on strong contractual guarantees that the revenue stream will not be suddenly reduced by unilateral changes in the tariff structure. *These guarantees and understandings are essential to all successful BOT negotiations.* Governments that do not wish to enter into agreements of this sort should avoid BOT-type arrangements.
- The blending of concessional public funds such as World Bank money with private sector capital in order to bring down the effective cost to the investor is a complex mechanism that can be used only with considerable uncertainty. The problem is that it provides an undeserved "sweetener" to the investor while reducing his obligation to bring in extra funds.
- From the investor's perspective, the major concerns associated with a BOT investment are construction delays and cost overruns, cash flow risks particularly during the first years of operation when interest and principal payments are highest, equity risks that arise from the very long payback period and the dangers of altered market conditions, and foreign exchange and inflation risks. All these can be partly or wholly alleviated through agreements with the government and control of tariff schedules.
- From the public's perspective, the major concern is the potential loss of control over important decisions affecting the public welfare when

the management of a public utility is placed in private hands. This is particularly so in the absence of a regulatory policy and framework.

- The current disinclination of the GOI to provide assurances in these risk areas suggests that a BOT arrangement will be extremely difficult to negotiate. (The difficulties in negotiating the Umbulan Springs venture bear this out.)
- BOT arrangements must be commercially viable. Financiers who commit long-term equity must have confidence in the overall commercial structure and in the ability of the new company to generate revenues and provide a competitive rate of return on the investment. There is an understandable but misleading inclination to view a private facility in the water sector as analogous to a public enterprise. A profit-driven BOT is an island in a sea of government facilities operating on a different set of assumptions, including the provision of a social tariff.



### 3. **IMPLICATIONS FOR DESIGN OF A STRATEGY TO ENCOURAGE INCREASED PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLY**

The analysis and findings set forth in this study have important implications for the design of a strategy to increase private involvement in the urban water sector. These implications are discussed below.

- **The public sector is unable to fully meet the growing demand for potable water.** The continuing growth of urban populations will create a constantly expanding demand for safe drinking water. Institutional and budgetary constraints make it unlikely that the current PDAM structure will be able to meet that demand to the full extent.
- **Private sector funds can help close the gap.** The infusion of private capital can help close the gap between actual and target water coverage rates in urban areas. Nothing in this study has suggested that the concept of seeking private funds to improve urban water service is flawed, provided the constraints and costs are recognized and dealt with.
- **There are obstacles and it will take time.** There are numerous difficulties that must be addressed if efforts to increase private sector involvement in the urban water sector are to be successful. If nothing else, the study makes it abundantly clear that increased involvement of the private sector will not be simple and will not occur overnight.
- **It is important to distinguish between constraints that are repairable and those that are not.** From a decision-making perspective, the constraints on increased private sector participation identified in this study fall into two categories: those that can be eased by corrective action such as clarification of laws, a strengthening of the PDAM framework, and installation of a regulatory system; and those that arise from conflicting interests and thus are much more difficult to change such as the misfit between the investment expectations of the private sector and the basic nature of water supply projects. By far the largest number of obstacles are in the first category.
- **Costs need to be better understood.** The study repeatedly stresses that private sector involvement in the urban water sector will involve significant social and financial costs that need to be

appreciated at the outset. It has identified some of these costs; It has not quantified or prioritized them. The GOI must do that and assess their political implications.

- **Consider private participation as one part of an overall "game plan."** PSP should not be approached as an end in itself but as part of an overall strategic approach to improving urban water supply. The role of the private sector is a subordinate but important element. If private sector involvement is approached in this derivative fashion, a number of the more difficult public policy issues such as those involving rate making and the extent and nature of subsidies will fall into place.

**The key to developing a workable policy for private sector involvement is to find the right balance between financial sustainability and social equity.** The current policy of keeping water rates low for social equity purposes, while asking PDAMs to function on a full cost recovery basis, is inconsistent with a strategy to increase private participation through the PDAM structure.

- **The basic policy toward private sector involvement should be reviewed.** Because the study has uncovered a number of constraints not previously identified, it may help the GOI to review its basic policy of encouraging PSP in urban water supply. This is not because of any conclusion suggesting that the costs of PSP outweigh benefits. That is a final judgment for the GOI to make. It is because a consensus on fundamental issues across the full spectrum of executive and legislative bodies is necessary.
- **The basic policy should be restated.** Because PSP requires a careful balancing of public goals and private interests and because several applicable laws and regulations are ambiguous or contradictory, the GOI needs to clarify its basic policy. Further, it needs to back up this clarification with modifications in law, regulation, and procedure to remove any lingering doubt about the intent of this policy.
- **Develop a comprehensive plan for private sector participation.** The GOI should develop a comprehensive plan defining the extent and nature of PSP and using it to the best advantage in achieving the strategic goals of the urban water sector. The plan should ensure that private investment supports, not

undermines, efforts to rationalize the financial structure of urban water authorities.

In addition, because of the institutional complexity of the urban water sector, some top-down "roadmapping" will be needed to attract significant private sector capital. This could mean a central facility to prioritize opportunities in the water sector, clarify procedures and regulations, and provide technical assistance during the negotiation process. A facility of this sort is needed particularly for large and complex BOT ventures, even if it is in partial conflict with current decentralization efforts.

- **Broaden the approach.** The study stresses that any strategy for increased PSP should go beyond mechanisms to tap private sector capital and include instruments to improve institutional performance and efficiency. This is particularly important in Indonesia, where the PDAMs face considerable institutional challenges that inhibit private investment.

In this vein, PSP should be conceived as a strategy to support GOI decentralization efforts, strengthen the capacities of local governments, and help them achieve financial stability. This important objective should be woven into the policy to increase PSP.

- **Place a high priority on designing a regulatory framework.** It is abundantly clear from the findings of this study that a regulatory structure and process must be in place before extensive PSP can occur. The absence of a regulatory framework is likely to slow down the entry of private investors and significantly reduce the benefits of PSP. Without a mechanism to resolve conflicts, disagreements tend to escalate and take on political significance.
- **Make private sector participation more attractive.** If large amounts of private capital are to be invested in the urban water sector, the GOI will have to take a number of steps to make investment more attractive. These will include institutional, financial, legal, and regulatory changes. Some of these reforms, such as a strengthening of the PDAM structure, need to be undertaken for their own sake regardless of subsequent private sector involvement. Others, such as the willingness to provide bulk water sales guarantees, are directly linked to attracting private sector capital.

- **Address the issue of guarantees.** In the financial area, the GOI needs to provide two guarantees. The first is on the rate that will be paid for delivered water, the second is on the quantity of water that will be purchased. The rate guarantee will necessitate a definition of where the authority to make rate changes resides, the process for making rate changes, and the price of water that would adequately compensate a private sector investor. The second guarantee requires improving the planning and forecasting capacity of the PDAMs.
- **Address the issue of the PDAMs.** There are three aspects of PDAM operations that require attention if successful joint ventures are to materialize: confirmation of the authority of the PDAMs to enter into contractual relationships with private entities; the extent to which local governments can intervene to alter the content of a PDAM/private sector partnership; and the overall managerial competence of the PDAMs.
- **Develop a policy for "enclave" investment that ensures these initiatives are compatible with overall water sector strategy.** Involving the private sector in providing water to industrial estates, tourist facilities, private housing developments, and other "enclaves" that operate outside the PDAM structure is a useful strategy for tapping private capital to cover some of the costs of water exploitation and transmission.

But there are two concerns. The first is that "enclave" developments may withdraw from the PDAM's jurisdiction higher-income groups able to cover the full costs of the water they consume as well as support a cross-subsidization policy. The second is that small "enclave" developments may prevent the future introduction of larger economies of scale by segregating the market into less than optimal subunits. Both concerns underscore the importance of an overall urban water sector strategy and a set of policies that flow from it.

#### **4. NEXT STEPS: WHAT SHOULD THE GOI DO TO INCREASE PRIVATE SECTOR PARTICIPATION IN THE URBAN WATER SECTOR?**

The study was designed to assess the prospects for increased PSP in urban water supply and to recommend a strategy for it. The central conclusion is that PSP is feasible and desirable only if steps are taken to make the sector more attractive to prospective investors by removing or modifying the constraints identified and establishing a regulatory framework and related policies to protect the public interest.

Recommendations for increasing private sector participation follow. Because this objective requires difficult policy choices that only the GOI can make, the emphasis is on the *decision-making process*, not on the content of specific decisions.

##### **Revalidate the Basic Policy**

The GOI should review the contradictions, constraints, and policies discussed in this paper (Volume I) and the Working Papers (A to F) to revalidate its policy of encouraging private sector participation in urban water supply. To be most useful, the review should consider five difficult issues :

- The willingness of the GOI to modify various laws and regulations to facilitate private sector involvement
- The extent to which the GOI in its negotiations with prospective investors is willing to provide price and quantity guarantees
- The role of local government and the need for assurances that local governments will not intervene unilaterally
- The location of rate-making authority and the extent to which tariffs can be raised to ensure a profitable return to the private sector partner
- The role, location, and composition of a regulatory authority

We recommend that this revalidation proceed from the perspective of the total strategic needs of the urban water sector and that private sector participation be approached as one of a variety of instruments that can be employed by the GOI to reach its goals.

The revalidation needs to be carefully organized to include key officials or their representatives from the ministries involved and representatives from the private sector. It is recommended that a workshop for this purpose be held in the first half of 1991.

## **Restate the Basic Policy**

The GOI should restate its policy on PSP, dealing directly with the five issues listed above and providing broad guidance at all levels of government regarding its intent and the steps it plans to take. The GOI may also want to consider a range of policies that reflect current market conditions and capitalize on current market opportunities. For example, large internationally financed BOT projects might warrant special legislation on ownership and rate-setting mechanisms that would not apply to smaller systems and domestic financing. Similarly, legislative and financial packages covering combined developments might be appropriate for "enclave" projects, which include investment interests outside the water sector.

## **Address the Constraints and Devise Solutions**

The GOI should consider the seven major recommendations that follow:

1. Changes in laws and regulations to remove ambiguities and inconsistencies that discourage private sector investment
2. The types of guarantees prospective investors should and should not be given to encourage participation in the urban water sector
3. Local government assurances to prospective investors against unilateral intervention that at the same time preserve the authority of local government and legislative bodies
4. Definition of the authority and process for adjusting water tariffs so that the public interest in social equity and the private investor's interest in revenue protection are held in balance
5. The establishment of a regulatory structure that would define authority, the relationship between the investor and various local government bodies, and the review and approval process so as to safeguard both the public and private interests
6. A PSP plan that would establish the types of projects in which investment is encouraged; the standards of coverage and quality assurance to be met; the technical standards that are expected; and an organizational roadmap to assist the private sector in its search for profitable investment opportunities

This plan would outline: a policy for encouraging "enclave" developments in a manner consistent with other policy goals such as the financial viability of the PDAM structure and the maintenance of

economies of scale in water supply; and a policy for BOT developments—mainly large projects such as bulk water supply or treatment suited to international market conditions for size of investment—that clarifies the terms acceptable to the GOI.

7. A review of measures to strengthen the institutional capacity of the PDAMs to ensure they are placed on an equal footing with private sector partners

Table 3 presents the seven major recommendations across a range of considerations that reflect the major policy implications of the study. It identifies the technical category of each recommendation and indicates the impact of each recommendation on the international and domestic investor. A number of these recommendations came from interviews with private investors, and implementing them would have a high impact and subsequently a high priority. The timeframe estimates the elapsed time (1 to 3 years or over 3 years) it would take to implement the recommendations, based on existing mechanisms that could be used or on new ones to be created.

Most of the recommendations require an integrated approach. Legislative reform to provide incentives, e.g., tax holidays, would be fairly straightforward. More difficult would be the changing of existing practices that protect vested interests within the sector. The most controversial recommendations probably will be to create an independent arbitrating authority outside the ministerial framework and to invest interests outside the water supply sector with financial control and tariff setting more suitable to private sector endeavors.

One final recommendation is that the GOI should consider models of PSP in the urban water sector (such as management and service contracts) that involve the transfer of human rather than financial capital. Although these may not be as dramatic as large-scale investment projects, they can achieve significant long-term budgetary savings by improving managerial efficiency and may be an important factor in attracting future private capital.

**Table 3****Consideration of Major Study Recommendations: Policy Matrix**

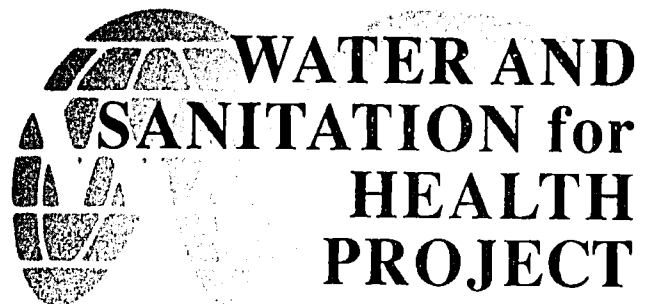
Study Recommendations	Specialist Category	Impact		Timeframe	Package/ Stand Alone	Difficulty	Priority
		Int'l	Domestic				
1. Inconsistencies in Existing Legislation	Legal	High	Low	Med.	S.A.	Low	Med
2. Financial Guarantees and Incentives	Financial	High	High	Med.	S.A.	High	High
3. Autonomy of Operation	Legal & Policy	High	High	Long	Package	High	High
4. Tariff Policy: Equity vs. Viability	Financial & Policy	High	High	Med.	Package	High	High
5. Establishment of an Independent Regulatory Authority	Legal, Fin., & Policy	High	?	Long	Package	High	?
6. Private Sector Participation Plan: (i) enclave (ii) BOT	Policy	High	High	Med.	Package	Med.	High
7. Institutional Strengthening of PDAMs	Policy	Low	Low	Long	Package	High	Low
Key:	Timeframe:	Med.	1-3 years				
		Long	Over 3 years				



PRIVATE SECTOR PARTICIPATION  
IN URBAN WATER SUPPLIES  
ISSUES FOR INVESTMENT IN INDONESIA

VOLUME II—ADMINISTRATIVE GUIDELINE

Field Report No. 330  
May 1991



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**Volume II**

**ADMINISTRATIVE GUIDELINE ON  
PRIVATE CAPITAL INVESTMENT  
IN URBAN WATER SUPPLIES**

Prepared for the USAID Mission to Indonesia  
under WASH Task No. 186

May 1991

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## **PREFACE**

### **PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES: ISSUES FOR INVESTMENT IN INDONESIA**

The purpose of this study is to assess the prospects for increasing private sector participation in the Indonesian urban water supply sector. The analysis has concentrated on capital investments and particularly on the "build, operate and transfer" (BOT) model. Issues arising in three policy areas were addressed—financial, legal, and public policy and administration.

The report is organized into three volumes. Volume I provides a summary of findings, implications, and recommended next steps; Volume II sets forth proposed administrative guidelines for water authorities in dealing with a private investor; and Volume III comprises a series of Working Papers (A through F) which deal with specific policy areas that need to be addressed if the Government of Indonesia is to successfully involve the private sector.

The study was funded by USAID/Jakarta and conducted by the Water and Sanitation for Health (WASH) Project. Field work and preparation of the reports were undertaken in Indonesia from October 1 to December 15, 1990. Consultants involved in the preparation of the report (and their respective specialties) include the following: S. Watt (team leader and engineering), Jane Walker (project manager and finance), S. Biddle (public policy), G. Letterman (legal), Lisa Kulp (finance), Tantri Marbun (finance), B. Nainggolan (finance), R. Thabrani (legal), D. Soetjipto (legal), R. Roesli (public administration), Harayatningsih (public policy), and M. Maulana (engineering).

The WASH project team would like to acknowledge the Municipal Finance Project Team, specifically Dr. James McCullough and Dr. John Taylor, for their invaluable assistance in the field work and their essential collaboration in the production of the report. WASH would also like to thank USAID Jakarta, in particular Mr. William Frej who initiated and guided the study and Mr. Peter Gajewsky who provided critical advice throughout the field work. WASH is also grateful for the time and assistance given to the team by the Directorate of Water Supply of the Ministry of Public Works, the Directorate General of Regional Government and Autonomy (PUOD) of the Ministry of Home Affairs, the Joint Technical Team for Water Supply Capital Investments and the Investment Coordinating Board (BKPM).

## FOREWORD

This *Administrative Guideline on Private Capital Investment in Urban Water Supplies* is intended to assist Sector Planners and PDAM Managers administer new urban water supply projects which are financed in part or completely by *private capital investment*.

The Guideline covers all stages of the Projects—from Identification to Implementation. However, because the main concern of Administrators is to select private investment projects that have *benefits* to the PDAMs and their customers, the Guideline concentrates on the Identification and Preparation stages. Thorough pre-investment planning is necessary because of the limited experience in Indonesia with private sector participation in urban water supply (PSPUWS) projects.

The Guideline covers *new capital investment* projects only. It does not cover the use of private firms to provide services or the use of lease contracts. It assumes that the Private Investor forms a Joint Venture Company with the PDAM to finance, build and operate the new facilities.

The Guideline does not consider project planning procedures where private sector funds are borrowed directly by the PDAM's. This is covered by the standard planning and implementation procedures of GOI.

## Section A

### INTRODUCTION TO GUIDELINE

#### 1. Purpose of the Administrative Guideline

The Government of Indonesia (GOI) has determined to promote Private Sector Participation in Urban Water Supplies for the following reasons:

- to encourage private investors to *finance new capital investment*—thereby taking the investment off GOI's budget.
- to use private sector management skills to *improve the performance* of the PDAM's.

The Guideline is concerned primarily with the planning and administration of *private capital investment* projects on a Joint Venture basis with PDAM's. The Build, Operate and Transfer (BOT) contractual model is GOI's preferred method of taking new capital investments off GOI's budget. Debt service charges on the new facilities are paid directly from consumer revenues.

PSPUWS projects can be initiated either by the PDAM's or the Private Investors:

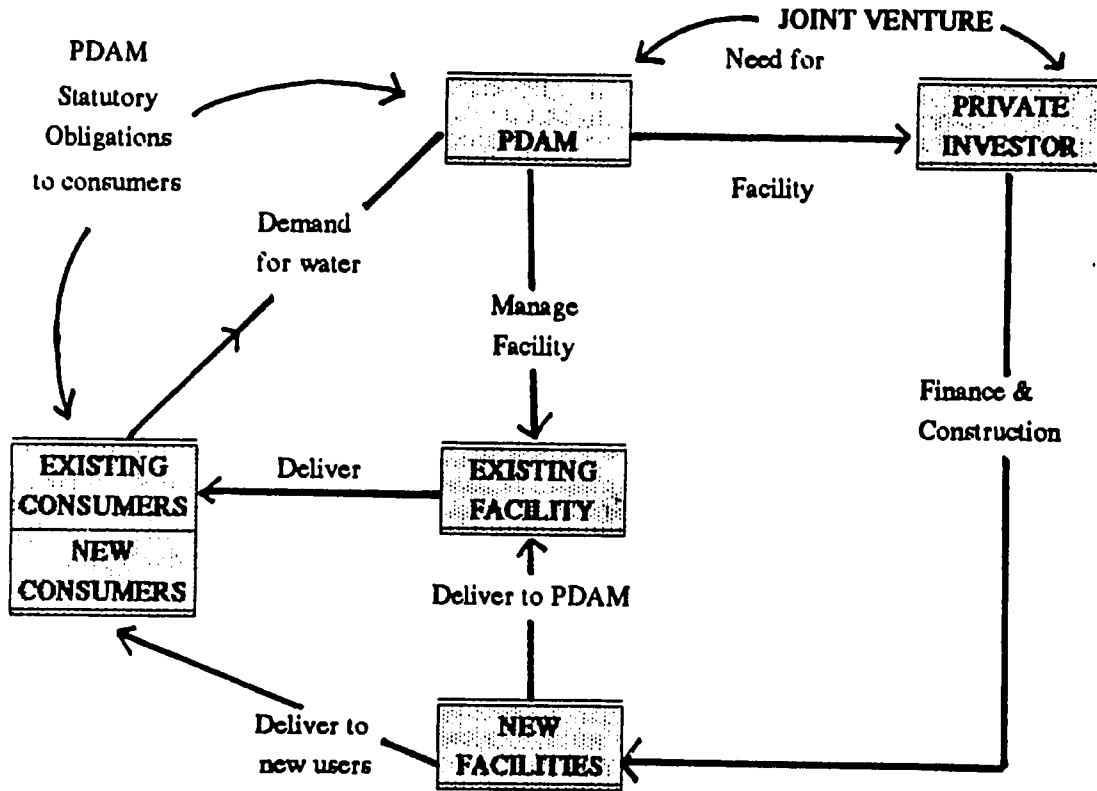
- a. *PDAM-led*—PDAM's seek a private investor to finance the BOT project, with either Domestic or Foreign finance. The new facilities meet the demand of PDAM's consumers.
- b. *Investor-led*—Private Investors seek services from the PDAM and provide finance for the new facilities which are used primarily to meet the investor's water needs.

The few examples of PSPUWS projects in Indonesia are of the 'Investor-Led' category where the private investors will *use and pay* for most of the new water supplies. The Joint Venture with the PDAM is then formed for practical reasons to share water sources, engineering facilities, and costs.

Figure 1 shows a model of a Joint Venture Company between a PDAM and a Private Investor where the Private Investor finances and constructs the *new facilities*. The water supplies from the new facilities, depending on the nature of the project, will either *service* new consumers directly, or *service* existing consumers through existing PDAM facilities, or a combination of both.

**Figure 1**

**Model of Private Sector Investment in New Facilities**



**WHO INITIATES THE PROJECT ?**

- i. PDAM-Led PDAM seeks finance from PRIVATE INVESTOR
- ii. Investor-Led PRIVATE INVESTOR seeks services from PDAM, and provides finance for the new facilities

**PDAM/PRIVATE INVESTOR RELATIONSHIP**

- o A Joint Venture Company is required by Law 11/1974 and MOHA 4/1990
- o PDAM Statutory Obligations to Consumers

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'Investor-led' projects may service industries, tourist areas, or real estate developments, where water supplies are an essential supporting infrastructure, and where the water supplied can demand a much higher tariff than can be expected in most urban areas in Indonesia.

'PDAM-led' projects may interest both domestic or foreign private investors. Foreign investors, however, are unlikely to be interested in the smaller PDAM projects (less than Rp. 50-100 billion). Foreign financed BOT projects are large, unique and of great complexity, and will require highly specialized legal and banking expertise of they are to be successful.

This Guideline, therefore, has been prepared for *private capital investment projects* that are:

- essential infrastructure for the private investor or PDAM
- paid for primarily in Rupiah
- are of relatively small scale
- mainly of interest to domestic investors.

PSPUWS financed projects are part of wider GOI strategies for urban development, which include decentralization of urban planning and management, and the mobilization of local finance through more effective user-charges. Sector planners and PDAM Managers will find these Guidelines useful in the promotion, implementation and regulation of privately financed water supply facilities within a PDAM/Private Investor Joint Venture Company.

## **2. Contents of the Guideline**

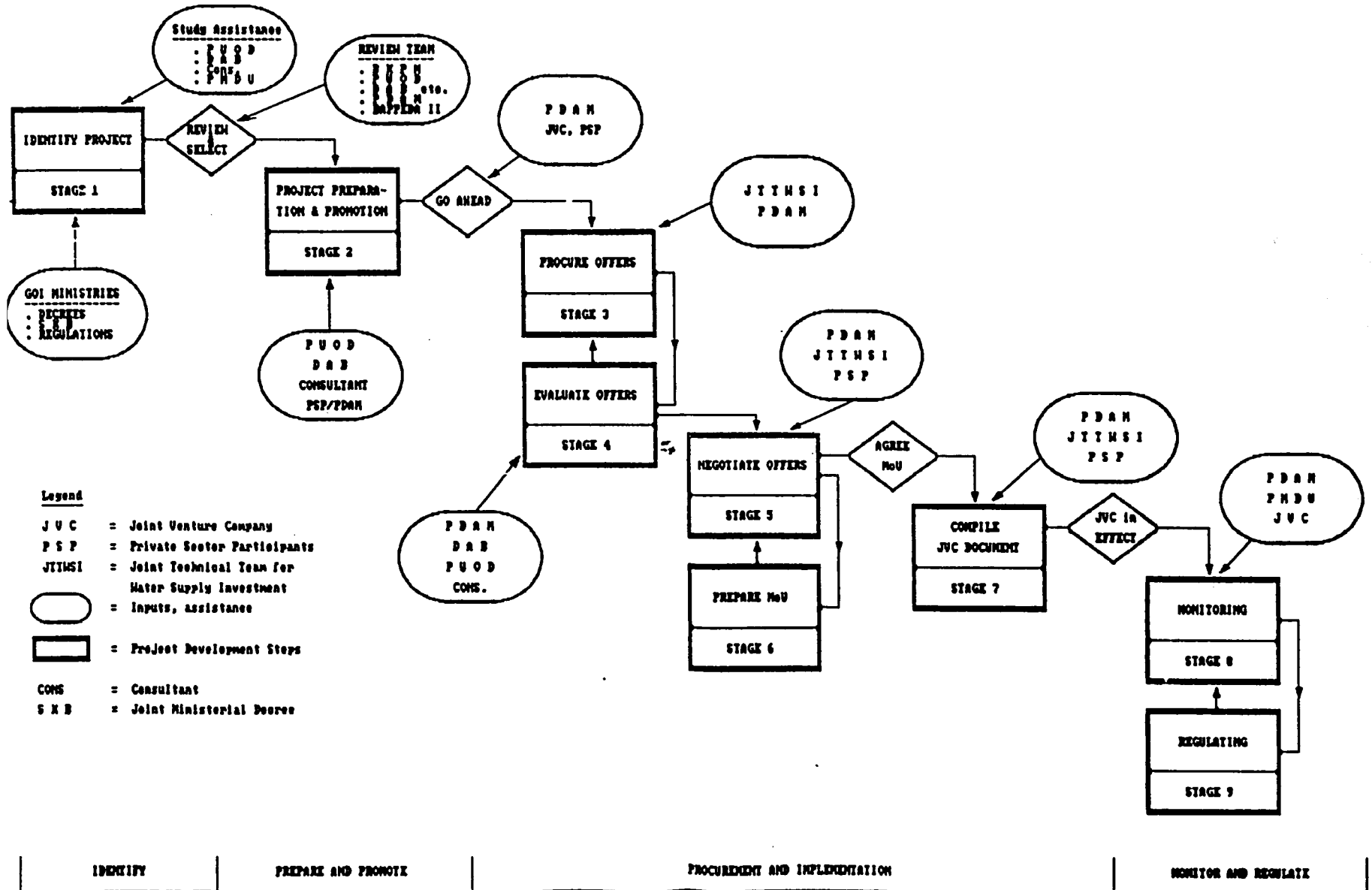
These Guidelines consist of a series of step-by-step instructions on the *stages* of preparing, implementing, and operation/regulation of PSPUWS *capital investment* Projects. They should be used in conjunction with existing GOI Regulations, Procedures, Planning Guidelines, and Standards for PDAM's and urban water supplies. See Figure 2.

There are only a few existing examples of PSPUWS projects in Indonesia and this Guideline has incorporated the experience of these projects where relevant. The users of this Guideline must take note that many of the administrative Procedures, Regulations and Directives referred to are subject to amendment and change.

The Guideline project cycle Stages are shown in Figure 2. Each activity Stage consists of a further series of Administrative Steps which will be described later in the Guideline in the relevant Sections. The tasks in each step are to be carried out by Sector Planners together with PDAM Managers. The activities of other Ministries, Agencies etc are shown linked to

Figure 2

Stages of PDAM/Private Financed Project



each project stage. The 'feed back' loops indicate that the step activities may have to be repeated.

The Guideline is divided into the following Sections:

- Section A : Introduction to Guideline.  
Describes how the Guideline may be used to assist PDAM planners and PSP investors prepare, procure, and implement PDAM/PSP investment projects.
- Section B : Policy and PSP Development.  
Gives a background to GOI policies on PSP investment; compares the requirements of both PDAMs and PSPs; and shows the Guideline user how to go about PSP projects. This will be of interest mainly to PDAM planners.
- Section C : Identification of PSP Project Packages—Stage 1  
Gives procedures to PDAM planners for identifying and prioritizing potential PSP investment projects, including a methodology of 'packaging' projects to minimize uncertainties for PSP investors.
- Section D : Preparation and Promotion of PSP Projects.  
Describes to both PDAM planners and PSP investors the procedures and scope of a feasibility study for selected PSP investment projects; and how the Project can be promoted to gain the interest of suitable private investors.
- Sections E to I : Procurement and Implementation.  
Outlines the procedures GOI requires in the *procurement* of an *agreement* between the PDAM and PSP investor to finance, build, operate and transfer an investment project to the PDAM after the concession period is completed. It does *not* cover the procurement of the engineering work.
- Sections J, K : Monitor and Regulate PSP Projects  
Reviews GOI requirements and procedures for monitoring, controlling, and regulating PSP projects during the concession period.

Because of the costs and risks involved with PPSUWS investment projects, arising partly from the nature of the contractual model for BOT concession projects and partly from the novelty of the model, the Guideline user is strongly recommended to make considerable

effort at the *identification* stage to review the options and select only *strong projects with clear potential* for further preparation. Preparation studies are expensive and time-consuming to complete; PDAM staff should review all the funding options so that the real benefits and costs of a PSP Joint Venture are understood by all parties.

### **3. Who Will Use the Administrative Guideline**

These Guidelines are intended for use by water supply sector planners in DAB and in the PDAMs and by PDAM managers. PUOD, BKPM, MoF and other Central Government offices will also use them as part of their long term planning tools. Private Investors should follow the general procedures given in preparing projects for submission to the PDAM.

### **4. How the Administrative Guideline Should be Used**

The Guideline describes the *Administrative procedures* for preparing and implementing new water supply facilities financed by private investors and PDAM's on a joint venture basis. A user guide is presented below.

The Guideline user must:

- *check* current GOI Regulations, Directives and Procedures concerning PSPUWS, especially Technical Guidelines. The "Private Sector Participation Identification Study" DGCK, (1989) contains much useful additional information which the PSP Project planners should refer to.
- *check* the purpose and outputs expected at each preparation and implementation step.
- *check* that all necessary legal steps have been followed to avoid subsequent delays.
- *keep in mind* the whole preparation and procurement process.
- *remember* that *both* the PDAM and the private investor have legitimate interests to advance and protect; both parties must agree to compromise at each stage of the projects.



## Section B

# POLICY AND PSP PROJECT DEVELOPMENT

### 1. Introduction to PSP Project Development

There is comparatively little experience with Private Sector Participation in urban water supplies in Indonesia or elsewhere in the world. This is because public water supplies are a natural monopoly requiring heavy, long term capital investment, and because public water supplies must operate both as a "social service" and as a business. Experience has therefore "grown-by-doing" in Indonesia.

One purpose of this Guideline is to assist PDAM Managers and Sector Planners present strong projects to the Private Investors to attract their interest, i.e. the aim is to assist in the *promotion* of investment projects to the private sector.

Public Water Supply institutions have developed steadily in Indonesia, evolving from water utilities which are the sole responsibility of regional DJCK—the BPAM's, to the more semi-autonomous PDAM's supervised under MOHA. Private sector finance currently can be considered within public water supplies only on a joint venture basis with the PDAM's. This Guideline must therefore consider the interests of both PDAM's and the Private Investors in the setting up of the Joint Venture Company (JVC) and the terms of the Agreement.

Private sector investment is wanted by PDAMs primarily to assist GOI meet ambitious service coverage programs and put the investments off-budget. The Private Investors are expected to be repaid by operating the new facilities in conjunction with the PDAM's, and obtain the returns to their capital investment directly from user-charges on water supplied. The emphasis is on the *mutual benefit* of the investments to both PDAM's and the Private Investors.

PDAM Managers must be aware that private funding, with its high opportunity costs (i.e. private investors can *choose* where to invest to obtain the best return),—is just one source of investment funds amongst many. The main reason for choosing private sector investment will be the limitation of alternative sources of funds.

To make PSP projects attractive to Private Investors the PDAM joint venture partner must be strong, and the investment project and JVC must be financially sound. The Private Investors seek a commercial profit in comparison with alternative investments, and with calculable risks. This requires thorough preparation of strong projects.

## **2. GOI Policy to PSPUWS**

GOI has gradually developed its policies toward private sector investment in urban water supplies since 1983, when the sector was opened to the private sector. The major policy issues are identified in Volume I of this report. The key issue identified is the control of tariff setting by Tk. II Local Government.

A review of GOI Policies, Laws and Regulations on PSPUWS is given in Annex A to this Guideline. These are in an easily accessible form for PDAM Managers, Sector Planners, and for the Private Investors.

## **3. PDAM and Private Investor Objectives**

MOHA Regulation No. 4/1990 makes inter alia a Joint Venture Company (JVC) a condition for private sector investment in new urban water supply facilities. Both the PDAM and the Private Investor require the JVC, which will build, own and operate the new facilities, to operate on business principles.

However the PDAM, as a public utility, also has statutory obligation to its consumers on issues such as service coverage for low income groups, social tariff structures etc. The Key objectives of the PDAMs and Private Investors with respect to a joint venture are presented in Table 1 for comparison.

These objectives differ basically in the requirement of the Private Investor to maximize profits, and the PDAM to carry out GOI social policies. The relative balance between these different objectives in practice depends on which party made the first move to set up the project.

## **4. Private Investors**

PDAM Managers and Sector Planners should have a clear understanding of the different financial requirements of the Private Investor, and the different types of investor. The negotiating position of the Private Investor depends on whether the project is Investor or PDAM-Led.

*Investor-Led* projects will have the following financial characteristics :

- Investor wants new water supply facilities to meet Investors demand - therefore the Investor is both the user and will pay the level of tariffs needed for the project.

**Table 1**

**Key Objectives of PDAM**

Objective	Comments
<ul style="list-style-type: none"> <li>• Off-Budget Finance</li> </ul>	<ul style="list-style-type: none"> <li>• takes capital investment <i>off-budget</i>; users pay for return on capital through water charges.</li> <li>• brings <i>real additional</i> investment funds to the sector.</li> </ul>
<ul style="list-style-type: none"> <li>• Rapid Project Implementation</li> </ul>	<ul style="list-style-type: none"> <li>• frees the Project from the Budgetary Cycle (Annual Planning Process).</li> <li>• private investor will insist on rapid implementation—this will reduce the cost of delays.</li> </ul>
<ul style="list-style-type: none"> <li>• Ensure Public Policies are Implemented</li> </ul>	<ul style="list-style-type: none"> <li>• extend service coverage and fulfill unmet needs.</li> <li>• support continuing service to PDAM area consumers.</li> </ul>
<ul style="list-style-type: none"> <li>• Improve Performance of PDAM</li> </ul>	<ul style="list-style-type: none"> <li>• Private Investors want PDAM performance improvement in order to increase revenue stream.</li> <li>• Private Investor will rationalize management and staffing of JVC; public sector personnel will learn more effective management practices.</li> </ul>
<ul style="list-style-type: none"> <li>• Possibility of Making a Profit</li> </ul>	<ul style="list-style-type: none"> <li>• Reasonable expectation of a commercial rate of return on investment.</li> <li>• Wants certainty of revenue streams ie. Keep Tariff Levels at least in line with installation.</li> <li>• Investor-Led: share the use of PDAM resources and share costs.</li> <li>• PDAM-Led: private investors will mostly be engineering suppliers who can get an early return on investment</li> </ul>

**Table 1 (cont'd)**

Objective	Comments
<ul style="list-style-type: none"> <li>• Investor-Led Water Demand</li> <li>• Calculable risk</li> <li>• Few Uncertainties</li> </ul>	<ul style="list-style-type: none"> <li>• Meet Private Investors Water demand.</li> <li>• wants control over all risks, such as cost over runs, etc; wants relation between PDAM and TK.II Local Government clarified.</li> <li>• PDAM-Led: Private Investor wants guarantee on investment (ie. sovereign guarantee)</li> <li>• Clarity in Regulation Framework.</li> <li>• Consistent application of Policy and Regulations</li> <li>• Enforceable JVC Agreement.</li> <li>• Effective Force Majeure conditions.</li> </ul>

- Water supplies are just one component of investors' project and are likely to be essential supporting infrastructure to much larger assets. High Tariff levels will not be a problem.

*PDAM-Led* projects have different characteristics:

- Investors interest is *only* in providing finance for the project at commercial rates of return
- PDAM's are interested in big investments on a long term basis at low interest rates to meet the water needs of the general public (ie. domestic, commercial and industrial).

Traditionally, sources of private capital investment funds for water supply utilities are long term lending institutions looking for safe investments'; they will accept relatively low rates of interest compared with venture capital. These institutions include Insurance and Pension Funds, Municipal Banks etc. The market for these types of funds is, however, not well developed in Indonesia—although they offer the most appropriate long term prospect for PDAM borrowing.

This Guideline assumes that the source of private sector funds consists of the Private Investors' own resources, plus other borrowing from Indonesian or Foreign Banks. Private Investors wanting new water supply facilities to meet their own demands will expect a lower return on their investment than in PDAM-Led projects.

PDAM Managers and Sector Planners must, in the course of preparing the project for promotion, have a clear picture of the real costs of joining with the Private Investors when compared with using alternative sources of finance. The costs of the alternatives must be assessed and compared thoroughly during the Project Preparation process.

## **5. Project Packaging.**

### **a. Investor-Led Packages**

Investor-Led projects may take whatever shape the Private Investor and the PDAM can agree on. The investment projects may range in scope from additional works which will, together with existing PDAM facilities, meet the Private Investors water demands. These may include water production, transmission and distribution facilities, and also include the operating and management of the complete system.

### **b. PDAM-Led Packages**

PDAM-Led projects, however, will only interest the private investors if the investment fits in with the investors' business, ie. a pipe manufacturer may be interested in a pipe line project; or if the project has clearly defined costs, revenues, and risks.

In accountancy terms, the project should be packaged on a 'cost-center' basis, where inputs and outputs can be measured, *calculated* and *controlled* with reasonable certainty during the concession period.

In practice, the most suitable project packages for private sector investment are large project units, such as dams, pipelines, treatment works etc. Private Investors are unlikely to be interested in distribution systems, which have operating parameters difficult to measure and cost, and which involve many other agencies.

### **c. Packaging from PDAM Master Plan**

Project package investments should be part of the PDAM's long term Master Plan Investment Program for the whole system. Master Plans consist of an optimized long term development sequence with a series of investments to meet forecast demand over the next 20 years. The Plan is constantly adjusted in response to changing conditions as they arise.

The immediate, *preferred project* consists of components of the Master Plan which have been prioritized for immediate implementation. The following prioritization method should be followed by the PDAM:

- i. *Improve Current O & M*, giving a more effective supply with the same assets, ie. plant rehabilitation, well screen cleaning, machine repairs, leakage control etc.
- ii. *Remove Bottlenecks* by investing in mechanical/operational constraints to improve overall system performance.
- iii. *Increase total service coverage* by extending the system or constructing a new system.

PDAM-Led project packages are most likely to have as their objective the removal of bottlenecks in the system by capital investment in new facilities, or as large unit investments in the extension of service coverage.

## **6. PDAM/Private Investor Joint Venture.**

Before a Private Investor can become involved in public water supplies a Joint Venture Company must be formed to include the Private Investor and the PDAM. The JVC is required by MOHA Regulation 4/1990.

The JVC must obey all GOI Laws, Regulations, Directives etc. with respect to the water supply service for the public, including policy regarding service coverage and tariffs.

This Guideline provides details on the procedures of forming the JVC based on experience already gained in Indonesia.

## Section C

# IDENTIFICATION OF PRIVATE FINANCED PROJECTS—STAGE 1

## 1. Introduction to Identification

### a. Purpose of Identification Stage

Before a potential project is chosen for detailed preparation and promotion to private investors, a range of potential investment projects packages should be identified and evaluated as a desk-top study to assess costs, benefits, and after impacts. This study will review all the likely problems with the investment project, and select the most promising project for further study.

The Identification Stage is necessary because it allows the PDAM Managers and Sector Planners to keep an open mind on the full range of options for increasing the capacity of their water supply systems, including the different funding options. It will allow an early decision to be made on whether or not to pursue further the private investment option.

The Identification Stage is carried out mostly for PDAM-Led projects, although it may also be used where a Private Investor seeks early discussion of an Investor-Led project.

### b. Intended Audience

- Head/Director of Water Enterprise (PDAM) at Local Level.
- Representatives from related Central and Provincial Agencies—the Sector Planners.

### c. What Is in Identification Study

The Identification Study should systematically identify and carry out preliminary studies on a range of projects considered appropriate for private sector investment, within a PDAM's jurisdiction. Costs should be developed based on outline designs, approximate quantities and unit costs. Revenue streams should be based on a realistic assessment on both the consumers ability to pay increased tariffs in line with inflation, and the willingness of Tk. II Local Government to agree increases.

The Study must also present a rational method for prioritizing the options considered, and a decision-making process whereby a strong project can be selected for further preparation.

The Study must also consider potential Private Investors, and begin to match the project needs against the needs of the Investors.

**d. Procedures in Identification Guidelines**

The Identification Guideline is divided into four (4) activity steps as shown in Figure 3:

- Step 1: Identify Project Package
- Step 2: Identify possible Private Investors
- Step 3: Prepare Identification Report
- Step 4: Planning and Action.

**e. Outputs expected**

The main output of the Identification Stage is an Identification Report summarizing the study activities and conclusions, and including an Action Plan. The Identification Stage is an *essential* lead-up into more detailed, preparation. The accuracy of the costs and benefits developed shall be in the order of plus or minus 20%.

The Identification studies are preliminary studies only, but should include all the major aspects of the proposed PDAM/ PSP joint venture at a desk-top level of detail, and should resolve all major issues at an early stage. A main purpose of the Identification report is to present the PDAM Manager and Sector Planners with enough evidence of PSP project viability so they can decide whether or not to continue with Project Preparation.

**2. Identify Project Packages—Step 1**

**a. What the PSP Wants**

The likely requirements that a private investor will want to see satisfied are described in Section B of this Guideline. These include:

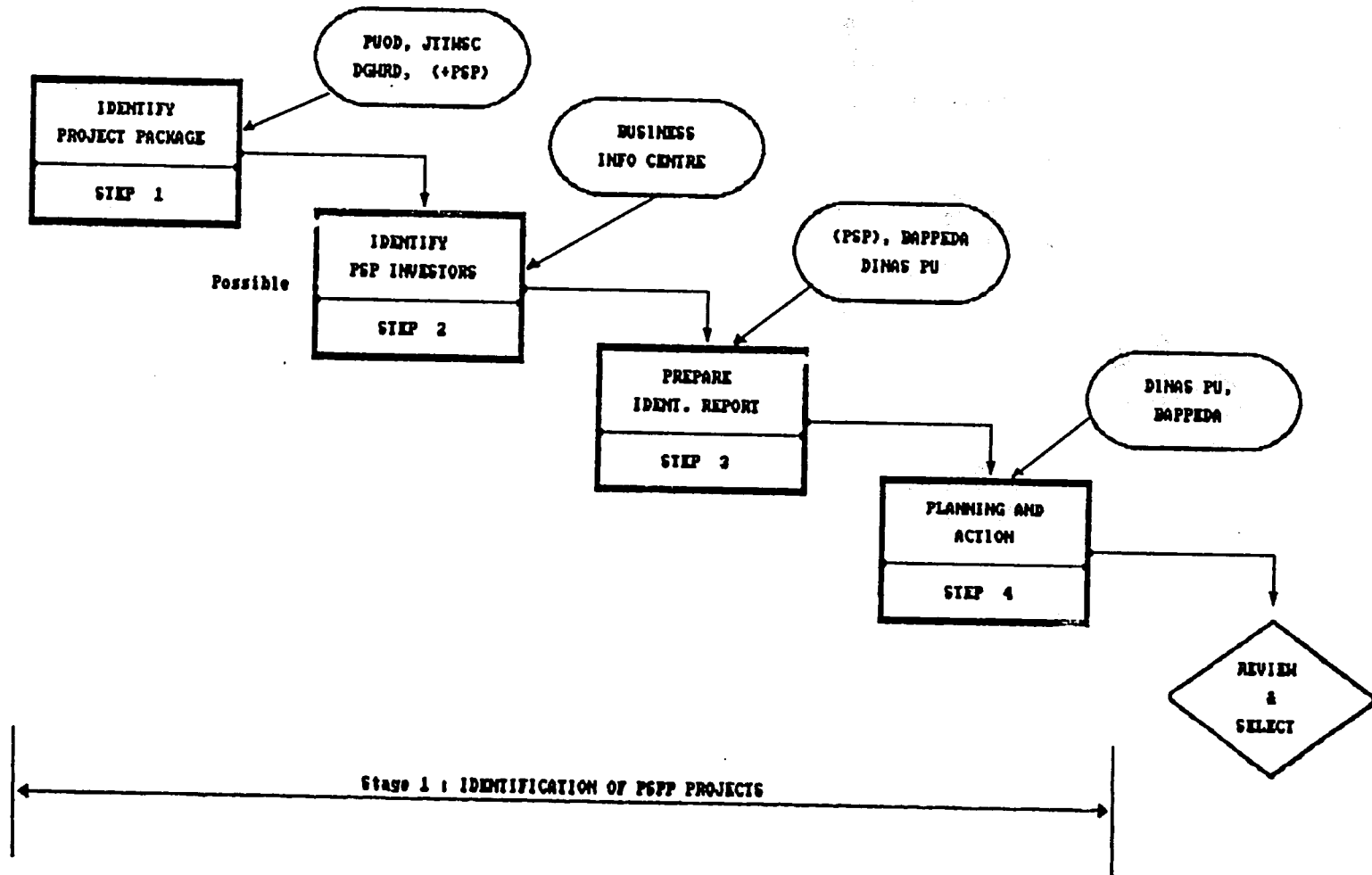
- Possibility of making a commercial profit
- Calculable risk (i.e. of not making a profit)
- Few uncertainties.

A major purpose of the pre-investment planning work for the PDAM-Led investment projects is to produce evidence that these requirements can be met. The work must satisfy the PDAM Manager and Sector Planners that the proposed project will be beneficial to both the user



Figure 3

Identification Process  
"Identification of Projects"—Stage 1



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and the national economy. The Private Investors will check the studies and make their own decision about the commercial benefits they can obtain from the project.

Although they will be addressed in detail during the Project Preparation study, these PSP requirements must also be considered during the desk-top Identification studies.

**b. PDAM Master Planning and Project Identification**

The PDAM should already have a long term Master Plan for the water utility with an optimized development sequence. This sequence will consist of a series of system improvements and enlargements on a year by year basis to meet the forecast demand for a 15-20 year planning horizon.

The purpose of the Master Plan is to provide an investment program framework, especially for the larger investments with a long design life. It screens and ranks alternative projects and defines the *priority project* to be implemented.

Producing the Master Plan is an iterative process which appraises a range of projects, varying in scale and scope, with alternative development sequences. It considers the number of consumers/users who will be provided with varying levels of service in each of the utilities service zones for the planning period. The design of the service level pattern affects the demand that has to be met by the system; and also the revenue streams that can be produced.

The *priority project* for immediate implementation will be designed to meet the demands of the system with a shorter, 5-10 year design horizons, depending on the type of project component. The larger components of interest to the Private Investor will have a longer design horizon than this. Where the new project concerns increased connections or changed service levels, a *Real Demand Survey* must be carried out to test the assumption that the users will in reality use and pay for the new service, and assess User-Preferences and Affordability. This will be a task of the Preparation Stage.

The production of a Master Plan for a utility is a major task. However, it is an essential planning and management tool for the PDAM. It will signal to the Private Investor that the PDAM Managers have an effective development plan.

**c. Project Packaging Method**

The Master Plan for the water supply system will be revised after every major new investment to allow adjustments for changing circumstances,—ie. demand, service areas, service levels, revenues etc. The Plan should adopt the following prioritization method:

- i. Improve current O & M efficiency  
— this will always be a cost effective investment.
- ii. Remove bottlenecks in the system  
— this will involve investments in new system components.
- iii. Increase total service coverage.

Private Investors are very unlikely to be interested in O & M investment, unless it substantially increases system performance and it is an integral part of the investment package. Improved O & M and management practices of the PDAM's may, however, be a precondition of the Private Investors interest in a potential project. Preparation projects should be chosen and "packaged" in a way that interests the private investor.

The project packaging method will review the Master Plan and select an investment project package that fits into the Plan. A list should be made of the following:

- Project inputs
- Project outputs
- Uncertainties.

The projects with the fewest uncertainties and with the minimum risks are the likely to be chosen for the study. Planners must keep in mind, however, that projects to improve O & M should not lose their priority.

Uncertainties concerning the investment project are mainly concerned with uncertainties on the revenue streams, i.e. tariff levels and users willingness to pay; O & M costs; and Tk. II local government transfer. The main strategy behind project packaging to meet the requirements of Private Investors is to select possible investments that reduce the uncertainties of the Private Investor making a commercial rate of return-by making certain that the outputs can be simply measured, controlled, and charged for.

### **3. Identify Possible Investors—Step 2**

For Investor-Led Projects the PSP project planners, although they do not have to locate the private investment funds, should review all other possible sources of funds for the needed new facilities. This will give a broad view of the long term costs of different funds, and a more balanced assessment of the Private Investors conditions.

PDAM-Led projects have to identify possible sources of private sector investment, primarily equity financing. This may be carried out by reviewing the success of other PDAM's in attracting private finance, and other Government agencies responsible for private investment, including BKPM PROPINSI and other agencies with contacts in water development, such as PMDUs and more generally DAB and PUOD.

A Key GOI requirement for private investment in the water supply sector is for the project funding to be off-budget, ie. financed and built by private investors, and operated for a concession period of up to 20 years.

The PDAM Managers and Sector Planners should carefully review the basic requirements of Private Investors and check to see if these requirements can be met by the PDAM, and the trade-off in terms of costs, loss of control etc that may be necessary to attract the Private Investors.

#### **4. PSP Project Identification Report—Step 3**

The Identification Report consists of the preliminary engineering and financial investigations into the potential PSP projects taken from the existing Master Plans, IUIDP Programs etc, and packaged to suit the requirements of the Private Investor.

It is a review of existing project outlines and an assessment of PSP interest. It contains the following information:

- the need for the project investment to meet water demand
- a review of the project investments already identified
- a description of the project packages
- a review of the private investors requirements
- a summary of the costs and benefits of the project package option(s)
- a comparison of real costs of private investment and other sources of funds for the project
- an assessment of the users willingness-to-pay
- a prioritization ranking of the packages, and recommendation for future action.

## **5. Planning and Action—Step 4**

The final step in the PSP project Identification process is to review the findings of the Identification Study, and to make a decision whether or not to proceed with the more costly Preparation activities.

Project Preparation is expensive—approximately 4 to 8% of built-costs, and should be carried out only after thorough deliberation by all responsible bodies as to the merits of seeking BOT private investment in comparison with other sources of private loans, such as banks, etc.

If a decision is made to confine with a selected and prioritized project, an Action Plan should be made with a program for the Project Preparation Stage, an estimate of costs, and the funding source for the study work.

## Section D

# PROJECT PREPARATION AND PROMOTION—STAGE 2

## 1. Introduction to Project Preparation & Promotion

### a. Purpose of PP and P Guideline

Project Preparation should only be carried out on PSP investment projects that have been identified, assessed and prioritized; that fit into the PDAM Master Plan; and bring real additional benefits to the PDAM and its users. Project Preparation is expensive and time-consuming, but is essential before the final implementation decision is made.

For PDAM-Led projects the Project Preparation Report (PPR) is a necessary part of the Project Investment Profile (PIP), which is used by the PDAM to promote the selected project to private investors.

The purpose of the PP & P Guideline described in this Section is to provide a comprehensive methodology for the pre-investment planning work of PSP investment projects. It asks the following questions and presents evidence of the answers:

- is the project technically viable?
- does it meet the financial requirements of both the PDAM and the Private Investors?
- does it bring real additional benefits?
- what are the impacts of the project?
- how best to promote the project?

### b. What Is in the Guideline

The Guideline consists of step-by-step instructions on how to administer the PP & P work and how to present the evidences of the project's viability in the Project Preparation Report (PPR) and Project Investment Profile (PIP). It does *not* contain details on the technical procedures of the preparation work.

**c. Private Investment Models**

The model of Private Investment discussed in this Guideline is limited to BOT: Joint Venture Schemes only, where the Joint Firm (the Private Sector and Representative of Public Enterprise) build and operate the water facility for a certain number of years. The Joint Firm has full Rights of Operation of the system and authority to set Tariffs within the policy framework of Local Government.

There are many variations of Joint Venture Schemes that could be adopted, and all are appropriate as long as they follow the main objectives of putting the investment cost of the system off GOI's budget. The variation of arrangement will depend primarily on the type of projects packaged for the investment system.

**d. Intended Audience**

- Head/Director of Water Enterprises (PDAM) at Local Level,
- Representative from related Central and Provincial Agencies,
- The Private Investor who are involved in and concerned with the Project (Consultants/Contractors),
- BKPM (Investment Coordinator Board) in line with promotional activity based on "Project Investment Profile".

**e. How Guideline Is to Be Used**

The Guideline is to be used as a source of practical procedures and clear information on Project Preparation and Promotion. It provides all information sequentially, and can be used as a reference for specialized items (e.g.: how to arrange a bid meeting, on what level of detail the PPR will be, etc.). The information in the Guideline comes with step by step approaches starting with "Setting Up the Studies" and finishing with "PPR Approval".

The Guideline also presents step by step instructions on Project Promotion, finishing with a Project Investment Profile which the PDAM can present to BKPM.

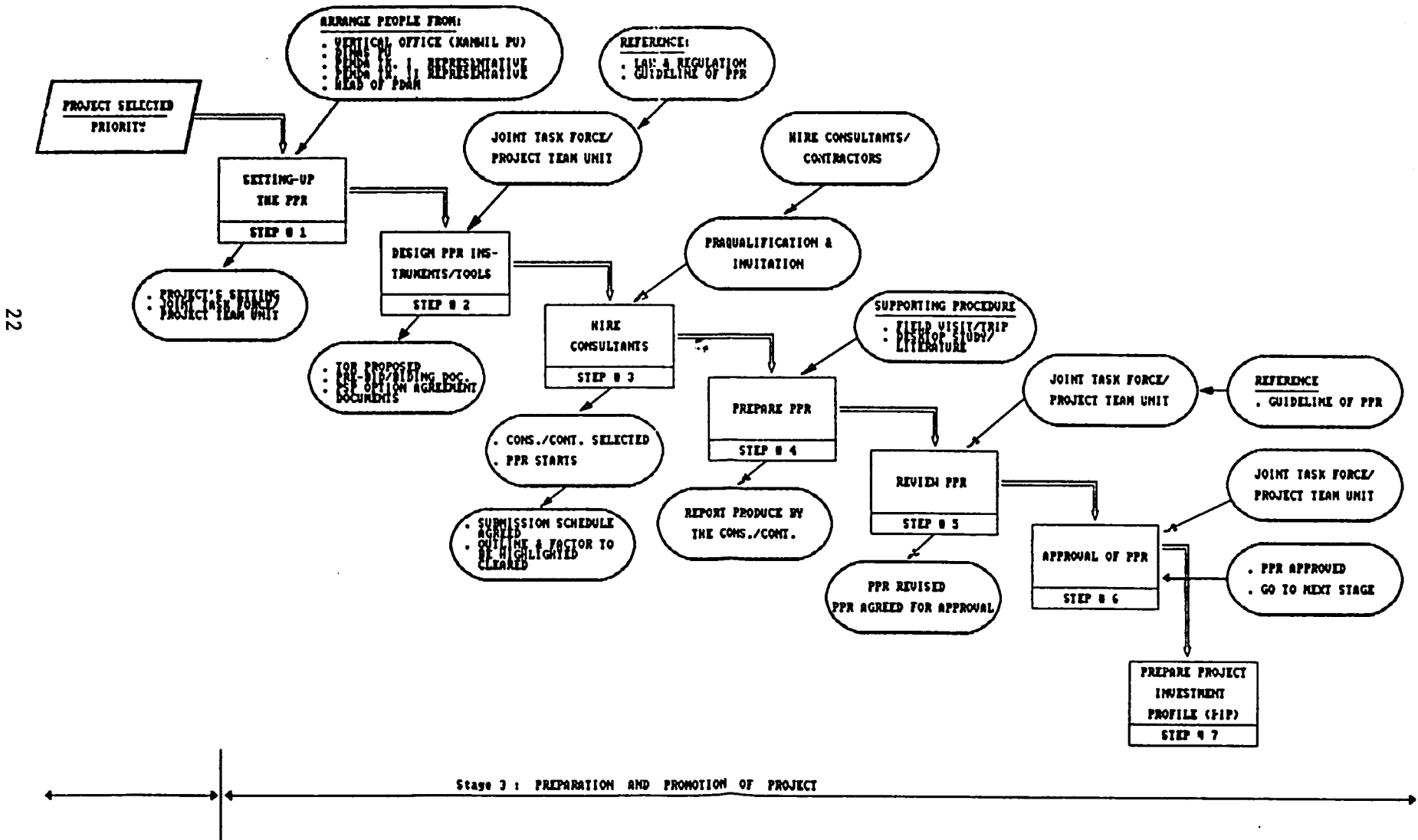
**f. Procedure in PP & P Guideline**

The Guideline is divided into seven activity steps, Figure 4, as follows:

- Step 1: Setting Up the Studies,
- Step 2: Design PPR and Prepare TOR,

Figure 4

Preparation and Promotion Process  
 "Project Preparation and PIP Documents"—Stage 2



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- Step 3: Hire Consultants,
- Step 4: Prepare Project Preparation Report (PPR),
- Step 5: Review of PPR,
- Step 6: Approval of PPR, and
- Step 7: Prepare Project Investment Profile (PIP).

**g. Outputs Expected from PP & P Stage**

Two outputs are expected:

- a). The Project Preparation Report (Feasibility Study of Project), with all the Evidence, Standard and its Approval, and
- b). The Project Investment Profile.

**2. Setting Up the Studies—Step 1**

**a. Who is to do it**

The initial project preparation activities for a water supply private capital investment project will depend on whether (a) the private investor identifies the project and initiates an offer to government, or (b) the government issues an invitation document to the Private Investors.

In case (a) the private investor will first obtain permission from central and provincial governments and the water supply enterprise PDAM to carry out preliminary data collection for project evaluation activities.

The responsibility for costs of the preparation work will be negotiated between the private investor and PDAM. Both parties will supervise the Project Preparation work.

The private investor must satisfy the government side that it has suitable credentials and capabilities and has serious intent to develop a realistic project.

In case (b), it may be assumed that the PDAM will have already identified the project and its objectives. The private investors should clearly understand the extent of available data, previous studies, and the extent of competition to be expected from other bidders.

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This Section D will describe the Project Preparation Report (PPR) that should be carried out either by the PDAM, the Joint Venture (PDAM and Private) or the Private Investor alone.

Step 1 activities for the PDAM will involve several representatives from various institutions which in turn act as a Joint Technical Team (JTT) for developing the PPR. The JTT will consist of agencies/institutions related to the Public Enterprise affairs as follows:

- a). *PMDU (Project Monitoring and Development Unit)*—will give advice to the Team about the latest Directives and Regulations (Provincial Level).
- b). *Dinas PU Tingkat II*—acts as resource person and will provide a perspective as to all Infrastructure developments on the relevant area.
- c). Representative from Tingkat I—this position will act as a advisor especially if the proposed project has an option for Loan and/or Full Private Participation (such as Lease and Concession/BOT).
- d). *Head of PDAM* and/or his Staff—as main actor in this JTT and responsible for all process.
- e). *Representative from Pusat*—MOHA cq. Directorate of State/Public Enterprise and MPW cq. Directorate of Water Supply.

This Step also covers several activities including :

- a). Preparation of Work Program which consist of all detailed work to be done by the JTT.
- b). Prepare Team Organizational Structure and Job Description, and
- c). Get Team's Letter of Approval.

**b. What Is to Be Done in the Studies**

Based on the "Selected Project" from the Identification Stage, the JTT should define the Project Scope of Work which will provide the basis for TOR preparation. Several Key issues have to be resolved at this point:

- a). Is there possibility of the project being funded by private sources or from other donors?

- b). If so, what kind of preparation and procedures should be considered and what impacts should be taken into account?
- c). Are there any specific conditions to be satisfied if the Private Sector wants to be involved in the project?
- d). What type of Private Co-operation is needed for effective implementation? This statement will also cover Private involvement procedures (i.e.: Rights of Operation, ownership status, etc.) and organization.
- e). What are the Project characteristics?
  - Multi Year Project.
  - Essential Early Step Project.
- f). How relevant is the Project compared with Repelita V achievement targets? Is there any need for Central Government Directives?
- g). How closely will the JVC be assisted by specialist consultants (for larger, internationally-financed projects).

### **3. Design Project Preparation and Prepare TOR—Step 2**

#### **a. Review Directives**

There are various National Directives in the water supply sector, but also there remain extensive problems to be solved with regard to the institutional arrangements, especially in connection with the decentralization of development functions from Central to Local Government. This involves the degree of readiness of Local Institutions to manage and control all the Private Investment arrangements

Several Directives that have to be considered in designing Project Preparation are:

- a). *National—Repelita Target Achievement*, it should be expressed clearly in the Report—how will the Project contribute to the target?
- b). *Identification of the Legal Framework of the Cooperation—Agency Agreements* (Joint Venture Status) which will consist of the Institution which will be responsible for, and control, the activity of The Company (Joint Venture Company) and the organizational structure of the company (which represents the mechanism of PDAM

and Private Collaboration); See Annex A for the relevant Regulations on PSPUWS.

c). *Clarification on financial—operational aspects such as:*

- shared composition or financing cooperation (between Public Authority and Private Investors—Domestic or Foreign).
- government guarantee on water sales (including Rights for Tariff Control and Competition).
- service proportion between domestic and non domestic supplies of the Project. The Individual Domestic level of service must be more or less same as the current standard.
- service proportion between the PDAM and private investor and responsibility for management functions.

b. **Review of Other Guidelines**

Other guideline that should be reviewed are:

- a). The guideline or Criteria for Government and Private sector cooperation arrangements.
- b). Guideline on periods of cooperation or the length of "Firm" Concession (in line with aspects to be considered for determination of cooperation period).
- c). Guideline on Capital ratio indicators (agreed measurable indicators).
- d). Guideline on Financing Cooperation.

c. **Prepare Tools for the Studies Activities**

The successful procurement and implementation of the Project will be determined by the quality and comprehensiveness of: (1). the proposal request (should be expressed in the level of detail given in the study structure—see section E3, page 42) and (2). the service contract documents (preparation of TOR, Project Contract, and Project Document). This will facilitate a smooth and orderly transition to the formulation of the JVC Agreement.

After all Directives and relevant Guidelines have been reviewed, the JTT should prepare the draft JVC Agreement and the TOR.

The requirements and scope of the JVC Agreement should be developed and agreed by the JTT before the TOR is prepared. They will provide an essential background to the Project Preparation work.

a). *Draft JVC Agreement Documents,*

The next activity is to prepare a draft JVC Agreement which will show the arrangements between the Local Government PDAM/the JVC to provide the water supply services. It will become the principal document in any Private Investor project.

This contract outlines terms of the Private Investor/PDAM partnership and should include any provisions to protect the interests of both partners in the transaction. The formal structure of the JVC Agreement Document is given in Table 2.

b). *Terms of Reference (TOR) of the Studies,*

The TOR has to explain very clearly all aspects of the Study. It consists of a brief overview of the Studies covering :

- Study Background,
- Goal and Objective of the Study,
- Study Coverage and Limitation,
- The Analysis Method that should be taken in the Study,
- Main structure of the Proposed Report (see Annex C),
- Other matters related to the Study Preparation.

c). *Bidding Procedure for PDAM-Led Projects,*

Bidding procedures as discussed in this section apply only in the case of Joint Venture/BOT. The method should be carefully selected based on the Competitive, Low-Bid approach. The PPR should be proposed bearing in mind the detailed requirements of both the PDAM and PSP.

Usually, Competitive Bidding is appropriate for simple project schemes (e.g.: contribution/civil works—treatment plant, main distribution pipes, etc.). For larger and complex project schemes, Direct Invitation Procedures may be more appropriate. Two activities should be taken in line with the competitive bidding method—(1). examination/pre qualification of short list of the Candidate Investors and (2). preparation of a bid offer.

**Table 2**

**Suggested Structure of JVC Agreement**

- **Technical and Operational clauses:**
  - design and construction supervision
  - operation and maintenance supervision of services under JVC control
  - environmental standard and procedures
  - laboratory requirements
  - modification to existing structures and equipment.
- **Financial clauses:**
  - operation and maintenance expenditures
  - rate of price escalation of project components
  - tariff structure and execution/collection procedures
  - insurances
- **Legal and Institutional clauses:**
  - design and operation responsibility and management
  - O and M responsibility and management
  - enforcement warranty
  - security procedures
  - organizational structure and staffing management
  - training responsibility and management
  - compliance with Local and State Government regulation
- **Force Majeure Conditional clauses**
- **Concession Renewal option clauses:**
  - project concession period
  - project concession renewal option
- **Project Control clauses:**
  - record keeping and reporting requirements
  - municipal access to facility and records
  - municipal responsibility for service coverage
  - unanticipated growth procedures
- **Project Contract Sanctions:**
  - contract sanction penalty
  - contract termination conditions
- **Transition Procedures and Responsibility clauses**

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#### **4. Hire Consultants—Step 3**

##### **a. Prequalification and Invitation**

Consultants will be hired by the PDAM to carry out the PPR if they consider that the proposed project has enough potential to attract Private Investors.

The JTT will pre-qualify a small number of competent Consultants capable of completing the proposed project including both the Project Preparation Report and the Project Investment Profile (PIP) Report.

Next, the PPR Bid Invitation document is sent to the selected prequalified Consultants. The invitation documents should be carefully prepared, giving a clear statement of project scope and client's needs (see Page 8 above).

##### **b. Pre PPR Bid Period**

In this activity the JTT will arrange a meeting with the selected consultants. The meeting has, at least, two functions: (1). for the clients (Government) as a forum for explaining the technical details of the Project, the procedure for project proposal submission (financial and administrative procedure) and to give or remind about policy pointers in line with the Project, and (2). for the consultants as the last opportunity before the PPR to express their comments on the Project TOR. This meeting is important because PSP Project Preparation has different requirements to conventional water supply projects.

##### **c. Hire Consultant**

Based on normal bid evaluation procedures a Consultant may now be contracted to carry out the PPR and PIP Report.

#### **5. Prepare Project Preparation Report—Step 4**

##### **a. Objective of Project Preparation Report**

The main objective of the PPR is to prepare and present evidences on the proposed project to demonstrate technical and operational, financial, institution and legal feasibility. This Report will be the basis for assessing Joint Venture possibilities, and later will act as a source of agreed project findings between the partners. More clearly, the objectives of PPR are as follows:

- a). to determine whether or not to proceed with implementation
- b). to identify the level of feasibility (at 10% of significance) for project implementation,

- c). as a basis for JVC Agreement Document preparation,
- d). as a source of latest project data that can be used further for both sides or partners in negotiating and executing the project.

The PPR for private capital financed projects will differ from the more normal feasibility studies only with respect to the way that finance and equity issues are treated. The PPR should also clearly show how historical PDAM performance affects the profitability (or otherwise) of the proposed project.

**b. How to do the Study**

The study or The Project Preparation Report (PPR) is a record of feasibility findings and conclusions, and *not* a description of the feasibility study activities. The content and level of detail of the PPR depends on the type of Project being submitted, and the specific requirements of the project.

The PPR will incorporate and clearly delineate all of the provisions, terms, and conditions that are of primary concern to the community, the PDAM, and the Private Investor. One of the reasons for a comprehensive PPR is to allow a rapid appraisal of the project to avoid delays in promotion or implementation.

**c. Recommended Structure of Report**

The Project Preparation Report should be seen as one of the administrative instruments in the Planning Process. The structure and contents of the Report should focus on Key evidences. A suggested Project Preparation Report structure is given in Table 3.

The major differences between the Private Investment project feasibility study, and the more conventional PDAM studies are:

- the use of a FIRR to measure net cost flow will not be acceptable to the private investor who will be looking to see if revenues are enough to cover costs *early* in the project.
- the Private Investor will want to be certain that the existing PDAM is being managed effectively—i.e. that it is a strong partner.
- the Private Investor will concentrate on the net revenue streams and the risk that revenue forecast will not be met.



**Table 3**

**Suggested PPR Structure Outline**

<b>Executive Summary</b>	
<b>I.</b>	<b>Introduction of the Study</b>
1.1	Study Background
	• Present Status of PP & P
	• Project Relevant Studies to date
	• Administrative Responsibility of PP & P
1.2	Objective and Scope of the Study
1.3	Requirements of PDAM and Private Investors
<b>II.</b>	<b>Project Area and Need for the Project</b>
2.1	Description of The Project Area
2.2	Existing Socio-Economic Condition
2.3	Water Sources in Project Area
2.4	Existing Water Supply System
2.5	Population and Water Demand Projections
2.6	Need for Water Supply Project Investment
<b>III.</b>	<b>Description of Proposed Project</b>
3.1	Project Objectives
3.2	Project Water Source
3.3	Technical Description of Investment Project
3.4	Operation and Maintenance of Project
3.5	Implementation Schedule of Project
3.6	Environmental Impact Analysis (if necessary)
<b>IV.</b>	<b>Project Organization and Management</b>
4.1	Joint Venture Company Arrangement
4.2	Management Structure
4.3	Concession Agreement
4.4	Contractual Arrangement
4.5	Project Operational Control
4.6	Staffing Plan and Training Requirements
<b>V.</b>	<b>Project Financial Analysis</b>
5.1	Project Assumptions
5.2	Financial Statement for PDAM and Project
5.3	Estimate of Project Cost
5.4	Implementation Schedule of Project (incl. expenditure schedule)
5.5	Financing Plan—PDAM and Private Investor
5.6	Bulk Water Charge (Tariff Design)
5.7	Conclusions of The Project Study
<b>See Annex C for detail explanation of each item.</b>	

## **6. Review of Project Preparation Report—Step 5**

### **a. Set Up Evaluation Team**

The Review activity takes place after the completion of the PPR by the PDAM and the Private Investor in the case of Investor-Led Projects; and by the PDAM only if they are promoting the project to the private sector. The objective is to find out the baseline criteria that comprise the minimum consideration for appraising the project. Steps to be taken for setting up the Team are as follows :

- a). Set up the Review Team,
  - select staff in line with the qualification needed, PDAM/PSP projects,
  - review format procedure.
  
- b). Set up the Review Methodology,
  - Define critical appraisal criteria for project,
  - Agree indicators or measurement factors of each criteria,
  - Obtain and compile all relevant standard or criteria to be applied, and policy issues to be considered during PPR review,
  - determine the methodology in assessing the Report.

### **b. Review Project Preparation Report**

- a). Aspects to be reviewed for PSP Projects,

The review will be based on the TOR of the PPR. The areas of principal concern are as follows:

- the need for the project,
  - PDAM users
  - Private Investors use.
  
- the management and condition of the existing system,
  - is performance improvement necessary to attract Private Investors?
  - is new capital investment in plant more effective in meeting demand than better O & M on the existing system.
  - is project integrated into system. or does it conform to the 'package' approach with few uncertainties.
  
- an estimate of investment costs, and potential of cost overruns.

- the willingness of users to pay increased tariffs,
  - PDAM users
  - use by Private Investors.
- Key areas of financial interest in project:
  - attitude of international and bi-lateral funding agencies towards investment in the proposed project,
  - preparation and bidding cost,
  - international and local capital market assessment of leading risks to Indonesia and specific project,
  - concession periods and loan repayment periods,
  - facilities which can be provided by government with respect to fiscal, non fiscal and monetary aspects,
  - potential returns on investment capital and the capacity to service loans and pay dividends to investors from revenue income.

- b). **Review Conclusion,**  
 Based on the above review, the team will make a summary conclusion. This summary should be prepared in brief, clear form, and make a strategic picture of the proposed project. The notes then can be used as an assessment framework for promoting or negotiating the Project.

## **7. Approval for Project Preparation Report—Step 6**

### **a. Who is involved in Approval of the PPR**

The Approval of the PPR will be made internally by the Joint Technical Team (see previous description: Setting Up the Studies).

### **b. Approval Statement**

The JTT then prepares the statement (or Berita Acara) of the Approval Committee which states that:

- the PPR has been reviewed,
- the reviewed aspects have already been examined and proved in guideline,
- the resulting figures and numbers of each aspect of the PPR have already been agreed and may be used as a basis for promoting and negotiating the project.

## **8. Prepare and Promote Project Investment Profile (PIP)—Step 7**

### **a. Introduction to PIP Guideline**

- Purpose of PIP

The Project Investment Profile is prepared as a promotional document for presentation to potential Private Investors. It is written with this purpose in mind, and addresses the specific requirements of the Private Investor.

The Guideline given in this Step is written for PDAM Managers and Sector Planners who are responsible for preparing the PIP.

- Content of Guideline

The Guideline shows how to prepare a PIP using the Project Preparation Report as a basis. It also includes instructions on the essential supplementary information the Private Investor will want to know on the decisions made by the PDAM on tariff, concession period, obligations etc.

The PIP, being promotional, must leave some flexibility for negotiations between the PDAM and the Private Investor, and the Guideline indicates which areas are likely to be critical.

- Procedure

The Guideline for PIP preparation Figure 5 is divided into the following steps:

- Sub Step 1: Establish Promotion Task Force
- Sub Step 2: Determine Policy Issues
- Sub Step 3: Prepare PIP Documents
- Sub Step 4: Identify Potential Investors

- Outputs

A Project Investment Profile consisting of:

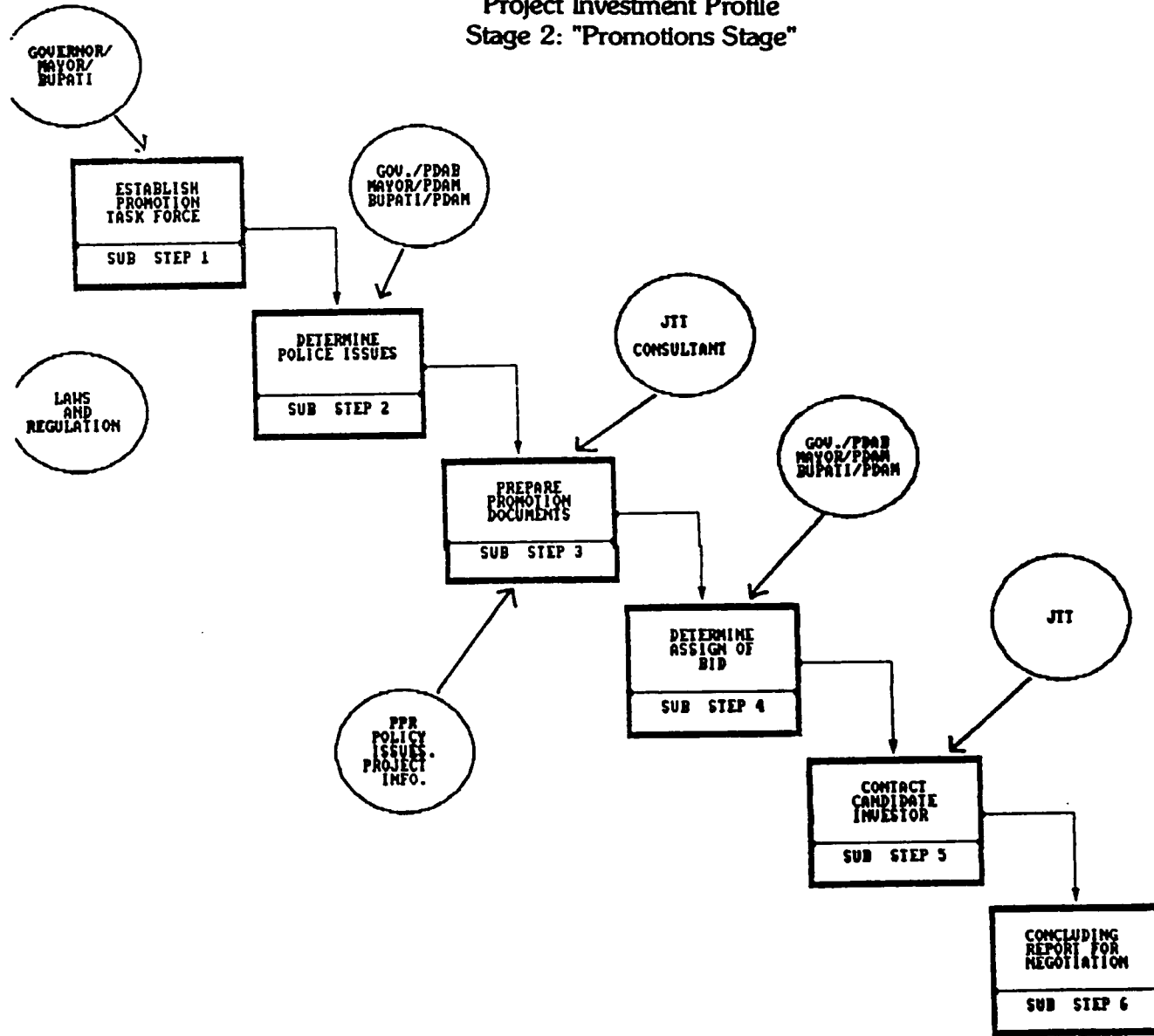
- policy statement from the Head of Local Government,
- a technical and financial profile,
- supporting PPR.

### **b. Establish Promotion Task Force**

The Head of the Local Government organizes a "Promotion Task Force" to handle the promotional activities of the Project. Members of the "JTT" consists of PDAM/PDAB and

**Figure 5**

**Project Investment Profile  
Stage 2: "Promotions Stage"**



representatives of different sectoral agencies of the Local Government and KANWIL (Regional Representative Offices) and BKPM (the Regional Investment Coordinating Board). The Promotion Task Force (PTF) should compile Law and Regulations concerning Government Enterprise and Investment, and check on the proposed projects legal status.

**c. Determine Policy Issues**

The Joint Venture Company (JVC) is the preferred model of cooperation with private firms. Since the JVC concept is a new legal entity in Indonesia, and the PDAM will become its share holder, the "Kepala Daerah" should clarify policy issues related to Ownership and Government Control. A statement should be made in the PIP giving the following information to the Private Investor on policy issues:

- the legal status of the JVC concept,
- who has control over tariff, and agreed planned tariffs,
- likely PDAM equity and loan agreement.

**d. Prepare PIP Documents**

The PIP Documents will usually be prepared by Consultants who are assisting the JTT members. The Documents will consist of:

- i. Policy Statement from the Head of Local Government. This should include statements as follows:
  - The PDAM Local Government is willing to give the opportunity to private sector to construct and operate the facilities in cooperation with the existing Government's water enterprise (PDAB/ PDAM) under a Joint Venture arrangement. For that purpose the Local Government will facilitate the incorporation of a Joint Venture Company (JVC).
  - The Local Government is willing to negotiate with interested companies or individuals, with respect to the detail of the form and content of the cooperation. This statement is important to assure Private Investors that the Head of Local Government is entitled to act as a "Single Administrator" as given in Law No. 5/1974.
  - Local Government's is prepared to agree to the tariff levels given in the PIP and agree tariff level rises in line with inflation.

## ii. Project Information

- **Technical aspect:**
  - Location (map !),
  - What is the area : residence, industrial, harbor, tourism/recreation etc.,
  - Demography (quantitative & qualitative),
  - Relationship of new investment with the existing Service Area,
  - Water resource and treatment plant,
  - Purification method and technical standards and requirement of clean water system.
  - Details of the new investment project and how it has been prepared.
  
- **Legal aspect :**
  - Legal form and status of cooperation (BOT),
  - Structure of Management and oversight,
  - Concession period,
  - Environmental protection.
  
- **Financial aspect :**
  - Capital cost of new investment,
  - Capital structure (size, percentage and form equity),
  - Facilities and billing rate policy.
  
- **Operational aspect :**
  - Scope of construction, operation and maintenance of new investment,
  - Policy making and decision making body,
  - Government of control of PDAM.

## iii. Project Preparation Report (PPR)

A copy of this may be attached to the PIP document to give background details of the project. The PPR may be edited to exclude the financial analysis and the different sets of financial investigations carried out to review and protect PDAM interest. Serious Private Investors will make their own appraisal of the Project.

The Promotion Documents should be made available for interested parties, in the form of booklet or brochures. Translation in English would be an advantage for the larger Project. It should clearly state which part of the PDAM facilities are to be transferred to the JVC.

**e. Identify Private Investors**

There are two possibilities for procuring Private Investors:

- "assigning" the project to an investor who has expressed a strong interest in the project. This method is non-competitive but may allow rapid implementation of the Private Investor is both interested and suitable.
- "Competitive Bids"—this is the more usual method of procurement.

Procedure for procuring Private Investor are given in Section E below.



## Section E

### PROCUREMENT OF OFFERS—STAGE 3

#### 1. Introduction to Procurement

##### a. Purpose of Procurement

PDAM-Led private investment projects should choose between Private Investors on a competitive basis. For this the PDAM should actively procure Private Investors using the Project. Investment Profile documents to make bids proposals or quotations for the investment project.

##### b. Intended Audience

This Procurement Guideline is mainly for PDAM staff and/or the Joint Technical Team (JTT)—see previous description on Project Preparation—who are responsible for Procurement Process (this process will consist of Stage 3: Procurement to Stage 7: Preparation of JVC). Procurement is only necessary for PDAM-Led projects.

##### c. Procedures in Procuring Offers

The following steps Figure 6 are described in this Guideline:

- Step 1: Develop Promotion Strategy
- Step 2: Prepare Invitation Documents
- Step 3: Invite Bidders

##### d. Outputs Expected

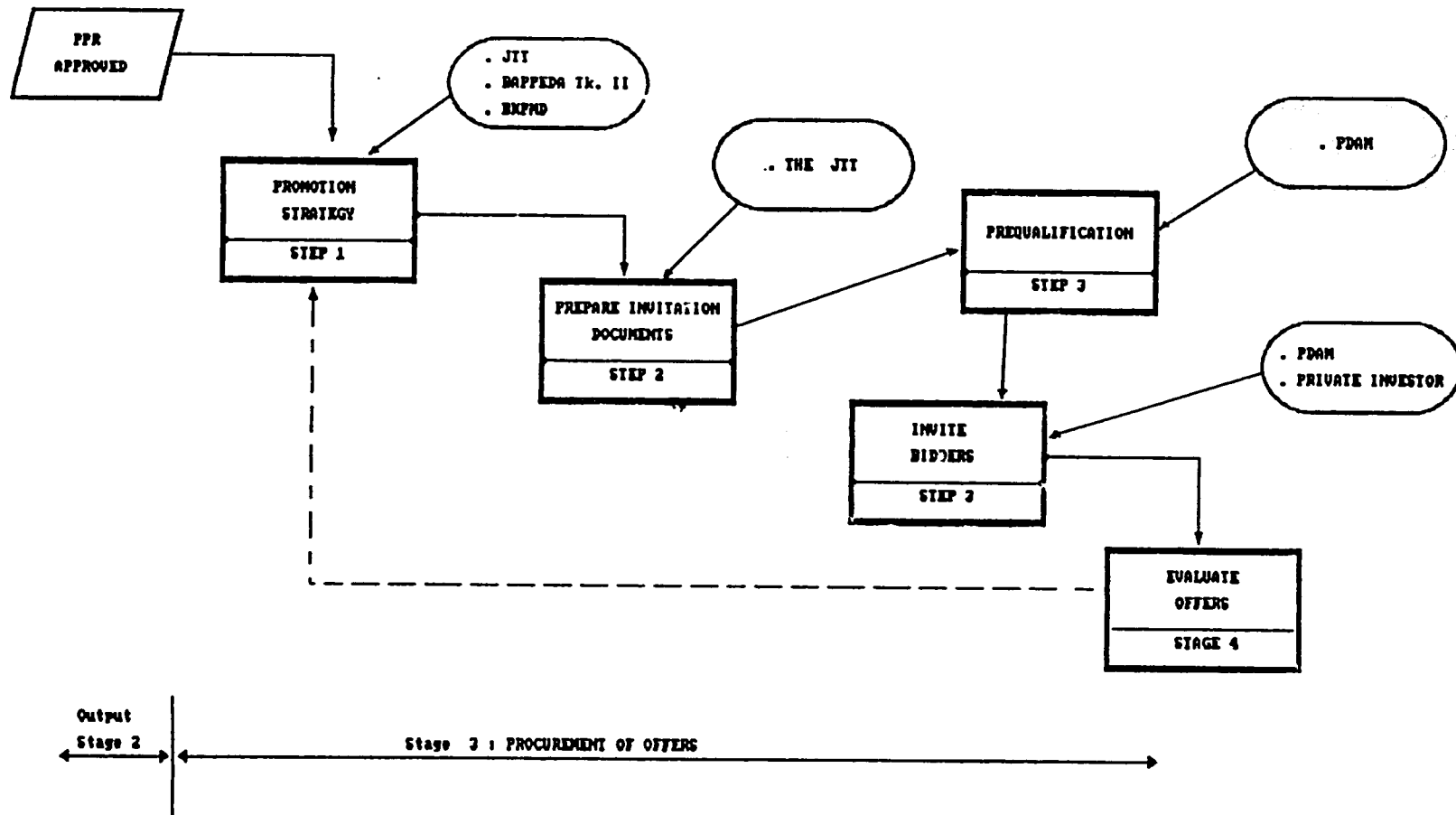
Invitations to pre-qualified bidders to make an offer to finance, build, operate and transfer the proposed project in a joint venture with the PDAM.

#### 2. Promotion Strategy—Step 1

Competitive bidding for projects is the most effective way to get the best terms for the PDAM. The Joint Technical Team may consider the aspects of promotional strategy given below before they prepare Bid Documents.

Figure 6

Procurement Process  
"Procurement of Offers"—Stage 3



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Planners must take note that the larger projects are often very complex, and the promotion should be carried out by specialists, especially for promotion to potential international investors. The JTT should consider the following aspects of Promotion Strategy:

- a). **Suitable package,**  
Arrange the project packages to allow partial bids under alternative contract options, which in turn will attract the interest of both small and large investor or bidders. This will only apply to very large projects.
- b). **Early warning,**  
The proposed project or future potential project to be procured should be announced well in advance. In this way, the bidders are invited with enough time to prepare bids. The "early warning" system must also contain safeguards to assure that the bidding/tendering invitation actually comes to the knowledge of those concerned.
- c). **Non-discrimination,**  
The selection of bidders shall be made in a "fair and non-discriminatory manner"—in order to ensure optimum effective competition under selected tendering procedures to invite bidders which consistent with the efficient operation of the procurement.
- d). **Accessibility,**  
The procurement team (PDAM Team) must facilitate the work of the bidders. They must provide the bidding documents to interested firms (investors) in an expedient manner and at a reasonable cost.
- e). **Neutrality,**  
The bidding document should be prepared in a standardized format (see next section for detail explanation).
- f). **Formality,**  
Bidding is a formal procedure:
  - bids must be submitted in written form,
  - bids should normally be submitted in sealed envelopes,
  - bids must be delivered to a certain place before a certain time specified in the invitation letter—late bids should be returned unopened, unless for reasons beyond the bidders responsibility.

- g). **Confidentiality,**  
Prior to bid opening, envelopes containing bids must be checked to see that they are properly sealed. They must be kept in a safe place until opened and recorded. No copies of the documents should be taken, and other suitable measures should be enforced to ensure that their contents are not divulged to persons other than those officially responsible for their examination.
- h). **Consistency,**  
When bids have been received and recorded, they should be checked for possible errors, correct signatures, and adherence to stipulated requirements in the bidding documents. But on other hand, if a bid is not "substantially responsive" to bidding documents, or contains inadmissible reservations, it should not be considered further.
- i). **Objective,**  
The lowest price bid is not necessarily the most advantageous one, considering all relevant factors. Price is obviously the first, but not the only criterion to decide that the bid is good enough to be a winner. The Objective criteria have to be formulated, spelled out in the bidding documents and applied in a consistent manner.
- j). **No Negotiation before award,**  
The conclusion of the bidder competition is to select a winner on the basis of the stated criteria without any effort at obtaining a better price or some other favor from any bidders. It means, no bidders shall be asked or permitted to change the substance or price of his bids.

### **3. Prepare Invitation Document—Step 2**

#### **a. Structure of Documents**

The invitation document might typically be in the form of an advertisement and should provide:

- a). an outline description of the proposed PSP investment project,
- b). stating the documentation to be submitted for prequalification (e.g.: proposed consortium members, firms experiences in similar projects. financial status, skills and resources which can be mobilized).

- c). a contact address for further information about the project prequalification period.

**b. Prepare Document**

The Invitation document has to be concise and must cover all essential information. The Team (PDAM or JTT) must make sure that the invitation document is clear and easily understood by the candidate bidders. This invitation document may then be advertised in the newspapers (the easiest method) and a period of approximately two months should be allowed from issue of the advertisement to the receipt of the prequalification submission.

**4. Prequalification—Step 3**

**a. Prequalification Criteria for Potential Private Investors**

To ensure uniformity of presentation, prequalification documents usually contain a set of questionnaires covering main areas of information required. The following information is normally requested for prequalification:

- a). Private Firm (Investor) Identification,
- b). Experience and past performance,
- c). Personnel Structure,
- d). Equipment availability, if necessary,
- e). Financial Status,
- f). Present Committee,
- g). Personnel and equipment available for the proposed project,
- h). Broad plan of the execution of works.

**b. Short list of Investors**

The evaluation of prequalification submissions should be carried out on the basis of criteria above. The selected prequalified investors or short-listed groups should be suited to the scope of work required and have fully capable organization.

## 5. Invite Bidders—Step 4

### a. Prepare Bid Documents

The Bid documents should be carefully prepared, giving a clear statement of the project scope and client needs and bearing in mind the criteria which will be used for evaluation offers. Bidding documents contain several topics, such as the

specification of the proposed project to be procured, the contractual conditions, and the instructions to the bidders. Details of above topics are shown below :

- a). Specification of proposed project,  
Specification consists of a definite description of the project to be procured. A general specification type for the technical/construction project is a Design Specification which will contain:
  - Project description—prevailing geographical and climatic condition, relationship with other construction projects, the units of construction according to location and nature of projects, the quality of materials and workmanship to be used.
  - Financial obligations of both PDAM and Private Investors.
  - Legal conditions and agreements.
- b). Contractual Condition,  
The Team will save staff time by using a standard set of conditions and can expect such conditions to be accepted from the firms (investors) side. Bids from different tenderers become more easily comparable, if based on the same general conditions of contract. On the bidders part, a recognized advantage is that the behavior of the procurement team becomes more foreseeable.
- c). Instructions to Bidders,  
The purpose is to set the rules for the bidding contest. The instructions contain *rules of procedure*, and usually describe:
  - When and where bids have to be made,
  - Eligible bidders,
  - The form and language to be used (usually the bidders should prepare three separated documents—technical, financial

estimation of the project, and the company administrative profile),

- Date, hour, and place of bid opening (if public),
- Validity period of bids,
- Requirements, if any, to provide a bid bond,
- A reservation enabling the government to reject all bids,
- The confidentiality of the bid evaluation procedure,
- The names and addresses of official Team to be contacted for supplementary information.

Based on the above structure, the Team (PDAM or JTT) should prepare the Bid Documents. The Team main task is to make sure that the documents are coherent and comprehensive, and they truly reflect the intentions of the government related policy. Particular care must be taken to ensure that the proposed projects are described with sufficient clarity and in sufficient detail to form the basis for bidding process.

**b. Send out the Invitation**

Bid invitation documents would be sent to the selected prequalified investors or short-listed groups (see previous section).

## Section F

### EVALUATE OFFERS—STAGE 4

#### 1. Introduction to Evaluation of Offers

##### a. Purpose of Evaluation

Bid offers from Private Investors should be evaluated in a manner that allows a fair comparison to be made between the bids. The JTT should not necessarily select the lowest cost bid, because bidders will make conditions and offers which may not be directly comparable in monetary terms.

The evaluation process should adopt a methodology that allows the JTT to make a balanced judgement on the merits of the different bids.

##### b. Intended Audience

The Evaluation Committee members who are selected specially for bid evaluation.

##### c. Procedures in Evaluation of Offers

The evaluation of bids proceeds through 3 activities, namely, examination of the bid offers, evaluation of bids, and postqualification. The Guideline consists Figure 7 of the following steps:

- Step 1: Set up Evaluation Committee
- Step 2: Formulate Evaluation Procedures
- Step 3: Evaluate Offers from Private Investors

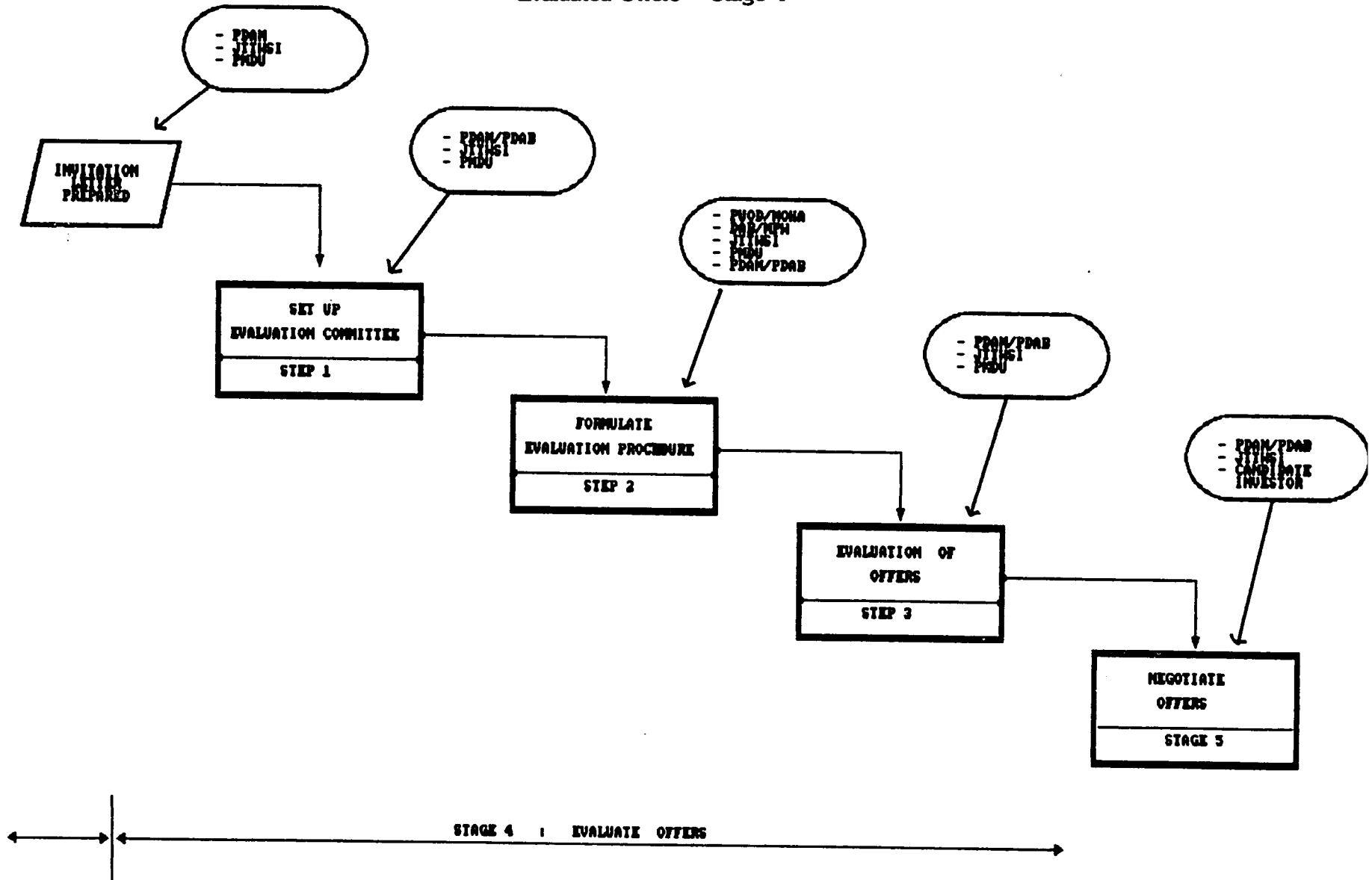
##### d. Outputs Expected

The output from the Evaluation Stage is a ranked list of the Bids received, and a recommended winner. The Evaluation Report should briefly summarize and compare the contents of each bid so that a fair comparison can be made. This comparison will be need by the PDAM during the Negotiation Stage.



Figure 7

Procurement Process  
"Evaluated Offers"—Stage 4



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## **2. Set Up Evaluation Committee—Step 1**

### **a. Select Committee Members**

The Evaluation Team will consist of PDAM staff and/or Joint Technical Team (JTT). Mainly the evaluation would be arranged internally by PDAM staff only, unless there are several reasons that the JTT will also be involved. The completion of evaluation offers should be possible within period of approximately one month. Within this period, the evaluation team will prepare an evaluation report of these bids. For complex projects involving international finance the committee should consider using specialist consultants.

### **b. Briefing on Evaluation Procedures**

After the Evaluation Team has been established, it is necessary to have an internal briefing which will give the team all the information related to the evaluation of bid offers. The briefing will try to explain about:

- a). **rules of procedure** in evaluating the bidder's documents that have to be followed by all members of the Team,
- b). **evaluation procedures** as a step by step activity of which each of the step has to be done sequentially (examination, evaluation, and finally post-qualification), and
- c). detailed explanation on **evaluation criteria**—so that the team will have common understanding on how to apply those criteria.

## **3. Formulate Evaluation Criteria and Procedures—Step 2**

### **a. Identify Criteria Parameters**

Criteria for Bid Evaluation should be selected to give a balanced picture of the bid. Most of the Private Investor's conditions and requirements will be quantifiable and clear, but others will not be obvious. The Private Investor may make his own assessment of risks, profits, and trade-off. The Evaluation Committee's main concern is to check that the PDAM is getting the best offer available. This best offer, when selected, will provide the basis for negotiation. The following criteria may be selected for Bid Evaluation:

- a). Management Structure Proposed,
- b). Professional Staffing Plans,

- c). Joint Venture Company Arrangement,
- d). Implementation Schedule Proposed,
- e). Costs and Tariffs Required by Private Investor,
- f). Materials and equipment specifications,
- g). Operational Procedures and performance levels proposed,
- h). Financing Requirements for Equity and Profit Shares.

**b. Evaluation Procedures**

The evaluation of competitive bidders would consist of three main activities (as previously described in section 1).

- a). Preliminary Examination,  
The examination filters out only those bidders that are substantially responsive (conforming to bidding documents), for further evaluation. This activity is carried out to check that the bidder's documents are:
  - complete,
  - properly signed,
  - arithmetically correct, and
  - responsive to the invitation to tender/bid (bid bond attached and no deviation from instructions).
- b). Evaluation of bids document,  
Evaluation serves to determine which is the most advantageous bid, considering price and other relevant factors referred to in bidding documents.
- c). Post-qualification,  
This activity serves as a safety measure to make sure that the most advantageous bid is also made by a responsible bidder (reliable bidders). Unless all bidders are prequalified and no reason exists to review their credentials before award, the procurement team (PDAM staff or the JTT) needs to check, before award, that the bidder who

has submitted the lowest evaluated bid has also the "capability and resource effectively to carry out the contract concerned".

#### **4. Evaluate Offers—Step 3**

##### **a. Check Bids against Criteria**

An evaluation formula sometimes needs to be devised which blends objective and subjective criteria. Such a formula could distinguish between, and give relative weights to, subjective criteria in the form of "reliability", "servicing capacity", and "operational capacity", and, on the other hand objective criteria, quantifiable factors.

The bid checking, in general, will assess several important factors:

- a). assess minor deviations from bid documents or minor differences within permissible margins,
- b). to calculate correction or adjustment figures related to differences in price estimation,
- c). and other potential variations between bidders which may be expressed in monetary terms but which are minor differences with regard to the general conditions of contract.

The Bid Evaluation activities should be summarized and compared in a short report.

##### **b. Select Successful Bidders**

Based on a thorough examination of Bids, the preferred Bidder can be chosen for further negotiation.

## Section G

### NEGOTIATION WITH SELECTED BIDDER—STAGE 5

#### 1. Introduction to Negotiation

##### a. Purpose of Negotiation

The purpose of the Negotiation Stage of Private Investment projects is to arrive at a set of conditions for the operation, financing, management and regulation of the JVC that can be mutually agreed by both PDAM and the Private Investor.

A basic premise behind the negotiations is the agreement by both parties that they are interested in making a workable JVC Agreement that both protects and serves the interest of the PDAM and the Private Investor.

During the negotiations both parties will adjust their expectations of the JVC until it is mutually agreed. At this stage formal Agreement can be made.

##### b. Intended Audience

- Joint Technical Team for Investment Project, formed by Head of Tk. II or Tk.I,
- PDAM's President Director,
- Private Investor invited to bid.

##### c. Procedures in Negotiation

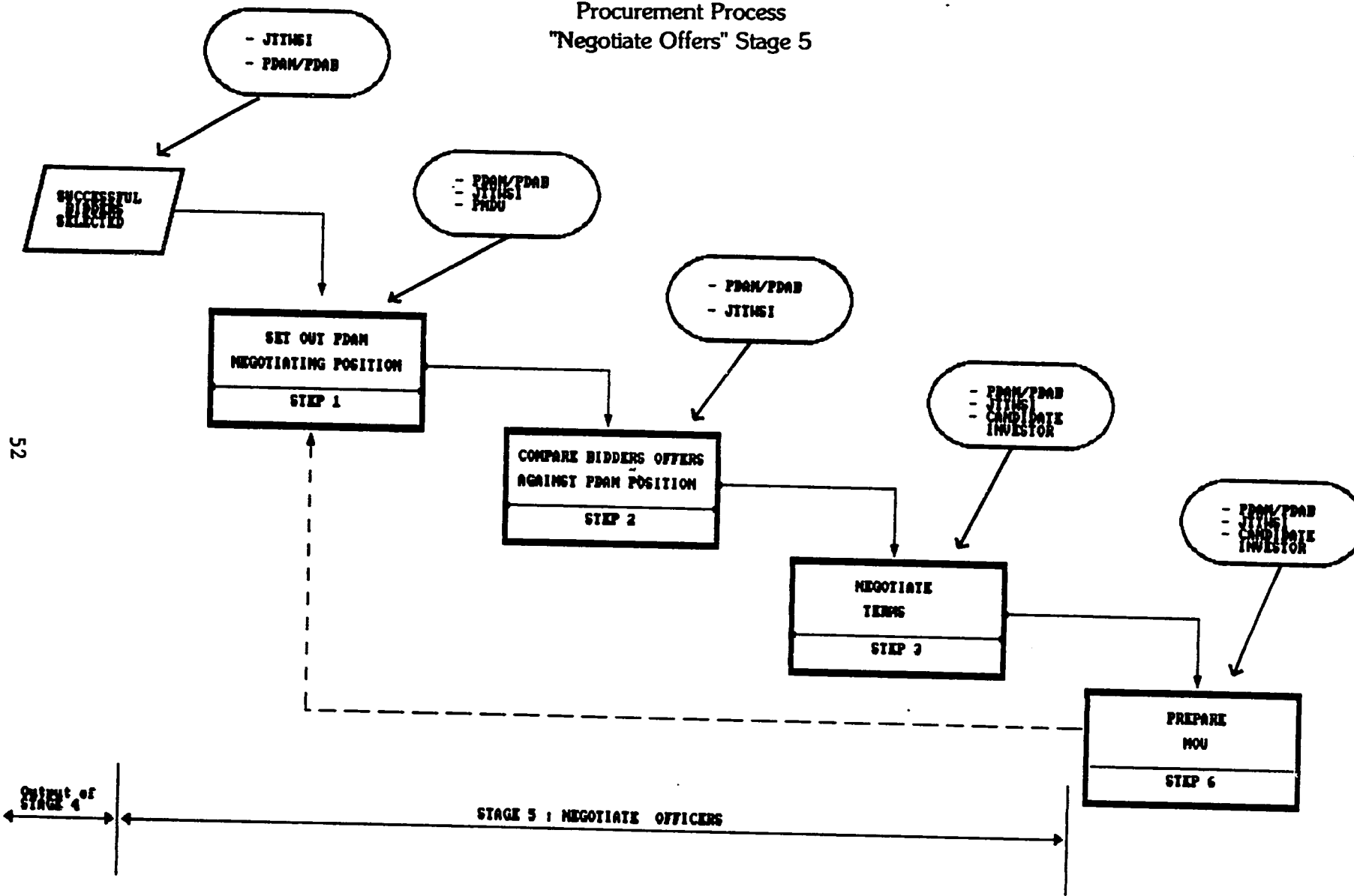
Negotiation should develop through a step-by-step process. The content of the negotiations is described in detail in this section; much of the content will be concerned with the development of a Memorandum of Understanding (see Section H below).

The steps Figure 8 in negotiation are:

- Step 1: Set out PDAM Negotiation Position
- Step 2: Compare Bidders Offer with Negotiation Position
- Step 3: Negotiate Terms.

Figure 8

Procurement Process  
"Negotiate Offers" Stage 5



**d. Outputs Expected**

An agreement for the content and undertaking of the Memorandum of Understanding (MoU) between the PDAM and the Private Investor.

**2. Set Out PDAM Negotiation Position—Step 1**

The JTT must be clear at the outset what its negotiation position is. This is constructed from a detailed study of the PPR, a comparison between the bidders' offers, and assessment of the benefit to the PDAM, and the additional costs of Private Investor finance, in comparison with other sources finance.

The PDAM Negotiation position will be built up from the following:

**a. List of PDAM's Equity and Loan Contribution:**

- Valuation of PDAM's Assets at ... valuation
- Feasible Transfer of Asset/ownership of PDAM to JVC
- Financing Cooperation for the JVC with Non Banking Financial Institution. This needs experienced project finance experts and the work must be fully defined in terms of technical scope and financial viability.

**b. Review Concession Period and Term:**

- The actual length of the Concession period will not be a major item for the Private Investor if the period is over 15 years. Most Private Investors are looking for a short term recovering of their investments.

**c. Review GOI Requirements:**

- Since the BOT model is not described in either Laws or Regulations, a special letter approving JVC/BOT is required from the MOHA.
- Proposed tariff structure based on MOHA Guidance in its Regulation No. 690-536 dated June 1988, particularly towards the aspects of:
  - a. the water tariff should be within the ability to pay of any member of the community.

- b. the National Tariff Pattern, "the strong help the weak".
- c. the water tariff is determined by the Head of Tingkat II and legalized by the Governor.
- d. **Choose PDAM Bottom Line:**
  - The scope of project in terms of capacity and extent of works.
  - Water demand which has to be met at different times; this should be prepared in advance.
  - The share of revenues that the PDAM is willing to give.
  - The potential loss of management control acceptable to the PDAM managers.

### **3. Compare Bidders and PDAM Position—Step 2**

The PDAM negotiation position may be compared with the Private Investors position, as given in the Bid offer, in a tabular form. The differences between the position are compared and checked. It should be noted that often the Private Investors Bids will not be transparent, i.e. the Private Investors financial decisions that lie behind the construction of the Bid will not be explained.

### **4. Negotiate Terms—Step 3**

Negotiation is a complex process which demands considerable human skills. No two negotiations are alike but the following process may be useful:

- set out an agenda and schedule of meetings,
- develop a priority list of items to be agreed,
- keep minutes of meeting and agreements made.



## Section H

### PREPARE MEMORANDUM OF UNDERSTANDING—STAGE 6

#### 1. Introduction to MoU Preparation

##### a. Purpose of MoU

The MoU evolves as part of the negotiation between the PDAM and the Private Investors. The MoU is in effect the record of the agreements made. It has the following uses:

- as notice of intent/willingness of PDAM and candidate investor to form a JVC based on the agreed minutes of meetings during negotiation stage (see para G.4),
- as a record of those agreements and/or undertakings reached at each negotiation stage,
- to provide a basis for :
  - the next stage of more detailed negotiations, if necessary,
  - JVC Agreement,
  - Concession/BOT Agreement,
  - any other contracts as may in due course be proved necessary, interalia Loan Agreement between JVC and offshore or domestic Banking Institution.
- for obtaining approvals from:
  - Minister of Home Affairs (MOHA Reg. No. 4/1990)
  - BKPM Foreign or Domestic Investment License.
- for consultation purpose with the respective Governor (MOHA Reg. No. 4/1990).
- as a reference for obtaining Governor's Concession License and Water-Use License.

##### b. Intended Audience

PDAM, candidate investor, Head of Tingkat II, Bappeda Tingkat II, Governor, MOHA/PUOD, Bappenas, BKPM/BKPMD, and lending offshore or domestic institutions.

**c. Procedures in Preparing MoU**

Mou Preparation Figure 9 has the following steps:

- Step 1: Design MoU Structure
- Step 2: Arrange Licenses and Permits
- Step 3: Prepare MoU Documents

**d. Outputs Expected**

- compilation of the agreed minutes of the MoU
- formulation of the MoU according to Procedures.

**2. Design MoU Structure—Step 1**

A model form of MoU is given in Annex B. This has been compiled from field experience and will provide a useful basis for future MoU's. Because each of JVC project is different the model form of MoU may need modification. The MoU must include information and agreements made on the following aspects:

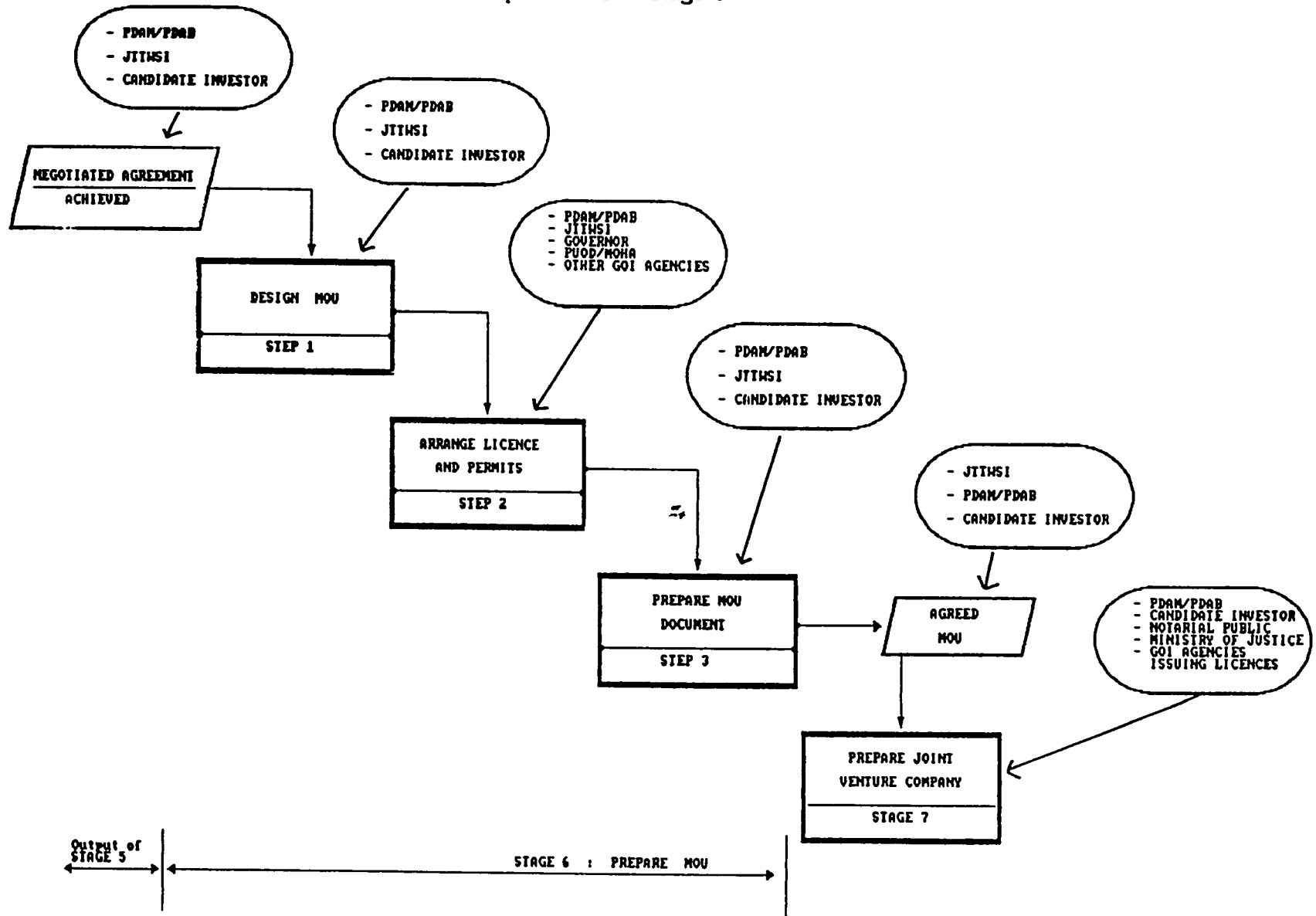
**a. Legal Institutional Aspects**

- Preamble, the names and domiciles of PDAM and Candidate Investor,
- Basic Agreements in principle containing the wishes of both parties, PDAM and Candidate Investor to cooperate in the activity of drinking/clean water supply in the respective service/business area,
- The scope of cooperation planning, construction, management and operation, maintenance, collection of revenues,
- JVC Legal Entity, Domicile and Service/Business Area,
- Concession/BOT Agreement, period etc.,
- Authority of the JVC,
- Ownership of assets/infrastructure,
- Calculation of Water Tariff,

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Figure 9

Procurement Process  
"Prepare MOU"—Stage 6



- Event of default, and
- Force Majeure.

**b. Technical Aspects**

- Proposal of candidate investor to be approved/amended by PDAM and the related Government Agencies,
- Technical Planning water supply system of the JVC from candidate investor to be approved by PDAM and the related Government Agencies,
- The implementation and control of the construction of the water supply system to be carried out by a Consultant appointed by PDAM and Candidate investor,
- Quality of Clean Water, required minimally according to threshold determined by Ministry of Health Regulation,
- Development of production and distribution system to fulfill the increasing need of clean water, and proportion to be used by Private Investor (if relevant)
- Project Implementation:
  - a. purchase of the needed materials/services, priority be given to domestic companies with competitive prices,
  - b. should start several months after the necessary licenses (Concession, Water Uses etc.) have been obtained.

**c. Financial Aspects**

- Fund's components to be fixed after completion of calculation of expenses needed to implement the water supply project, which consists of preparation, planning, construction and Operation and Maintenance expenses,

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- The source of capital investment in the JVC will include :
  - a. PDAM's equity, consist of :
    - i). the existing assets and infrastructure based upon re-appraisal of an Independent Appraisal Company, appointed by PDAM and Candidate investor.
    - ii). Goodwill of Local Tk. II Government.
  - b. Candidate investor's equity means in cash money,
  - c. Long Term Loan from Banking/Financing Institutions (offshore/domestic),
- Guarantee of the Candidate investor to the needed fund, as his equity,
- Composition of shares,
- JVC is subject to existing Tax Regulation,
- Profit sharing based upon share's ownership,

**d. Operational and Management Aspects**

- Operational aspects shall include:
  - a. The JVC shall operate during the Concession period,
  - b. Transfer of shares and assets of JVC after the date of the Concession period has elapsed,
- Management:
  - a. The JVC shall be managed by Board of Directors whose names, number and composition of membership to be agreed upon by PDAM and candidate investor,
  - b. The JVC shall be under the supervision of the Board of Supervisors, whose names, number and composition of membership to be agreed upon by PDAM and Candidate investor.
- Manpower:

The JVC shall employ skilled and professional employees, whose qualifications and number shall be agreed beforehand by PDAM and the Candidate investor.

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- **Government Regulation :**

Both parties must obey the existing or the newly issued Government Regulation affecting water supply. If new or changes in the regulations might occur, than the affected stipulations in the MoU shall be modified, if necessary.

### **3. Arrange Licenses and Permits--Step 2**

Before the MoU can be used as the basis for the formal JVC Agreement, a number of Licenses and Permits should be obtain such as:

#### **a. Obtain Concession License**

- Application form prepared and signed by those who signed the MoU,
- Submit application to the Governor Tingkat I,
- The Attachments which will consist of MoU, Articles of Association of PDAM and other necessary documents,
- Has to be arranged by PDAM.

#### **b. Obtain JVC License**

- Application form filled in and signed by Candidate Investor and PDAM,
- Submit application to BKPM through BKPM (Provincial Investment Board),
- The Attachments which will consist of MoU, Articles of Association of PDAM and the Candidate Investor(s) and other necessary documents,
- Wait for the President's approval (SP3) approximately within 3 months time after submission of the JVC application.

#### **c. Obtain other permits/approvals**

- Water-use license,

- Land acquisition permit (for pipe layings),
- Operational license,
- Expatriate working permits, if any,
- Rights of way for the construction and operation of the pipelines (Dinas PU, Jasa Marga, and other relevant agencies),
- Installing pipelines crossing canals, drains and/or rivers (Dinas P.U./Pengairan),
- Provision of electrical power, tariff and the security of electric supply,

#### **4. Prepare MoU Document—Step 3**

The MoU preparation will be based on the materials which were compiled during the previous steps. Several tasks that are usually taken in preparing the MoU are the following:

- Compilation of all agreed minutes during the negotiation stage, consisting of legal/institutional, technical, financial and operational/management aspects,
- At least 2 sets of copies to be prepared for the signing of the MoU documents.

## Section I

### PREPARE JOINT VENTURE AGREEMENTS—STAGE 7

#### 1. Introduction to JVC Agreement

##### a. Purpose JVC Agreement

The JVC Agreement is made to establish the desire of the PDAM and the Private investor to cooperate in the development and enhancement of water supply to the people and in other uses the project service area.

It state that the activity of developing the project for the enhancement of water supply system can best be carried out as a joint activity.

It also state that the PDAM and the Private Investor have decided on a reciprocal basis to cooperate and establish a JVC legal entity as the holding company of the cooperation.

##### b. Intended Audience

Candidate Investor, PDAM, Head of Tingkat II, Bappeda Tingkat II, Governor, MOHA/PUOD. Bappenas, BKPM/BKPMMD.

##### c. Procedures in Preparing JVC Agreement

The following steps Figure 10 should be used

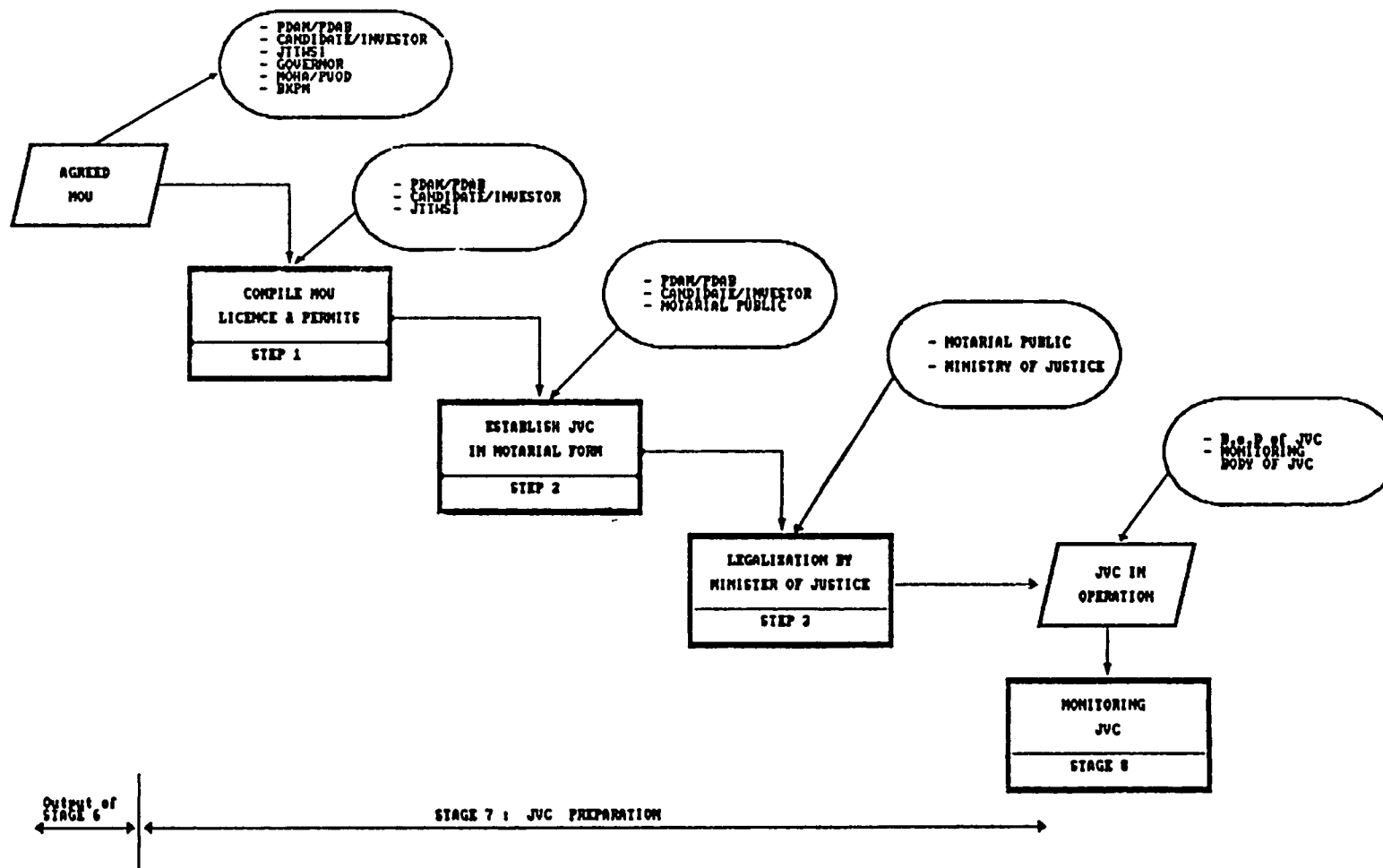
- Step 1: Compile MOU, Licenses and Permits
- Step 2: JVC Signing Agreement in Notarial Form
- Step 3: Establishment of the JVC

##### d. Outputs

- Articles of Association of JVC (the Establishment Deed).
- Application submitted for having legalization by Minister of Justice of JVC's establishment, to be done by the Notary Public.



**Figure 10**  
**Procurement Process**  
**"JVC Preparation"—Stage 7**



## **2. Completion of Documents, License or Permit—Step 1**

- In awaiting the legalization of Ministry of Justice, as mentioned in above, the pending issuance of the necessary licenses or permits as pointed out in Section H.3 ("Arrange License") should be obtained from the related agencies.
- All original permits/licenses obtained should be properly documented and filed in the safety box.
- The JVC Agreement can not be signed until the following have been completed:
  - signing the MoU
  - obtaining all necessary Licenses
  - completion of all permits and other legal requirements.

## **3. JVC Signing Agreement in Notarial Form—Step 2**

The JVC Agreement must be made in front of a Notary Public.

- after obtaining President/BKPM License
- after Completion of Concession/Water Uses and
- other licenses
- MOHA and Governor approval for PDAM setting up
- JVC with the Private Investor(s)
- Signing of JVC Articles of Association (Notarial Deed) by PDAM and Private Investor(s).

## **4. JVC Effective Operation, Considered Formally as Indonesian Legal Entity—Step 3**

- after obtaining legalization of JVC's Article of Association (Establishment Deed) from the Minister of Justice and registered with the Local Court of Justice.

- The B.o.D. members of JVC are not personally liable for implementation of their tasks/duties on behalf of the JVC against third parties.
- The JVC becomes finally effective after completion of the following:
  - signatures on JVC Agreement by PDAM and Private Investor(s) in the form of Notarial Deed
  - MOHA and Governor approval to the JVC establishment
  - President c.q. BKPM approval/license for project. Justice and registration with the Local Court of Justice.

At this point the JVC is a legally approved formal entity.

## Section J

# MONITORING THE PROJECT DURING THE CONCESSION PERIOD—STAGE 8

## 1. Introduction to Monitoring

### a. Purpose of Monitoring

The different objectives of the PDAM and the Private Investors are outlined in Section B of this Guideline. These differences must be continuously monitored in order that the project meets the requirements, of a Public Water Supply in terms of quality, quantity, and level of service.

Monitoring is intended to:

- continuously observe performance/activity of JVC's management by getting all facts of the performance on a regular basis.
- allow decisions to be taken by the B.o.D. in the event of the occurrence of legal, technical and operational deviances problems and failures.
- make standards procedures of efficiency and effectivity in the economic and public policy conformance of the JVC's management.

The detailed procedures of Monitoring JVC projects during the Concession Period can only be worked out after the project has been established. Each project will have different conditions and circumstances and the Monitoring procedures should be adjusted accordingly.

### b. Intended Audience

- The Board of Directors of the JVC
- The Head of Tk. II who owns the PDAM
- The B.o.D. and Shareholders of the Investor's Private Enterprise.
- The Governor of Tk. I (for information only)

**c. Procedures for Setting up Monitoring System**

The Monitoring System is set up as follows:

- Step 1: Define Monitoring Criteria
- Step 2: Set up Monitoring Board

**d. Outputs Extended**

- Detailed criteria to be used by Monitoring Body
- Established and functioned Monitoring Body.

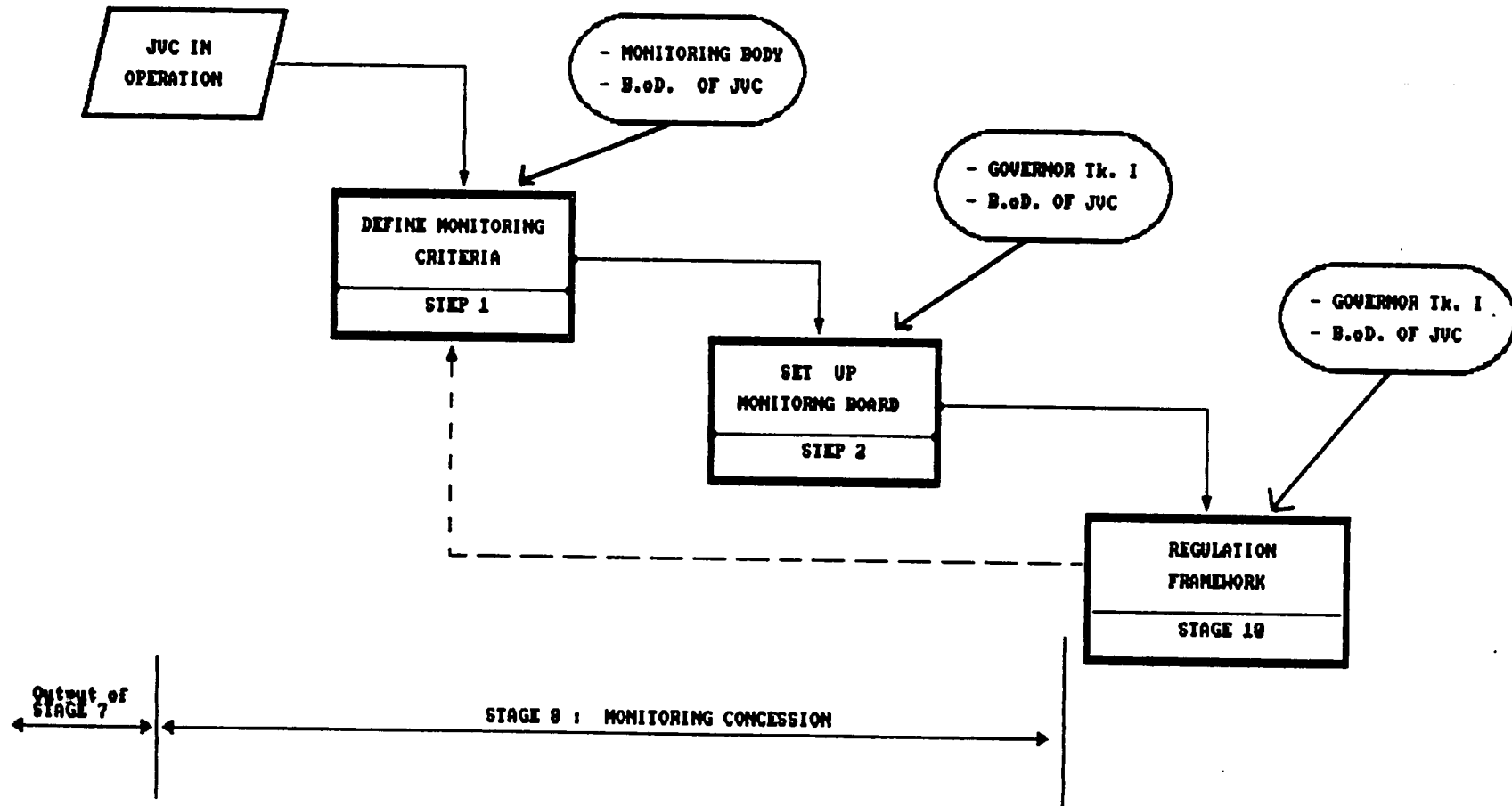
**2. Define Monitoring Criteria—Step 1**

A wide range of parameters can be measured and used as monitoring criteria. Observable and measurable criteria should be defined and selected to monitor the following aspects:

- For Operation and Maintenance of the JVC assets and Infrastructure during the concession period
- For replacement/repair of assets
- Employee's salary and other remunerations
- The responsibility/duty/authority of each member of the B.o.D.
- Tariff calculation for determining new tariff.
- Bill collection system and procedure
- Service improvement of water supply to customers
- Periodical reports on the Project performance expected for JV Board of Management.
- Set up rules and procedures in case of violation of JV Agreement by each of the parties.

Figure 11

Operate and Regulate  
"Monitoring Concession"—Stage 8



### **3. Set Up Monitoring Board—Step 2**

The Monitoring Board should be a separate/independent/ higher organization consisting of members representing the related Government agencies in water supply affairs. The PMDU at Provincial Level may also be taken into consideration to act as Monitoring Body to the JVC. It must be independent of Tk. II and Tk. I officials involved in the Project.

The Monitoring Boards is set up to:

- monitor performance of the JVC to determine if the JVC management does its job properly or improperly.
- tell the JVC management if something is wrong.
- Evaluate the JVC Agreement after it has been implemented to determine if there are some aspect missing or not regulated.

The Board should have enough power to instruct the JVC management to make changes if they the in fringe the MOU other service obligations. The Regulatory framework provides the basic procedures, responsibilities and criteria for the Monitoring Board.

## Section K

# REGULATION OF JOINT VENTURE COMPANY—STAGE 9

## 1. Introduction to Regulation

### a. Purpose of Regulation

The Monitoring process observes and measures Key parameters in the functioning of the JVC project. The Regulation Process is the means by which the Monitoring Boards can control the JVC management policy so that GOI's policies can be followed. The Regulation procedures and rules provide a framework within which the project is monitored.

### b. For whom is Regulation JVC

- Monitoring Board
- JVC Management

### c. Procedures in Regulation JVC

Regulation has the following steps:

- Step 1: Implement GOI Policy
- Step 2: Make measures to correct
- Step 3: Check measures have been carried out

### d. Outputs extended

- Set Rules for Project

## 2. Implement GOI Policy

GOI policy and the rules regulating the JVC should be clearly written specifying the remedies and penalties when JVC does not make the necessary changes.

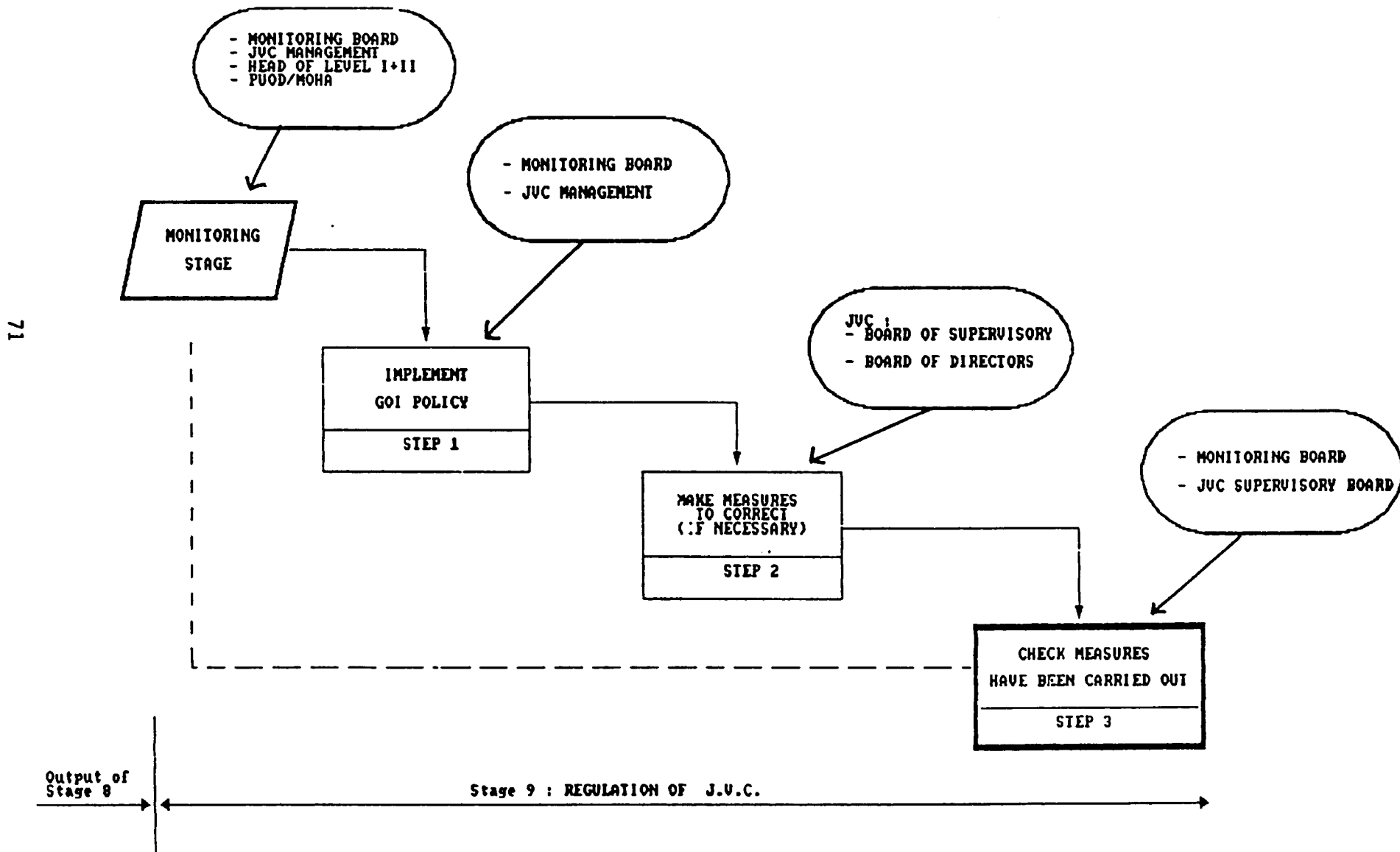
The existing GOI rules and regulations should be compiled and checked for any changes. The regulating framework to be set up should do the following :

Provide basic procedures, responsibilities and criteria for the Monitoring Board.



Figure 12

Monitoring and Regulation Process  
"Regulating the J.V.C. Company"—Stage 9



- Keep records on all GOI's Policy, Laws/Regulations, Concession/Water Uses and other necessary licenses.
- If there are some aspects in the operation of the JVC which are doubtful or not regulated, the Monitoring Board should discuss with the B.o.D. and its result should be taken up with the higher authority of Pemda Tingkat I and/or MOHA.
- Provide clear policy standard on water tariff determination based on commercial (for the interest of JVC) and social (for the interest of the customers) rate.
- Improvement of service to the customers as well as the increase of income of the JVC and the supply of clean water should at any time meet the quality threshold of the Ministry of Health.
- Procedures, criteria and sanctions of non-payment of water bills by customers. Is legal proceeding needed?

### **3. Make Measure to Correct if Necessary—Step 2**

The Monitoring process will observe deviances in the performance of the JVC Agreement. The Regulation Framework indicates the procedures to be followed to correct the system.

### **4. Check Measures Have Been Carried Out—Step 3**

The Monitoring Board should appoint someone to look at the JVC, whether all regulations and policy of GOI have been met and to give directions/advises to JVC management.

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**Annex A**

**RELEVANT LAW AND REGULATION RELATED TO PSPUWS**

<b>LEGISLATION ASPECT</b>	<b>LAW NO./YEAR</b>	<b>DESCRIPTION</b>
<b>GENERAL/ MAIN BASIS</b>	<ol style="list-style-type: none"> <li>1. Constitutional Law 1945, Act.33</li> <li>2. Law 5/1974</li> <li>3. Gov't Reg : 14/1987</li> <li>4. Presidential Decree 26/1980</li> <li>5. Presidential Decree 35/1985</li> <li>6. Presidential Decree 21/1989</li> <li>7. Presidential Decree 5/1984</li> <li>8. Presidential Instruction 4/1985</li> </ol>	<ul style="list-style-type: none"> <li>- Decentralization/Antonomous of responsibility, task sectors to Provincial and Local Government</li> <li>- transfer of vertical offices/Sectoral Offices Activities to Provincial and Local Government Institutions/Agencies</li> <li>- Concerning Regional Investment Coordinating Board (BKPM)</li> <li>- Amending Presidential Decree No. 33/1981 and 78/1982 regarding status of BKPM</li> <li>- Concerning the exhaustive list of 75 economic sector</li> <li>- Concerning Guidelines for Simplification and control of Business Licensing</li> <li>- Concerning Policies to expedite the flow of goods</li> </ul>

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INSTITUTION/ LEGAL ASPECT		
	1. Law 5/1962  Law 8/1971	- The establishment of Government Enterprises (Tk.I and Tk.II) and proportion of PDAM Revenue (net profit) that transferred to Local Government (Tk.II)
	2. Gov't Reg : 22/1982	- Pertamina's right to exclusively license private sector participatns in Indonesia petroleum sector - Relates to Water Supply Management, as it concern sourcing of water supplies from streams and grandwater
	3. MOHA Reg : 4/1990	- The Procedure of cooperation between Local Government Enterprise and the Private/Investor
	4. MOHA Ins. letter 5/1990  4/1984 and 27/KPTS/1984	- The Change of form (type) of Local Government Enterprises into 2 (two) types of Legal Entity : - PERUMDA (Regional Public Company) - PERSERODA (Regional Limited Liability Company) o Concerning on aspects related PDAM Development
	6. Law 15/1985	o Regarding private sector participation in electricity
	7. Law 3/1989	o Regarding private sector participation in telecommunications
	8. Presidential Decree 54/1977	o Concerning regional basic provision on investment procedures
	9. Presidential Decree 17/1986	o Regarding Ownership of assets
	10. Presidential Decree 23/1990	o Concerning the establishment of a national pollution board
	11. BKPM Decision 17/SK/1986	o Concerning foreign share participation in existing business

<b>FINANCIAL ASPECT</b>	1. Law 1/1967 Jo. Act.11/1970	o Foreign Investment Capital Regulation (PMA)
	2. Law 6/1968 Jo. Act.12/1970 Government Reg. Regulation 6/1989	o Domestic Investment Capital Regulation (PMDN) o Customs tariffs and administration regulation
	3. MOHA Reg : 690-536/1988	o Guidance on the PDAM Tariff Determination (Tariff Structure). Tariff can be determined by PDAM without authorization of local council (DPRD)
	4. Circ. Letter : MOHA : 690/7072/sj dated 10 Juli 1985	o Exemption of PDAM's duty to provide 55% of its net profit to Regional Government
	5. SKB of MOHA/MPW 5/1984 and 28/KPTS/1984	o Guidance, Organization, Accounting System, Maintenance Technique and Cost Calculation to determine Drinking Water Tariff
	6. SKB of MOHA/MPW/ 160/1978 and 281/KPTS/1978 and 360/Krak.001/1978	o the Execution and Development of Clean Water Construction Project with Central Government Aid
	7. MOF Decree 540/KMK.011/1979	o The Management of Central Government Fund for PDAM Project Financing
	8. MOHA Reg : 3/1986	o The Provincial Capital Sharing to the third party
	9. Law 6/1983	o Concerning general tax matters
	10. Law 7/1983	o Concerning income taxation
	11. Law 8/1983	o Concerning value added taxation on goods and services. and luxury goods sales taxation
	12. Law 12/1983	o Regarding custom
	13. Law 13/1983	o Regarding taxation of real property
	14. MOF Decree 862/KMK.01/1987	o Regarding the issuance of securities through a stock exchange

<b>TECHNICAL ASPECT</b>	1.	MOH Decree 2180/Yankes/Instal/XI/81	o Establishment of water Quality and Environmental Development Team.
	2.	11/1974 Act	o Regarding wayer resources and which has a wide range of applicability to other public water utility issues
	3.	Law 4/1982	o Regarding environmental protection
	4.	Joint/SKB of MOHA and MPW 3/1984 and 26/KPTS/1984	o Project Proposal Procedure to establish Water Supply System Project
	5.	SKB of MOHA/MPW: 5/1984 and 28/KPTS/1984	o See : Financial Aspect

<b>OPERATIONAL ASPECT</b>	1. Government Reg. 24/1986	o Concerning the 30th year licensing period for foreign investment companies
	2. Government Reg. 20/1990	o Regarding water pollution control operation
	3. Minister Reg. 03/P/M/Pertamber/83	o Requiring licensing of all private use of ground and spring water and water drilling by the provincial governor
	4. MPW Reg. 65/KPTS/1989	o Establishing the Joint Technical Team for Water Supply Capital Investment
	5. MPW Decree 269/KPTS/1984	o Regarding BPAM's which provides for a shorter period before they are changed to PDAM status
	6. Circ. Letter MOHA: 690-1595/1985	o Authorized the creation of PMDU's
	7. BKPM Decision 5/SK/1986	o Regarding local equity participation requirements in Joint Venture operation (foreign investors)
	8. Decree of Governor DKI Jakarta D.IV-a.12/1/49/1974	o Regulation of digging and drilling for groundwater in Jakarta area

**LISTING WITH BRIEF DESCRIPTIONS AND SELECTED TRANSLATIONS INTO ENGLISH OF PRINCIPAL RELEVANT INDONESIAN LAWS, REGULATIONS, AND OTHER OFFICIAL DOCUMENTS**

- (a) **Basic Law of 1945**, particularly Article 33 which states "Production branches which are important to the country and which provide for the needs of the people must be under the control of the State" and "Earth, water and other ground resources have to be managed/utilized by the government for the maximum benefit of the people." The Basic Law is the Indonesian constitution. It is superior to all other Indonesian laws and legal authorities.
- (b) **Dutch East Indies Commercial Code of 1947**. This is the essential law regulating commercial and corporate legal activities and transactions. It is now being revised. It is invalid to the extent it is incompatible with Indonesian independence or conditions or is revoked by subsequent Indonesian law. It is based on the Roman Code of Justinian and is similar to continental European civil codes.
- (c) **The Indies Tariff Law (Indische Tariefwet) (Staatsblad 1873 Number 35)**, as amended and supplemented most recently by Government Regulation No. 6 of 1969. It is the basic law regulating customs tariffs and administration.
- (d) **Law No. 5 of 1962** which is concerned with the establishment of regional government enterprises at provincial/local levels of government. It serves as the fundamental legal basis for the establishment of PDAMs and PDABs. The current status of this Law is ambiguous. It was revoked by Law No. 6 of 1969, but revocation was made contingent upon the enactment of a new law to replace Law No. 5 of 1962. No such superseding law was ever enacted. Several relevant contents of the law are:

**Chapter II: Characteristic, Objective and Field of Activity**

**Article 4:**

- (1) A Regional Government Enterprise (of Level I or I Governments) is established under a Regional Government Regulation (*Peraturan Daerah* = PERDA), based on this Law.
- (2) The Regional Government Enterprise as meant in paragraph (1) is a Legal Entity, the status of which is obtained with the existence of this Law.
- (3) The Regional Government Regulation as meant in paragraph (1) will come into force upon legalization by the appropriate government executive (For Special Regions of Level I Government, the President; For Provincial Level I Government, the Minister of Home Affairs; For Local Level II Government, a governor of Level I).



**Article 5:**

- (1) The Regional Government Enterprise is a production unit with the characteristic of:
  - a. providing service
  - b. serving public needs
  - c. gaining revenue
- (2) —
- (3) —
- (4) The important/main production branches for the Region which effect the well-being of the community of the Region concerned are to be managed by Regional Government Enterprises whose capital wholly or partly must be part of the separated assets of the Regional Government.

**Chapter III: Capital**

**Article 7:**

- (1) The capital of a Regional Government Enterprise consists of assets wholly or partly belonging to a Regional Government, which forms a separated asset.
- (2) The capital of a Regional Government Enterprise may not consist of shares.
- (3) —
- (4) —

**Chapter V: The Management**

**Article 11:**

- (1) A Regional Government Enterprise will be managed by a Board of Directors, whose number and composition is stipulated in its Establishment Deed (Articles of Association).
- (2) Members of a Board of Directors must be Indonesian nationals appointed and dismissed by the appropriate government executive.
- (3) Appointment as meant in paragraph (2) is for a period of 4 (four) years at the most. After the said period ends, a member may be reappointed.

**Article 15:**

- (1) The Board of Directors shall make decisions on the management policy of the Regional Government Enterprise.
- (2) The Board acts as the executive and manages the assets of the Regional Enterprise.

**Article 16:**

The stipulations on the limited power (authority) of the Board are prescribed in the Regional Enterprise's Articles of Association.

**Article 17:**

Each Regional Enterprise will have a Supervisory Board which is further subject to regulation by the PERDA (the

Regional Government Regulation on the establishment of the Regional Enterprise).

**Chapter VII: Control**

**Article 19:**

The Board is under the control of the appropriate government executive or the head of an agency appointed by him.

**Chapter VIII: Stipulation on the Use of Profit and the Contribution of Production Services**

**Article 25:**

(1) —

(2) The use of the net profit after deduction of depreciation, reserve and other real deductions within the Enterprise, is determined as follows:

- a. for the Regional Development Fund—30%
- b. for the Regional Expenditure Budget—25%
- c. for General Reserve Fund, social and education fund, production service, and Retirement Fund and Donation, the amount of each is stipulated in the Articles of Association of the Enterprise totalling 45%.

**Chapter XIV: Personnel**

**Article 26:**

(1) The status, salary, retirement fund and donation and other income of the Board members and personnel/employees of a Regional Government Enterprise is regulated in the PERDA (Regional Government Regulation) and is effective after getting legalization from the Governor for a Level II Government Enterprise and the Minister of Home Affairs for a Level I Government Enterprise, taking into account the stipulations of the prevailing Regional Government Salary Regulation.

(e) **Law No. 1 of 1967** regarding foreign investments. It is the basic laws under which all foreign investments in Indonesia are regulated and authorized by BKPM. In Article 6, it list nine economic sectors closed to foreign investors "exercising full control." a term which is not defined. "Drinking water" is one of those listed economic sectors

**Article 2:**

Foreign Investment in this Law means:

- a. foreign exchange which does not form a part of the foreign exchange resources of Indonesia, and which with the approval of the Government is utilized for financing an enterprise in Indonesia.
- b. equipment for an enterprise, including rights to technological developments and materials imported into Indonesia, provided the said equipment is not financed from Indonesian foreign exchange resources.
- c. that part of the profits which in accordance with this Law is permitted to be transferred, but instead is utilized to finance an enterprise in Indonesia.

**Article 3:**

- (1) An enterprise as intended by Article 2, which is operated wholly or for the greater part in Indonesia as a separate business unit, must be a legal entity organized under Indonesian Law and have its domicile in Indonesia.
- (2) The Government shall determine whether an enterprise is operated entirely or for the greater part in Indonesia as a separate business unit.

**Article 5:**

- (1) The Government shall determine the fields of activity open to foreign investment, according to an order of priority, and shall decide upon the conditions to be met by the investor of foreign capital in each such field.
- (2) The order of priority shall be determined whenever the Government prepares medium and long-term development plans, taking into consideration developments in the economy and technology.

**Article 6:**

- (1) Fields of activity which are closed to foreign investment exercising full control are those of importance to the country and in which the lives of a great deal of people are involved, such as the following:
  - a. harbors;
  - b. production, transmission and distribution of electric power for the public;
  - c. shipping;
  - d. telecommunications;
  - e. aviation;
  - f. drinking water;
  - g. public railways;
  - h. development of atomic energy;
  - i. mass media.

- (2) Industries performing a vital function in national defence, among others, the production of arms, ammunition, explosives, and war equipment, are absolutely prohibited to foreign investment.

**Article 18:**

Every permit for investment of foreign capital shall specify the duration of its validity, which shall not exceed 30 (thirty) years.

**Article 23:**

- (1) In the fields of activity open to foreign capital, cooperation may be effected between foreign and national capital, with due consideration given to the provisions of Article 3.
- (2) The government shall further determine the fields of activity and the forms and methods of cooperation between foreign and national capital utilizing foreign capital and expertise in the fields of export and the production of goods and services.

**Article 27:**

- (1) Enterprises mentioned in Article 3 of which the capital is entirely foreign, are obligated to provide opportunities for participation by national capital, following a specified period and in a proportion to be determined by the Government.
- (2) When participation as intended by Section (1) of this Article is effected by selling existing shares, the proceeds of such sales can be transferred in the original currency of the foreign capital concerned.

**Article 28:**

- (1) Provisions of this Law shall be implemented by coordination among the Government agencies concerned in order to ensure harmonization of Government policies regarding foreign capital.
- (2) Procedures for such coordination shall be subsequently determined by the Government.

- (f) **Law No. 6 of 1968** concerning domestic investments. This law was originally designed to attract back to Indonesia flight capital and is the authority under which BKPM now licenses "facilitated" domestic investments.

**Article 1:**

- (1) That which is intended by "Domestic Investment" in this Law is a portion of the property of Indonesian society, including rights and goods, owned either by the State or by National Private or Foreign Private Entities domiciled in Indonesia which has been reserved/made available for the operation of an enterprise insofar as such capital is not governed by the provisions of Article 2 of Law No. 1 of 1967 concerning Foreign Capital Investment.

**Article 2:**

That which is intended by "Domestic Investment" in this Law is the use of property as referred to in Article 1, either directly or indirectly for the operation of a business in accordance with or based upon the provisions of this Law.

**Article 3:**

- (1) A national enterprise is an enterprise of which at least 51% of the domestic investment therein is owned by the State and/or a National Private Enterprise. This percentage shall be increased so that on January 1, 1974, it will amount to not less than 75%.
- (2) A foreign enterprise is an enterprise which does not satisfy the conditions of Section (1) of this Article.
- (3) Should an enterprise intended by Section (1) of this Article be a limited liability company, then at least the percentage of the total shares as referred to in Section (1) of this Article must be identified by a holder.

**Article 4:**

- (1) All fields of activity are in principle open to private enterprise. State activities in connection with the development of fields of private activity include fields to be initiated or pioneered by the Government.
- (2) Fields of State activity include especially those fields of undertaking which the government is obligated to conduct.

- (g) Law No. 11 of 1970 which amended and supplemented Law No. 1 of 1967.
- (h) Law No. 12 of 1970 which amended and supplemented Law No. 6 of 1968.
- (i) Law No. 8 of 1971 regarding Pertamina's right to exclusively license private sector participants in the Indonesian petroleum-related economic sector.
- (j) Law No. 5 of 1974 which is concerned with decentralization and the establishment of autonomous authority in the provincial and local governments regarding administrative matters.

**Article 2:**

To organize and establish an Administration, the territory of the Republic of Indonesia shall be divided into Autonomous Regions and Administrative territories.

**Article 3:**

- (1) In the framework of the implementation of the decentralization principle, there shall be organized and established Regions of the First Level and Regions of the Second Level.

**Article 7:**

A Region has the right, is authorized and is obliged to organize and manage its own services in accordance with the prevailing laws and regulations.

**Article 8:**

The additional transfer of governmental affairs to the Region will be stipulated by Government Regulation.

**Article 13:**

(1) The Regional Government will consist of the Head of the Region and the Regional Legislature.

**Article 38:**

The Head of Region with the approval of the Regional Legislature shall have the authority to issue Regional Regulations (Perda).

**Article 39:**

- (1) Regional Regulations (Perda) and/or Decisions of the Head of Region may not be in contravention of the general interests and statutes of Regional Regulations of the higher level.
- (2) A Regional Regulation shall be signed by the Head of Region and be countersigned by the Chairman of the Regional Legislature.

**Article 55:**

Sources of Regional Revenue are:

- (1) Original revenue of the Regional Government consisting of:
  - a. revenue from regional taxes
  - b. revenue from regional fees
  - c. revenue from Regional Enterprises
  - d. other legal regional revenues
- (2) Revenue originating as subsidies from the (central) Government consist of:
  - a. subsidy from the (central) Government
  - b. other contributions regulated by statutes.
- (3) other legal revenue.

**Article 59:**

- (1) The Regional Government may set up a Regional Enterprise of which the execution and maintenance shall be carried out based upon the principle of cost accounting.
- (2) Basic stipulations on Regional Enterprises shall be determined by Law (Statute). (Note: See Law No. 5/1962)

(k) **Law No. 11 of 1974** regarding water resources and which has a wide applicability to other public water utility issues.

**Article 2:**

Water and its resources, including the natural wealth contained therein, has a social function and must be used for the maximum welfare of the people.

**Article 3:**

- (1) Water and its resources must be managed/controlled by the State.
- (2) The State therefor gives the authority to the Government:
  - a. to manage and develop the use of water and/or water resources.
  - b. to formulate, legalize and/or issue licenses according to planning and technical planning of water/water resource management.
  - c. to organize, legalize and/or issue licenses for the purpose, the use and the supply of water and/or water resources.
  - d. to organize, legalize and/or issue licenses for the exploitation of water and/or water resources.
  - e. to determine and arrange legal deeds and legal relations between persons and/or corporate bodies in water and/or water resources matters.

**Article 4:**

The authority of the Government as meant in Article 3 can be delegated to Government agencies/units, at Central as well as at Provincial and Regional Level and/or to certain legal entities based upon the requirements and procedures to be determined by Government Regulation.

**Article 5:**

- (1) The Minister, who is given the task of water resources affairs (Ministry of Public Works, Directorate General of Water Resources), is authorized and responsible to coordinate all regulations concerning planning, technical planning, control, exploitation, maintenance, protection and the use of water and/or water resources; with due consideration of the interests of other related Ministries and/or Institutions.

**Article 11:**

- (1) The exploitation of water and/or water resources, aimed to enhance its benefit for the welfare of the people, is basically carried out by central as well as Regional Government.
- (2) A corporation, social organization, or person exploiting water and or water resources must obtain a license from the Government.

- (l) **Law No. 4 of 1982** regarding environmental protection.
- (m) **Law No. 6 of 1983** concerning general tax matters.
- (n) **Law No. 7 of 1983** concerning income taxation.
- (o) **Law No. 8 of 1983** concerning value added taxation on goods and services and a sales tax on luxury goods.

- (p) **Law No. 12 of 1983** regarding customs.
- (q) **Law No. 13 of 1983** regarding taxation of real property.
- (r) **Law No. 15 of 1985** regarding private sector participation in electricity.
- (s) **Law No. 3 of 1989** regarding private sector participation in telecommunications.
- (t) **Government Regulation No. 22 of 1982** regarding water management as it concerns sourcing of water supplies from streams and groundwater.

**Article 2:**

- (1) The system of water management should be based on the principles of public benefits, balancing of competing interests, and preservation of a natural resource.
- (2) A water right is the right of water-use only.

**Article 5:**

- (2) The Regional Government is responsible for the implementation of authority within the framework of its duty to assist the Central Government with regards to water and/or water resources within its regional boundary.
- (3) The authority regarding water and/or water resources crossing more than one regional boundary is still in the hands of the Minister of Public Works.

**Article 11:**

- (1) The exploitation of water and/or water resources with the purpose of improving its benefit for the people's welfare is basically carried out by the Central as well as Provincial/Local Governments.
- (2) Legal entities, social organizations, and/or persons exploiting water and/or water resources should obtain licenses from the Government based on the principle of joint and mutual cooperation.
- (3) The implementation of this Article will be further stipulated by Government Regulation.

**Article 13:**

- (1) Water used for drinking holds the top priority above all other needs.

**Article 16:**

- (1) Any person has the right to use water for the needs of his daily life and/or the animals under his care.
- (2) Use can be made of water derived from water sources as meant in paragraph (1) of this Article as long as it does not result in damage to the water source and its environment or projects constructed for the benefit of the public.

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**Article 19:**

- (1) The use of water and/or water sources other than for the needs as stated in Article 16 may only be made under a license.
- (2) The use of water and/or water sources as meant in paragraph (1) of this Article covers use for the needs of urban activity, agriculture, power, industry, mining, water traffic, recreation, health and other necessities in accordance with development needs.

(u) **Government Regulation No. 24 of 1986** concerning the 30 year licensing period for foreign investment companies.

(v) **Government Regulation No. 14 of 1987** regarding the transfer of entities and assets, and the delegation of part of the government's authority in the field of public works, to the provincial and local governments.

**Article 2:**

Without decreasing the duties and responsibilities of the Minister of Public Works, part of Public Works affairs are transferred to Heads of Level I and Level II Governments based upon the stipulations provided in the Government Regulation.

**Article 3:**

Part of Public Works affairs as meant in Article 2 which are transferred to Provincial/Level I Governments are:

- c: in the field of Human Settlement (Cipta Karya):
  - 6: the development of planning, construction, maintenance and management of clean water in the rural areas, piping systems and artesian wells.

**Article 4:**

Part of Public Works affairs as meant in Article 2 which are transferred to Local/Level II Governments are :

- c: in the field of Human Settlement (Cipta Karya):
  - 10: The construction, maintenance and management of infrastructure and facilities for clean water supply.

**Article 8:**

- (1) The Minister of Public Works organizes technical guidance and controls on the execution/implementation of Public Works affairs which have been transferred to and carried out by Level I Government and Level II Government.
- (2) Technical guidance as meant in paragraph (1) shall further be regulated by the Minister of Public Works after obtaining advice and consideration from the Minister of Home Affairs.
- (3) Technical control as meant in paragraph (1) shall further be regulated by the Minister of Public Works.

**Article 10:**

(2) All charges (taxes) in the field of Public Works which have been transferred to Level I and Level II Governments become Level I and Level II Government income and shall further be determined in the Regional Government Regulation (Perda).

- (w) **Government Regulation No. 20 of 1990** regarding water pollution control.
- (x) **Presidential Decree No. 54 of 1977** concerning regional basic provisions on investment procedures.
- (y) **Presidential Decree No. 26 of 1980** concerning regional investment coordinating boards [*Badan Koordinasi Pananaman Modal Daerah* ("BKPM")].
- (z) **Presidential Decree No. 35 of 1985** amending Presidential Decree Nos. 33 of 1981 and 78 of 1982 regarding the status, duties, and organizational structure of BKPM.
- (aa) **Presidential Decree No. 17 of 1986** requiring that Indonesian investment entities in which a majority equity ownership is held by local participants be treated the same as domestic investments under Indonesian law. This Decree was amended by Presidential Decree No. 50 of 1987.
- (bb) **Presidential Decree No. 21 of 1989** concerning the exhaustive list of 75 economic sectors that are closed for designated forms of new private investment. "Water supply" and "drinking water" are not listed as closed sectors. This seemingly does—but may not—supersede Article 6 of Law No. 1 of 1967 which designates nine economic sectors—including "drinking water"—as being closed to foreign investment because they are of strategic national importance for which the Government of Indonesia will retain exclusive authority. This Decree also supersedes Presidential Decree 15 of 1987 (which superseded Presidential Decree No. 22 of 1986) which established nonexhaustive lists of economic sectors open to new private investment and which listed "drinking water" as an open sector. Economic sectors open to new private sector investment by the Decree may still be closed or restricted by "prevailing laws and regulations" as stated in the Decree.
- (cc) **Presidential Decree No. 23 of 1990** concerning the establishment of a national pollution board.
- (dd) **Presidential Instruction No. 5 of 1984** concerning guidelines for the simplification and control of business licensing.

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- (ee) **Presidential Instruction No. 4 of 1985** concerning policies to expedite the flow of goods in support of economic activities.
- (ff) **Regulation of the Minister of Mining and Energy No. 03/P/M/Pertamber of 1983** requiring licensing of all private use of ground and spring water and water drilling by the provincial governor acting upon the binding advice of the Directorate General of Geology within the Ministry of Mining and Energy.
- (gg) **Regulation of the Minister of Home Affairs No. 3 of 1986** concerning cooperation by a regional enterprise with a third party. This made possible the establishment of joint cooperation undertakings between a regional enterprise and a private investor.
- (hh) **Regulation of the Minister of Home Affairs No. 690-536 of 1988** dealing with guidelines for the pricing of water supplies by a PDAM. This provides that water supply prices must be decided by the head of the local government and be subject to gubernatorial approval following a proposal from the management of the water company and the favorable considered judgement of the supervisory board. This eliminated the requirement for ratification by DPRD TK. II provided in Regulation No. 690-1572 of 1985.

**Article 2:**

The drinking water tariff will be based upon:

- (1) The ability to cover the following expenses:
  - a. Personnel
  - b. Electricity
  - c. Chemicals
  - d. Organization and Maintenance
  - e. General Administration
  - f. Depreciation
  - g. Rate of interest.
- (2) Clear calculations of revenue must be made or the rate of return must be based on a prior calculation.
- (3) The price of drinking water must be affordable by all members of the community.
- (4) Wealthier consumers must bear part of the cost of providing drinking water to poorer consumers.
- (5) The efficient use of water must be promoted.

**Article 3:**

The system applied for determining a drinking water tariff is the progressive tariff system.

**Article 4:**

(1) Customer categories are divided into:

Category	I:	Social
	II:	Non-Commercial
	III:	Industry
	IV:	Special—Commercial

(2) The Categories mentioned in paragraph (1) above may also be modified according to the situation and need.

**Article 5:**

The tariff of drinking water is determined by the Head of Region with his Decision Letter (Decree = *Surat Keputusan*) upon the proposal of the Board of Directors through the Board of Supervisors.

**Article 6:**

- (1) Prior to submission to the Head of the Region, the proposed tariff should first be discussed and considered by the Board of Supervisors.
- (2) The consideration by the Board of Supervisors covers political, social, economic and cultural aspects.
- (3) If it is considered necessary, the Board of Supervisors may alter the said proposal with or without the approval of the Board of Directors.
- (4) The decision of the Head of the Region regarding the tariff determination becomes effective after it is legalized by:
  - the Governor (for PDAM Level II Government)
  - the Minister of Home Affairs (for PDAM Level I Government).

**Article 7:**

- (1) The Board of Directors in submitting its proposal for determination of a tariff for drinking water to the Head of the Region, should base the proposal upon full consideration of subjects such as:
  - a. The objective of tariff determination
  - b. [AVAILABLE COPY UNREADABLE]
  - c. Price Calculation of water sale
  - d. Analysis of water price
  - e. The method of tariff investigation
  - f. Final Determination of the Tariff Structure.
- (2) —
- (3) The Head of the Region is not bound by the tariff proposal of the Board of Directors.

(ii) Regulation of the Minister of Public Works No. 65/KPTS of 1989 establishing the Joint Technical Team for Water Supply Capital Investment.

(j) Regulation of the Minister of Home Affairs No. 4 of 1990 concerning the guidelines for cooperation between a regional enterprise and a third party. This

revoked Regulation of the Minister of Home Affairs No. 1 of 1983 concerning the same subject.

**Article 2:**

The basis for the cooperation between a regional enterprise and a third party shall be mutual interests of both parties which shall be arranged in a joint venture which

- a. fully establishes the legal rights and ensures the safety by full adherence to written provisions agreed by both parties,
- b. gives equal and appropriate benefits and profits to both parties.

**Article 3:**

The aims of the cooperation is for increased efficiency, productivity, and effectiveness of the Regional Enterprise in the efforts to continue and to ensure sustainability of the Regional Enterprise and to accelerate mobilization of business by means of:

- a. developing existing or already running businesses;
- b. establishing new enterprises based on considerations prospects and mutual benefits.

**Article 5:**

(1) The options for cooperation shall be determined by the conditions and objectives of the Regional Enterprise and the capital agreed in the cooperation.

(2) The cooperation shall be made in forms of:

- a. Management cooperation, operational cooperation, profit-sharing cooperation, joint-venture cooperation, financing cooperation, or production-sharing cooperation;
- b. Management contract, production contract, profit-sharing contract, and facilities sharing contract;
- c. Purchase of stocks or bonds from a limited liability corporation which has good prospects;
- d. Agency, usage, and distribution;
- e. Selling of stocks and bonds and going public with stocks and bonds;
- f. Technical assistance cooperation at national and/or international levels;
- g. Any combination of two (2) or more of the types of cooperation described in paragraphs a, b, c, and/or f.

**Article 6:**

The said cooperation shall be done without changing the legal entity status of the Regional Enterprise.

(2) In drawing up the cooperation agreement both parties shall definitely agree on the type of cooperation, ratio of capital, sharing of profits

and/or rewards, period of the cooperation, obligations, penalties, and termination of agreement and/or the possibility for extension, and other matters as necessary.

- (3) The execution of cooperation as defined in Article 5 shall be reported to the Minister of Home Affairs following the appropriate governmental chain of command.

**Article 8:**

- (2) The proposed partner for the cooperation (a Third Party), in addition to having the same objectives as the Regional Enterprise, shall meet the following requirements:

- a. Shall meet the requirements of:
  - (for an Enterprise)—the status of a legal entity set up in accordance with the effective laws and regulations;
  - (for an Individual)—the **NPWP** (Taxpayer's Registration Number)
  - (for a Foreign Institution/Private Enterprise)—the license/recommendation from the authority in accordance with the effective laws and regulations.
- b. Has positive values in terms of its *bona fides* and credibility, concerning:
  - good attitude and dedication;
  - sufficient competence/experience in the proposed business;
  - sufficient capital.

**Article 9:**

- (1) The cooperation with a Third Party shall be executed by the Management of the Regional Enterprise in accordance with the following provisions:

- a. For an investment value of up to Rp. 500.000.000,- and with a period of cooperation no longer than one (1) year, the cooperation shall not require approval by the Head of Region/Authority.
- b. For an investment value of Rp. 500.000.000,- and with a period of cooperation of over five (5) years, the cooperation shall only be effective after having had approval by the Head of the Region.
- c. For an investment value of over Rp. 1.000.000.000,- and with a period of cooperation of over five (5) years, the cooperation shall only be effective after having been approved by the Minister of Home Affairs.

- d. For an investment value and period of cooperation which is not as provided in items a, or b, or c, the cooperation shall only be effective after having had the approval by the Authority prescribed of the maximum limit of investment.
- (2) The cooperation agreement as defined in paragraph (1) above shall be made in a deed of the Notary Public.
- (3) For a Joint Venture cooperation, in addition to meeting the requirements as defined in Article 8, paragraph (2), the parties in the cooperation shall provide the balance sheets and the profit and loss accounts in the past three (3) years as already audited by a Public Accountant.
- (4) The requirements defined in paragraph (3) above shall not apply to a Third Party which is a newly established corporation formed for the exclusive purpose of the joint venture cooperation.

**Article 11:**

If considered necessary, the cooperation agreement may be reviewed with the Authority (Minister of Home Affairs for Level I Government and Governor of Level I for Level II Government) before the signing.

**Article 12:**

- (1) Within six (6) months prior to the termination of a cooperation agreement, both parties shall together with the relevant Board of Supervisors of the Regional Enterprise, examine and evaluate all the assets and liabilities related to the cooperation and the prospects of the cooperation, and the possibility of extending the said cooperation period with a Third Party.
- (2) If necessary, the Head of Region may set up a Team of Verification and Appraisal consisting of elements of the Regional Government, concerned agencies, Board of Supervisors, and a Consultant competent in his field.
- (3) The Management of the Regional Enterprise shall prepare an accountability report to the Head of the Region in connection with the execution of a cooperation, with the attachments of the analysis results and evaluations as defined in paragraph (1) and/or paragraph (3) above in order to get approval of the extension or termination of the cooperation.
- (4) The termination of an agreement already approved by the Head of Region as defined in paragraph (3) must be recorded in a "Process Verbal" signed by both parties.

**Article 13:**

- (1) The extension of a cooperation period must be executed by the Management of the Regional Enterprise after having applied for an approval in principle by the Head of Region and the Authority.

- (2) The submission of an application as defined in paragraph (1) above shall have attached a report as defined in Article 12, paragraphs (1) and (2).
- (3) The administration process and all its procedures shall be in accordance with the provisions defined in Paragraphs 7, 8, 9, and 10.

**Article 15:**

General supervision of the execution of cooperation between the Regional Enterprise and Third Parties will be carried out by the Minister of Home Affairs and the respective Heads of Regions.

- (kk) **Joint Ministerial Decree of the Ministers of Home Affairs, Public Works, and Finance Nos. 160 of 1978, 281 of 1978, and 360/KMK.011 of 1978** regarding execution and development of clean water construction projects with central government aid.
- (ll) **Joint Ministerial Decree of the Ministers of Home Affairs and Public Works Nos. 3 of 1984 and 26 of 1984 and 4 of 1984 and 27 of 1984**, regarding the establishment of local drinking water enterprises and the development of PDAMs. These Decrees assigned the Ministry of Public Works responsibility for initial water supply planning and development and assigned the Ministry of Home Affairs the principal responsibility for developing the nontechnical aspects of water enterprises. Joint responsibility was assigned to the Ministries of Home Affairs and Public Works for formulating guidelines for the organizational structure of PDAMs.
- (mm) **Joint Ministerial Decree of the Ministers of Home Affairs and Public Works Nos. 5 of 1984 and 28 of 1984** concerning guidance about the calculation of drinking water tariffs and regarding the organization, accounting systems, structure, and cost calculations of water utilities.
- (nn) **Decree of the Minister of Finance No. 540/KMK.011 of 1979** regarding the management of central government funds for the financing of PDAM projects.
- (oo) **Decree of the Minister of Health No. 2180/YANKES/INSTAL/XI of 1981** regarding the establishment of water quality standards and an environmental team.
- (pp) **Decree of the Minister of Public Works No. 269/KPTS of 1984** regarding BPAMs which provides for a shorter period before they are changed to PDAM status.
- (qq) **Decree of the Minister of Finance No. 862/KMK.01 of 1987** regarding the issuance of securities through a stock exchange.



- (rr) **Instruction letter of the Minister of Home Affairs No. 5 dated March 19, 1990**, regarding the anticipated change of the form of all regional government enterprises to one or the other of two forms of legal entity, i.e., PERUMDA (*Perusahaan Umum Daerah* or Regional Public Company) and PERSERODA (*Perusahaan Perseroan Daerah* or Regional Limited Liability Company) upon enactment of a law to replace Law No. 5 of 1962.
- (ss) **Circular letter of the Minister of Home Affairs No. 690-1595 of 1985** which authorized the creation of PMDUs.
- (tt) **Circular letter of the Minister of Home Affairs No. 690/7072/SJ dated July 10, 1985**, to all level one governors, all *bupatIs* and *walIkotas* of level II, and all directors of PDAMs regarding the possible release by level one and two governments of PDAMs from the duty to provide 55% of their net profits to those governments as provided under Article 25 of Law No. 5 of 1962 if such funds are required for projected development and replacement needs.
- First: to make preparation of the change of the form/type of the legal entity of all Enterprises owned by the Regional Government, which capital is partly or wholly owned as Regional separated assets, such as a *Perusahaan Daerah* (Regional Government Enterprise), *Perseroan Terbatas* (Limited Liability Company) and/or other business activities which in fact are managed according to sound economic principle, ... except the *Bank Pembangunan Daerah* (Regional Government Bank), into 2 (two) types of Legal Entity, i.e. the *Perusahaan Umum Daerah* (PERUMDA = Regional Public Enterprise) and/or the *Perusahaan Perseroan Daerah* (PERSERODA = Regional Limited Liability Company).
- (uu) **Decision of the Chairman of BKPM No. 17/SK of 1986** concerning foreign share participation in existing businesses.
- (vv) **Decision of the Chairman of BKPM No. 5/SK of 1986** regarding local equity participation requirements in joint ventures with foreign investors. This Decision followed and implemented the provisions of Article 27 of Law No. 1 of 1967, Circular Letter from the Chairman Nos. 1195/A/BKPM/X of 1974 and B 109/A/BKPM/II of 1975, and BKPM Internal Guidelines of 1981. The Decision was further modified by Decisions of the Chairman Nos. 08/SK and 16/SK of 1989. Also see Decision of the Chairman of BKPM No. 13 of 1986 which amended Decision Nos. 5 of 1986 and 10 of 1985 which largely concerned the procedures for application for approval and facilities for domestic and foreign investments.
- (ww) **Guidelines on the Accounting System of PDAMs of August 1990** Issued by the Minister of Home Affairs.

- (xx) **Implementing Guidelines for Regulation No. 690-536 of 1988** (Interim Report) (undated) regarding the calculation of drinking water tariffs by PDAMs.
- (yy) **Organizational structure of PDAMs** (undated) issued by the Minister of Home Affairs.
- (zz) **Decree of the Governor of the Special Province of Jakarta No. D.IV-a.12/1/49 of 1974** on the regulation of digging and drilling for groundwater in Jakarta Special Province.
- (a') **Decision of Jakarta Governor No. 664 of 1980** concerning the organization, structure, and work division of the drinking water company of the Special Municipality of Jakarta ("PAM Jaya").
- (b') **Provincial Regulation of East Java No. 6 of 1980** amending the provincial water regulation of East Java of 18 November, 1938, on the use of water.
- (c') **Provincial Regulation of East Java No. 5 of 1983** concerning drilling and the use of underground water in East Java.
- (d') **Provincial Regulation of East Java No. 2 of 1987** regarding the establishment of PDABs.
- (e') **Surabaya PDAM Regulation No. KPTS/29/411.61 of 1985** regarding private sector service contracts for bill collection.

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Annex B

**DRAFT MODEL FORM OF JVC AGREEMENT**

(Project Name .....

**MEMORANDUM OF UNDERSTANDING**

**MEMORANDUM OF UNDERSTANDING DATED .....**

**BETWEEN**

**(1) GUBERNUR KEPALA DAERAH TINGKAT I**

**AND**

**(2) REPRESENTATIVE OF PUBLIC ENTERPRISE**

**(3) THE PRIVATE INVESTOR NAME**

**1. PREAMBLE**

1.1. The Consortium was invited by PEMDA to submit a Proposal for the design, construction, operation and financing of .....Project Name ..... (the "Project") on a private investment basis under the build-operate-transfer (BOT) concept.

1.2. The Consortium submitted an initial Proposal to PEMDA in (dated) and subsequently submitted a Supplement to that Proposal in (dated) (the initial Proposal and the Supplement thereto together hereinafter defined as the "Proposal").

1.3. The Consortium now consist of the following parties:

[ The name of the Consortium  
which are consist of : ... ]

[ Additional explanation  
. if any ]

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- 1.4. The Consortium has appointed (the name of the Bank) act as its financial advisers in relation to the Project.
- 1.5. By a letter ref. .... dated ....., PEMDA invited the Consortium to enter into negotiations on the terms of a Concession for carrying out the Project based upon the Consortium's Proposal.
- 1.6. A number of negotiating meetings have been held since ..... and certain agreements in principle have been concluded.
- 1.7. The purpose of this Memorandum of Understanding is to record those agreements and to provide a basis for the next stage of more detailed negotiation.
- 1.8. It is envisaged by the Parties hereto that the Concession for the Project will be awarded by PEMDA to a Joint Venture Company ("JVC" which expression shall include its successors and assigns) to be formed under the laws of Indonesia by the Consortium, (representative of PE) and others to be mutually agreed by the Consortium and (representative of PE). Formation of the JVC will require the prospective shareholders thereof to enter into a Shareholder's Agreement which (among other things) will give rise to certain rights and duties under the Articles of Association of the JVC. The JVC will enter into various contract (the "JVC Contracts") as follows:
  - 1.8.1. the Concession Agreement with PEMDA;
  - 1.8.2. the Bulk Water Sales Agreement with (representative of PE).
  - 1.8.3. the design, construction and operation contracts in respect of the Project with certain individual members of the Consortium;
  - 1.8.4. such other contracts as may in due course prove necessary, subject to the agreement of the Consortium and (representative of PE), and including a loan agreement between the JVC and offshore and (the lenders, if any).
- 1.9. It is the objective of the JVC to maximize the domestic Indonesian content of the construction contract that will be let by the JVC whilst ensuring that the Project will attract such financing as will result in the lowest Bulk Water Charge.

**2. AGREEMENTS IN PRINCIPLE**

It is agreed between the parties hereto that the matters referred to in the following sub-paragraphs are fundamental both to the financing and to the successful implementation of the Project and that the JVC Contracts will incorporate clauses having a similar effect.

**2.1. CONCESSION AGREEMENT**

PEMDA and (representative of PE) will ensure that the following conditions are incorporated within the Concession Agreement.

**2.1.1. Concession Period**

To be .... years from the date of commissioning of the Project and with a right (but not an obligation) for the JVC to extend the Concession Period for a further .... years.

**2.1.2. Access to (the Water Source) - if any**

**2.1.3. Access to Pipeline Facilities - if any**

**2.1.4. Abstraction of Water**

**a). Quantity**

(the description of Water Quantity to be provided JVC)  
.....  
.....

**b). Quality**

(Standard Quality of Water provided and responsibility to maintain such standard).

**2.1.5. Other Investments**

(other investment opportunity)

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**2.1.6. Escrow Account**

.....  
..... (if any)  
.....

**2.1.7. Availability of Foreign Exchange**

.....  
.....

**2.1.8. Fixed Rate Rupiah Finance**

PEMDA will support the procurement of fixed rate Rupiah finance from the ....., subject to its availability, (or from such other financial institutions as may be able to provide such finance) for the benefit of the JVC or related parties.

**2.1.9. Tax Carry Forward**

The JVC will be entitled to carry forward, for the maximum time permitted under the laws of Indonesia, any tax losses incurred as a result of the operation of the Project.

**2.1.10. Import Tax**

(if necessary or exist)

**2.1.11. Sales Tax**

(representative of PE) will support the application for the JVC to be zero rated for the purposes of any liability for value added tax (PPN).

**2.1.12. Expropriation**

Full compensation will be made to the JVC in the event that the Project is expropriated by any Indonesian Authority.

**2.1.13. Non Interference**

During the Concession Period there will be no interference with the JVC's operation of the project and the conduct of the JVC's business affairs

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provided that these are both carried out on the part of the JVC entirely within the terms of the Concession Agreement.

**2.1.14. Work Permits and Visas**

(if necessary)

**2.1.15. Assignment**

All the JVC Contracts stipulated in Clause 1.8 will be assignable to or for the benefit of the lenders to the Project without restriction. The lenders would be able to exercise their right of assignment if the party concerned was failing to perform its duties and obligations under the terms of its contract and was therefore jeopardizing the successful operation of the Project.

**2.2. BULK WATER SALES AGREEMENT**

PEMDA will ratify and underwriter the obligations of the (Representative of PE) in respect of the following matters:

**2.2.1. Distribution System**

A condition precedent to the effectiveness of the Concession Agreement will be the signature by the (pleas notify the location) and the Government of Indonesia of an agreement for the financing of engineering and construction contracts for the rehabilitation and expansion of the (location name) water distribution system. Such contracts will therefore need to be let to the timescale of the (name of) project.

**2.2.2. Water Volumes**

(Representative of PE) agree to take a minimum annual contracted volume of water. The figures in the following table will form the basis of such volumes; these figures

will be confirmed or adjusted in writing by the (Representative of PE) to the Consortium by (the date). The final adoption of such confirmed or adjusted figures will be subject to confirmation of the availability of the appropriate quantity of water at the (project location) as referred to in Clause 2.1.4 (a)

## Table of Minimum Annual Contracted Volumes

Yr 1 Yr 2 Yr 3 Yr 4 Yr 5 Yr 6-15/20

Vol Mm3/year  
Flow m3/sec  
(approx)

### **2.2.3. Payment**

(Representative of PE) will pay for the minimum contracted volume as stated in Clause 2.2.2. whether taken by the (Representative of PE) or not plus any water taken in excess of the contracted volume at rates to be agreed and incorporated within the Bulk Water Sales Agreement.

The Consortium will, for the sake of a first calculation of the Bulk Water Charge, assume that payment will be made for one-twelfth of the agreed minimum yearly quantity. Such payment will be made on the last banking day of each month, the first such payment will be made within two months of the first supply of water and each subsequent month thereafter. In the event that the JVC supplies water to the (Representative of PE) in excess of the annual agreed minimum quantities (Representative of PE) will pay for such additional supplies at the Bulk Water Charge prevailing for the year in which such excess water is supplies. Such payment as may be necessary will be made at the end of each twelve month period.

### **2.2.4. Bulk Water Charge Increases**

The Bulk Water Charge will be increased on the third anniversary of the first supply of water to the (Representative of PE) and each subsequent three year period or less as might be agreed at later negotiations.

The amount of each increase shall be calculated as follows:

The Bulk Water Charge shall be increased by an amount equal to the level of Indonesian inflation as published by Biro Pusat Statistik (Angka indeks harga 9 bahan pokok) during the preceding period of fixed Bulk Water Charge.

In the event that JVC is unable to negotiate with PLN the price of electricity on an acceptable long term basis and the electricity tariff rises in excess of the level of Indonesian inflation, as defined above, then the JVC will determine



the increase in the Bulk Water Charge taking into account the actual increase in electricity tariff.

#### **2.2.5. Event of Default**

It is agreed that an event of default clause shall be placed in the JVC contracts setting out the obligations of the JVC to pay liquidated and ascertained damages for loss arising as a result of the failure of the JVC to meet its obligations under the JVC contracts, due to matters which are its responsibility and within its control.

#### **2.2.6. Force Majeure**

It is agreed that a clause shall be included in the JVC contracts providing that, in the event that such JVC contracts cannot be performed, in whole or part due to force majeure, such failure to perform shall not give rise to claims against such non-performing party.

### **3. OTHER AGREEMENTS**

In addition to the matters referred to in paragraph 2 hereof, other agreements have been reached and are recorded in separate signed minutes. The intent of such agreements shall form part of the Concession Agreement, the Bulk Water Sales Agreement and other agreements, as stipulated in Clause 1.8 and Clause 5.1.

### **4. FURTHER NEGOTIATIONS**

It is recognized by PEMDA, (Representative of PE) and the Consortium that further detailed negotiations will have to take place following signature of this Memorandum of Understanding [and also that financial support from the (Foreign Government, if any)] is fundamental to ensuring an acceptable Bulk Water Charge. Therefore; before detailed negotiations can commence, PEMDA will obtain written confirmation from the Ministry of Home Affairs that the Central Government fully supports the undertakings to be made by PEMDA in the Concession Agreement.

Following this, and the finalization by (Representative of PE) of the contracted water volumes as described in Clause 2.2.2, detailed negotiations between the parties will take place in accordance with the following principles.

- 4.1. The Consortium shall make every endeavor diligently to secure financing for the Project on terms acceptable to PEMDA, (Representative of PE), Consortium and financial institutions.
- 4.2. PEMDA will negotiate exclusively with the Consortium. In the event that any Indonesian agency decides that these negotiations should be postponed or terminated and such decision is subsequently reversed, the Consortium will have the prior right to resume negotiations on an exclusive basis and such negotiations shall be resumed by the Consortium within a period of 3 months from the date of invitation to renegotiate.
- 4.3. PEMDA will assist the Consortium in relation to the project to reach agreement in all matters related to Indonesian Government Departments.
- 4.4. It is intended that this next phase of negotiation will deal with all outstanding matters of principle necessary of successful implementation of the Project such that PEMDA can issue a Letter of Intent to the JVC confirming the intention to award a Concession subject to detailed drafting and agreement on all the necessary contractual documentation.
- 4.5. It is agreed that in the discussion leading up to the agreement of a bulk water charge the Consortium will satisfy the (Representative of PE) that equipment and materials proposed for installation in the project will be fit for purpose and will meet the relevant standards having regard to the need to maximize (other) sources of finance.

## 5. OTHER DOCUMENTATION

It is hereby agreed that on the successful conclusion of all negotiations it will be necessary for several documents to be put in place in addition to those agreements referred to elsewhere in this Memorandum of Understanding in order to ensure the successful implementation of the Project. This will include, but not be limited to:

- 5.1. Agreements or approvals between the JVC [or, if appropriate, the (Representative of PE) either alone or jointly with the JVC] and:

(this documents below are presented as an example)

- Jasa Marga relating to rights of way, design, construction and operation approvals, fees and charges for the pipeline along Jalan Tol;

- Bina Marga relating to technical conditions for the crossing of national, provincial and Kabupaten roads;
- Pengairan relating to technical conditions for the crossing of canals, drains and rivers;
- PJKA relating to technical conditions for the crossing of railways;
- PLN relating to the provision of power, equipment for the sub-station, electricity tariff and security of supply;
- Other documents needed.

5.2 There will also need to be agreements relating to the following matters for which the assistance of PEMDA and (Representative of PE) will be crucial:-

#### **5.2.1. Land Acquisition**

Land acquisition will be the responsibility of the (Representative of PE), in whose name land required for the construction and operation of the Project will be acquired and registered.

The Consortium will set out the pipeline route and prepare plans showing the extent of land required to be purchased.

(Representative of PE) will conclude the necessary contracts for land acquisition before signature of the Concession Agreement and the Bulk Water Sales Agreement, such contracts to provide for (Representative of PE) and the JVC to have the right to enter and carry out work on the land before full legal transfer of title.

The JVC will fund the land acquisition up to the amount as mutually agreed, between the Consortium, (Representative of PE) and PEMDA and the cost will be included in the Project cost.

#### **5.2.3. Export Credit Finance**

(if necessary or needed)

#### **5.2.4. Foreign Government Aid (if any).**

## **6. COSTS**

In the event that the subsequent negotiations do not lead to the award of a Concession to the JVC, it is hereby agreed that PEMDA and the Consortium will bear their own costs and each will have no liability to the other in the event of failure to reach agreement.

## **7. COPYRIGHT**

Until signature of the JVC Contracts, the copyright in all designs, calculations, drawings, computer analysis, pricing, financial models, and other documents where prepared by the Consortium shall remain the property of the Consortium. The copyright in all designs, calculations, drawings, computer analysis, pricing, financial models, and other documents where prepared by the (Representative of PE) shall remain the property of the (Representative of PE). Thereafter copyright shall pass in accordance with the terms of the JVC Contracts.

## **8. GOVERNING LAW**

Indonesian law and practice will govern this MOU, the Concession Agreement, the Bulk Water Sales Agreement and (the local rupiah loan to the JVC (if any) and the agreements set out in paragraph 5.1. (English law will govern any sterling loan to the JVC and the contracts set out in paragraph 1.8.3. this statement attached as needed).

The JVC will have the right to demand changes in or additions to the terms of the JVC Contracts if any change in the laws or practice of Indonesia indicates that it may cause difficulty to the JVC in operating the Project.

## **9. VALIDITY**

This Memorandum of Understanding will remain in full force and effect until the earliest of;

- signature of the Concession Agreement and Bulk Water Sales Agreement
- (the date)
- such later date as may be agreed to by PEMDA, (Representative of PE) and the Consortium
- agreement between PEMDA, (Representative) and the Consortium to terminate negotiations.

Signed on behalf of (Representative of PE) under the authority attached hereto on the day and year first above written.

\_\_\_\_\_

(name)

Signed on behalf on the (name) Consortium under the authority attached hereto on the day and year first above written.

\_\_\_\_\_

(of the Consortium)

and others related parties.

\_\_\_\_\_

Signed by GUBERNUR KEPALA DAERAH TINGKAT I (name of the province)

\_\_\_\_\_

(name) (The Governor of .....)

## Annex C

# PROPOSED STRUCTURE OF THE PROJECT PREPARATION REPORT

## DETAIL PROPOSED STRUCTURE OF THE PPR

### Proposed Structure of Report

A proposed Project Preparation Report outline which may be followed to review and protect the interest of the PDAM, is given below:

### EXECUTIVE SUMMARY

The Executive Summary should provide a concise summary of **the most important aspects** of the Project Preparation Report (PPR). It should include an easily understood review of the key project parameters of interest to both the PDAM and Private Investors.

#### I. Introduction of The Study

##### 1.1 Study Background

##### **Present Status of Project,**

Explains how and why the Project has evolved and also indicates the present status of the Project. Reviews the alternative funding sources approached.

##### **Project Relevant Studies to date,**

Establishes that all relevant information about the Project and its environment has been used to make the PPR as comprehensive as possible. This will include a review of the identification studies, method of packaging, and any institutional steps taken to promote the project.

##### **Administrative Responsibility of PPR,**

States who was actually responsible for preparing the Project Preparation Report and indicates if the Project or aspects of its report may have changed since the Project Preparation Report was prepared.

## **1.2 Objective and Scope of the Study**

Objectives should focus on the service to be delivered and on who receives it. This section should be broken into at least two parts, one dealing with the *beneficiaries* to be covered by the project and the other dealing with *the planned output* of the project. A major objective is to obtain private sector funding to take the investment off-GOI budget.

## **II. Project Area and Need for the Project**

### **2.1 Description of The Project Area**

Shows the location of the Project, Administrative boundaries, rivers, existing infrastructure, and land use geography. Shows the Private Investors assets, in the case of Investor-Led projects.

### **2.2 Existing Socio-Economic Condition**

Describes existing populations, households, household income for the residential zones, industrial and commercial areas development. And also makes a prediction on future project area growth, particularly with regard to potential revenue streams.

### **2.3 Water Sources in Project Area**

Provides an inventory of the quantity and quality of surface and groundwater resources (actual and potential) in the Project area and vicinity.

### **2.4 Existing Water Supply System**

Provides a summary of all water supply systems and facilities in the Project Area, both PDAM and Private supplies. Also this section will represent data, analysis, and comments on **the service coverage** (number of people served) and their **service level** (type of facility and quality of services). Also make a review of the performance of the PDAM, its management, finances, and assesses its potential as a partner to a Private Investors.

### **2.5 Population and Water Demand Projections**

Provides population figures for the Project Area on which demand forecast are based. The demand projections will also be based on the domestic and non domestic category. Investor Led projects will make their own assessment of water demands.

## **2.6 Need for Water Supply Investment Project**

Identifies major problems with the existing system, describes and summarizes the need for the Project investment to meet demand or maintain the system output. And finally, outlines the need for the water supply investment.

### **III. Description of Proposed Project**

#### **3.1 Project Objectives**

Gives detailed information on areas to be served or demand to be met by the project. The composition of each type of service should be expressed (domestic and no domestic demand) and the projected demand of each type (generally in percent format). The percentage of demand to be met for PDAM and Private Investor must clearly stated.

#### **3.2 Project Water Source**

Describes in detail the selected water resource for the project and its yields. This section will explain the current uses of those water resource and projected demand to be met for agricultural, industrial, and urban use. Any necessary licenses for water abstraction must be clearly listed.

#### **3.3 Technical Description**

This section provides a summary of the components of the Project in terms of the purpose of each component, its technical output, how it will operate, and how it fits into the existing PDAM system. Further, description will also include any provisions for future extension of each components and show how the components are served by other necessary infrastructure facilities, such as roads, drainage, sewerage, etc. The method of "packaging" should be described.

#### **3.4 Operation and Maintenance of Project**

Describes how operation and maintenance have been considered in all Project design decisions and also states on what circumstances the operation and maintenance will be arranged during concession/contract period before the project is transferred to the Government.

#### **3.5 Implementation Schedule of Project**

Provides a detailed and realistic implementation schedule for all of the Project components. Realistic timings should also be provided for each step in the implementation process,



including completion of final design, preparation and approval of tender documents, tender period, tender evaluation, recommendation and approval of contract award, negotiation and contract signatures, and finally mobilization by the JVC.

### **3.6 Environmental Impact Analysis**

Describes the various environmental impacts expected from the project, including public health, water resources, and wastewater disposal. And this section has to also provide a proposals/plans to reduce adverse impacts and increase positive impacts.

## **IV. Project Organization and Management**

### **4.1 Joint Venture Company Arrangement**

Describes the nature of The JVC arrangement which will consist of name and specification of parties, and basic principles of the JVC. The aspects that covering all technical specifications and operation of JVC should be presented. For PDAM-Led Projects this will provide essential background information to the interested Private Investors.

### **4.2 Management Structure**

Provides an explanation of the Scope of Operation, and system and structure of the JVC, and how the project will managed in relation to the existing PDAM.

### **4.3 Concession Agreement**

This describes the MoU between PDAM and The Joint Operation or Private Investor. The section will describe the PDAM responsibility for issuing of the concession license to the JVC and also include the determination of the concession period and its conditionality.

### **4.4 Contractual Arrangement Third Parties**

Provides an explanation of the JVC requirements for hiring third parties (e.g : consultants, contractors, or suppliers), these explanation will cover :

- directives to utilize domestic products, unless they are not available in Indonesia or need higher quality,
- price direction—i.e they should be competitive,
- procurement arrangement, according to agreed standard.

#### **4.5 Project Operational Control**

Provides an Operational Control Mechanism of the JVC which will involve:

- control during construction stage of the Water Supply Investment Project; this control will be carried out by an independent consultant,
- controls during operational/concession period by a Monitoring Body who has the power to supervise and instruct the JVC management using Regulatory procedures.

#### **4.6 Staffing Plan and Training Requirements**

Gives a description on the needs and management of JVC staff which will include:

- the possibility to and arrangement for expatriate persons (if needed) and local professional experts,
- the possibility of PDAM staff involvement in the JVC—this issue covers the salary structure and staff responsibility,
- training needs and material exercises for staff development (specially for pure JVC staffs).

### **V. Project Financial Analysis**

#### **5.1 Project Assumptions**

The PPR must produce clear evidence of a revenue stream that meets the Private Investors requirement for a commercial profit. All assumptions on uncertainties concerning revenue streams must be set out clearly.

#### **5.2 Project Financial Statement**

These should include the financial performance of the whole PDAM over the last 3 years, and indicate the effect of the new investment project and JVC on PDAM finances.

#### **5.3 Estimate of Project Cost**

Provides a summary of total investment costs for the project, and the investment costs for each component. These estimated costs are the basic data for financial analysis, so they must be realistic and within 10-15% of actual construction costs. The base year cost estimates

should have add-on provisions for unforeseen cost and price escalations and should be in the year which the Project Preparation Report prepared.

#### **5.4 Financing Plan**

Summarizes and describes all sources of finance that will be used in the implementation of the Project, including the terms and conditions of the Loan (if any). It should evaluate the various options of equity and revenue share with the Private Investors and assess the real cost and benefit to the PDAM in the JVC with Private Investors.

#### **5.5 Bulk Water Charge (Tariff Design)**

Describes water charges and tariff policy in the past, and planned tariff design in the future for the Enterprise. Tariff design is a complex subject which attempts to balance the often contradictory objectives of economic efficiency, financial viability for the Enterprise, administrative practicality, and social equity. This section is of critical importance to the Private Investor that it looks at uncertainties regarding revenue streams.

#### **5.6 Conclusions of The Project**

This gives concise list of conclusions regarding the study and recommendations for future achievement.

PRIVATE SECTOR PARTICIPATION  
IN URBAN WATER SUPPLIES  
ISSUES FOR INVESTMENT IN INDONESIA

VOLUME III—WORKING PAPERS A-G

Field Report No. 330  
May 1991



Sponsored by the U.S. Agency for International Development  
Operated by CDM and Associates

**PRIVATE SECTOR PARTICIPATION IN URBAN WATER SERVICES**

**ISSUES FOR INVESTMENT IN INDONESIA**

**Volume III**

**WORKING PAPERS A-G**

**Prepared for the USAID Mission to Indonesia  
under WASH Task No. 186**

**May 1991**

**Water and Sanitation for Health Project  
Contract No. DPE-5973-Z-00-8081-00, Project No. 836-1249  
is sponsored by the Office of Health, Bureau for Science and Technology  
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Washington, DC 20523**

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Working Paper B:	A Review of Indonesian Laws and Regulations Concerning Private Sector Participation in Urban Water Services
Working Paper C:	Public Policy and PSPUWS—Issues and Options
Working Paper D:	Institutional Constraints and Opportunities
Working Paper E:	Private Sector Investment Needs Assessment
Working Paper F:	Water Sector Financing: Selected Issues in Financial Assessment
Working Paper G:	List of References, Contacts and Glossary

## PREFACE

### PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES: ISSUES FOR INVESTMENT IN INDONESIA

The purpose of this study is to assess the prospects for increasing private sector participation in the Indonesian urban water supply sector. The analysis has concentrated on capital investments and particularly on the "build, operate and transfer" (BOT) model. Issues arising in three policy areas were addressed—financial, legal, and public policy and administration.

The report is organized into three volumes. Volume I provides a summary of findings, implications, and recommended next steps; Volume II sets forth proposed administrative guidelines for water authorities in dealing with a private investor; and Volume III comprises a series of Working Papers (A through F) which deal with specific policy areas that need to be addressed if the Government of Indonesia is to successfully involve the private sector.

The study was funded by USAID/Jakarta and conducted by the Water and Sanitation for Health (WASH) Project. Field work and preparation of the reports were undertaken in Indonesia from October 1 to December 15, 1990. Consultants involved in the preparation of the report (and their respective specialties) include the following: S. Watt (team leader and engineering), Jane Walker (project manager and finance), S. Biddle (public policy), G. Letterman (legal), Lisa Kulp (finance), Tantri Marbun (finance), B. Nainggolan (finance), R. Thabrani (legal), D. Soetjipto (legal), R. Roesli (public administration), Harayatningsih (public policy), and M. Maulana (engineering).

The WASH project team would like to acknowledge the Municipal Finance Project Team, specifically Dr. James McCullough and Dr. John Taylor, for their invaluable assistance in the field work and their essential collaboration in the production of the report. WASH would also like to thank USAID Jakarta, in particular Mr. William Frej who initiated and guided the study and Mr. Peter Gajewsky who provided critical advice throughout the field work. WASH is also grateful for the time and assistance given to the team by the Directorate of Water Supply of the Ministry of Public Works, the Directorate General of Regional Government and Autonomy (PUOD) of the Ministry of Home Affairs, the Joint Technical Team for Water Supply Capital Investments and the Investment Coordinating Board (BKPM).

**PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES**

**ISSUES FOR INVESTMENT IN INDONESIA**

**Working Paper A**

**PRIVATE SECTOR PARTICIPATION IN  
SELECTED URBAN SERVICES**

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## Working Paper A

# PRIVATE SECTOR PARTICIPATION IN SELECTED URBAN SERVICES

### EXECUTIVE SUMMARY

This paper examines the role played by the private sector in several urban service areas in Indonesia other than water supply. The objective is two-fold: to capture important lessons for the water sector, and to catalog the existing situation in private participation across a range of selected urban services. Four public services have been reviewed: transport (tollroads), power (electrical generation), telecommunications, and solid waste management.

Private sector participation in urban sectors is a relatively recent development. The formal encouragement of private sector participation in urban services coincided with the gradual deregulation of the economy which began in 1986. Given this relatively recent time frame, most formalized private sector activities are limited to specific investments. Further, the configuration of private sector activities is limited to specific investments. Investments in transport has been through joint venture agreements involving build-transfer-revenue share. Telecommunications is also opting for this model of investment. The solid waste sector has mainly been restricted to management contracts with small investments in capital assets. Electricity generation through private sector investment is in the preliminary stages of implementation with a likely investment profile of build-operate-own.

The transportation sector in the construction and operation of toll roads and the solid waste management sector are the most advanced in terms of active operation. At present there are 17 km of toll roads constructed with an additional 34 kms under construction with private sector input. The majority of urban areas are served by the Dinas Kebersihan for solid waste removal. A few private sector contractors are operating solid waste management contracts but there is little capital investment.

Though a very new venture for private participation, the telecommunications sector has been particularly successful in attracting private sector investment. During the period 1989-90, the private sector has contracted to build over a million telephone lines at an approximate development cost of US\$ 4 billion. Considerable interest has been shown by the private sector in the development of electrical power generation. Investment in power, however, is at the preliminary stages with officials formulating the regulatory and administrative procedures and preparing a strategy for implementation.

In reviewing the current situation with regard to private sector participation across the range of urban services, common concerns become apparent. A pervasive problem experienced by most private participation efforts is the lack of regulatory and institutional infrastructure.

The transportation sector through the construction of toll roads is a case in point. Toll road construction has proceeded slowly through an ad hoc system which has established regulation and procedures on an as-needed, case-by-case basis. Only in 1990 was the legality of private sector participation in toll roads established. At present the private sector is finding it difficult to obtain financing for toll road investments even though public authorities feel that the current revenue-sharing arrangement should be adequate to cover investor risks. Legal agreements are now also in place.

The lack of a well defined strategy for private participation in public services has led to confusion for both the private and public sectors. The private sector needs to have clear direction concerning expected obligations and privileges, specifically with respect to control over assets and revenue streams. Further the lack of appreciation of the private sector's investment risks and need for specific guarantees has slowed down the dialogue between public authorities and private investors. Private investors have responded differently in the various sectors. In telecommunications, revenue-sharing arrangements have been attractive and have drawn a large response by investors. The electrical power sector has yet to become fully accessible for private investors, however public authorities are discussing requirements with the private sector before terms are offered and are establishing a regulatory structure. In toll roads and in solid waste, equity participation in terms of capital assets formation has been disappointing.

Lessons from private participation in the range of urban sectors can be applied to the urban water sector. A clear lesson is that the lack of a workable institutional and regulatory framework supported by appropriate legal instruments will cause delay in investment and add to the investment cost through anticipated increased risk by the private investor. The need for consensus in private sector participation in water supply is reinforced by the lack of major private investments in the sector even though official encouragement of private sector participation in water supply have been in place since 1986. Several significant examples of stalled investment opportunities in the water supply sector illustrate the need for a regulatory framework. Further, without a regulatory framework, private investment may go ahead in an unplanned and ad hoc manner resulting in sub-optimal facilities.

## WORKING PAPER A

### PRIVATE SECTOR PARTICIPATION IN SELECTED URBAN SERVICES

#### 1. INTRODUCTION

The purpose of Working Paper A entitled Private Sector Participation in Selected Urban Services is to examine the role played by the private sector in urban service areas other than water. This is important to gain further perspective on the important issues involved in private sector participation and to draw important lessons for water. The extent to which the private sector participates in the provision of these other urban services is assessed and the problems, successes, and limitations are evaluated.

The main focus has been in areas in which the private sector has invested capital, although other forms of private sector participation have been reviewed as well.

Four public service sectors have been reviewed; tollroads, electrical power, telecommunications, and solid waste management. Each of these has in common the provision of a social good although the extent to which each can be considered a social necessity differs. Toll roads and electrical power resemble water in that the investments are usually very large, lumpy, and have a long payback period. Telecommunications can be more modular than tollroads or electrical power generation but is similarly capital intensive and is particularly foreign exchange intensive. Solid waste management represents a smaller scale of investment, excluding construction of sanitary landfills, but presents a greater challenge for monitoring and regulation.

Initially it was thought that private sector participation would be at one of three stages of development, each with its unique characteristics and issues. These stages were categorized as: preliminary, implementation, and operation. At this time it appears that most private sector participation in these four areas is still in the preliminary stage. There are two interrelated reasons for this:

- PSP is new and, as a corollary, the strategies and implementation method are still being defined or refined and;
- The guarantees required by the private sector to obtain funds through traditional financial markets for traditional forms of participation, particularly Build/ Operate/ and Transfer or Build/ Operate/ and Own cannot or will not be provided by the GOI.

The next four sections will deal with each public infrastructure sector individually. The analysis will include:

- a brief description of the institutional and regulatory framework;
- an accounting of the current status existing works and those under construction and the degree of private participation;
- an analysis of the problems in general and for proposed projects and;
- an assessment of the potential for increasing private sector participation and the requirements for such an increase.

## **2. PRIVATE SECTOR PARTICIPATION IN TOLL ROADS**

### **2.1 Institutional and Regulatory Framework**

Toll roads in Indonesia are regulated, supervised, and monitored by Bina Marga. Operation and maintenance is executed by PT Jasa Marga, a public corporation established in 1980. Revenues generated by the tollroads are collected by Jasa Marga for operation and maintenance. Total toll road link revenues are pooled and then redistributed after subtracting the amounts due under joint venture agreements.

### **2.2 Current Status (Existing and Under Construction)**

The first toll road connecting Jakarta to Bogor began operation in 1978. Indonesia now has a total of 309 Km of toll road open for operation consisting of 11 inter urban links and five bridges. Construction of an additional 100 km is underway and an existing 47 km link is being widened from two lanes to four. See Table 1 for details.

Toll bridges have been financed directly through the development budget. Toll roads subsequent to the Jagorawi were been funded through a combination of PT Jasa Marga Bonds, Soft Loan, and GOI equity participation. In 1983, Jasa Marga began floating bonds to raise equity for further investment. The bonds are floated for a five year period at between 16 and 18% interest. The main bondholders are TASPEN and ASTEK, a pension fund and a worker insurance compensation fund owned by the Ministry of Finance. Because the main bondholders are held by public companies, it is unclear whether they represent private participation.

**Table 1****Toll roads in Operation**

Name	7 Length (Main)	Year Opened	Source Funds
Jagorawi	47	78	APBN
Citarum Bridge	0.22	79	APBN
Tallo Lama bridge	0.21	81	APBN
Kapuas + Landak bridge	0.6	81	APBN
Mojokerto bridge	0.23	82	APBN
Semarang Artery	15	83	City/BOND
Ciujung & Serang Bypass	12	84	OECF/APBN
Jakarta Tangerang	27	84	OECF/BOND
Prof. Dr. Ir. Sedyatmo	14	85	BOND
Belmera	34	86	KFW/BOND
Surabaya-Gempol	43	86	SAUDI/ADB/BOND
Jakarta-Cekampek	73	88	IBRD/KUWAIT/BOND
Cawang-Tomang	17	89	OECF
Ir. Wyoto Wiyono, Msc.	17	90	JV Citra Marga
Cakung-Cikunir	<u>9.</u>	90	IBRD/BOND
Total:	309.26		

**Tollroads under Construction**

Padalarang-Cileunyi	66	91	Saudi/Kuwait/MOF/BOND
Tangerang-Merak I	34	93	JV Marga Mandala Sakti
Cibitung-Cikampek*	<u>47.5</u>	92	JV Bangun Cipta Sarana
	147.5		

\*(add two lanes)

**2.3 Analysis of Problem**

In 1986, however, toll road construction was opened for private investment. Although not generally considered as such, the Prof. Dr. Ir. Sedyatmo tollroad to the Cengkareng airport opened in 1985 may have been the first privately funded toll road as it was financed entirely from Jasa Marga bonds.

The first terms offered were onerous:

- The land and the asphalt on it were the property of the GOI, not the Investor;
- The contract was non-recourse;
- The investor assumed the cost of land clearing and relocation of utilities;
- Duty free import status was not provided;
- The tariff was set by Presidential Decree;
- No government guarantees regarding revenue or changes in exchange rates were provided;
- The asset held by the investor was the agreed upon concession period

Some of these terms were revised in Presidential Decree #8/ 1990 where the legality of Private Sector Participation was established and the Government reassumed all responsibility for land clearing and relocation of utilities. Other terms remain the same.

At the same time this decree was issued the first private toll road was completed and started operation. A 17 kilometer link from Cawang-Priok was built by a Joint Venture company PT Citra Marga. Actual operation of the tollroad is sub-contracted back to Jasa Marga. The link is operated under a revenue sharing operation with the Cawang-Tomang link. The Cawang Priok link consists almost entirely of a fly-over road which is considerably more expensive to construct so the revenue sharing was weighted 75% Joint Venture and 25% Jasa Marga for the entire system with a 23 year concession period. Most of the participants are first-line suppliers such as Indocement, Krakatau Steel, and a state owned contractor Hutama Karya. Financing was provided by the state owned Bank Dagang Negara. Two other links are under construction consisting of mainly first line investors and funding was obtained through Bapindo, the State Development Bank. It is possible that these are unique and not easily replicable arrangements.

An arrangement favored by the private sector where large amounts of earthwork has already been done by Jasa Marga is the Joint Operation. PT. Bangun Cipta Sarana, a contractor firm, to expand the Cibitung to Cikampek link from two lanes to four. Under the joint operation agreement, PT Bangun Cipta Sarana has a 26 year concession and receives 69% of the revenues accruing from the Cikampek to Cibitung traffic. Financing of the toll road was provided by the national development bank, Bapindo.



The first two joint venture agreements are composed of Jasa Marga and first line suppliers.

In toll roads the scheme is Build, Sub-contract operations and maintenance back to Jasa Marga, take revenue or revenue share during the concession period, and then transfer the rights to the revenue at the end of the concession period. This is not a true BOT, at least in that the assets are never owned by the investor.

An additional 20 links representing 1018 km of road have been offered by Jasa Marga for investment of which six links representing 212 km have been taken up for serious negotiation. (note that the Jakarta Outer Ring Road is counted as one link.) Table 2 below shows details of the links which have reached a negotiating stage.

**Table 2**

Tollroads which have reached negotiation stages

Name of Link	Study Status	Length (KM)	Current Situation
JKT Harbor	FE3	22	J.V. Negotiation for equity sharing
Surabaya/Gresik	FE3	20	J.V. agreement already Initialed.
Cikampek/Padalarang	FE3	60	J.V. agreement far along
Jkt OuterRing WII	FE3	10	J.V. On-Shore early stages
Jkt OuterRing S	FE3	13	J.V. Off-Shore early stages
Jkt OuterRing rest	FE3	36	High priority but no arrangements
Tangerang/Merak II	Closed	43	Extension of Tangerang/Merak I
Grogol/Pluit	Closed	8	To be included in Jkt harbor
Total:		212	

Note: FE stands for Feasibility and design

FS stands for feasibility

PFS stands for Pre Feasibility

There are 5 steps in the investment process: under step 3 the investment agreements are negotiated; step 4 is for BKPM approval; and step 5 is construction.

The remaining 14 links are thought to be far from the negotiation stage until major issues regarding the terms of the of investment are resolved and the first five enter into construction. Details of the remaining links are shown below in Table 3.

**Table 3**

Tollroads which have not reached negotiation stages

Name of Link	Study Status	Length (KM)	Current Situation
Gempol/Malang	FS	56	No current investment projects
Surabaya/Mojokerto	FS	39	No current investment projects
Medan/Binjai	FS	24	No current investment projects
U.P. Mandai	FS2	14	No current investment projects
Cikampek/Ciribon	FS3	142	Some discussions but too costly
Ciribon/Tegal	PFS	69	No current investment projects
Semarang Artery C	PFS	12	No current investment projects
Semarang Batang	PFS	75	No current investment projects
Tegal/Batang	PFS	69	No current investment projects
Semarang/Solo	PFS	80	No current investment projects
Bogor/Bandung	PFS	120	No current investment projects
Gempol/Pasuruan	PFS	26	No current investment projects
Solo/Jogya	PFS	60	No current investment projects
Jkt/Serpong	FS1	20	Not designated as tollroad yet.
Total:		806	

Note: FE stands for Feasibility and design

FS stands for feasibility

PFS stands for Pre Feasibility

There are 5 steps in the investment process: under step 3 the investment agreements are negotiated; step 4 is for BKPM approval; and step 5 is construction.

## 2.4 Potential for Future Investment

Although the GOI had felt that generous revenue sharing arrangements would provide sufficient return to cover the investors risks, the private sector is still finding it difficult to obtain financing. The public partner, Jasa Marga, because of its debt burden is also finding it difficult to raise its share of equity. For each of the links currently in the negotiating stage compromise will be required from the GOI for completion.

A mixed financing scheme is being discussed by Jasa Marga with the Ministry of Finance. The scheme calls for 30% equity through the joint venture and a 70% loan where half will be provided under concessionary terms through the Government and half will be raised on the commercial market.

One has no sense of whether resolution of these, essentially policy related problems will be rapid or not. It is clear, however, that unless some further change takes place additional investment is unlikely to occur.

### **3. PRIVATE SECTOR PARTICIPATION IN SOLID WASTE MANAGEMENT**

#### **3.1. Institutional and Regulatory Framework**

Solid waste management is the responsibility of the local government, Mayor or Bupati and is generally under the supervision of the Sub-Dinas Kebersihan, however, the actual agency responsible varies widely. Operation and maintenance are funded through an annual budget and include central government funds. Each local government is autonomous and responsible for setting up some arrangement although assistance and guidance may be provided from the local level Tk II Dinas Pekerjaan Umum.

There is no direct national legislation regarding private sector participation in solid waste management.

#### **3.2. Current Status**

Garbage removal is generally organized at the neighborhood level. Waste is brought to collection points where it is collected and, at least in theory, taken to a city operated dump. Variants on the theme exist. Unlicensed garbage collectors provide a service removing waste to an informal site, often a river or canal, scavengers remove and sort for salvage items, in certain areas the Dinas operates a door-to-door collection service and, after late 1987 formal licensing of private garbage removal firms started.

An institutional survey of 12 major cities shows a lack of uniformity in the areas of responsibility, composition, and size assumed by the Dinas Kebersihan. In some cities the Dinas Kebersihan was in charge of solid waste disposal and street sweeping, in others maintenance of small drains, public parks, and even street lighting was included. The report recommended that guidelines be issued defining organization, structure, tasks, and responsibilities.

In general, the solid waste management system is unsatisfactory, insufficient, and falling behind as Indonesian cities grow and income increases (although some cities such as Bogor are considered to do a reasonably good job.) The problem of solid waste disposal and management will be exacerbated in the future as not only the higher the income the more solid waste produced but the greater the average particle size and proportion of inorganic matter, both of which increase ultimate disposal costs. Statistics are scanty but indicative:

In urban areas 40% of the households are served by some form of garbage collection. In Jakarta and other cities with populations greater than one million the proportion rises to 55%. The smaller the city the lower the coverage. The wealthier the household the higher the coverage; 70% for households with monthly incomes greater than Rp. 400,000 in 1988, 33% for households with incomes between 100,000 and 200,000, and only 19% for households with incomes below 50,000. The poorer the household the lower the level of service received and with consequences for environmental health.

In Jakarta about 5,000 tons of garbage are produced each day of which approximately half is generated by domestic sources. Overall, 75% of the waste generated is collected of which 60% or 2,3000 tons per day is transported to a landfill. The remainder is disposed of in informal dumps, drains, canals, and open land. In other cities the problem is the same although the absolute amount of garbage is less.

The financial potential of solid waste management is enormous but problems in the collection system have undermined the financial base of the Dinas Kebersihan. As solid waste management is not well understood, and generally not regarded as a serious profession or a priority, it is one of the most underfunded for the task involved. Each household pays a garbage collection fee through the neighborhood organization. This fee varies between neighborhoods and is generally based on an assessment of the household's ability to pay but is usually between 1,000 and 5,000 per month. In Jakarta, significant fee revenue is collected each year of which little reaches city coffers.

Prior to 1987, private sector participation was in the form of unlicensed collectors hauling garbage to illegal dumping grounds. In late 1987, at the initiative of the governor of Jakarta, the first private firm, PT Sarana Organtara Resmik, was licensed to operate. This firm operated by a solid waste management expert began operating in the Monas area and has since expanded to Menteng, Gondangdia, Kebon Sirih, and Pasar Baru. The firm sweeps streets, collects waste from bins, cleans the parks, and transports the waste to the Municipal dump 41 km away in Bekasi.

PT. SOR covers 7 kelurahan and an additional 14 firms clean a total of 19 kelurahan. In short private sector participation covers 7% of the 261 kelurahan in the city. But solid waste management is not, under present arrangements, a promising private enterprise. It should be understood that PT SOR operates on the principles of a Yayasan, a volunteer organization, and has chosen to act as a model of what could be done within the Dinas Kebersihan and the private sector. The firm owns its own maintenance chop and 25 trucks. With little additional investment the firm could clean 20 kelurahan though it is only licenced for seven. While the PT SOR performance is effective and impressive, it is not yet financially attractive. At present the firm is able to meet all its costs but there is no profit. That it should do so well while operating at a less than efficient scale bodes well for the sector in the future. Under present arrangements it is not surprising that no other firm has invested to the level

of PT SOR, rather they have purchased a limited number of second hand trucks or have hired them from the Dinas Kebersihan.

### **3.3 Analysis of Problem**

The private sector experience has not been entirely successful. Nor have the majority of the private operations performed better than the best public sector operations. Most firms involved had no prior experience in solid waste management with all the problems that implies as solid waste management is a profession and cannot be run simply as a larger version of village waste disposal, a point not often appreciated by these firms.

In turn, the public sector has had a difficult time specifying its requirements. Unclear terms of reference and performance measures have made it difficult for municipal authorities to monitor the performance of their contractors.

The incentives offered the private sector have been few. The problems are mainly that;

- the concession size offered is too small for any firm to achieve economies of scale;
- the concession period is generally too short for the firm to risk purchasing equipment (currently three years.) and;
- there is no clear procedure for time increases in the fee, hence returns to investments are uncertain.

### **3.4. Potential**

Solid waste management has the potential for becoming a directly profitable private sector business which benefits society by improving the health and visual environment as well as providing jobs. It could be expected to have significant positive spin-off effects through the income and employment generated by better organized cottage recycling industries.

The economic and social problems, solutions, and ramifications of solid waste management are multifaceted, interrelated, and easy to underestimate. For significant private investment to take place the following changes or improvements are needed:

- legislation which clarifies who is responsible for solid waste management and;
- a clear definition of guidelines and procedures for solid waste management;

- More training for the Dinas Kebersihan in solid waste management so that they can monitor and regulate the private sector effectively;
- Studies to decide if and where the private sector should be encouraged to operate, the scale needed, and to determine the most appropriate level of technology.
- That the terms offered to the private sector be long enough, the concession large enough, and have sufficient income guaranteed for the firms to operate at economically profitable size, and to invest in the equipment, maintenance facilities, and training required for efficient performance;
- A fee collection system is improved to capture lost revenues and, as corollary which is related to the amount paid for the service except where explicit subsidies are desired.

#### **4. PRIVATE SECTOR PARTICIPATION IN ELECTRICAL POWER**

##### **4.1. Institutional and Regulatory Framework**

Established in 1972, PLN, the National Electricity Authority, has the mandate for providing electricity for the nation. As a public corporation, it is regulated under the Ministry of Mines and Energy under the Director General of Electricity and New Energy (DGENE.) The DGENE is also responsible for planning expansion of the PLN grid.

In 1985, a new Presidential Decree was issued which was intended to provide the widest opportunity possible for private sector participation in the provision of electrical power. While the door was opened for private investment, the institutional arrangements and public/private expansion strategy remained to be defined. This decree followed a series of Indonesian National Development Budget retrenchments caused by declining oil prices beginning in 1984 and the recognition that the enormous forecasted increase in power demand and concomitant investment requirements were competing for scarce development funds.

##### **4.2. Current Status**

During the 1980's PLN's installed capacity grew from 2.3 GW (gigawatt) to 8.1 GW and captive self-generation for industry grew from 2.7 GW to 7.8 GW. During the same period the number of customers grew from 1.8 million to 8.9 million, reflecting an average annual increase in met demand of 16% per year. The proportion of electrified households at the end of the '80's was about 24%. Further expansion is required to meet estimated demand for

electrification in 54% of all households and to meet the increasing demand from industry which accounts for 70% of the total demand for power.

The series of deregulatory measures initiated in 1987 has intensified the demand for electricity for export oriented industrial and manufacturing purposes. Currently most of this new demand is being met by more expensive self-generated electricity. Under present regulations little incentive exists for co-generation, any electricity not produced for own use may only be sold at PLN approved and PLN competitive rates.

By the end of 1989, it had become apparent that the much-needed industrial and manufacturing boom was in danger of being stifled by an impending energy shortage endangering the much needed job creation activity and anticipated non-oil foreign exchange earnings. Whether an optimistic or pessimistic energy demand scenario was used, a significant shortfall was inevitable. See Table 4 below:

**Table 4**  
Comparison of Electricity Demand for Java System  
for Different Scenarios

Fiscal years	High	Scenario	Low	Scenario	REPELITA V PLN	
	Peak Load (MW)	Energy Demand (TWH)	Peak Load (MW)	Energy Demand (TWH)	Peak Load (MW)	Energy Demand (TWH)
1989/90	3,914	23.7*	3,943	23.86*	3,792	22.9
1993/94	7,443	45.2	7,287	44.3	6,301	38.0
1998/99	13,914	84.8	12,321	75.1	10,829	65.4
2003/4	24,411	148.8	18,456	112.5	16,949	102.4

\* Actual

Source: Investment Opportunities on Power Supply in Indonesia, by A. Andoyo, Director for Electrical Power Program Development Directorate General of Electric Power and New Energy, in a paper presented at the Specialist Conference Group Meeting, Minerals and Energy Conference, New Zealand, August, 1990.

Efforts to promote private investment in electric power generation remained low until April 1990 when the President made a speech calling for private sector involvement in non-oil

powered generation. This reflected a conscious decision not to meet the widening energy gap out of Government of Indonesia coffers.

In response to this perceived more favorable investment environment, letters of intent began to arrive from the private sector. To date, more than 24 letters of intent have been received for electric power generation on and off Java.

In June 1990, the Minister of Mining and Energy established a team for Preparation for Private Electricity whose tasks were:

- To reassess the forecasted demand for energy;
- To inventory existing related regulations;
- To prepare terms of reference for private sector participation;
- To obtain suggestions for candidate investors;
- To evaluate those suggestions;
- To submit the results of their analysis to the Government;

#### **4.3 Analysis of Problem**

At this writing a forecast and expansion plan has been produced by the team but has not yet been officially approved although this is likely to occur shortly.

Although there has been much speculation regarding arrangements, no decisions have been made regarding the tariff level, method of setting the tariff, or even what commitments the private sector will have to provide in order to continue its participation in the evaluation process.

Decisions are being made regarding how much of the future demand will be met through GOI financing and which specific units of expansion will be offered to the private sector.

An intersectoral team, consisting of BKPM, DGENE, and the Directorate General of Taxation, for evaluation of actual proposals submitted is to be established.

#### **4.4. Potential**

Indonesia is a promising country for private electric generation for several reasons :

- It has a diverse and abundant supply of natural energy;



- The growing demand of no less than 14% per year comes principally from commercial ventures which are 70% export oriented and thus earning foreign exchange. Therefore the nation can afford the foreign exchange required to generate the electricity.
- Indonesia is credit worthy.

The anticipated form of private participation is BOO (Build, Operate, and Own) with some provision in the event that the utility is nationalized. Of the 24 letters of intent received as of last August, 14 letters proposed sale to the national grid, three were for industrial estates as well as for sale to the national grid, two were dedicated to industrial purposes, and four were unspecified.

Fundamental issues must be resolved before any investment is realized. The institutional and regulatory mechanism must be put in place. The Government must set its strategy for meeting future energy demands and all the commercial arrangements must be made clear.

One of the difficult issues will revolve around the tariff. Major questions are: How can the private sector profitably sell electricity to the national grid or directly to the consumer at a price competitive with the current PLN tariff structure; what rate of return does the Government consider acceptable; what guarantees will the government provide to reduce the risk entailed by a large up-front investment in foreign exchange against a long term return on investment in Rupiah; and, as a corollary, for the government to continue its subsidy to the social part of the demand how should the tariff be structured.

While most of the firms which have submitted Letters of Intent are Indonesian, most of these are assumed to be working in conjunction with experienced power developers, and because of the size of the investment, the financing is likely to be off-shore.

## **5. PRIVATE PARTICIPATION IN TELECOMMUNICATIONS**

### **5.1 Institutional and Regulatory Framework**

Telecommunications in Indonesia is provided through Perumtel, the Indonesian Telecommunications State Enterprise and PT Indosat, for international communications. Both Perumtel and PT Indosat are regulated and monitored by the Direktorat Jenderal Posel under the Menteri Pariwisata, Pos, dan Telekomunikasi.

### **5.2. Current Status**

In 1987 and 1988 when Perumtel was preparing for Pelita V, conservative plans for increases in service were made in the face of development budget constraints. This was

considered necessary in spite of a shortage of one half million lines anticipated by the end of the planning period. See Table 5 below for further details. The gap between demand and capacity would only be closed by the year 2005 at the end of Pelita VII.

**Table 5**

**Demand for Telephone Services**

	PELITA V	PELITA VI	PELITA VII
Current capacity	2,500,000	4,600,000	7,800,000
Planned Investment	1,430,000	2,100,000	3,200,000
Capacity at end PELITA	3,930,000	6,700,000	11,000,000
Need for lines	4,431,000	6,930,000	9,872,000
Capacity-need	(501,000)	(230,000)	1,128,000
Population	199,000,000	219,000,000	244,000,000
Density (# line per 100 population )	1.2	2.1	3.2

Undang-Undang 3, 1989, the first law issued on telecommunications since 1964, redefined the telecommunications sector. One of the major differences between UU3, 1989 and UU5, 1964 was that responsibility for telecommunications was assumed by Perumtel and it was established that the private sector could work with Perumtel in providing services.

Although private sector participation began earlier with the introduction of car telephones and the Warung Telekomunikasi, it was on a very limited scale. Undang Undang 3/89 was a legal breakthrough which allowed private participation on a large scale.

Since the new law was issued Perumtel has shifted from uncertainty over the financing of 1.4 million lines planned for Pelita V in 1989 to having awarded, negotiated, or begun implementation of 2.2 million lines of which 55% is through private investment. Table 6 below provides details.

The arrangement is Build (Perumtel operates), Revenue share, then Transfer at the end of a 7-9 year concession period. All contracts for STDI I are denominated in Rupiah. While for PBH-1 the contract allows for extension of the contract period in case of equipment failure on the part of Perumtel, under PBH-2 and 3 no extension was provided. To reduce risk, the investors have increased their investment to replacing lines outside of the system.

**Table 6**

**Central Telephone Project Pelita V  
(as of 14 November 1990)**

Name of Project	Number of lines	Source of Funds
<b>Under STD-1</b>		
<b>A. Under Implementation</b>		
PHB-1	100,000	Rupiah Investor (5)
PKS Indosat 89/91	32,140	Rupiah Investor
Other projects	334,112	Mixed Rupiah + Foreign Loan
Sub-total	466,252	
<b>B. Contracts not effective</b>	467,754	Mixed Rupiah + Foreign Loan
<b>C. Contracts negotiated</b>	62,844	Rupiah Perumtel
<b>D. Negotiations in-process</b>		
PBH-2	125,000	Rupiah Investor
PBH-3	200,000	Rupiah Investor
PKS Indosat 91	13,442	Rupiah Investor
Subtotal	338,442	
<b>E. SPPH</b>	114,400	Rupiah Perumtel
<b>F. F. T O R</b>	29,058	Rupiah Investor
<b>Sub-Total for STDI I</b>	<b>1,478,750</b>	
<b>Under STDI II and III</b>		
<b>A. STDI II</b>	350,000	ATT with own funding
<b>B. STDI III</b>	350,000	NEC with own funding
<b>SUB-TOTAL STDI II &amp; III</b>	<b>700,000</b>	
<b>Total Investment</b>	<b>2,178,750</b>	
<b>Total Private</b>	<b>1,199,640</b>	
<b>% Private</b>	<b>55%</b>	

No guarantees have been provided by the GOI. Ownership of the asset is still a question although apparently not an issue as the owner may not sell the asset.

Subsequent to that, the next instance of private participation was in the introduction of cellular phones in 1986. PT Rajasa Hasana Perkasa was the first of several firms to Build, Market, Operate, and Revenue Share for a five to ten year period. Initially 10,000 lines were to be installed of which 4,000 remain idle. Perumtel says that although there is a long waiting list they have decided not to go ahead with the existing arrangement and are reconfiguring the system to use Indonesian products and to have telephone links over the national network as the present system can only be operated within and between Jakarta and Bandung.

The Warung Telekomunikasi, or Wartel, is a telecommunications center which offers phone, fax, and telex services up to 24 hours a day. The Wartel are mainly private. The owner-investor, builds or rents the building, buys the phones, faxes, and telexes while Perumtel lays in the cable and installs the equipment. The investor operates the facility charging government set rates and pays Perumtel 80% of the Pulsa (unit of measurement combining time and distance) for domestic connections and 92.7% for international connections. The Wartel appear to be tremendously successful, so much so that an increase in the percent of the rate paid is being studied.

The Kiosstel, or telephone kiosks, will be introduced in 1991. These are to be combined telephone/cigarette stands operated under a similar arrangement. Like the Wartel scheme, the Kiosstel increases public access to telecommunications services at a profit to Perumtel while creating jobs and avoiding the problem of theft and vandalism.

### **5.3 Analysis of Problem**

The telecommunications sector was successful in attracting private investment once they established the legality of private sector participation. This was established unambiguously under the strongest laws of the land, the Undang Undang or Basic Laws rather than, for example, under Ministerial Decree. A strategy for expanding the network was planned and then profitable portions of the network were offered to the private sector. Much of the private sector development is for the city of Jakarta where there is relatively high phone use and thus more revenue to be shared.

### **5.4 Potential**

The potential of the telecommunications sector in attracting private sector participation has proven itself in the year since its legalization.

## 6. LESSONS FOR WATER AND CONCLUSIONS

### 6.1 Observations

Private sector participation in all four sectors is new. This is because private sector participation is a new concept. GOI encouragement of private sector participation first began in 1986 when the gradual deregulation of the economy was accompanied by a change in direction and the first calls for private sector participation. GOI philosophy began to shift from "we the government are responsible for and will provide basic public services." towards "we the government are responsible for basic public services and will ensure that they are provided."

As a new philosophy it has taken time to get translated into policy and then action. Private sector participation is at best only a few years old, and most activities are still in the formulating and negotiations stage. Table 7 below provides details by sector.

**Table 7**

#### Summary of Private Sector Participation by Stage

Stage Sector	Preliminary	Implementation	Operation	Legalization (Year)	First Year Operation
Tollroads	x	x	x	1990	1990
Electricity	x			1989	1993?
Telcom	x	x		1989	1991?
Solid Waste	x	x	x	?	1988

x = activity has occurred

The toll road sector is the most advanced in terms of investment accrued with 17 km of toll road on the ground and an additional 34 km under construction. But little additional investment will occur before major financial issues are resolved. Private participation exists for solid waste management but with the exception of one firm has involved little investment in capital assets. In telecommunications the private sector has contracted to build 1.2 million lines at a cost of approximately US\$ 4 billion dollars. In electrical power the government is laying down the regulatory and administrative procedures, formulating a strategy, and assessing the requirements of the private sector before proceeding.

The classic models of private sector participation have been modified to meet Indonesian conditions. The most successful model is the telecommunications Build/ Transfer/ and

Revenue Share. In the case of tollroads and telecommunications, the host institution prefers to continue operations for efficiency, no duplication of equipment or training, for security reasons, and to guard its position as the operating authority. Favorable revenue share arrangement can provide the investor with a cushion to absorb the risks imposed by lack of government guarantees on exchange rates, construction risks, or unanticipated events. It is difficult for the GOI to establish a fair return on investment in order to balance high private sector risks and required returns and also to avoid paying a high price for private money when public sources seem unavailable. Table 8 shows the common investment format for each sector.

**Table 8**

Type of Investment

Tollroads	Joint Venture: Build, Sub-Contract operations to PT Jasa Marga, Revenue share for 20-30 years
Electricity	Likely to be Build, Operate, Own
Telcom	Build, Transfer, Share revenue for 7-9 years
Solid Waste	Mainly service contracts with equipment leased from the municipal cleansing departments.

The problems faced by each sector are similar although the degree to which they are (or were) a problem varies. Table 9 shows the problems in each sector.

Lack of regulatory and institutional infrastructure is a common problem. Tollroad investment and construction proceeded, uncovering and working out legal and institutional problems along the way. As one consequence they have been criticized and questioned by DPR, the National Legislature, and have been perceived as providing facilities to the already privileged. Had the regulations been in place beforehand, however, the links would probably not have been built. The question is does one plan by doing as in the toll sector and get some roads built or create the framework and strategy first and then find the investors thus deferring construction of vital infrastructure.

Lack of strategy leads to confusion for both the private and public sector. The roles of each and their interface needs to be defined to avoid duplication of efforts. Strategy is required to achieve the best mix of public and private investment and optimal allocation of funds. Questions need to be asked and answered regarding how much the public sector can and

**Table 9****Classification of Common Problems Across the Sectors**

	Tollroads	Electricity	Telcom	Solid Waste
<b>Major Problems</b>				
<b>Institutions:</b>				
• Institutional framework and supporting regulations need definition	1	2	2	3
• Where private sector will participate needs to be defined	1	2	1	3
• limited appreciation of private sector incentives	2	1	1	3
<b>Risk:</b>				
• No clear ownership of asset	3	1	1	1
• No control over revenue	3	2	2	2

Note: 1=Small Problem; 2=Big Problem; 3=Major Problem

should do themselves. How much private sector investment is required and where? Will the private sector be allowed to do only the easy sites and leave the difficult one to the public sector or will the private sector be given stimulus to do the hardest ones? Or will different inducements be provided for different situations? Centralized planning is required to avoid ad-hoc investment leading to a sub-optimal distribution of infrastructure.

Lack of appreciation of the private sector by the public sector regarding the cost of private money, the risks, and the need for guarantees has slowed down the dialogue between the two sectors. Although the push for private sector financing came as early as 1986 and the initial stipulations offered for investment were onerous, there has been a gradual softening of the GOI stance as the realization came that the money was not forthcoming. In some sectors such as telecommunications with a shorter pay-back period, the revenue sharing arrangement without other any guarantees was profitable enough to draw a large response. In electrical power these issues are being studied and discussed with the private sector before any terms are offered. But in tollroads and solid waste management, comparatively little

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investment has accrued. One official in the tollroad sector commented that: "We were misled by the volume of letters of intent that arrived into thinking that there were no serious underlying financial issues to be resolved."

## **6.2 Lessons for Water**

The problems encountered by the private sector in other urban services besides water are also to be found in water. Review of three impending major BOT investments in the water sector show that the problems of private participation are common rather than unique. Annex 1 of this working paper provides a summary of project findings for proposed investments in Lhok Seumawe (ANNEX 1.A), Umbulan Springs (ANNEX 1.B), and Nusa Dua (ANNEX 1.C.) As a disclaimer, it should be noted that no attempt has been made to analyze the financial and economic soundness of the individual projects.

Lack of an institutional and regulatory framework has helped delay investment for a US\$ 25 million dollar investment in Nusa Dua, Bali where 1) lack of clarity of procedure led to confusion over which of the proposed civil works, how many firms should be invited to submit tender, and 2) whether foreign firms should be invited to participate. Lack of strategy has led to confusion as to whether private investment is the most attractive option or whether the PDAM should avail itself of a World Bank loan at concessional rates available through the East Java - Bali Program.

In the Umbulan Springs US\$ 125 million dollar project, the investment process has reached an impasse where the local government has promised guarantees which the central government could not support. Again this is a problem of a regulatory framework, unambiguous authority, a clear strategy as well as a full appreciation of private sector needs.

The Lhok Seumawe US\$ 71 million investment scheme reached an impasse regarding the eligibility of the PDAM to participate as a shareholder in a joint venture, a question that could have arisen but didn't in the other two ventures. Another issue revolves around the autonomy of the PDAM versus the authority of the Ministry of Home Affairs in regulating the PDAMs. This too is a question that could be asked of every proposed scheme.

While the opportunities for PSP have existed in some form or other from 1986 onward, there appeared to be no takers from the private side and little active searching for such participation. By 1989 or early 1990 however, each sector had come to view PSP as a necessity to accommodate the burgeoning demand for their services and began to think through and put into place the regulatory and implementation modifications required. In a sense the GOI had put the cart before the horse, they had the desire and need for private sector participation but hadn't developed the regulatory or implementation framework.

Before private sector participation can play a major role in water or in any other urban sector where a public good with social implications, for example health in the case of water,



is being provided, the government will have to assess when and where private sector participation is desirable. It must set up the framework for implementation and regulation, and decide what the fair and realistic terms are that can be offered to the private sector. Without this regulatory framework in place, investment, both public and private, is liable to take place in an unplanned and sub-optimal fashion saddling the public sector with expensive infrastructure requiring larger subsidies to meet its social goals or it may delay public investment while waiting for private investment that does not materialize. Full consideration must be given to the cost of delay in provision of adequate public services.

**Notes:**

- 1/. Source: Urban Institute and P.T. Hasfarm Dian Konsultan, "Data Book Urban Housing in Indonesia," November 1989, Housing Policy Studies Project.
- 2/. Keputusan Menteri Pertambangan dan Energi Nomor 0666K/702/MPE/1990

## **ANNEXES**

**Annex - A1:**

**Private Sector Participation in Urban Water Supply Project. Case Study : Lhok Seumawe, Aceh Utara.**

**Annex - A2:**

**Private Sector Participation in Urban Water Supply Project. Case Study : Umbulan Spring Water, Pasuruan, East Java.**

**Annex - A3:**

**Private Sector Participation in Urban Water Supply Project. Case Study : Nusa Dua, Bali.**

## ANNEX A1

### Private Sector Participation in Urban Water Supply Project Case Study: Lhok Seumawe, Aceh Utara

Source of information: WASECO, DHV, HDK, and OTHERS

#### EXISTING CONDITION (as of 1989)

Total population :  
Geographical Area : Lhok Seumawe, Aceh Utara  
Water Enterprise : PDAM Tirta Mon Pase  
Capacity : 25 l/s  
Population served : 1,347 households  
                          267 commercial units  
                          41 government agencies  
                          14 social units  
                          15 public stands  
Average tariff : Rp.203 per m3  
Potential customer: There are 5 (five) big industries in Lhok Seumawe: Mobil Oil, LNG - Arun, Pupuk Iskandar Muda (fertilizer), Asean Aceh Fertilizer, and KKA or Kraft Industry (paper industry). These industries use water from Krueng Mane (Mane river) which they treat in their own treatment plant.

#### HISTORY

1. In 1987, Den Otter Management Services, BV (DOMS) in cooperation with PDAM Tirta Mon Pase tried to seek opportunity to invest in water supply infrastructure in Lhok Seumawe (through BKPM, DAB, and other related agencies).
2. In 1988, PDAM LS and DOMS agreed to finance a pre-feasibility study for investment on water supply system development in Lhok Seumawe. The pre-feasibility study was carried out by a German consultant, WAKUTI Karl Erich Gall KG, appointed by the financier who was interested in financing the investment (EZRA Group, USA).
3. WAKUTI came up with a positive rate of return in 20-year investment. However, it was considered not in line with the interest of PDAM by the government (Direktorat Air Bersih, Cipta Karya). WASECO was then asked to carry out a feasibility study in 1989 by PDAM Tirta Mon Pase. The study showed that the investment is financially viable within 20 years (even after taking into account 55 percent of net profit for local government revenue).

#### AGENCIES INVOLVED

1. Pemerintah Daerah Kabupaten Dati II Aceh Utara
2. PDAM Tirta Mon Pase, Lhok Seumawe, Aceh Utara
3. Den Otter Management Services, BV, The Netherlands
4. EZRA Group, USA
5. PT WASECO TIRTA, Indonesia

**PROPOSED INVESTMENT**

Population served : End of 1999: 202,730 (75 percent)  
End of 2014: 288,270 (75 percent)

**Production capacity:**

End of 1999: 1,700 l/second  
End of 2014: 3,000 l/second

Source of water : Sungai Peusangan and Sungai Mane

Coverage area : 80 percent industrial area, 20 percent household connections and others.

Scope of work : Overall new network (including transmission and distribution);  
Expansion of existing network (connections);  
Bulk water supply to existing network.

Type of cooperation: Joint venture between PDAM and Investor (BOT) which is embodied in a Corporate Body in the form of Perseroan Terbatas or PT (Limited Liability Company) under the name of PT Peusangan

Transfer agreement: The concession agreement stipulates that the project will be transferred to PDAM after the concession period in good condition.

Concession period : At first, it was proposed for 20 years of concession. Due to recent policy development concerning the concession right period, it is now proposed for 30 years of concession.

**Composition of Shares:**

PDAM's shares are in the form of "rights" (concession, water source, and distribution). It is unclear whether private sector will supply capital in the form of "cash" only or partly in the form of equipment (such as pipes and pumps).

**FINANCIAL ASPECT**

**1. Estimation of project cost:**

Phase I : Rp. 95,246,532,700  
(1999 - 1999)  
Phase II : Rp. 37,320,235,700  
(2000 - 2014)

**Total project cost: Rp.132,566,768,400**

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2. Financing composition:

Equity : Rp. 37,499,260,700  
Loan : Rp. 95,067,507,700

3. Loan term:

Loan maturity : 20 years  
Grace period : 5 years  
Interest rate : 18 percent per annum

4. Tariff structure:

Household : Rp.125 - Rp.740 per m3  
Average tariff : Rp.432.50 per m3

REASON TO INVEST and INCENTIVE NEEDED ACCORDINGL

Amongst several alternatives of investment (including fisheries), water supply infrastructure project is considered to be more profitable and secure in the long run provided that large amount of investment is involved.

It would be more attractive to investors if they have facility to import necessary equipment such as pumps.

CURRENT STATUS OF THE PROJECT

The following document had been signed:

1. The Memorandum Of Understanding
2. The Joint Venture Agreement (draft)
3. The Concession Agreement (draft)

The Joint Venture Agreement and Concession Agreement had not yet been approved by the government. It is still debated whether PDAM is eligible to be a shareholder in the joint venture company or not; if it is, who is going to be responsible if the project fails, and accordingly, what will happen to PDAM's assets or rights. However, the draft agreement were signed in order to speed up the financial approval from the financier.

POLICY ISSUES CONCERNING THE PROJECT

1. According to the Negative List of Investment 1989 (Presidential Decree No. 21, 1989 ?), water supply project is open for foreign investment.
2. Interested investors should submit their interest to BKPM and are required to fill in "Form A" and submit it with necessary document, such as the joint venture agreement, balance sheet, and others. This procedure is not considered to be a burden by investors.

3. The investment is based on Law no.5, 1974 (Pokok-pokok Pemerintahan Daerah).

4. According to the new regulation (Permendagri No. 4, 1990), Joint venture between PDAM and private sector is permitted.

5. According to BKPM regulation, foreign investor is allowed to hold shares up to 90 percent. After ~~10~~ years of operation (half of the proposed concession period), PDAM is projected to obtain at least 51 percent of the shares. However, the Ministry of Home Affairs has not approved the joint venture between PDAM and the interested investors, keeping in mind that PDAM might lose everything if anything goes wrong within the concession period.

6. According to BKPM regulation, the concession right may be given for 30 years with another 30 years of extension.

7. Tariff can be set up by PDAM on the condition that it is approved by the Head of ~~District (Bupati)~~. However, it is still unclear as to who has the power to set up tariff structure and who has the authority to collect and receive money for the proposed network.

8. Foreign investor is not permitted to collect payment from consumers, based on BKPM regulation which stipulates that retail business is prohibited from foreign investment.

9. One of the constraints faced by private sector in this investment is the power of Sub-Direktorat Perusahaan Daerah (PUOD, Ministry of Home Affairs) to monitor and supervise all local government enterprises. This limits the autonomy of PDAM as an enterprise.

## ANNEX A2

### Private Sector Participation in Urban Water Supply Project Case Study: Umbulan Spring Water, Pasuruan, East Java

Source of Information : PDAB (Perusahaan Daerah Air Bersih)  
East Java Level I Government

#### HISTORY OF THE PROJECT

- Umbulan Spring has been identified as a potential source of clean/potable water for Surabaya city which provide the city 110 l/s with the existing facility, besides from other sources, Karang Pilang Water Treatment Plant and Surabaya river. Kali Surabaya suffers with major problems of pollution especially in the dry season. Karang Pilang I treatment plant with 1000 l/s capacity has recently been commissioned, but this also uses raw water from river as its source and it does not alleviate the water quantity problems.  
Surabaya's PDAM is since 1950 getting water from Umbulan Spring although in a very small quantity.
- In March 1988, the East Java Water Resources Study defined Surabaya and its environs + Gresik (where most industries are located) + Kabupaten Sidoarjo and Pasuruan should be supplied from the same/ existing sources, inter alia the Umbulan Spring. Umbulan Spring has an estimated total yield of 5,200 l/s and offers the best security of water supply both in quality and quantity.
- The project aims to transfer water from Umbulan Spring through a transmission pipeline to Surabaya and the neighboring towns. Along the route of the transmission pipeline, water can be supplied to a number of smaller towns in the rural areas on its way. The PDAMs of Kotamadya Surabaya and the other neighboring towns will manage the internal distribution, billing and revenue collection.
- In 1987-1988 the East Java Water Resources Study team carried out an Optimization Study for resource development for Surabaya. The report recommended that bids be requested from the Private Sector

for the development of Umbulan Spring as the initial source. The Government accepted this recommendation and bids for a Build-Operate-Transfer (BOT) type of contract were requested.

Several consortia comprising domestic Indonesian and foreign interests expressed an interest in bidding for the Concession. One such consortium, the Bromo Consortium, was finally selected by the Government of East Java to negotiate for the Concession to supply water to Surabaya. Detailed discussions and negotiations have been taking place between the Bromo Consortium and the Technical Evaluation Committee and its advisers formed to represent the interest of the Government of East Java.

### EXISTING CONDITIONS

- Water Enterprise : PDAB (Perusahaan Daerah Air Bersih = Provincial Government Clean Water Enterprise) of Tingkat I East Java, establish in 1987.
- Geographical area : Kabupaten Pasuruan, ± 70 km from Surabaya city East Java.
- Estimated total capacity : 5,200 l/s.
- Consumers served : ± 70% domestic  
± 30% non domestic (industry, commerce, hotel etc)  
areas: - Surabaya city (± 3 million inhabitants)  
- Gresik and Sidoarjo (where most industries are located)  
- Pasuruan Kabupaten (where the Umbulan Spring is located).
- Present Water Tariff : Rp. 417 per M3 (Surabaya city).

### AGENCIES INVOLVED

- Government of Indonesia : - Ministry of Home Affairs/PUOD  
- BAPPENAS  
- Provincial Government Tingkat I East Java  
- Technical Team of Umbulan Spring Water Investment  
- PDAB



- Private Sector : - The Bromo Consortium, consisting of:
  - \* PT. Duta Comfact, Jakarta
  - \* Mac Donald Dev.Ltd., Cambridge, U.K.
  - \* North West Water, Manchester, U.K.
  - \* Costain/Mowlen, U.K.
  - \* Export Credits Guarantee Department (ECGD) of the Government of U.K.

**PROPOSED INVESTMENT**

- Form of Private Sector Participation:
  - BOT/JVC between PDAB and Bromo Consortium
  - Concession Agreement with East Java Government (15 years)
  - Bulk Water Sales Agreement JVC and PDAB
  - This consortium will form a Joint Venture Company (J.V.C.) and enter into a bulk water supply agreement with PDAB of East Java Provincial Government. Detailed discussions and negotiations culminated in the signing of a Memorandum of Understanding (M.o.U.) on 5 April 1990 between Provincial Government Tingkat I East-Java, PDAB and Bromo Consortium.
  - The M.o.U. sets the framework for further negotiations and provides the basis for two major agreements required to put the project into realization:
    - The Concession Agreement, to build the pipeline and operate it for a minimum concessionary period of 15 years.
    - The Bulk Water Sales Agreement, under which PDAB will purchase the water from the operating company and distribute to PDAMs of Surabaya, Gresik, Sidoarjo and Pasuruan.
    - Water Sales/Distribution Agreements between PDAB and PDAMs of Kotamadya Surabaya, Kabupaten Gresik, Sidoarjo and Pasuruan.
  
- Scope of Work : - Design; construction and operation of new network up to the pipelines of the existing or newly built by PDAM Surabaya and PDAMs of the other neighboring towns.
  - Bulk water supply:
    - JVC —> PDAB
    - PDAB —> all PDAMs (mentioned above)

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Requirements by

- Bromo Consortium :
- a. Letter of Approval from the Minister of Home Affairs for marketing and other guarantees to the J.V.C.
  - b. ECGD's loan for the equity of PDAB in the JVC required Bappenas's guarantee.
  - c. A condition precedent to the effectiveness of the concession agreement will be the signature by IBRD and GOI of an agreement for the financing of engineering and construction contracts for the rehabilitation and expansion of Surabaya water distribution system.

FINANCIAL ASPECT

- **Tariff Structure**

- a. PDAB agrees to take a minimum annual contracted volume of water according to the following table:

	<u>Yr. 1</u>	<u>Yr. 2</u>	<u>Yr. 3</u>	<u>Yr. 4</u>	<u>Yr. 5</u>	<u>Yr. 6</u>
Vol.M m3	68.68	81.99	88.30	100.92	113.50	126.14
Flow m3/sec.(approx)	2.20	2.60	2.80	3.20	3.60	4.00

- b. PDAB will pay for the minimum contracted value as stated above, whether taken by PDAB or not plus any water taken in excess ...etc...etc.

The bulk water charge will be increased on the third anniversary of the first supply of water to PDAB and each subsequent three year period or less as might be agreed at later negotiations.

- **Loan Term**

Fundamental to financing the Project will be the availability of subsidized export credit finance made available to the JVC through the medium of the E.C.G.D. which terms and conditions of the Concession Agreement and the Bulk Water Sales Agreement will require its prior approval.

- Cost

Tabel 2.2

Capital Cost Alternative 1 (2,800 1/s)

Package	Capital Cost Pds million	Equivalent Cost in Rp. million
IA (2800 1/s)	45.708	137.124
IB (800 1/s)	8.866	26.598
General Items	7.184	21.552
	-----	-----
Total Alternative 1	61.758	185.274
IIA (2000 1/s)	10.597	31.791

Tabel 2.3

Capital Cost Alternative 2 (3,360 1/s)

Package	Capital Cost Pds million	Equivalent Cost in Rp. million
IA (3360 1/s)	47.208	141.624
IB ( 960 1/s)	8.866	26.598
General Items	7.184	21.552
	-----	-----
Total Alternative 2	63.258	189.774
IIA (2400 1/s)	11.949	35.847

Tabel 2.4

Capital Cost Alternative 3 (4,000 1/s)

Package	Capital Cost Pds million	Equivalent Cost in Rp. million
IA (4000 1/s)	58.124	174.372
IB (1200 1/s)	10.904	32.712
General Items	8.962	26.886
	-----	-----
Total Alternative 3	77.990	233.970
IIA 28000 1/s)	11.501	34.503

Note: Equivalent Rupiah costs have been calculated at the exchange rate of Pds 1 = Rp. 3,000.

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- Equity Share of PDAB

ATP aid grant

The U.K. Government's Overseas Development Administration (ODA) makes available, for the benefit of deserving projects, an aid grant of 35.1% of the value of U.K. Goods and services.

However, since this is a BOT project the Government of Indonesia is not directly involved and ATP would be made available to the PDAB.

The PDAB is a public sector entity and, subject to the agreement of the Governments of Indonesia and of the U.K., would act as the channel for the aid grant. The grant monies would, under the Bromo Consortium's proposals, constitute PDAB's equity share in itself. The major impact of the ATP grant is the reduction in the cost to the PDAMs which are buying the bulk water supplies from Umbulan Spring. In turn, the consumers in the areas served by the PDAMs will pay less for their water consumption if the benefits are passed on to them by means of lower water tariffs.

The members of the Bromo Consortium, together with PDAB and the Commonwealth Development Corporation, will inject the capital required into PT. Umbulan to carry out the Project.

The UK governments' ATP grant will be made available to the PDAB as their equity contribution to the project without the PDAB being required to contribute from its own resources.

Total equity will constitute approximately 35% of the total funds required for the project, with loans constituting the remainder. At the end of the concession period, the shares not already owned by PDAB will be transferred by the other shareholders to PDAB. Thus PDAB will ultimately have total ownership and control over the project at no direct financial cost.

The shares will broadly carry the same rights and obligations, except that the PDAB 'A' shares will carry 1/3 of the obligations and rights of the 'B' shares recognising the actual equity contribution made by the PDAB.

POLICY ISSUES

- a. Central Government has no obligation what so ever to issue guarantee to JVC (considered as a Private Enterprise or Semi Government Enterprise).

- b. - Tariff determination of drinking water must be within the ability to pay of the people.
- Production costs must be fully covered by PDAM revenue.
- The National pattern of tariff structure must be that "wealthiest water consumers will subsidize the provision of water to poorer consumers". (This is a constraint for Surabaya city and its neighboring towns since industry, hotel and other commercial sectors forms  $\pm$  30% of the water consumers).

#### CURRENT STATUS OF THE PROJECT

- Have resulted in the frustration or delay of the JVC, Concession and Bulk Water Sales Agreements.
- Further negotiations Pemda East Java/PDAB and Bromo Consortium is at present still being held.

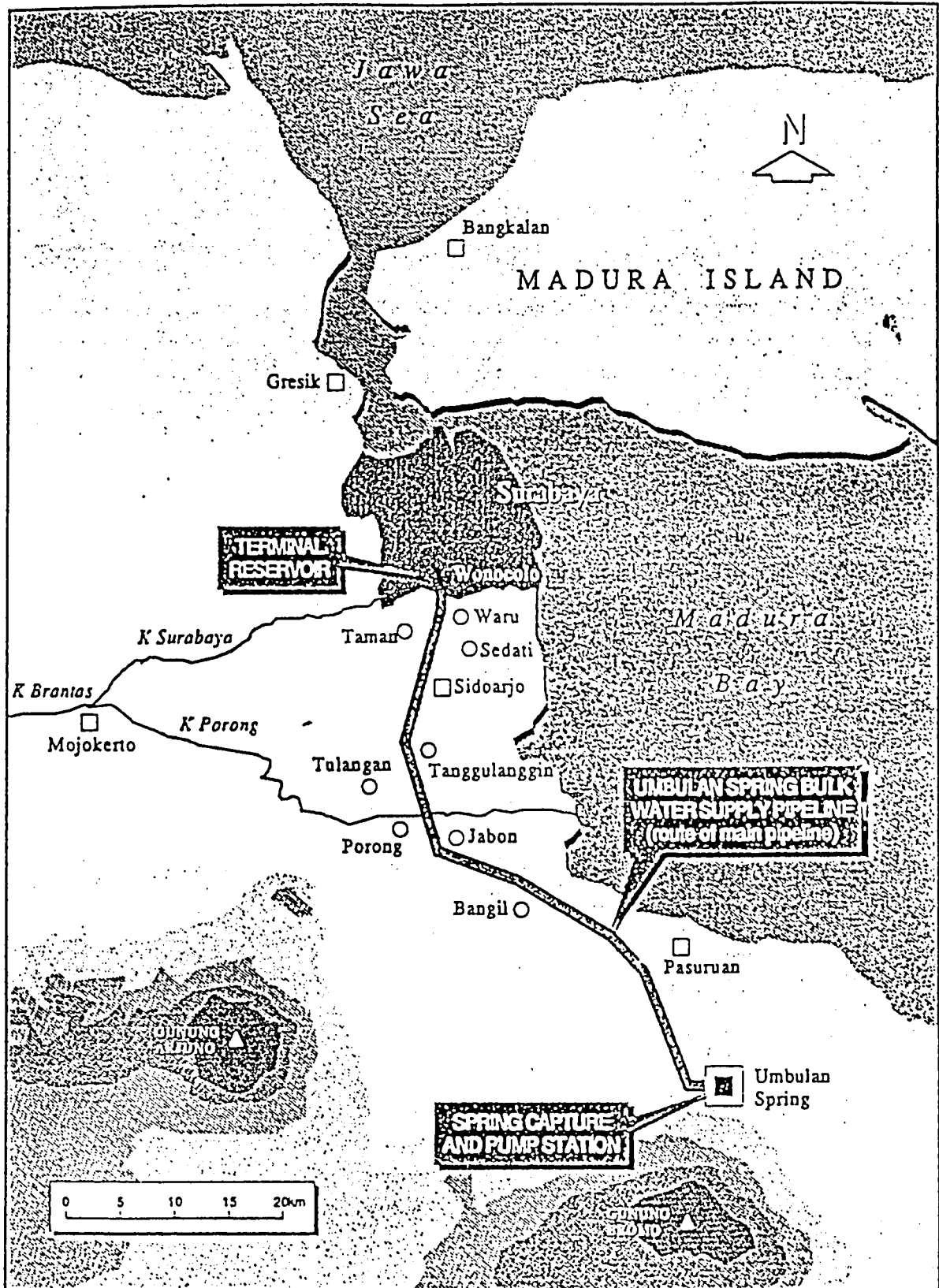
#### REASON TO INVEST

Surabaya, Gresik and some adjacent towns are suffering from a major shortage of potable water, because of the limited previous rate of investment in source works and distribution systems. At present only about 20% of houses in Surabaya have a PDAM connection, and there is an existing waiting list of more than 50,000 applicants; in Gresik major planned investment in new industry is being frustrated by lack of water supplies.

The Umbulan Spring provides a major potential source of high quality water; the estimated available yield is at least 4 m<sup>3</sup>/sec. However, its distance from the city and thus high capital cost has discouraged early development, although extensive studies and designs were undertaken. The Government, through the East Java PDAB, has therefore invited proposals from private sector groups for a 'build-operate-and-transfer' approach: a private group, in partnership with the PDAB, will be responsible for raising all finance, constructing the scheme and operating it for a limited concession period. The water will be sold at an agreed bulk water charge to the PDAMs, who will distribute it to the consumers.

The Invitation to Bid was issued on 9 July 1988, with a revised submission date being 1st November 1988. The invitation request bidders to consider two capacities of scheme: 2,800 litres/sec and 4,000 litres/sec.

Figure 1.1  
Project Location



## ANNEX A3

### Private Sector Participation in Urban Water Supply Project Case Study: Nusa Dua, Bali

#### A. HISTORY

1. Demand for piped water supplies is rising both in the Administrative City of Denpasar and in the tourist resorts in Kecamatan Kuta, ie. Legian, Kuta Beach, Nusa Dua, Tanjung Benua and Belang. At present these areas are supplied by PDAM Badung But rapid tourist growth - especially from the new hotels is expected to effect a demand that will out strip supplies by 1992.
2. The 1988 IUIDP Master Plan proposed an immediate new river intake and treatment works alongside the existing works at Belugung on the Tukad Ayung River north of Denpasar (see Fig 1), and new transmission and distribution systems to the new growth areas. Part of the new supplies will be used in existing service areas in Denpasar.
3. In 1988 a private Indonesian/French consortium investigated a potential estuary supply of 1 m<sup>3</sup>/s. A proposed Joint Venture with the some Indonesian partners was made for the current project in via DAB/MHA/MoF to PDAM Badung ie. the proposal came from Jakarta. Because of the urgency other PSP groups were not invited to submit tenders. PDAM Badung management estimate 2 years lead time for Indonesian financed projects, and 4 years for foreign lending projects.
4. A World Bank Loan for the Project is reported to be available from the East Java - Bali Program at concessional rates.

5. A Joint Venture Company, with details of equity, loan funds, responsibilities has been prepared. The Memorandum of Understanding (MoU) was signed on 24th September 1990 between PDAM Badung and the PSP partners.
6. Currently (December 1990) PDAM Badung is negotiating with two private firms, PT. Makasara Buana/Humpus Group and PT. Intan Dyandra Mulya as a possible Joint Venture Partner. Should these firms withdraw from the negotiations, a second consortium will be approached. However, if these also cannot agree terms, PDAM Badung is reported to be ready to use the cheaper World Bank Loan - with the consequent delays.

**B. EXISTING CONDITIONS (November 1990)**

Total Population	:	61,986 (1990)	
Geographical Location	:	Denpasar/Nusa Dua, Bali.	
Water Enterprise	:	PDAM Badung	
Capacity	:	Existing deep wells	450 l/s
		Existing Ayung I (1988) river source	300 l/s
			----- 750 l/s
Population served	:	population	- 16,250
		hotel rooms	- 2,855
		social units	- NA
		public stand posts	- NA
Average tariff	:		Rp. 300/m <sup>3</sup>
Potential customers	:	The new project will serve rapidly growing international tourist development areas south of Denpasar city, including very large international hotels; condominiums; and a new golf course.	



C. AGENCIES INVOLVED

1. Pemerintah Daerah Kabupaten Dati II - Badung
2. PDAM Badung, Denpasar, Bali
3. PT. Humpus/PT. Intan Mulya
4. PT. Dacrea.

D. PROPOSED NEW INVESTMENT

Population to served : end 1992

o population served - 20,925

o star hotel rooms - 5,809

end 1994

o population served - 26,072

o star hotel rooms - 7,601

Water Needs (l/s) : end 1992

o non commercial - 22 l/s

o commercial - 125 l/s

end 1994

o non commercial - 30 l/s

o commercial - 169 l/s

Water Production : end 1992 - 150 l/s

(for new service areas) end 1994 - 255 l/s

Source of Water : Tukad Ayung River

(existing water source for Denpasar)

New Coverage area : 20 % household

80 % hotels

New Facilities (1992) :

o Tukad Ayung II Treatment Works (300 l/s)

o Transmission Pipeline 10 Km

o Distribution System

o Reservoir 3,000 cu.m.

Type of Cooperation :

- o Corporate body in the form of a PT. (Limited Liability Company) to plan, construct, operate, maintain and manage new system hotel service area.
- o both parties shall cooperate in construction of Tukad Ayung II treatment works which will be integrated with Tukad Ayung I works; both parties will jointly manage new system.

Transfer agreement :

- o The MoU stipulates that the assets shall be transferred to PDAM Badung after the concession period.

Concession period :

- o Concession period to be agreed after full proposal has been made by private investor; concession right may be extended on mutual agreement.

Composition of shares :

- o PDAM Badung            45 %  
Private Investor       55 %  
Profit sharing is based on percentage of share ownership.
- o PDAM shares in form of existing assets; Private investors shares in form of subscribed/paid up capital.

E. FINANCIAL ASPECTS

1. Estimation of Project Costs (-1992)

Construction of Ayung II                      Rp. 15,348 million

2. Financing Composition Rp. million

Description	1990	1991	1992	1994	Total
<u>Participation of Capital</u>					
Private Investor	1,858	5,201	372	4,125	11,555
PDAM (Equity)		6,075	0	3,375	9,450
<u>Loan</u>					
Private Investor	812	5,803	1,304	0	17,368
PDAM		8,810	0		8,810
	2,669	25,889	1,675	7,500	47,183

3. Loans.

Private Sector Loan from BAPINDO 21 % rate of interest  
 Grace Period - 2 years  
 Loan Period - 15 years  
 P D A M R D I (9% ?)

4. Tariff Proposed

Households Rp. 300/m<sup>3</sup>  
 Tourist hotels Rp. 1,300/m<sup>3</sup> may rise to Rp.1600/m<sup>3</sup>

F. REASON TO INVEST

The new investment is intended to meet the rapidly growing water demand of the major international hotels being built at Nusa Dua, and the other expanding areas.

Water is also needed for a golf course (60 l/s) and other landscape use. Nusa Dua is made of coral limestone with a thin soil cover and the grass etc will require regular watering.

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The cost of the new water supplies is small compared with other tourist investments perhaps less than 5% of the total. .

G. CURRENT PROJECT STATUS

1. Signed Memorandum of Understanding  
Being Prepared (Draft)
2. Joint Venture Agreement
3. Concession Agreement.

H. POLICY ISSUES CONCERNING PROJECT

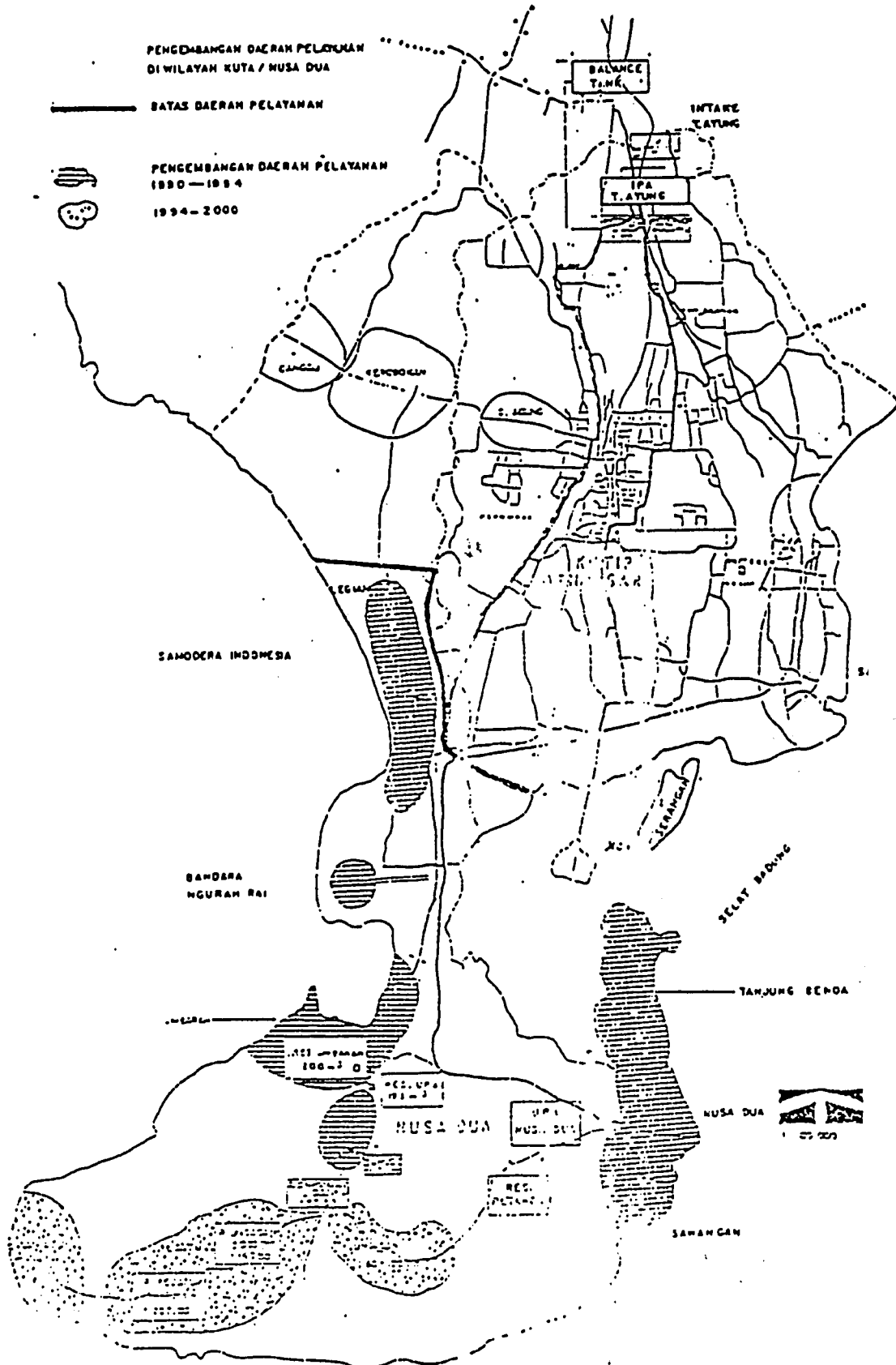
1. The PDAM were instructed to join with the Private Investors in order to speed up construction; and to encourage private sector participation. No competition is reported between investor groups.
2. The private investor is also reported to have major interests in the new tourist facilities, ie. project is 'Investor-led'.
3. PDAM Badung is using its new Ayung I Treatment Works as equity; it is not clear if this is within GOI Regulations. The works are recently constructed and worth about Rp. 8 billion.
4. A World Bank loan is reported to be available for the new works at concessional rates; PDAM Badung were instructed to use the PSP offer by Pusat.
5. Tariffs for the tourist development area are at premium rates, ie. tourists can afford to pay. Water tariff may rise Rp.1600. Ordinary users pay Rp. 300/m3.
6. The JVC will jointly manage all the system, thereby offering potential private-sector management transfer potential. In case of drought, the JVC will jointly decide on water use priority.

7. The concession period may be extended on the agreement of both parties. It is not clear if original agreement will then be re-negotiated.
- 8 Project risks : - fall in international tourist trade, but then sell water to Kota Denpasar.

#### I. SOURCES OF INFORMATION

1. 'Brief Proposal on PSP : Clean Water Supplies to Kuta/Nusa Dua' (source unknown) plus Data Tables.
2. Minutes of Meeting 7/8/1990 PAB.
3. MoU 24/9/1990.
4. Field visit by SW 22/23 November 1990.
5. Studi Kelayakan - Nusa Dua PT. Perencana Aneka Sarana (October 1990).

FIG 1 NUSA DUA PROJECT.



PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES

ISSUES FOR INVESTMENT IN INDONESIA

**Working Paper B**

**A REVIEW OF INDONESIAN LAWS  
AND REGULATIONS CONCERNING  
PRIVATE SECTOR PARTICIPATION  
IN URBAN WATER SERVICES**

Prepared for the USAID Mission to Indonesia  
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## Working Paper B

# A REVIEW OF INDONESIAN LAWS AND REGULATIONS CONCERNING PRIVATE SECTOR PARTICIPATION IN URBAN WATER SERVICES

### EXECUTIVE SUMMARY

The purpose of this paper is to provide the Government of Indonesia with a comprehensive statement of assumptions and conclusions regarding the laws and regulations of Indonesia which would make the legal and regulatory structure better serve the needs and objectives of the Government regarding water supply activities. The paper includes (a) background information regarding the laws and regulations of Indonesia which are relevant to private sector participation in water supply activities and (b) an analysis of deficiencies in, and recommendations regarding changes to, the legal and regulatory structure. The paper provides information for prospective private sector participants in Indonesia's water supply activities to understand the investment and contracting opportunities permitted and welcomed by the Government as well as the possible legal pitfalls which may be encountered.

Specific legal issues with regard to private participation in water supply are reviewed within the context of the full legal history of Indonesia. This includes the types of laws and regulations in Indonesia which have legal authority and their place in the hierarchy of laws and regulations, the relevant offices and agencies of the Government which issue and implement laws and regulations, and practical aspects of implementation and enforcement, including a description of the judicial system. The organizational structure of public water supply utilities and the legal authorities under which BPAMs, PDAMs, and PDABs operate are included.

The paper deals generally with the laws and regulations applicable to private sector commercial activities in Indonesia, e.g., the Commercial Code and the Government of Indonesia's treatment of "facilitated" "domestic" investments. There is also a brief treatment of other laws and regulations that may be of interest to private sector investors, e.g., taxes, customs tariffs, immigration, land ownership and use, and health and environmental matters. More specifically, however, the paper examines the regulation of foreign investments in Indonesia by BKPM and Law No. 1 of 1967.

Private sector participation in other Government and governmentally-promoted activities is examined. In particular, private sector participation in petroleum-related activities is considered in light of the analogous treatment accorded private sector participation in the area of water supply under some Indonesian regulations, i.e., the use of concession. A conclusion is drawn that the analogy between petroleum and water supply activities as they relate to private sector participation is flawed because the financial parameters which define

private sector activities in these two fields are so different. The issue of whether the "private sector" should be defined to include governmentally-owned or -related parties is briefly considered. Further, legal authorization for private sector participation in public utilities under Indonesian laws and regulations is identified, including references to any which would seem to exclude or limit that participation.

Consideration is given to the award of service contracts—especially those awarded to the private sector by water utilities. The regulations authorizing the award of such service contracts are examined in detail. The contents of those regulations, including a recitation of critically important elements which they do not contain, is given. Particular emphasis is also given to the authorizations for, and restrictions on, the participation of the private sector and PDAMs in joint ventures provided by Law No. 5 of 1962 and No. 1 of 1967 and Regulation of the Minister of Home Affairs No. 3 of 1986 and No. 4 of 1990. Also considered are the means by which water tariffs are approved, with an examination of the specific language of the relevant regulations. Some attention is given to BOTs, but this treatment is cursory since no laws or regulations (except those issued by Pertamina) concerning or authorizing BOTs were found. The study also notes a number of variations which may be made—or which have been made in Indonesia—on the basic BOT format.

The conclusions are based upon two fundamental assumptions. The first is that existing laws and regulations must be adequate to inform prospective private sector participants of investment and contracting opportunities available in Indonesia. The second is that consumers of water and essential public policies of Indonesia must be protected through the regulation of activities if the private sector is to be permitted to participate in the water supply field. The paper concludes that current laws and regulations lack clarity and precision. This is of critical importance in attracting the private sector because a lack of clarity increases the perception of risk. It also concludes that those laws and regulations are inconsistently applied and that rights granted to private parties under them are largely unenforceable through the courts or elsewhere. The result is a perception of unpredictability by the private sector which diminishes its interest in participation in the water supply field. Inadequate measures exist to assure that the private sector is subject to the rigors of competition or to protect the interests of consumers and Government were the private sector to participate in water supply services. Particularly critical deficiencies in current laws and regulations are the conflicts among them which may prohibit or restrict private sector participation in ways which the Government does not intend. Also of importance is the absence of any law or regulation which would authorize or regulate BOTs in the water supply sector and the existence of water tariff rate-making procedures which do not adequately assure the private sector of a reasonable return on investment through the application of fair and detailed standards by independent rate-making bodies.

The paper suggests that Indonesian laws and regulations be made clearer and more precise and detailed. It also recommends that these laws and regulations be consistently applied and that the private sector be assured of its ability to enforce its rights provided under those laws

and regulations. More specifically, it is recommended that the current apparent conflicts among the laws and regulations regarding the ability of the private sector to participate in the water supply field be clarified by new laws and regulations and by authoritative legal interpretations which will eliminate these conflicts. BOTs in the water supply field should be explicitly authorized and regulated. New or amended regulations should be issued that will clarify under what circumstances private sector participation is welcome and unwelcome in the water supply field and that will provide detailed terms for award of service contracts, entering into joint ventures, and administration of water tariffs.

Finally the paper provides a list and short description of all relevant Indonesian laws and regulations, proposed drafts of new laws and regulations, and the full texts of selected relevant laws and regulations.

## WORKING PAPER B

### A REVIEW OF INDONESIAN LAWS AND REGULATIONS CONCERNING PRIVATE SECTOR PARTICIPATION IN URBAN WATER SERVICES

#### 1. GENERAL BACKGROUND TO THE INDONESIAN LEGAL SYSTEM

The history; the cultural and religious diversity; the governmental organization; and the great size and insular dispersion of Indonesia have all contributed to a very complex legal structure in Indonesia. In some respects, Indonesia has several distinctly different legal systems whose jurisdictions are restricted largely to nonoverlapping sectors. In other respects, several legal and regulatory provisions and schemes will apply to a single sector. These may sometimes be inconsistent or even contradictory. Finally, Indonesia's legal system is in many ways incomplete, and in a current state of formulation and revision.

Within the last half century, Indonesia has been governed under four very different forms of government. The first was the colonial administration of the Dutch East Indies under the control of the Government of the Netherlands. The second was the Japanese military occupation. The third was the "Old Order" rule of President Sukarno who pursued nationalistic and socialistic goals under national policy and law. The fourth was (and is) the current "New Order" government which is pragmatic and generally more receptive to the participation of private and/or foreign capital in the Indonesian economy. Each of these governments issued and implemented laws and regulations. Most of the old laws and regulations have not been rescinded (although new laws and regulations may state that any contrary prior laws and regulations are revoked). All unrevoked earlier laws and regulations continue to be valid. They were issued in support of philosophically disparate policies.

Although there is a national legal system for Indonesia, different ethnic and religious groups are subject to their traditional (*adat*) legal systems which are applicable to most aspects of personal law and—to varying degrees—to the laws of land ownership and custom.

Indonesia is a unitary state. Power is centralized in the national government. The Basic Law of 1945 is the constitution of Indonesia and is the paramount law of the land. The President has the dominant role in practice in establishing and implementing national policies and laws. He may—and often does—achieve this through the issuance of presidential proclamations [*Keputusan Presiden* ("Keppres")], and instructions.

Within the President's Cabinet, individual ministries have been assigned responsibility for prescribed sectors of national interest. Each ministry may itself issue decrees and regulations with regards to its assigned sector, but the application of such decrees and regulations often

infringes on sectors assigned to other ministries. Other governmental agencies and coordinating boards which are not under any ministerial control also issue decisions and policy statements. Ministries may issue regulations in the form of decrees, called *Peraturan Menteri* ("Permen"), and ministerial decisions called *Keputusan Menteri* ("Kepmen"). They may jointly issue decrees called *Surat Keputusan Bersama Menteri*. A decision of the Chairman of the Investment Coordinating Board is called a *Surat Keputusan Ketua BKPM*. Ministries and agencies may also issue circular letters (*Surat Edaran Menteri*), instruction letters (*Instruksi Menteri*), and other guidelines and policy statements.

There is a national legislature which enacts national laws. The national legislature is the *Dewan Perwakilan Rakyat* [People's Representative Council ("DPR")], some of whose members are elected but the majority of whom are appointed. It normally only considers bills submitted to it by the National Government and drafted by the ministries. When enacted by the DPR, bills become laws after being signed by the President, after which they are published in the State Gazette (*Lembaran Negara*). These are the only formal Indonesian statutes (except for preexisting Dutch East Indies laws with continuing validity).

Below, and theoretically completely subservient to, the national government are provincial and local governments. These regional governments, through their executives and legislatures also issue rules and regulation. The National Government has also promulgated measures for the official decentralization of some power to lower levels of government.

Within the 27 provinces including three special provinces of Jakarta, Aceh and Yogyakarta (referred to as "level one" or *tingkat satu* governments), the chief executive is called a governor (*gubernur*). A governor may issue a decree, called a *Surat Keputusan Gubernur* ("SK Gubernur"). A governor may also issue instructions to a *walikota* or *bupati* (local government executives) and his subordinate *kepala dinas* through a decree called an *Instruksi Gubernur*. In each province, there is a provincial legislature [*Dewan Perwakilan Rakyat Daerah Tingkat I* ("DPRD TK. I")] made up of elected and appointed members. A DPRD enactment—called a *Peraturan Daerah* ("PERDA")—is drafted and submitted by the governor to the DPRD TK. I and is subject in its final form to central government Minister of Home Affairs legalization. When this is accomplished, it becomes part of the law (although it is referred to as a "regulation") of the province. In each province and special province there are organizations—called *dinas*. There are also *Kantor Wilayah* ("KANWIL") which are the provincial offices of some central government's ministries. Their heads report both to the provincial governor and to the appropriate central government minister through its relevant director general.

Within the provinces, local ("level two" or *tingkat dua*) government is exercised in each urban and rural area by a mayor (*walikota*) of the city (*kotamadya*) or (in less urbanized and in rural areas) by the regent (*bupati*) of the regency area (*kabupaten*). At this level, there are also legislatures [*Dewan Perwakilan Rakyat Daerah Tingkat II* ("DPRD TK. II")] made up of appointed and elected members. In each level two government there are *dinas* who act as

technical agencies to the *walikota* or *bupati* and some local offices of national ministries [*Kantor Departemen* ("KANDEP")] which report both to the local government executive and the KANWIL of the relevant ministry. Although they will play little or no role in private sector participation in Indonesian water supply activities, there are lower government units within level two which are called *kecamatan* (whose executive is a *camat*), and generally speaking the lowest level is the *kelurahan* (whose executive in an urban area is a *lurah* and in a rural area is a *kepala desa*).

The implementation and enforcement of these laws, regulations, and rules may also be undertaken at various levels of government by their executives, or agencies.

Indonesia's judicial system is composed, from lowest to highest levels, of Courts of First Instance (*Pengadilan Negeri*) which are located in judicial urban and rural regencies areas within provinces and special provinces, Courts of Appeal (*Pengadilan Tinggi*) which are located in the capital city of each province and special province, and a Court of Cassation or Supreme Court (*Mahkamah Agung*) located in Jakarta. In criminal cases only, further appeals may be made to the President for pardons or reduced sentences. A law to create Courts of Administrative Law (*Pengadilan Tata Usaha Negara*), which will for the first time provide a forum through which private parties have legal recourse against the Government of Indonesia and its agencies, was enacted under Law No. 5 of 1986 and will be effective in 1991.

The laws of Indonesia are now becoming more regularized. An effort has been made to coordinate or harmonize these laws and regulations through the *Badan Pembinaan Hukum Nasional* ("BPHN"), but this process is far from complete and progress has been slow. The Indonesian Government is formulating a broad range of new laws and regulations to cover existing gaps in the laws. The Commercial Code of the Dutch East Indies is now in the process of being modernized and adapted to meet current Indonesian needs and conditions. Within the past decade, great efforts have been made to collect, collate, and index the existing body of Indonesian law and to make that information available to lawyers, judges, and the public. This task has been the special focus of attention of the legal documentation center of the Law Faculty of the University of Indonesia. There are two of its offices in Jakarta which maintain current laws and regulations indexed by subject and relatively current indexed collections of laws and regulations issued by or pertaining to specific central government departments or agencies. New laws and government regulations must be issued in the official State Gazette (*Lembaran Negara*). New laws and regulations are also regularly published by specialized commercial papers which may also publish English-language translations of them. Copies of back issues of these papers are obtainable from their offices for a price that increases with the age of the back issue.

A matrix of the hierarchy of Indonesian laws, regulations, and rules, with the prevailing authority in case of conflicts being that which is found highest and furthest to the left on the matrix, is presented in Figure 1.

Figure 1

Hierarchy of Sources of Indonesian Laws and Regulations

	NATIONAL	PROVINCIAL (LEVEL 1)	LOCAL (LEVEL 2)
<u>CONSTITUTION</u>	Basic Law of 1945		
<u>STATUTES</u>	1. Dutch colonial laws 2. Laws drafted by ministries, submitted by the President, and enacted by the DPR	PERDA TK. I (Classed as regulations) Drafted by <u>dinas</u> , submitted by a governor and enacted by a DPRD TK. I	PERDA TK. II (Classed as regulations) Drafted by a <u>dinas</u> , submitted by a walikota / bupati and enacted by a DPRD TK. II
<u>GOVERNMENT REGULATIONS AND EXECUTIVE ORDERS</u>	1. Government Regulations 2. Kepprcs (Decree) 3. Inpres (Instructions)	1. Governor's Regulations 2. Governor's Decrees 3. Governor's Instructions	1. Regulations of a <u>walikota</u> or a <u>bupati</u> 2. Decree of a <u>walikota</u> or a <u>bupati</u> 3. Instructions of a <u>walikota</u> or a <u>bupati</u>
<u>MINISTERIAL DECREES AND REGULATIONS</u>	1. Joint Ministerial Decree 2. Permen (Regulations) 3. Kepmen (Decision) 4. Guidelines and Policy Statement 5. Circular Letter 6. Instruction Letter		

Note :

Sources are of increasing authority the higher and further to the left that they appear on the chart.

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## 2. THE LEGAL ISSUES CONCERNING BPAMS, PDAMS, AND PDABS

The organization of, and delegation of authority within, the Indonesian Government with regards to water utilities involves many tiers of law- and regulation-making and enforcing bodies.

The principal ministries involved in water utility matters are the Ministry of Public Works [*Departemen Pekerjaan Umum* ("PU")] and the Ministry of Home Affairs [*Departemen Dalam Negeri* ("DEPDAGRI")]. Under PU is the Directorate General of Human Settlement [*Direktorat Jenderal Cipta Karya*], which is over the Directorate for Clean Water [*Direktorat Air Bersih* ("DAB")]. Also under PU but concerned only with irrigation and similar water and water resources issues rather than with BPAMs and drinking water is the Directorate General of Water Resources [*Direktorat Jenderal Pangairan* ("DITJENAIR")]. Under DEPDAGRI is the Directorate General of Regional Development Affairs [*Direktorat Jenderal Pembangunan Daerah* ("BANGDA")] and the Directorate General of General Governmental Affairs and Regional Autonomy [*Direktorat Jenderal Pemerintahan Umum dan Otonomi Daerah* ("PUOD")]—which is in turn over the Directorate for the Development of Regional Enterprises [*Direktorat Bina Perusahaan Daerah*].

Other ministries and agencies which have partial or occasional involvement in water utilities issues or regarding foreign loans to water utilities in Indonesia are the Ministry of Finance [*Departemen Keuangan* ("DEPKEU")] and its Directorate Generals of Budget [*Direktorat Jenderal Anggaran*] and Monetary Fund [*Direktorat Jenderal Moneter*]; the Ministry of Health [*Departemen Kesehatan* ("DEPKES")]; the Ministry of Industry [*Departemen Perindustrian* ("DEPERIN")]; the Ministry of Mining and Energy [*Departemen Pertambangan dan Energi*] which is responsible for authorizing the use of groundwater resources; the State Secretariat [*Sekretariat Negara* ("SEKNEG")]; the State Minister for Environmental and Population Affairs [*Menteri Negara Kependudukan dan Lingkungan Hidup* ("KLH")]; the Investment Coordinating Board [*Badan Koordinasi Penanaman Modal* ("BKPM")]; the National Planning and Development Board [*Badan Perencanaan Pembangunan Nasional* ("BAPPENAS")] which is over the Coordination Team for Urban Development [*Tim Koordinasi Pembangunan Perkotaan* ("TKPP")]; and the Indonesian Central Bank (*Bank Indonesia*).

Under Indonesian regulations and practice, municipal water utilities are initially constructed by PU. Each is planned, built, and operated by PU as a *Badan Pengelola Air Minum* ("BPAM"). A BPAM is not a legal entity but is an embryonic project under the national development budget. A BPAM is subject to the administrative overview of a provincial level office of DAB, called *Proyek Peningkatan Sarana Air Bersih* ("PPSAB"). Once a municipal water utility is built, has proven in practice to be running according to design, and is running at "break-even," it is transferred by PU to a level two government. The BPAM's assets will be transferred to an entity in the form of *Perusahaan Daerah Air Minum* ("PDAM")

following DPRD TK. It legal action and approval of the provincial governor (although somewhat different procedures apply where the PDAM is at level one). A PDAM is subject to the administrative overview of its board of directors (whose members are selected by the *walikota* or *bupati* for their technical expertise). Its board of supervisors (*Dewan Pengawas*) which is made up of the *walikota* or *bupati* and appropriate designated level two *dinas* offices, and a provincial *Proyek Monitoring and Development Unit* ("PMDU") which advises the provincial governor and provides technical advice and assistance to the PDAMs at *kotamadya* and *kabupaten* level two. In East Java a new type of level one organization was formed in 1987. It is called a *Perusahaan Daerah Air Bersih* ("PDAB"). Its purpose is to develop multi-use water sources and to resell water from those sources to a number of local PDAMs who, in turn, make distribution to ultimate consumers. The PDAB seems likely to be a form of enterprise which will be adopted for use in other provinces in the near future.

PDAMs, PDABs, and BPAMs are the operational entities used by the Government of Indonesia for water supply services. They are created by the provincial/local government (or the central government for BPAMs) and operate under the guidelines and constraints of the central government. They (excluding BPAMs) are classified as "regional enterprises" (*Perusahaan Daerah*). This category also includes, *inter alia*, agricultural markets, hotels, transportation, banking municipal parking lots, slaughtering houses, etc.

PMDUs have operated under the authority of a joint ministerial decree since 1986. There are now 21 PMDUs scattered throughout Indonesia. The principal objectives of PMDUs are to: (a) assist the management and boards of directors of PDAMs to achieve objectives set for them by national and regional authorities and (b) monitor progress in the Indonesian water supply sector in order to permit the central and provincial governments to determine and implement effective policies for future development and operations. PPSABs may sometimes in practice also advise and assist PDAMs and thereby compete with or duplicate the efforts of PMDUs.

About 140 Indonesian urban water supply programs are operated as BPAMs. Another 151 of them are operated as PDAMs. PDAMs are meant to be operated as independent and financially viable companies. Nonetheless, their operations and tariff rate structures are prescribed in general terms by national law and policy and their specific tariff rate schedules are approved by politically-appointed boards and officials. Those tariff rates make inadequate provision for, replacement and future development costs. From its revenues, a PDAM is normally required by law to distribute 55% of its after tax revenues to the level two local or level one provincial government in which the PDAM is located. The Minister of Home Affairs in 1975 left to the discretion of the level one and two executives the decision as to whether to release PDAMs from their obligation to make contributions of 55% of their net earnings to local/provincial governments when such funds are required to be used for later PDAM investments, developments, maintenance, and operations. The legal right of PDAMs to contract for services and otherwise cooperate with third parties has been significantly

augmented in recent years, although the nature and extent of this legal authority remains unclear.

Significant efforts have been made to decentralize water supply and other public sector functions in Indonesia. Decentralization has in practical terms, however, been only incompletely achieved. The relationship between the central government and provincial and local governments is most commonly characterized by centralized regulatory control, institutionally weak local and provincial governments, and intensive involvement by the central government in the implementation of central government water policies through provincial and local governments and institutions. Implementation of urban development through the Integrated Urban Infrastructure Development Program ("IUIDP") is a central government effort to coordinate the programs of a number of central government ministries into a single development program that is responsible to local governments. The IUIDP attempts to prepare the local governments to assume their newly assigned roles in urban development. It also integrates funding sources in order to provide greater latitude in project selection by local governments.

An important issue in this effort to decentralize water supply authority and accountability is the question of the continuing availability to PDAMs of central government funding and financial support. The central government have encouraged PDAMs to become more responsible for their own financing. As PDAMs do so, they will need to adjust their operations and possibly tariff schedules. As this is a new policy, PDAMs appear to continue to rely on central government funding and financial support. This may have ramifications for PDAMs' enthusiasm for private sector participation.

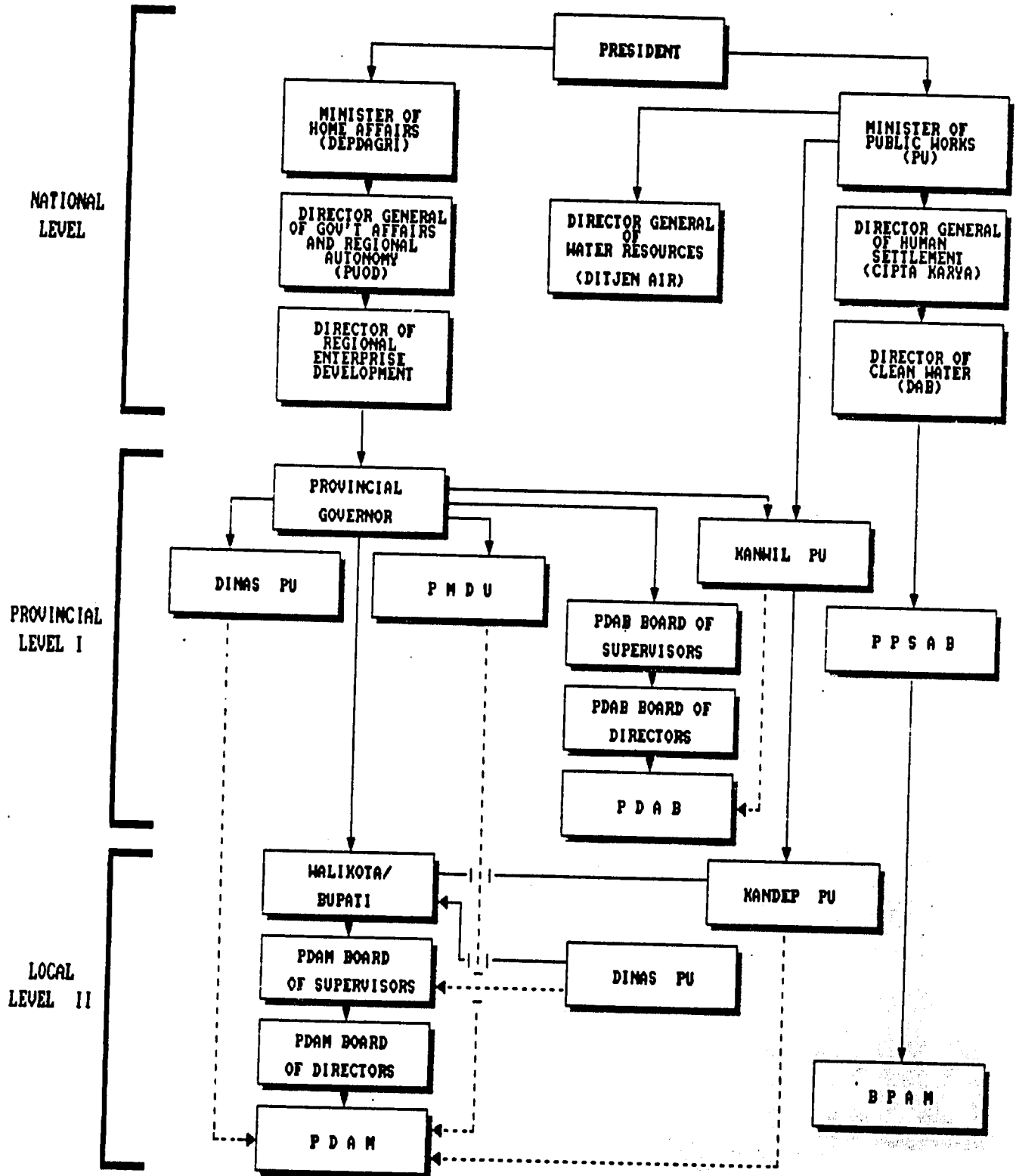
A diagram of the organization and government agencies regulating BPAMs, PDAMs, and PDABs is presented in Figure 2.

The principal laws and regulations relevant to BPAMs, PDABs, and PDAMs are:

- (a) The Basic Law of 1945 (the Indonesian Constitution), particularly Article 33 which provides that "Production branches which are important to the State and provide for the needs of the people must be under the control of the State" and "Earth, water and other ground resources have to be managed/utilized by the government for the maximum benefit of the people."
- (b) Law No. 5 of 1962 which is concerned with the establishment of government enterprises at provincial/local levels of government. It serves as the fundamental legal basis for the establishment of PDAMs and PDABs. The current status of this Law is ambiguous. It was revoked by Law No. 6 of 1969, but revocation was made contingent

Figure 2

Organizational Structure for the Regulation of, and the Provision of Assistance to, BPAMs, PDAMs, and PDABs by the Government of Indonesia



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upon the enactment of a new law to replace Law No. 5 of 1962. No such superseding law was ever enacted.

- (c) Law No. 11 of 1974 regarding water resources and which has a wide applicability to other public water utility issues.
- (d) Government Regulation No. 22 of 1982 regarding water management as it concerns sourcing of water supplies from streams and groundwater.
- (e) Presidential Decree No. 21 of 1989 concerning the exhaustive list of 75 economic sectors that are closed for designated forms of new foreign and domestic private investment. "Water supply" or "drinking water" are not listed as closed sectors. This may supersede Article 6 of Law No. 1 of 1967 which designates nine economic sectors—including "drinking water"—as being closed to foreign investment because they are of strategic national importance for which the Government of Indonesia will retain exclusive authority. However (see Figure 1 and later discussion in Sections 8 and 11 of this Paper), a presidential decree may not properly supersede a law because of the relative levels of their legal authority. This Decree supersedes Presidential Decree No. 15 of 1987 which, in turn, superseded Presidential Decree No. 22 of 1986 which both established nonexhaustive lists of economic sectors open to new foreign and domestic private investment and which listed "drinking water" as an open sector.
- (f) Joint Ministerial Decree of the Ministers of Home Affairs, Public Works, and Finance Nos. 160 of 1978, 281 of 1978, and 360/KMK.011 of 1978 regarding the execution and development of clean water construction projects with central government aid.
- (g) Joint Ministerial Decrees of the Ministers of Home Affairs and Public Works Nos. 3 of 1984 and 26 of 1984 and 4 of 1984 and 27 of 1984 regarding the establishment of local drinking water enterprises and the development of PDAMs. These Decrees assigned the Ministry of Public Works responsibility for initial water supply planning and development and assigned the Ministry of Home Affairs the principal responsibility for developing the nontechnical aspects of water enterprises. Joint responsibility was assigned to the Ministries of Home Affairs and Public Works for formulating guidelines for the organizational structure of PDAMs.

- (h) Joint Ministerial Decree of the Ministers of Home Affairs and Public Works Nos. 5 of 1984 and 28 of 1984 concerning guidance about the calculation of drinking water tariffs and regarding the organization, accounting systems, structure, and cost calculations of water utilities.
- (i) Decree of the Minister of Finance No. 540/KMK.011 of 1979 regarding the management of central government funds for the financing of PDAM projects.
- (j) Decree of the Minister of Public Works No. 269/KPTS of 1984 regarding BPAMs which provides for a shorter period before they are changed to PDAM status.
- (k) Regulation of the Minister of Mining and Energy No. 03/P/M/Pertamben of 1983 requiring licensing of all private use of ground and spring water and of water drilling by the provincial governor acting upon the binding advice of the Directorate General of Geology within the Ministry of Mining and Energy.
- (l) Regulation of the Minister of Home Affairs No. 690-536 of 1988 dealing with guidelines for the pricing of water to consumers by a PDAM. This provides that water prices charged to consumers must be decided by the head of the local government and be subject to gubernatorial approval following a proposal from the management of the water company and the favorable considered judgement of its supervisory board. This eliminated the requirement for ratification by DPRD TK. II provided in Regulation of the Minister of Home Affairs No. 690-1572 of 1985.
- (m) Regulation of the Minister of Public Works No. 65/KPTS of 1989 establishing the Joint Technical Team for Water Supply Capital Investment.
- (n) Circular Letter of the Minister of Home Affairs No. 690/7072/SJ dated July 10, 1985, to all level one governors, all *bupatits* and *walikotas* of level two, and all directors of PDAMs regarding the possible release by level one and two governments of PDAMs from the duty to provide 55% of their net profits to those governments as provided under Article 25 of Law No. 5 of 1962.
- (o) Circular Letter of the Minister of Home Affairs No. 690-1595 of 1985 which authorized the creation of PMDUs.

- (p) Instruction Letter of the Minister of Home Affairs No. 5 dated March 19, 1990, regarding the anticipated change of the form of all regional government enterprises to one or the other of two forms of legal entity, i.e., PERUMDA (*Perusahaan Umum Daerah* or Regional Public Company) and PERSERODA (*Perusahaan Perseroan Daerah* or Regional Limited Liability Company), following enactment of a law to replace Law No. 5 of 1962.
- (q) Guidelines on the Accounting System of PDAMs of August 1990 issued by the Minister of Home Affairs.
- (r) Organizational structure of PDAMs (undated) issued by the Minister of Home Affairs.
- (s) Implementing Guidelines for Regulation No. 690-536 of 1988 (Interim Report) (undated) regarding the calculation of drinking water tariffs by PDAMs.
- (t) Decree of the Governor of the Special Province of Jakarta No. D.IV-a.12/1/49 of 1974 on the regulation of digging and drilling for groundwater in Jakarta Special Province.
- (u) Decision of Jakarta Governor No. 664 of 1980 concerning the organization, structure, and work division of the drinking water company of the Special Municipality of Jakarta ("PAM Jaya").
- (v) Provincial Regulation of East Java No. 6 of 1980 amending the provincial water regulation of East Java of 18 November, 1938, on the use of water.
- (w) Provincial Regulation of East Java No. 5 of 1985 concerning drilling and the use of underground water in East Java.
- (x) Provincial Regulation of East Java No. 2 of 1987 regarding the establishment of PDABs.

### 3. REVIEW OF INDONESIAN LAWS AND REGULATIONS REGARDING FOREIGN AND DOMESTIC PRIVATE SECTOR INVESTMENTS

The legal structure for private sector commercial activities in Indonesia is based on the Commercial Code of the Dutch East Indies of 1847. This Commercial Code is a civil law code derived from the Dutch Commercial Code. This was in turn derived from the Roman Justinian Code. This Commercial Code continues in full force and effect in Indonesia except where its provisions have been specifically revoked by Indonesian law or are otherwise incompatible with Indonesian independence and public policy. This Commercial Code is currently being revised to accommodate modern and specifically Indonesian conditions, needs, and practices, but no date of completion has been announced and it may not be accomplished in the near future. Corporate practices and procedures are prescribed by the Commercial Code. The most common form of corporate entity for private commercial use in Indonesia is the *Perseroan Terbatas* or "P.T." The P.T. is a limited liability company whose form and legal rights and obligations are similar to, and modeled closely after, those established by most civil code jurisdictions.

Indonesia, under the government which preceded the New Order, adopted an anticapitalistic policy. Even during this period, however, private sector activities continued, e.g., in agriculture and the vending of consumer goods and services. Following the fall of the Old Order government, a change in national economic and social policy was made under the New Order to the *Pancasila* philosophy. *Pancasila* stresses cooperative efforts and a commitment to the amelioration of poverty and social problems through government activities. *Pancasila* continues to be the official Indonesian national ethos and ideology.

This is reflected in some official public policies and enactments of Indonesia. Under these, private sector participation in the economy is frequently only permitted with the special authorization of the government, the private sector's activities are sometimes subject to close regulation and monitoring.

In many instances, the Indonesian laws which refer to "domestic capital" are misleading in their use of this term. In this context, "domestic capital" initially principally referred to flight capital. The "domestic investment" laws were designed to encourage the repatriation and local investment of this flight capital. BKPM licensed "domestic investments" are now those investments of Indonesian capital which seek or require special government incentives—particularly through special customs treatment of some or all of their imported assets.

To a great degree, the general Indonesian population is permitted—and even encouraged—to engage in economic activity through the use of private capital. To the extent that this is regulated at all, regulation is implemented through general licensing and other laws which will not be considered in this Paper.



The agency of the Indonesian Government most directly involved with specially licensed private sector investments in Indonesia is BKPM. In the two years immediately following the institution of the New Order, foreign and domestic private investments were encouraged and were generally unrestricted. Beginning in 1967, however, the Government of Indonesia—through predecessor institutions of BKPM—initiated a policy of critically reviewing private foreign capital investment proposals. In 1968, that review was extended to "facilitated" "domestic capital" investments, i.e., returning flight capital regarding whose origins the Government of Indonesia tacitly agreed to not examine closely and registered as a Domestic Investment Company [*Penanaman Modal Dalam Negeri* ("PMDN")] which received investment inducements from the government. BKPM was organized in 1973 to formally review and license foreign and domestic investment applications. BKPM does not review investment proposals regarding financial institutions, which are regulated by other ministries and agencies of the Government of Indonesia. It also does not consider private investments related to the petroleum industry or review private sector contractual relationships with the Indonesian national oil company, which is called *Perusahaan Pertambangan Minyak dan Gas Bumi Nasional* ("Pertamina"). All such investments and contracts are handled exclusively by Pertamina itself. BKPM approval is now required for all domestic investments for which special "facilities," e.g., preferential import customs tariffs, are requested. No special tax facilities have been granted to private investors by BKPM since 1983.

Although all foreign investments and all facilitated domestic investments must be reviewed and approved by BKPM, there are a few significant differences in the way foreign and domestic investments may—and must by law—be treated by BKPM. Domestic investments may be licensed upon the approval of the Chairman of BKPM, but all foreign investments also require the formal approval of the President. Domestic, but not foreign, investments may obtain financing through government-owned banks. Domestic investors may engage in the direct distribution of products, but foreign investors may only engage in the distribution within Indonesia of their own products and then only through separately approved Indonesian joint venture companies. Once a foreign investor's equity participation in an Indonesian company is below 50% and Indonesian investors hold the majority of the equity, a company must by law be treated in every respect as the same as a company formed using only domestic private investment.

Initially, private sector investment applications were considered cautiously. Those investments that were approved were approved only with severe limitations and then only as exceptions to the general rule against foreign and "domestic" private sector investments in Indonesia. Over time, BKPM and the Government of Indonesia have grown increasingly receptive to private sector investment applications. Restrictions imposed on investments are now more limited than was previously the case. The annual number of approved investment applications and the speed with which investment applications are dealt with has increased over the period. The likelihood of any investment application being approved has improved over the years.

Since 1977, BKPM has provided a "one stop" review and licensing center for all private sector investment applications over which it has authority (except for forestry, fishing, and mining investments, which require the direct participation of other ministries and agencies). The Chairman of BKPM has been delegated the authority to issue investment approvals (excluding those listed above) without the formal review and approval of those investment applications by other ministries and agencies.

Nonetheless, Indonesian Government investment application review and licensing procedures continue to be officially expressed in negative terms, i.e., they state that all investments are excluded until official approval has been granted. This belies to a degree the current reality that there is a presumption of approval for investment applications barring some special reason for refusal.

The procedure for seeking investment approval by BKPM is to submit an application, complete with detailed plans for the investment, to BKPM. BKPM will then review the application (and may seek extensive clarification of the application from the investor). Following that review, BKPM may choose to approve the application as submitted, reject the application in its entirety, or accept in part the application subject to changes and restrictions imposed by BKPM. Following approval of an investment, any significant changes to that investment are also subject to BKPM notification and approval.

The Government of Indonesia established a policy in the early 1970s of nonexhaustively listing those sectors of the Indonesian economy in which new private sector investment would be permitted. "Drinking water" was added to this list beginning in 1986. In 1989, this policy was changed. In that year, an *exhaustive* list was published of those Indonesian economic sectors from which certain forms of new private sector investment is excluded. Private investment is permitted in all other economic sectors—including "drinking water." Nonetheless, Article 3 states that such investments are only permitted in accordance "with the provisions of prevailing laws and regulations." Consequently, as shall be described in greater detail in a later section of this Paper, those sectors opened for private investment by the Decree may arguably be closed for some such investments through the operation of other laws and regulations. There are now 75 economic sectors in Indonesia which are closed to specified forms of new private sector investment.

The principal relevant Indonesian laws and regulations concerning the participation in the Indonesian economy of the private sector are:

- (a) Dutch East Indies Commercial Code of 1847.
- (b) Law No. 6 of 1968 concerning domestic investments.
- (c) Law No. 12 of 1970 amending and supplementing Law No. 6 of 1968.

- (d) Presidential Decree No. 54 of 1977 concerning regional basic provisions on investment procedures.
- (e) Presidential Decree No. 26 of 1980 concerning regional investment coordinating boards [*Badan Koordinasi Penanaman Modal Daerah* ("BKPM")].
- (f) Presidential Decree No. 35 of 1985 amending Presidential Decree Nos. 33 of 1981 and 78 of 1982 regarding the status, duties, and organizational structure of BKPM.
- (g) Presidential Decree No. 21 of 1989 concerning the exhaustive list of economic sectors that are closed for specified forms of new private investment. It does not include "drinking water." It replaces the earlier nonexhaustive list of economic sectors open to new private sector investment of Presidential Decree No. 15 of 1987 which, in turn, replaced Presidential Decree No. 22 of 1986 which contained a similar list.
- (h) Presidential Instruction No. 5 of 1984 concerning guidelines for the simplification and control of business licensing.
- (i) Decree of the Minister of Finance No. 862/KMK.01 of 1987 regarding the issuance of securities through a stock exchange.
- (j) Decision of the Chairman of the Investment Coordinating Board No. 5/SK of 1987 regarding local equity participation requirements in joint ventures with foreign investors. This Decision followed and implemented the provisions of Article 27 of Law No. 1 of 1967, Circular Letter from the Chairman Nos. 1195/A/BKPM/X of 1974 and B 109/A/BKPM/II of 1975, and BKPM Internal Guidelines of 1981. The Decision was further modified by Decisions of the Chairman Nos. 08/SK and 16/SK of 1989.

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#### 4. REVIEW OF INDONESIAN LAWS AND REGULATIONS REGARDING FOREIGN INVESTMENTS

Until the institution of the New Order in 1966, foreign investments in Indonesia were generally discouraged. Between the time of Indonesian national independence and 1966, a number of existing foreign investments—particularly those owned by the Dutch—were nationalized. Foreign investment in Indonesia was largely unrestricted during 1966 and 1967. Indonesia initiated a policy of restricted authorization for foreign investments in 1967.

Since then, local participation with foreign investors has been officially encouraged. In virtually all cases after 1974, foreign investments have been permitted only when made in conjunction with local venture parties. Following the initial foreign investment, the incremental transfer of majority equity ownership to local participants was at first encouraged and later required by the end of a fixed period (initially of ten years, later extended to fifteen years with provision for a discretionary extension of a further five years). Upon the transfer of majority ownership in an enterprise by the foreign investors to local participants, the enterprise will be treated under Indonesian law as a domestic investment.

All foreign investments (except for those concerning financial institutions and petroleum-related sectors) must be authorized by BKPM and be approved by the President. Special customs tariff treatment may be authorized by BKPM, but special tax treatment for foreign investments has not been granted since 1983. Foreign investments may not have access to Indonesian Government bank financing and may only distribute in Indonesia their own products and then only through separately incorporated Indonesian joint venture distribution companies. The procedures for applying to, and receiving authorization from, BKPM for investments which were described in the previous section are generally applicable to foreign investments as well as subject domestic investments. Foreign investments are made in the form of a Foreign Investment Company [*Penanaman Modal Asing* ("PMA")].

It should be noted that foreigners may also invest in Indonesia by buying shares in existing Indonesian companies through purchases on the Indonesian Stock Exchange or through private purchases of equity and shares. They may also list their Indonesian companies on the Indonesian Stock Exchange.

Since 1967, the Government of Indonesia has become increasingly receptive to foreign investment. Foreign investment applications are now routinely processed and approved by BKPM relatively quickly and in large numbers. Nonetheless, foreigners are explicitly excluded from making investments in nine specific Indonesian economic sectors (including drinking water) under the provisions of Article 6 of Law No. 1 of 1967. This is examined in greater detail in Sections 8 and 11 of this Paper. Foreigners may not have proprietary rights in Indonesian real property according to the terms of the Indonesian Agrarian Law. Indonesian laws and regulations by their literal terms treat foreign investment as an activity that is only

permitted selectively and cautiously, although in reality the Government of Indonesia now encourages foreign investment and rejects few legitimate foreign investment proposals. Government of Indonesia receptiveness to foreign investment may be expected to continue and even increase in the future.

The principal Indonesian laws and regulations of relevance to foreign investments and foreign investors are:

- (a) Law No. 1 of 1967 regarding foreign investments.
- (b) Law No. 11 of 1970 which amended and supplemented Law No. 1 of 1967.
- (c) Government Regulation No. 24 of 1986 concerning the 30 year licensing period for foreign investment companies.
- (d) Presidential Decree No. 17 of 1986 requiring that Indonesian investment entities in which a majority equity ownership is held by local participants be treated the same as domestic investments under Indonesian law. This Decree was amended by Presidential Decree No. 50 of 1987.
- (e) Decision of the Chairman of the Investment Coordinating Board No. 17/SK of 1986 concerning foreign share participation in business companies already in operation.
- (f) Those relevant laws and regulations listed in the preceding section.

**5. REVIEW OF INDONESIAN LAWS AND REGULATIONS REGARDING TAXES, CUSTOMS TARIFFS, FISCAL MATTERS, AND OTHER LEGAL ISSUES**

A multitude of other Indonesian laws, regulations, and policies will strongly affect private sector investors considering making investments in Indonesia.

The tax laws of Indonesia will affect the net profitability of any private sector investment in Indonesia. There are Indonesian taxes, *inter alia*, on income, real property and the sale of luxury goods. There is a value added tax on the sale of goods and services. There are many licensing fees, document taxes, user fees, and other government exactions which are imposed by the national government and/or its subordinate levels of government. Since 1983, Indonesia has not offered tax holidays or incentives for investors. The assessment of taxes in Indonesia is not made on a clear and accepted accounting basis. Final levels of taxation may, without any suggestion of impropriety, be determined through self-assessment and subsequent negotiations between taxpayers and Indonesian tax officials. This uncertainty and flexibility in Indonesian tax law is often unsettling for foreign investors.

Customs tariffs (except for imported household goods and goods with only a nominal value) are imposed under Indonesian law but are at present administered and collected under contract by a private Swiss company. The result has been a greatly enhanced efficiency and clearer adherence to established procedures. This contract is scheduled to expire soon. For favored investments, BKPM may authorize duty free or reduced duty importation of some or all items. In some cases—i.e. petroleum exploitation imported machinery may immediately become the property of the Indonesian Government or later reexportation of the equipment from Indonesia may be prohibited.

The Government of Indonesia, through its central bank (*Bank of Indonesia*) and BKPM licensing, may impose foreign currency exchange controls (although those controls are now suspended) and restricts the repatriation of investment capital and profits. Special authorization must be obtained through BKPM for the right to make such currency exchanges and capital and profit repatriations on acceptable terms. The national currency, the Indonesian Rupiah, is freely convertible to other currencies.

The Indonesian Agrarian Laws prohibit foreign ownership of, or proprietary rights in, Indonesian land. This may create difficulties for some investors.

Indonesian immigration law and BKPM investment authorizations greatly limit the ability of foreign investors to use expatriate staff resident in Indonesia. Over time, the number of expatriate personnel granted residence and work permits for a particular investment may be reduced. All residents of Indonesia require an official departure authorization (exit permit) each time that they wish to temporarily or permanently leave Indonesia.

Particularly regarding private investments in the water supply sector, laws and regulations regarding pollution controls, environmental matters, and health standards for potable water will be of importance.

The principal relevant laws regarding the above areas include:

- (a) The Indies Tariff Law (*Indische Tariefwet*) (Staatsblad 1873 Number 35), as amended and supplemented most recently by Government Regulation No. 6 of 1969.
- (b) Law No. 4 of 1982 regarding environmental protection.
- (c) Law No. 6 of 1983 concerning general tax matters.
- (d) Law No. 7 of 1983 concerning income taxation.
- (e) Law No. 8 of 1983 concerning value added taxation on goods and services and a sales tax on luxury goods.
- (f) Law No. 12 of 1983 regarding customs.
- (g) Law No. 13 of 1983 regarding real estate taxation.
- (h) Government Regulation No. 20 of 1990 regarding water pollution control.
- (i) Presidential Decree No. 23 of 1990 concerning the establishment of a national pollution board.
- (j) Presidential Instruction No. 4 of 1985 concerning policies to expedite the flow of goods in support of economic activities.
- (k) Decree of the Minister of Health No. 2180/YANKES/INSTAL/XI of 1981 regarding the establishment of water quality standards and an environmental team.

**6. DECENTRALIZATION OF, PRIVATIZATION OF, AND GENERAL PRIVATE SECTOR PARTICIPATION IN GOVERNMENTAL AND GOVERNMENTALLY-PROMOTED ACTIVITIES IN INDONESIA**

Indonesia was established and has been operated as a unitary state. All power emanates from the central government—to subordinate officials and levels of government. This was true for a number of historical reasons. The Dutch had administered the Dutch East Indies in this fashion. The new Republic of Indonesia was threatened with separatist forces which might fragment the country were not central control maintained. The first government of the Republic of Indonesia perceived its principal tasks as nation building and economic development. The number of competent technicians and administrators in the new government was limited and those persons were concentrated in the central government. The cultural tradition in Indonesia generally favored centralized authority and decision-making.

As Indonesia has developed economically and become more politically sophisticated, the concentration of power at the center has become increasingly inappropriate as a means of successfully and efficiently serving the country's needs. With experience and training, a larger body of qualified persons is now available at lower levels of government which is capable of assuming greater responsibilities.

The implementation of privatization and of a general shift in national economies from the public to the private sector have in many cases proven to have provided significant benefits to countries and their governments. As a consequence, the Indonesian Government has declared in PELITA V (its current five year economic plan) that it favors privatization in some forms and economic sectors. It is now actively exploring the suitability of privatization for Indonesian conditions and needs. Privatization may take many forms.

The purest form of privatization, which has been implemented in Western Europe—particularly in the United Kingdom—is divestiture. Under divestiture, public enterprises which are engaged in commercial activities will have their assets or their equity participation shares sold or transferred in whole or in part to private sector investors.

The leasing of government-owned assets to the private sector which will then operate those assets during the lease period, retain all earnings from the operation of those assets, and return those assets to the government at the end of the lease period in exchange for periodic payments by the private sector to the government is another type of private sector participation. Current Indonesian laws and regulations regarding water utilities do not seem to contemplate such leasing schemes nor does Government of Indonesia policy seem to favor such a form of privatization (unless the term "profit-sharing cooperation" in Regulation of the Minister of Home Affairs No. 4 of 1990 contemplates such leases). In other sectors, the only example of government-owned asset leasing discovered is the leasing of capital assets, e.g., drilling rigs, by the Indonesian national oil company to its private sector contractors.



Other types of privatization (which will be referred to in this Paper as "private sector participation"), i.e., service contracts; joint ventures; and build, operate and transfer investments, are considered in detail in later sections of this Paper.

Private sector participation in governmentally-promoted activities has a long history in Indonesia. The private sector has participated in the operation of plantation agriculture, the exploitation of forestry, the operation of the national customs system, and other areas since, in some cases, the early days of the Republic.

The most noteworthy example of such participation is in the exploitation of petroleum and natural gas. Under certain regulations, private sector participation in the water supply field has been treated in part as though it were directly analogous to the exploitation of Indonesian petroleum and natural gas. Consequently, the practice of private sector participation in the petroleum industry is of particular interest. This analogy has been drawn principally because, under Article 33 of the Basic Law, both petroleum and water are required to be managed exclusively by the government for the use and benefit of the people of Indonesia.

Petroleum exploitation in Indonesia by foreign and domestic private participants is based on the constitutional principle that all resources found beneath the surface of the lands (and seas) of Indonesia are the property of the people. As part of the national patrimony, these natural assets are controlled and exploited exclusively by the national government. Consequently, exploitation of Indonesian petroleum resources is the exclusive right of the Indonesian national oil company, Pertamina. Following the expropriation of foreign interests in the petroleum sector during the first few decades of Indonesian independence, the Government of Indonesia determined that it required the technology and worldwide marketing capabilities of foreign participants. Pertamina awards contracts to private foreign participants to explore for, develop, and extract Indonesian petroleum. Foreign parties are required to provide all technology, capital investments, and other facilities for their activities in the petroleum sector. All capital equipment which is entered into Indonesia for this purpose becomes immediately the property of the Republic of Indonesia and is leased to the foreign participants which originally purchased and imported the capital equipment. All risks and costs of exploration are for the account of the foreign participant. All extracted petroleum is the property of Pertamina. The foreign participant, through production or profit sharing contracts, is permitted to take a part of the extracted petroleum as its payment for its participation and to compensate it for its costs of exploration and exploitation. In many instances, the foreign participant is also permitted to market abroad additional portions of its petroleum production on behalf of Pertamina.

The analogy between petroleum production and water supply activities is flawed. It fails to take into account the social policy concerns of governments which are applicable to water supply and the essential differences in the economic dynamics of petroleum production and water supply activities. Foreign participants are willing to participate in the Indonesian

petroleum industry under the terms established by the Indonesian Government because of the international dollar-denominated market for petroleum, the high per unit price which petroleum brings on those markets, and the needs of the foreign participants for secure supplies of petroleum to serve their international refining and marketing requirements.

In the case of water, all water produced from Indonesian sources (with the possible exception of some proposed sales of water to Singapore) will be consumed in Indonesia and will be sold at prices denominated in Indonesian rupiahs. Consequently, if private sector participants incur non-rupiah expenses and financing costs they will be reluctant to accept currency exchange rate risks in meeting those costs and expenses through rupiah sales. Further, they will be dependent for profits from their exploitation of Indonesian water resources on the strength of the Indonesian demand for the water and on the ability of Indonesian consumers to purchase the water. In addition, the prices charged for the water they sell may in some cases be established by Indonesian Government institutions under regulatory structures which may not assure a recovery of their investment and a reasonable profit on that investment.

A confusing factor in any evaluation of private sector participation in government-related activities in Indonesia is the fact that many so-called "private sector" participants are in fact not purely "private." They may be quasi-government institutions or may have other close ties to the government. For example, the letting of a service contract by the PDAM of Surabaya for bill collection has been frequently cited as an example of "private sector participation." In fact, the "private" party that was awarded the contract was a provincial government-owned bank which, in turn, admittedly subcontracted collection work to genuinely "private" sector bill collectors. Similarly, foreign government and multilateral noncommercial institutional financial participation is often considered to be "private sector participation" as long as such financing moves the investment out of the Government of Indonesia's budget, even though foreign governments and multilateral noncommercial institutions are hardly private sector investors in any other sense.

The principal Indonesian laws and regulations which are relevant to decentralization, privatization, and private sector participation in governmental and governmentally-promoted activities in Indonesia are:

- (a) Basic Law of 1945, particularly Article 33 which states "Production branches which are important to the State and provide for the needs of the people must be under the control of the State" and "Earth, water and other ground resources have to be managed/utilized by the government for the maximum benefit of the people."
- (b) Law No. 8 of 1971 regarding Pertamina's right to license private sector participants in the Indonesian petroleum-related economic activities.

- (c) Law No. 5 of 1974 which is concerned with decentralization and the establishment of autonomous authority in the provincial and local governments regarding administrative matters.
- (d) Government Regulation No. 14 of 1987 regarding the delegation of part of the central government's authority in the field of public works to the provincial Level I and Local Level II Governments.
- (e) Presidential Decree No. 21 of 1989 concerning the list of economic sectors that are closed for prescribed forms of new private investment and revoking Presidential Decree No. 15 of 1987 which, in turn, revoked Presidential Decree No. 22 of 1986.
- (f) Regulation of the Minister of Home Affairs No. 3 of 1986 concerning cooperation by a regional enterprise with a third party. This made possible the establishment of joint cooperation undertakings between a regional enterprise and a private sector investor.
- (g) Regulation of the Minister of Home Affairs No. 4 of 1990 concerning the guidelines for cooperation between a regional enterprise and a third party. This revoked Regulation of the Minister of Home Affairs No. 1 of 1983 concerning the same subject.
- (h) PELITA V, the current Indonesian five year economic plan which refers to the Government of Indonesia's plans for private sector participation in its public sector activities.

## 7. GENERAL REVIEW OF INDONESIAN REGULATION OF PRIVATE SECTOR PARTICIPATION IN PUBLIC UTILITIES

Public utilities are commercial (but not necessarily profit-making or even fully self-supporting) operations which provide essential services and products to consumers and which are, by the very nature of their means of production and distribution, compelled to operate as monopolies within their geographical marketing areas if they are to achieve maximum—or even reasonable—efficiencies and economies of scale. Examples of public utilities are water, telephone, and electric companies. The essential nature of the services and products they provide make public policy considerations of great importance in assuring that the public is adequately served with those services and products at prices that are reasonable and—in some cases—that are at subsidized prices for more remote or for poorer consumers of those services and products.

The existence of natural monopolies in the provision of public utility services and products necessarily creates a conflict between any private sector participation in those utilities and public policy considerations. Private capital seeks to maximize its profits. Where free market competition exists, it assures that private capital will so function as to maximize efficiencies and provide the consumers the best service or product at the lowest competitive price. Where there is no competition or where competition is imperfect—which must necessarily be the case for public utilities, private capital will be driven by its own internal dynamics to maximize its profits, which may be to the detriment of consumers and public policy if there are no ameliorating limits imposed by competitors or the free market.

This is true for public utilities in all countries. Consequently, in countries where private capital has been permitted to participate in public utilities, governments have established independent utility rate-making regulatory bodies which operate under clear and consistently applied rules. These permit the private sector to realize the recovery of its investment and a reasonable rate of return on that investment and to conduct its activities on a business-like basis without the imposition of unnecessary and disruptive government interference while assuring that the consuming public receives adequate service at reasonable prices and that public policies are protected and implemented.

Indonesia has no history of private sector participation in public utilities. It has not established any independent utility rate-making regulatory bodies (or rules to govern the operations and activities of those bodies) which would permit private sector investors to operate efficiently and realize reasonable profits while protecting the public and promoting public policies. The existence of such independent regulatory bodies—and the rules under which they operate—are not only important from the standpoint of the government because they protect consumers and assure the proper implementation of public policy. They are also important to private sector investors because they will make investing in public utilities less speculative—and therefore more attractive—and will provide private investors with an assured forum through which to pursue and enforce their legal rights.

The Government of Indonesia has permitted private sector participation in water utilities since 1986. This was originally authorized through the publication of nonexhaustive lists of economic sectors open to private investment. In 1989, an *exhaustive* negative list was issued which recited all those economic sectors in Indonesia in which specified forms of new private investments would not be permitted. Water supply/drinking water and a number of other public utility operational areas were not on this negative list. Nonetheless, Article 3 of the relevant Decree states: "(1) The licensing of investment within the framework of the Domestic Investment Law shall be implemented by the Chairman of the BKPM on behalf of the minister responsible for the investment concerned *in accordance with* his authority and *the provisions of prevailing laws and regulations*; (2) The licensing of investment outside the Foreign Investment Law and the Domestic Investment Law shall be handled by the minister responsible for the investment concerned *in accordance with* his authority and *with the provisions of prevailing laws and regulations*; ..." Consequently, these sectors opened to private investment by the Decree may still be closed through the operation of other laws and regulations. Law No. 15 of 1985 explicitly permitted private sector investment in electric utilities. Law No. 3 of 1989 gave a similar formal authorization for private sector participation in telecommunications.

Little interest has been shown by the private sector in participating in water supply during this period, but greater interest has been expressed in investing or obtaining service contracts in other public utility sectors, e.g., waste removal and disposal, electric power generation, and telecommunications. In at least one area, i.e., the construction and operation of toll roads, the private sector has not only displayed an interest in making investments but has completed a number of major investments in projects which are now operational. Nonetheless, the legal procedures for seeking and obtaining authorization to make such private investments in public utilities and the terms and conditions under which such investments will be permitted are unclear. The charges or tariff rates which private investors in public utilities may demand of the public are often established or approved by appointed bodies.

With particular reference to private sector participation in public water utilities, the legal status of that participation is especially unclear. Article 33 of the Basic Law states that the State must control the "production branches" which provide for the "needs of the people" and that water may only be managed and utilized by the government for the maximum benefit of the people. If these are not absolute prohibitions regarding private sector investments in water supply activities, they minimally establish a requirement for a high standard of government regulation of any private sector activities in this area. Of greater concern is Law No. 1 of 1967 which states in Article 6 that nine economic sectors are closed to foreign investment which is "exercising full control." These include telecommunications, electricity, and *drinking water*. Paragraph 2 excludes *absolutely* foreign investment in other economic sectors. Although foreign investment in electricity and telecommunications has been explicitly permitted by later laws, foreign participation in the drinking water sector has been authorized only through presidential decrees and ministerial

regulations (see the list of relevant laws and regulations at the end of this Section). If a law prevails over any conflicting language of presidential decrees and ministerial regulations—as seemingly it must (see Figure 1), the definition of what constitutes "exercising full control" is of critical importance. This term is as yet undefined.

The principal laws and regulations relevant to private sector participation in Indonesian public utilities are:

- (a) Basic Law of 1945 (Indonesian Constitution), particularly Article 33 which states "Production branches which are important to the State and provide for the needs of the people must be under the control of the State" and "Earth, water and other ground resources have to be managed/utilized by the government for the maximum benefit of the people."
- (b) Law No. 1 of 1967 regarding foreign investments.
- (c) Law No. 15 of 1985 regarding private sector participation in electricity.
- (d) Law No. 3 of 1989 regarding private sector participation in telecommunications.
- (e) Presidential Decree No. 21 of 1989 concerning the list of sectors that are closed for specified forms of new private sector investment, superseding Presidential Decree No. 15 of 1987 which, in turn, superseded Presidential Decree No. 22 of 1986.
- (f) Regulation of the Minister of Home Affairs No. 3 of 1986 concerning cooperation by a regional enterprise with a third party. This made possible the establishment of joint cooperation undertakings between a regional enterprise and a private sector investor.
- (g) Regulation of the Minister of Home Affairs No. 4 of 1990 concerning the guidelines for cooperation between a regional enterprise and a third party. This revoked Regulation of the Minister of Home Affairs No. 1 of 1983 concerning the same subject.

## **8.           INDONESIAN LAW REGARDING PRIVATE SECTOR SERVICE CONTRACTS AWARDED BY UTILITIES AND GOVERNMENTAL ENTITIES**

Indonesian public utilities and governmental entities have for a long time awarded service contracts to private sector participants. Private sector participants perform under service contracts in petroleum-related activities which are worth millions of dollars annually. Garuda Airlines has in the past privately contracted out some of its aircraft maintenance. A private Swiss company has contracted with the Indonesian Government to collect and administer customs tariff operations for goods entering Indonesia.

In the field of water supply public utilities, private sector service contracts have been awarded under more limited circumstances and less frequently. In two cases, i.e., Medan and Surabaya, the collection of the payment from at least some water consumers has been contracted out to other parties. At least in the case of Surabaya, the contract was awarded to a bank owned by the provincial government and not to a genuine private sector bidder (although private sector bill collectors were subcontracted to actually perform the service).

In the water utility sector, authorization for the award of service contracts is principally provided by Regulation of the Minister of Home Affairs No. 4 of 1990. That Regulation states that service contracts may be awarded by regional enterprises to the private sector through "management cooperation," "operational cooperation," "management contract," "agency, usage and distribution," or "technical assistance cooperation." Regulation of the Minister of Home Affairs No. 3 of 1986 also permits, *inter alia*, regional enterprises to enter into service contracts with third parties regarding "management and operation assistance." These terms are not defined in the regulations. No clear procedures are established for evaluating bidders or for awarding contracts. No standard contract terms or formats were prescribed.

To assure that private sector performance of services under contract to government entities is provided at the lowest possible cost and with the greatest efficiency, there must be competitive bidding by qualified bidders for such contracts, such service contracts must be regularly rewarded through competitive bidding, and the performance of private sector service contracts must be subject to continuous monitoring and evaluation. Of course, the benefits to be derived from awarding water supply service contracts to the private sector may only be achieved if the private sector itself has the competence and resources to fulfill such contracts. This must be determined prior to initiating a program of awarding such contracts. There are currently no rules in the water utility sector for the publication of announcements of a request for bids, the preparation of the terms of service contracts for which bids will be accepted, the formal qualification of competent bidders, the submission of sealed bids, the selection of the most competitive bidder, public disclosure of the winning bid, the right of losing bidders to challenge the bid award through the courts, a requirement that service contracts be for only limited periods and that they be rewarded competitively, or the

mechanics for monitoring and evaluating the performance under service contracts of winning private sector bidders.

Those principal laws and regulations which are relevant to the award by public utilities and government entities to private sector participants of service contracts are:

- (a) Regulation of the Minister of Home Affairs No. 3 of 1986 concerning cooperation of a regional enterprise with a third party.
- (b) Regulation of the Minister of Home Affairs No. 4 of 1990 concerning the guidelines for cooperation between a regional enterprise and a third party which revoked the Regulation of the Minister of Home Affairs No. 1 of 1983 concerning the same subject.
- (c) Surabaya PDAM President Director's Decree No. KPTS/29/411.61 of 1985 regarding private sector service contracts for bill collection.



## 9.           INDONESIAN LAW REGARDING PRIVATE/PUBLIC SECTOR JOINT VENTURES

The answer to the question of whether a public sector regional enterprise may legally enter into a joint venture with a private sector investor, particularly in the area of water supply, remains unclear. Regulation of the Minister of Home Affairs No. 4 of 1990 and Regulation of the Minister of Home Affairs No. 3 of 1986 explicitly authorize such joint ventures. Instruction letter of the Minister of Home Affairs No. 5 dated March 19, 1990, regarding the anticipated change of the form of regional government enterprises into one or the other of two types of legal entity, i.e., PERUMDA (Regional Public Company) and PERSERODA (Regional Limited Liability Company), following enactment of a law to replace Law No. 5 of 1962 would make such joint ventures more easily accomplished. Because of the peculiarly ambivalent status of Law No. 5 of 1962, which is neither quite revoked nor quite inoperative, the ability of PDAMs or PDABs to enter into joint venture agreements with private sector investors remains in doubt. In Law No. 5 of 1962, Article 5(4), provides that: "The important/main branches of the region which affect the well-being of the region must be *managed* by the regional enterprise ...". Article 7(2) states: "The capital of a regional enterprise may not consist of shares." The continuing overhang of the limitations imposed by Law No. 5 of 1962 (as well as the previously quoted Article 33 of the Basic Law) may be argued by some to make some or all such joint ventures illegal. These Articles require that control and/or management of essential services (including water supply) be the exclusive right of the State which is exercised for the benefit of the people. For foreign investors, the restrictions of Article 6 of Law No. 1 of 1967 would seemingly limit the participation of foreigners to a noncontrolling minority without management rights in any such joint venture and prevent the foreign investor from exercising control over the investment.

The clearest authorization for public/private sector joint ventures in the water supply area is found in Regulation of the Minister of Home Affairs No. 4 of 1990. It explicitly permits regional enterprises to participate with the private sector in joint ventures (as well as quasi-joint ventures, i.e. "profit-sharing cooperation," "financing cooperation," "production-sharing cooperation" and "facilities-sharing contracts." Regional enterprises may also purchase equity in existing private sector enterprises or sell stocks and bonds (seemingly contrary to the provisions of Law No. 5 of 1962) under this Regulation. The other provisions of the Regulation clearly have joint ventures as their principal focus and deal with a number of their aspects, e.g., the joint venture agreement under Article 6. Nonetheless, the provisions of the Regulation as it concerns joint ventures are neither clear nor detailed.

Under Regulation of the Minister of Home Affairs No. 4 of 1990, regional enterprises are permitted to cooperate, *inter alia*, with a foreign country government, a foreign private enterprise, a cooperative, a national private enterprise, and/or a national and/or foreign financial institution. "Cooperation" means any activities resulting from a formal binding contract between a regional enterprise and a third party to jointly execute any business activity to accomplish a specified objective. Cooperation is permitted to increase the

efficiency, productivity, and effectiveness of a regional enterprise, to make a regional enterprise more financially viable, and to "accelerate the mobilization of business." Those terms are undefined. This may be accomplished by (a) developing an existing business or (b) establishing new enterprises based on anticipated mutual benefits. The role and responsibility of each party is to be linked to their relative risks. The "cooperation" with a third party *may not*, under Article 6, *change the legal entity status of the regional enterprise*. Article 8 specifies the qualifications of an eligible third party. The level of final Government of Indonesia approval required for any "cooperation" is based on the size of the investment (which clearly contemplates only joint ventures) as prescribed in Article 9.

Regulation of the Minister of Home Affairs No. 3 of 1986 permits the purchase of shares in an existing corporation by a regional enterprise, the establishment of a new corporation by a regional enterprise, and the award of contracts by a regional enterprise for, *inter alia*, profit-sharing, production-sharing, and shared facility arrangements.

Under Law No. 5 of 1962 and Regulation of the Minister of Home Affairs No. 3 of 1986, DPRD TK. II approval is required for joint ventures between regional enterprises and third parties. This requirement does not exist under Regulation of the Minister of Home Affairs No. 4 of 1990.

Regulation of the Minister of Home Affairs No. 690-536 of 1988 states in Chapter II, Article 2, that revenue projections from water sales must be clearly calculated based on the establishment of tariffs for water which will recover personnel costs, electricity costs, costs for chemicals, operation and maintenance costs, general administration costs, depreciation of assets, and any interest payments. No provision is made for set-aside funds for planned new infrastructure developments. Infrastructure replacement funding is only provided to the extent that is covered by depreciation of assets. The tariff schedules must: permit any member of the community to afford to pay for water; provide for higher tariffs for wealthier consumers to subsidize below cost of water sales to poorer consumers; and encourage the efficient use of water. There are drafts of accountancy rules for PDAMs and a detailed methodology for the determination of tariffs which are only available in Indonesian-language versions. They were not examined in detail for the preparation of this Paper. Different tariff rates will be established for the following categories customers in accordance with Chapter III, Article 4: (a) nonprofit public institutions, e.g., hospitals and mosques, (b) noncommercial customers, e.g., residential customers, (c) industrial customers, and (d) special commercial customers, e.g., hotels and restaurants. There is no provision for regularly scheduled periodic or specially requested reviews or revisions of the tariff schedules. Proposed tariff schedules are prepared and submitted by the board of directors to the board of supervisors of a PDAM/PDAB. The board of supervisors may modify the proposed tariff schedule. It submits its proposed tariff schedule to the head of the level of government under which the PDAM/PDAB operates. The government executive may modify the proposed tariff schedule and will formally issue the tariff schedule through a *Surat Keputusan*. No provision is made

for public hearings on the tariff schedule or for legal challenge to any tariff schedule which is formally issued.

The principal relevant laws and regulations regarding joint ventures between private sector participants and public sector enterprises are:

- (a) Basic Law of 1945, particularly Article 33 which states "Production branches which are important to the State and provide for the needs of the people must be under the control of the State" and "Earth, water and other ground resources have to be managed/utilized by the government for the maximum benefit of the people.
- (b) Law No. 5 of 1962, particularly Article 5(4) which states, "The important main production branches of the region which affect the well-being of the region must be managed by the regional enterprise ..." and Article 7(2) which states, "The capital of a regional enterprise may not consist of shares."
- (c) Law No 1 of 1967 on foreign investment, particularly Article 6 which prohibits foreign investors from "exercising full control" over any activities regarding "drinking water."
- (d) Regulation of the Minister of Home Affairs No. 3 of 1986 concerning the cooperation of a regional enterprise with a third party.
- (e) Regulation of the Minister of Home Affairs No. 690-536 of 1988 dealing with guidelines for the pricing of water to consumers by a PDAM. This provides that water prices charged to consumers must be decided by the head of the local government and be subject to gubernatorial approval following a proposal from the management of the water company and the favorable considered judgement of its supervisory board. This eliminated the requirement for ratification by DPRD TK. II provided in Regulation of the Minister of Home Affairs No. 690-1572 of 1985.
- (f) Regulation of the Minister of Home Affairs No. 4 of 1990 concerning the guidelines for cooperation between a regional enterprise and a third party. This Regulation revoked Regulation of the Minister of Home Affairs No. 1 of 1983 concerning the same subject.
- (g) Joint Ministerial Decree of the Ministers of Home Affairs and Public Works Nos. 5 of 1984 and 28 of 1984 concerning guidance about the calculation of drinking water tariffs and regarding the

organization, accounting systems, structure, and cost calculations of water utilities.

- (h) Instruction letter of the Minister of Home Affairs No. 5 dated March 19, 1990, regarding the anticipated change of the form of regional government enterprise into one or the other of two types of legal entity, i.e., PERUMDA (Regional Public Company) and PERSERODA (Regional Limited Liability Company), upon enactment of a law to replace Law No. 5 of 1962.
- (i) Guidelines on the Accounting System of PDAMs of August 1990 issued by the Minister of Home Affairs.
- (j) Implementing Guidelines for Regulation No. 690-536 of 1988 (Interim Report) (undated) regarding the calculation of drinking water tariffs by PDAMs.

## 10. **INDONESIAN LAW REGARDING BUILD, OPERATE AND TRANSFER INVESTMENTS**

Build, Operate and Transfer (BOT) private sector investments have been made in Indonesia in hotels, commercial buildings, toll roads, petroleum-related supporting institutions and elsewhere.

In a BOT, the private sector investor first plans and constructs ("BUILD") the investment capital project using its own capital and resources. It then operates the project on a commercial basis ("OPERATE") for a fixed term or until it has recovered its investment costs and a reasonable rate of return. At the end of the period of operation by the private investor, the assets of the investment capital project will be transferred ("TRANSFER") to the government or one of its entities.

It is the preference of the private sector, and occasionally it has been proposed, that private investors *not* ultimately transfer the assets but retain them indefinitely as their own private property. This has been characterized as a Build, Operate, and Own/Operate ("BOO") investment.

Of critical importance from the standpoint of the Government of Indonesia in evaluating the beneficial nature of BOTs is a determination of: (a) whether a BOT constitutes a cheaper form of financing for projects which serve public policy goals; (b) whether a shortage of available funds to the Government of Indonesia would prevent construction of the project without the participation of private BOT capital; (c) whether a BOT would provide urgently needed water supply services more expeditiously or more thoroughly or reliably than would or could the public sector; (d) whether the operation of the BOT would be contrary to essential Government of Indonesia public policies or whether the BOT could be so regulated as to operate in accordance with those essential public policies; and/or (e) whether the BOT capital investment project infrastructure will be so maintained during the period of private sector operation that the infrastructure will have some intrinsic value to the Government of Indonesia upon its transfer.

No examined BOTs in Indonesia seem to fit the classical BOT format. Under some BOT investments, the transfer of the assets may not take place completely on some fixed date but the title to the assets may be transferred to the government incrementally and over time. In some cases the project assets are transferred immediately upon completion of the infrastructure construction and the operations themselves are handled by the public sector with the investor retaining nothing but a right to a portion of the revenue stream from the investment. In the petroleum sector in Indonesia, such immediate transfers of investor assets are the norm. It is noted that in case of the proposed Umbulan Spring project in East Java, the drafted legal agreement characterized the cooperation as a "production sharing cooperation"—a term derived exclusively from Government of Indonesia-private sector dealings in petroleum-related activities.

There are no laws in Indonesia which are specifically applicable to BOTs in the area of water supply. Regulation of the Minister of Home Affairs No. 4 of 1990 makes no reference to BOTs among those enumerated acceptable means by which the private sector may cooperate with regional enterprises in the public sector in water supply activities. The law of Indonesia regarding BOTs in the water supply area must therefore be determined by an extrapolation from current practice. The only laws or regulations of Indonesia dealing with BOTs which were discovered are Presidential Decree No. 42 of 1989 and Regulation of the Ministry of Mining and Energy No. 03P/39/M.PE of 1989 which deal with BOTs in the supporting sector, e.g., refineries, of the petroleum industry. On the basis of current practice, nonetheless, it is clear that BOTs have an accepted and legitimate legal basis under Indonesian law for private sector investments because so many of them are in operation and because BOTs in Indonesia have been built and operated for so long. What is less clear is on what basis and through what administrative procedures the Government of Indonesia will receive, approve and deny applications for BOTs and how such applications will be evaluated by the Indonesian Government. Because all examined Indonesian BOTs differ from the standard definition and perception of what constitutes a BOT, it is uncertain whether classic BOTs as such are permitted by Indonesian law generally or in the water supply sector.

The only relevant Indonesian laws and regulations discovered regarding BOTs are the following.

- (a) Presidential Decree No. 42 of 1989 regarding BOTs in the petroleum-related support sector.
- (b) Regulation of the Minister of Mining and Energy No. 03/39/M.PE of 1989 regarding BOTs in the petroleum-related support sector.

## 11. ANALYSIS OF THE ADEQUACY OF EXISTING INDONESIAN LAWS AND REGULATIONS

Some laws and regulations of Indonesia regarding private sector participation in water supply activities are clear in their statement of policy that such participation is encouraged, but these may conflict with Article 33 of the Basic Law, Law No. 5 of 1962 may restrict PDAMS'/PDABS' cooperation with the private sector, and Law No. 1 of 1967 would seem to prohibit at least a controlling interest or management by foreign participants in Indonesian water supply activities. They are far less clear in stating on what basis the private sector may so participate, what standards the Government of Indonesia will apply in evaluating any application by the private sector to participate, and how the Government of Indonesia will assure that its public policy aims in the water supply area will not be unacceptably frustrated as a result of any private sector participation.

Current Indonesian law regarding private sector participation in water supply activities creates perceived risks in the minds of private sector participants because of its lack of clarity and uncertain application. Where financing or capital costs are incurred in currencies other than rupiah, the lack of guaranteed currency conversion from rupiah to other currencies at assured rates adds to this perceived risk.

From the standpoint of the Indonesian Government, private sector participation in a natural or *de facto* monopoly—such as water supply—poses great risks unless that participation is clearly defined and limited by law and unless provision is made for continuous oversight of such private sector participation under clear and consistently applied standards by Indonesian regulatory bodies. Where there are few competing investors or enterprises which wish to participate in water utility activities; where those investors have a limited competence to undertake roles in the water supply area; or where some investors or enterprises are inappropriately supervised and obtain an unevaluated role in water supply activities, private sector participation provides uncertain benefits. Effective and beneficial private sector participation demands competent and competing private sector parties and prudent government regulation.

Figure 3 lists the respective needs of the private and public sectors if private sector participation in Indonesian water supply activities is to prove mutually beneficial to both parties. Applicable laws and regulations must be formulated to meet the needs of both parties and to provide assurances that fulfillment of those needs is based on enforceable rights at law. If the private sector's needs are not satisfied, it will not participate. If the public sector's needs are not satisfied, it may be displeased with the participation of the private sector. If standards and procedures are not clearly articulated under laws and regulations, both the private and public sectors may lose time and money and incur lost opportunity costs by pursuing possible projects under terms that one or the other party will ultimately find unacceptable. Current Indonesian laws and regulations regarding private sector participation

**Figure 3**

**Private and Public Sector Needs**

**PRIVATE SECTOR NEEDS**

**A. PREDICTABILITY**

- (1) CLARITY
- (2) CONSISTENCY
- (3) ENFORCEABILITY

**B. PROFITABILITY**

- (1) CALCULABLE RISKS
- (2) CALCULABLE COSTS
- (3) A REASONABLE EXPECTATION OF A COMMERCIAL RATE OF RETURN ON THE INVESTMENT

**PUBLIC SECTOR NEEDS**

**A. BENEFITS**

- (1) EFFICIENCIES
- (2) FINANCIAL ASSISTANCE
- (3) A DESIRED SHIFT IN PRIVATE / PUBLIC SECTOR BALANCE

**B. PUBLIC POLICY IMPLEMENTATION**

- (1) INCREASED SERVICES/CHEAPER SERVICES
- (2) ASSURED / SUBSIDIZED SERVICES TO MORE REMOTE OR TO POORER CONSUMERS
- (3) RESPONSIVENESS TO NEW OR CHANGED PUBLIC POLICIES



in water supply activities do not provide clear and detailed standards and procedures nor do they satisfy the real needs of either the private or the public sector.

Generally, relevant Indonesian laws and regulations are unclear and are not detailed. Terms used in them are undefined and are not self-defining. No procedures are clearly provided through which private parties may enforce their legal rights through courts or independent bodies. Standards for decision-making are expressed only in vague terms. Administrative procedures are not stated in sufficient detail to serve as guidance for implementing agencies of the Government of Indonesia or to advise the private sector of exactly what opportunities are offered to it and how it should proceed to explore those opportunities. The laws and regulations should do all these things. To the degree that this lack of clarity and precision reflects the fact that the Government of Indonesia has not yet thoroughly determined its public policies in this area, implementation should not be attempted until such public policy decisions are made and are reflected in Indonesian laws and regulations.

Current Indonesian laws and regulations establish no clear standards for evaluating the desirability of specific private sector participation proposals in the water supply area or for evaluating their compatibility with essential public policy aims. There are also no legal standards for evaluating the awards of water supply service contracts, the competence of bidders to adequately perform those contracts, the assurance that contracts are awarded on a competitive basis to the bidder who best meets the articulated standards of the Government of Indonesia for a particular contract, or for the form of contract to be used in making such awards. No legal authority for, or laws and regulations concerning, BOTs in Indonesia's water supply sector exist. In particular, there is uncertainty about the time at which a transfer of BOT assets will be made. Although PDAMs and other agencies of the Government of Indonesia will *implement* the laws and regulations of Indonesia concerning private sector participation in water supply activities by proposing, evaluating, and authorizing such participation in *specific projects*, the laws and regulations themselves must give detailed guidance in terms of general policy, standards, and procedures to those implementing agencies if they are to be able to implement them in specific cases. Those laws and regulations must also be sufficiently explicit, detailed, and clear to reassure and give guidance to prospective private sector participants. The current laws and regulations do not satisfy these requirements.

There is not any independent regulatory body now established by the Indonesian Government or its subordinate levels of government which operates under clear and consistently applied rules and whose function is to provide a mechanism for permitting private sector investors in monopoly public utilities the opportunity to obtain a reasonable return on their investments while assuring that essential public policy goals of Indonesia are pursued and attained. Members of such independent rate-making bodies should be impartially selected and should sit for limited terms of office. The procedural methodologies of such bodies should operate through explicit and detailed rules which are transparent to the public. The procedures should permit private parties to submit information and arguments and might

allow private parties to personally appear before the regulatory body. The standards they apply in setting rates should also be clear and expressed with sufficient precision to assure the public, the private investors, and the Government of Indonesia of a predictable outcome. The decisions of the regulatory body must be subject to the review of the courts upon the request of private parties.

In summary—

- Indonesian laws and regulations authorizing private sector participation in water supply activities are in apparent conflict.
- Current laws and regulations satisfy neither private sector nor public sector needs although they must satisfy both if they are to be at all effective.
- Applicable Indonesian laws and regulations are not clear and are undetailed and may reflect the fact that the Government of Indonesia has not yet formulated specific relevant public policies.
- In some cases, particularly with regards to BOTs, there is a complete absence of applicable laws and regulations.

## **12. RECOMMENDED CHANGES TO, AND ADDITIONAL, INDONESIAN LAWS AND REGULATIONS**

The private sector requires clarity in any legal description of its legal rights and the standards under which its activities will be regulated by the Indonesian Government. It also requires the consistent and predictable administration by the Government of Indonesia of the existing laws and regulations applicable to its investments. Finally, the private sector must feel assured that its rights are legally recognized and enforceable at law through the courts against the Indonesian Government and its agencies. There are some historical reasons why the private sector may have legitimate concerns that those requirements are not now met regarding its present and prospective investments in Indonesia. It is recommended that the Government of Indonesia continue its current program of providing greater assurances to the private sector that these requirements are, and will continue to be, met. Specifically, applicable laws and regulations should be made clearer and more detailed, with essential terms used in them defined to a thorough and practical degree.

Specifically, Law No. 5 of 1962 should be replaced as proposed by Law No. 6 of 1969 by a new law that will clarify the legal ability of PDAMs and PDABs to contract with private parties or to enter into joint ventures, BOTs, and service contracts with private parties for water supply activities. If such a replacing law cannot be issued, a new law clarifying private sector participation authorization in water supply activities and eliminating the requirement for DPRD approval of each such private sector participation should be promulgated.

The restrictions imposed on foreign investments in the water supply sector by Article 6 of Law No. 1 of 1967 should be clarified. If they are significant, they should be eliminated through new legislation.

A new law should be promulgated or the legal opinion of the Minister of Justice should be sought regarding the significance of Article 33 of the Basic Law on private sector activities in the water supply field.

Ministry of Home Affairs Regulation Nos. 3 of 1986 and 4 of 1990 should be amended to specifically provide legal authorization for BOTs, to clarify the nature of production and profit sharing contracts in the water supply sector and to distinguish the nature of such contracts from those which are used in the petroleum sector to eliminate the requirement for DPRD approval of each private sector participation, and to clarify and provide details of the nature of other permitted forms of private sector participation in the water supply area.

The possible conflicts of law regarding the legal authority of, and restrictions on, private sector participants to engage in water supply activities in Indonesia are listed and juxtaposed in Figure 4.

Figure 4

Possibly Conflicting Authorities—  
Private Sector Participation in Indonesian Water Supply Activities

**PROHIBITED OR RESTRICTED**

**Basic Law of 1945, Article 33**

Production branches which are important to the State and provide for the needs of the people must be under the control of the State and water is to be managed and utilized by the government for the maximum benefit of the people.

**Law No. 5 of 1962**

PDAMs (see Article 5) have no authority to cooperate with the private sector if this would relinquish "management" by the PDAM.

**Law No. 1 of 1967**

Foreign investment may not (see Article 6) "exercise full control" in activities in the drinking water sector, although [see para. (2)] foreign investment in this sector is not absolutely prohibited.

**PERMITTED**

**Presidential Decree No. 21 of 1989**

The private sector is permitted to participate in the water supply sector because "water supply" or "drinking water" is not listed as an area from which any form of new private sector investment is excluded.

**Regulation of Minister of Home Affairs  
Nos. 4 of 1990 and 3 of 1986**

Permits, inter alia, cooperation of prescribed types between regional enterprises and the private sector.

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The legally mandated methodology for rate-making and the setting of tariffs for the sale of water should be based on clear and readily calculable determinations of the cost of delivered water. Such tariff schedules should be legally defined. Tariffs should preferably be established by independent bodies which are free from political influences which must act in accordance with precise and clearly articulated standards. Tariff rate schedules must be reviewed and adjusted on a regularly scheduled and/or specially requested basis in order for the tariffs to reflect changed circumstances. The tariff rate determinations of those independent bodies must be subject to judicial scrutiny and judicial modification based on their inconsistency with the legally established standards by which those independent bodies are required to conduct their proceedings.

Laws, policies, and guidelines should clearly state where and how private sector participation in the water supply sector will be welcome, where it will be unwelcome, and on what terms it will be judged. This will permit private sector investors/contractors to realistically evaluate investment opportunities and only pursue those where they and the Government of Indonesia are likely to find mutually acceptable accommodation.

For any government, the participation by the private sector in economic activities where the private sector will attain complete or localized officially-recognized or *de facto* monopoly powers poses a serious threat to its ability to effectively pursue its public policy objectives. Further, such monopolies in private sector hands also pose a potential threat of exploitation by the private sector of consumers through the private sector's monopolistic control of the provision of services and goods. Water utilities are classic cases of such monopolies. Any possible adverse effects of private sector participation in monopolies may generally be avoided through carefully administered government regulation.

The Government of Indonesia has an essential interest, which must be protected by law and through established administrative procedures, to assure that its fundamental public policy goals are not frustrated by the participation of private sector parties in the water supply sector. This must be accomplished by the clear articulation of the administrative methods—including which ministries and agencies of the Indonesian Government have review and approval authority—through which applications by the private sector to participate in water supply activities will be considered and the standards under which any such applications will be evaluated. It must include continuing oversight of the activities of private sector investors/contractors to assure that they do not improperly exploit their monopoly economic position.

Evaluation of private sector activities in the water supply area must also be the subject of continuous monitoring to assure that private sector participation generates those benefits which originally justified the authorization for its participation and to assure that competing private sector participants are provided regular and fair competitive opportunities to participate in permitted water supply activities. This may only be accomplished through the

creation of a new agency or the delegation of power to an existing governmental body to perform such a role in accordance with clearly established administrative procedures and the consistent application of explicit standards.

Standard contractual forms should be created to be used for the award of service contracts by public water utilities. Standards should be established to evaluate the competence of prospective bidders on such contracts and to assure that the bidder which most completely satisfies those standards is ultimately awarded the contract. Bidders who have not been awarded a contract but who think they should have been awarded the contract under the applicable standards should have the right of recourse to the courts for a reevaluation of the contract award process. The courts should have the power to overturn the award where it has been improperly made.

In summary, it is recommended that—

- Applicable Indonesian laws should be written clearly and in a detailed fashion and that they should be implemented and enforced consistently and rigorously.
- A new law or laws should be promulgated to replace Law No. 5 of 1962 and/or to clearly authorize private sector participation in Indonesian water supply activities; to clarify/eliminate conflicts of law regarding that participation and Article 33 of the Basic Law, Law No. 5 of 1962, and Law No. 1 of 1967; and to eliminate any requirement for DPRD TK. I approval of each such participation.
- Regulation of the Minister of Home Affairs Nos. 3 of 1986 and 4 of 1990 should be amended or a new regulation issued to authorize BOTs and to provide needed details, definitions, and clarifications regarding other permitted forms of, and procedures for, private sector participation in Indonesia's water supply activities.
- Where a private sector investor is dependent on revenues based on a tariff schedule for water to cover its costs and realize a reasonable rate of return on its investment, tariff rate-making methods must be clearer, more detailed, reflective of the needs of the private sector investor, frequently subject to review and revision, and subject to enforcement by the private sector investor through the courts.
- In general, Indonesia must establish a regulatory system for its water utilities which satisfies the needs of both the private and public

sectors; provides for continuous monitoring and evaluation of private sector performance; and the continuous reformulation of government objectives and public policies based on recent and continuing empirical experience.

### **13. DRAFT LAW**

Regarding: A law to clarify the permitted activities of the private sector in Indonesian water supply activities.

In Consideration of: A. basic law of 1945, particularly Article 33; B. Law No. 5 of 1962, particularly Article 5; and C. Law No. 1 of 1967, particularly Article 6.

Chapter I—Article 1—The provisions of the basic law of 1945, Article 33, state that "Production branches which are important to the state and provide for the needs of the people must be under the control of the State" and "Water is to be managed and utilized for the needs of the people by the government."

Article 2—These restrictions are unchanged by this law, but—in clarification—it is sufficient to satisfy the above requirements if the private sector engages in activities in Indonesia's water supply functions which are explicitly authorized by the State and remain under the control of the State.

Chapter II—Article 1—Law No. 5 of 1962, Article 5, prohibits regional enterprises from cooperating with third parties in any way which would relinquish "management" over those activities for which it is responsible.

Article 2—This prohibition is unchanged by this law, but—in clarification—it is sufficient to satisfy the above requirement if any transfer of a PDAM's/PDAB's assets to third parties is made with the explicit authorization of the Ministry of Home Affairs or a person to whom he has delegated this function and if any cooperation with a third party by a PDAB/PDAB is made under a written contract entered into in accordance with the relevant rule and regulations of the Minister of Home Affairs.

Chapter III—Article 1—Law No. 1 of 1967, Article 6, prevents foreign investment in the drinking water sector where the foreign investor would "exercise full control."

Article 2—This prohibition is unchanged by this law, but—in clarification—it is sufficient to satisfy the above requirement if any foreign investment in the drinking water sector is authorized by BKPM and if it remains under the continuing regulation of the Minister of Home Affairs.

Chapter IV—Article 1—Domestic and foreign private sector investments in build, operate and transfer ("BOT") infrastructure in the drinking water sector are hereby authorized when such investments are made in compliance with the rules and regulations and under the continuing regulation of the Minister of Home Affairs and/or if each such investment is explicitly authorized by the \_\_\_\_\_.



Article 2—No formal approval or ratification shall be required of any private sector participation in drinking water activities, to include cooperation with PDAMs/PDABs or related tariff rate-making, by any DPRD TK. I or II.

*Minister of Home Affairs Regulation No. \_\_\_\_ of 199\_\_.*

Regarding: The award of service/management contracts by PDAMs/PDABs to third parties.

Chapter I—PDAMs/PDABs are hereby authorized to make awards of service/management contracts to third parties where to do so would result in cost savings, greater efficiency, improved service to customers, or similar benefits.

Chapter II—No such contracts will be awarded unless they are: (a) awarded competitively as provided below; (b) concluded through a written contract which is approved by the \_\_\_\_\_ or some delegated authority; (c) for a limited term; and provide compensation to the third party commensurate with the benefits to be realized; and (d) subject to continuing monitoring and control by the PDAM/PDAB to assure compliance by the third party with any contractual terms and conditions.

Chapter III—Article 1—Any service/management contract which is proposed to be awarded by a PDAM/PDAB must be drafted by the PDAM/PDAB regarding its specific terms and conditions before it is announced for bids.

Article 2—The proposed award of such contract and requests for tender bids by third parties for the contract must be advertised conspicuously in at least two regularly published general circulation newspapers and provided to commercial attaches or all major foreign embassies at least \_\_\_\_ days prior to any award.

Article 3—A copy of the proposed contract draft must be provided by any party which requests it.

Article 4—Third parties wishing to compete for the contract must submit sealed bids for the contract on or before a date specified by the above advertisements and no bids may be accepted after that date. Sealed bids must be accompanied by sufficient information to demonstrate that the third party has the competence and the resources to perform under the contract. All sealed bids must remain sealed and in a secure place under the constant control of the PDAM's/PDAB's officer responsible for the contract.

Article 5—The qualifications of bidders will be reviewed by the PDAM/PDAB and those bidders found to be unqualified will be so notified promptly and in writing, to include the reasons for disqualification, by the PDAM/PDAB officer responsible for the contract.

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Article 6—In a public place with third parties permitted to be present and at an announced place and time, the PDAM's/PDAB's officer responsible for the contract will open all the sealed bids of qualified bidders in the sequence in which they were received, and shall read each of them aloud. At that time, the contract will be provisionally awarded to the maker of the lowest qualified bid, contingent upon finalization of a formal written contract.

Article 7—Where there is only one qualified bidder, no award of a contract will be made until the bidder's tender has been specially reviewed and approved by the \_\_\_\_\_ or his delegated official.

Article 8—Any bidder which has been disqualified or which was not awarded the contract may have recourse to an appropriate court of law for judicial review of the contract award with these and other relevant regulations, rules and procedures.

*Minister of Home Affairs Regulation No. \_\_\_\_ of 199\_\_.*

Regarding: The water tariff rate-making where a private sector party is dependent on such tariffs for its revenues from its legally authorized activities.

Chapter I—All water tariff rate-makings where a private sector party is dependent on such tariffs for its revenues from its legally authorized activities shall be conducted in accordance with these regulations and with other rules formally promulgated for such rate-makings where not inconsistent with this regulation.

Chapter II—All such rate-makings shall be based on calculations and revenue projections derived from full, sufficient and reliable information and using the formal accounting rules specially promulgated for PDAMs/PDABs or generally accepted accounting rules where other rules are unclear, imprecise, or silent on a point or do not exist.

Chapter III—Revenue projections and tariff rate-making shall result in the full recovery by the private party of all its legitimate costs plus a reasonable rate of return on its investments. A reasonable rate of return will be commensurate with prevailing commercial rates of return on investments of similar risk and will exceed current rates on commercial depository instruments.

Chapter IV—The private party may attend and participate in any rate-making bodies' proceedings.

Chapter V—Tariff rates shall be reviewed and revised annually and will be reviewed and revised specially upon the private party's request where justified by significant and unanticipated changes in circumstances.

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Chapter VI—All decisions of water tariff rate-making bodies shall be subject to challenge by the private party in a court of law and will be subject to judicial review for compliance with applicable rules and regulations.

**14. LISTING WITH BRIEF DESCRIPTIONS AND SELECTED TRANSLATIONS INTO ENGLISH OF PRINCIPAL RELEVANT INDONESIAN LAWS, REGULATIONS, AND OTHER OFFICIAL DOCUMENTS**

- (a) Basic Law of 1945, particularly Article 33 which states "Production branches which are important to the country and which provide for the needs of the people must be under the control of the State" and "Earth, water and other ground resources have to be managed/utilized by the government for the maximum benefit of the people." The Basic Law is the Indonesian constitution. It is superior to all other Indonesian laws and legal authorities.
- (b) Dutch East Indies Commercial Code of 1847. This is the essential law regulating commercial and corporate legal activities and transactions. It is now being revised. It is invalid to the extent it is incompatible with Indonesian independence or conditions or is revoked by subsequent Indonesian law. It is based on the Roman Code of Justinian and is similar to continental European civil codes.
- (c) The Indies Tariff Law (*Indische Tariefwet*) (Staatsblad 1873 Number 35), as amended and supplemented most recently by Government Regulation No. 6 of 1969. It is the basic law regulating customs tariffs and administration.
- (d) Law No. 5 of 1962 which is concerned with the establishment of regional government enterprises at provincial/local levels of government. It serves as the fundamental legal basis for the establishment of PDAMs and PDABs. The current status of this Law is ambiguous. It was revoked by Law No. 6 of 1969, but revocation was made contingent upon the enactment of a new law to replace Law No. 5 of 1962. No such superseding law was ever enacted.

**CHAPTER II: CHARACTERISTIC, OBJECTIVE AND FIELD OF ACTIVITY**

**Article 4:**

- (1) A Regional Government Enterprise (of Level I or II Governments) is established under a Regional Government Regulation (*Peraturan Daerah = PERDA*), based on this Law.
- (2) The Regional Government Enterprise as meant in paragraph (1) is a Legal Entity, the status of which is obtained with the existence of this Law.

- (3) The Regional Government Regulation as meant in paragraph (1) will come into force upon legalization by the appropriate government executive (For Special Regions of Level I Government, the President; For Provincial Level I Government, the Minister of Home Affairs; For Local Level II Government, a governor of Level I).

**Article 5:**

- (1) The Regional Government Enterprise is a production unit with the characteristic of:
  - a. providing service
  - b. serving public needs
  - c. gaining revenue
- (2) —
- (3) —
- (4) The important/main production branches for the Region which effect the well-being of the community of the Region concerned are to be managed by Regional Government Enterprises whose capital wholly or partly must be part of the separated assets of the Regional Government.

**CHAPTER III: CAPITAL**

**Article 7:**

- (1) The capital of a Regional Government Enterprise consists of assets wholly or partly belonging to a Regional Government, which forms a separated asset.
- (2) The capital of a Regional Government Enterprise may not consist of shares.
- (3) —
- (4) —

## **CHAPTER V: THE MANAGEMENT**

### **Article 11:**

- (1) A Regional Government Enterprise will be managed by a Board of Directors, whose number and composition is stipulated in its Establishment Deed (Articles of Association).
- (2) Members of a Board of Directors must be Indonesian nationals appointed and dismissed by the appropriate government executive.
- (3) Appointment as meant in paragraph (2) is for a period of 4 (four) years at the most. After the said period ends, a member may be reappointed.

### **Article 15:**

- (1) The Board of Directors shall make decisions on the management policy of the Regional Government Enterprise.
- (2) The Board acts as the executive and manages the assets of the Regional Enterprise.

### **Article 16:**

limited power (authority) of the Board are prescribed in the Regional Enterprise's Articles of Association.

### **Article 17:**

Each Regional Enterprise will have a Supervisory Board which is further subject to regulation by the PERDA (the Regional Government Regulation on the establishment of the Regional Enterprise).

## **CHAPTER VII: CONTROL**

### **Article 19:**

The Board is under the control of the appropriate government executive or the head of an agency appointed by him.

**CHAPTER VIII: STIPULATION ON THE USE OF PROFIT AND THE CONTRIBUTION OF PRODUCTION SERVICE**

**Article 25:**

- (1) —
- (2) The use of the net profit after deduction of depreciation, reserve and other real deductions within the Enterprise, is determined as follows:
  - a. for the Regional Development Fund—30%
  - b. for the Regional Expenditure Budget—25%
  - c. for General Reserve Fund, social and education fund, production service, and Retirement Fund and Donation, the amount of each is stipulated in the Articles of Association of the Enterprise totalling 45%.

**CHAPTER XIV: PERSONNEL**

**Article 26:**

- (1) The status, salary, retirement fund and donation and other income of the Board members and personnel/employees of a Regional Government Enterprise is regulated in the PERDA (Regional Government Regulation) and is effective after getting legalization from the Governor for a Level II Government Enterprise and the Minister of Home Affairs for a Level I Government Enterprise, taking into account the stipulations of the prevailing Regional Government Salary Regulation.
- (e) Law No. 1 of 1967 regarding foreign investments. It is the basic laws under which all foreign investments in Indonesia are regulated and authorized by BKPM. In Article 6, it list nine economic sectors closed to foreign investors "exercising full control," a term which is not defined. "Drinking water" is one of those listed economic sectors.

**Article 2:**

Foreign Investment in this Law means:

- a. foreign exchange which does not form a part of the foreign exchange resources of Indonesia, and which

with the approval of the Government is utilized for financing an enterprise in Indonesia.

- b. equipment for an enterprise, including rights to technological developments and materials imported into Indonesia, provided the said equipment is not financed from Indonesian foreign exchange resources.
- c. that part of the profits which in accordance with this Law is permitted to be transferred, but instead is utilized to finance an enterprise in Indonesia.

**Article 3:**

- (1) An enterprise as intended by Article 2, which is operated wholly or for the greater part in Indonesia as a separate business unit, must be a legal entity organized under Indonesian Law and have its domicile in Indonesia.
- (2) The Government shall determine whether an enterprise is operated entirely or for the greater part in Indonesia as a separate business unit.

**Article 5:**

- (1) The Government shall determine the fields of activity open to foreign investment, according to an order of priority, and shall decide upon the conditions to be met by the investor of foreign capital in each such field.
- (2) The order of priority shall be determined whenever the Government prepares medium and long-term development plans, taking into consideration developments in the economy and technology.

**Article 6:**

- (1) Fields of activity which are closed to foreign investment exercising full control are those of importance to the country and in which the lives of a great deal of people are involved, such as the following:
  - a. harbors;
  - b. production, transmission and distribution of electric power for the public;



- c. shipping;
- d. telecommunications;
- e. aviation;
- f. drinking water;
- g. public railways;
- h. development of atomic energy;
- i. mass media.

- (2) Industries performing a vital function in national defence, among others, the production of arms, ammunition, explosives, and war equipment, are absolutely prohibited to foreign investment.

**Article 18:**

Every permit for investment of foreign capital shall specify the duration of its validity, which shall not exceed 30 (thirty) years.

**Article 23:**

- (1) In the fields of activity open to foreign capital, cooperation may be effected between foreign and national capital, with due consideration given to the provisions of Article 3.
- (2) The government shall further determine the fields of activity and the forms and methods of cooperation between foreign and national capital utilizing foreign capital and expertise in the fields of export and the production of goods and services.

**Article 27:**

- (1) Enterprises mentioned in Article 3 of which the capital is entirely foreign, are obligated to provide opportunities for participation by national capital, following a specified period and in a proportion to be determined by the Government.
- (2) When participation as intended by Section (1) of this Article is effected by selling existing shares, the proceeds of such sales can be transferred in the original currency of the foreign capital concerned.

Article 28:

- (1) Provisions of this Law shall be implemented by coordination among the Government agencies concerned in order to ensure harmonization of Government policies regarding foreign capital.
  - (2) Procedures for such coordination shall be subsequently determined by the Government.
- (f) Law No. 6 of 1968 concerning domestic investments. This law was originally designed to attract back to Indonesia flight capital and is the authority under which BKPM now licenses "facilitated" domestic investments.

Article 1:

- (1) That which is intended by "Domestic Investment" in this Law is a portion of the property of Indonesian society, including rights and goods, owned either by the State or by National Private or Foreign Private Entities domiciled in Indonesia which has been reserved/made available for the operation of an enterprise insofar as such capital is not governed by the provisions of Article 2 of Law No. 1 of 1967 concerning Foreign Capital Investment.

Article 2:

That which is intended by "Domestic Investment" in this Law is the use of property as referred to in Article 1, either directly or indirectly for the operation of a business in accordance with or based upon the provisions of this Law.

Article 3:

- (1) A national enterprise is an enterprise of which at least 51% of the domestic investment therein is owned by the State and/or a National Private Enterprise. This percentage shall be increased so that on January 1, 1974, it will amount to not less than 75%.
- (2) A foreign enterprise is an enterprise which does not satisfy the conditions of Section (1) of this Article.

- (3) Should an enterprise intended by Section (1) of this Article be a limited liability company, then at least the percentage of the total shares as referred to in Section (1) of this Article must be identified by a holder.

**Article 4:**

- (1) All fields of activity are in principle open to private enterprise. State activities in connection with the development of fields of private activity include fields to be initiated or pioneered by the Government.
  - (2) Fields of State activity include especially those fields of undertaking which the government is obligated to conduct.
- (g) Law No. 11 of 1970 which amended and supplemented Law No. 1 of 1967.
  - (h) Law No. 12 of 1970 which amended and supplemented Law No. 6 of 1968.
  - (i) Law No. 8 of 1971 regarding Pertamina's right to exclusively license private sector participants in the Indonesian petroleum-related economic sector.
  - (j) Law No. 5 of 1974 which is concerned with decentralization and the establishment of autonomous authority in the provincial and local governments regarding administrative matters.

**Article 2**

To organize and establish an Administration, the territory of the Republic of Indonesia shall be divided into Autonomous Regions and Administrative territories.

**Article 3:**

- (1) In the framework of the implementation of the decentralization principle, there shall be organized and established Regions of the First Level and Regions of the Second Level.

**Article 7:**

A Region has the right, is authorized and is obliged to organize and manage its own services in accordance with the prevailing laws and regulations

**Article 8:**

The additional transfer of governmental affairs to the Region will be stipulated by Government Regulation.

**Article 13:**

- (1) The Regional Government will consist of the Head of the Region and the Regional Legislature.

**Article 38:**

The Head of Region with the approval of the Regional Legislature shall have the authority to issue Regional Regulations (Perda).

**Article 39:**

- (1) Regional Regulations (Perda) and/or Decisions of the Head of Region may not be in contravention of the general interests and statutes of Regional Regulations of the higher level.
- (2) A Regional Regulation shall be signed by the Head of Region and be countersigned by the Chairman of the Regional Legislature.

**Article 55:**

Sources of Regional Revenue are:

- (1) Original revenue of the Regional Government consisting of:
  - a. revenue from regional taxes
  - b. revenue from regional fees
  - c. revenue from Regional Enterprises
  - d. other legal regional revenues
- (2) Revenue originating as subsidies from the (central) Government consist of:
  - a. subsidy from the (central) Government
  - b. other contributions regulated by statutes
- (3) other legal revenue.

**Article 59:**

- (1) The Regional Government may set up a Regional Enterprise of which the execution and maintenance shall be carried out based upon the principle of cost accounting.
  - (2) Basic stipulations on Regional Enterprises shall be determined by Law (Statute). (Note: See Law No. 5/1962)
- (k) Law No. 11 of 1974 regarding water resources and which has a wide applicabil to other public water utility issues.

**Article 2:**

Water and its resources, including the natural wealth contained therein, has a social function and must be used for the maximum welfare of the people.

**Article 3:**

- (1) Water and its resources must be managed/controlled by the State.
- (2) The State therefor gives the authority to the Government:
  - a. to manage and develop the use of water and/or water resources.
  - b. to formulate, legalize and/or issue licenses according to planning and technical planning of water/water resource management.
  - c. to organize, legalize and/or issue licenses for the purpose, the use and the supply of water and/or water resources.
  - d. to organize, legalize and/or issue licenses for the exploitation of water and/or water resources.
  - e. to determine and arrange legal deeds and legal relations between persons and/or corporate bodies in water and/or water resources matters.

**Article 4:**

The authority of the Government as meant in Article 3 can be delegated to Government agencies/units, at Central as well as at Provincial and Regional

Level and/or to certain legal entities based upon the requirements and procedures to be determined by Government Regulation.

Article 5:

- (1) The Minister, who is given the task of water resources affairs (Ministry of Public Works, Directorate General of Water Resources), is authorized and responsible to coordinate all regulations concerning planning, technical planning, control, exploitation, maintenance, protection and the use of water and/or water resources; with due consideration of the interests of other related Ministries and/or Institutions.

Article 11:

- (1) The exploitation of water and/or water resources, aimed to enhance its benefit for the welfare of the people, is basically carried out by central as well as Regional Government.
  - (2) A corporation, social organization, or person exploiting water and or water resources must obtain a license from the Government.
- 
- (l) Law No. 4 of 1982 regarding environmental protection.
  - (m) Law No. 6 of 1983 concerning general tax matters.
  - (n) Law No. 7 of 1983 concerning income taxation.
  - (o) Law No. 8 of 1983 concerning value added taxation on goods and services and a sales tax on luxury goods.
  - (p) Law No. 12 of 1983 regarding customs.
  - (q) Law No. 13 of 1983 regarding taxation of real property
  - (r) Law No. 15 of 1985 regarding private sector participation in electricity.
  - (s) Law No. 3 of 1989 regarding private sector participation in telecommunications.
  - (t) Government Regulation No. 22 of 1982 regarding water management as it concerns sourcing of water supplies from streams and groundwater.

**Article 2:**

- (1) The system of water management should be based on the principles of public benefits, balancing of competing interests, and preservation of a natural resource.
- (2) A water right is the right of water-use only.

**Article 5:**

- (2) The Regional Government is responsible for the implementation of authority within the framework of its duty to assist the Central Government with regards to water and/or water resources within its regional boundary.
- (3) The authority regarding water and/or water resources crossing more than one regional boundary is still in the hands of the Minister of Public Works.

**Article 11:**

- (1) The exploitation of water and/or water resources with the purpose of improving its benefit for the people's welfare is basically carried out by the Central as well as Provincial/Local Governments.
- (2) Legal entities, social organizations, and/or persons exploiting water and/or water resources should obtain licenses from the Government based on the principle of joint and mutual cooperation.
- (3) The implementation of this Article will be further stipulated by Government Regulation.

**Article 13:**

- (1) Water used for drinking holds the top priority above all other needs.

**Article 16:**

- (1) Any person has the right to use water for the needs of his daily life and/or the animals under his care.

- (2) Use can be made of water derived from water sources as meant in paragraph (1) of this Article as long as it does not resulting in damage to the water source and its environment or projects constructed for the benefit of the public.

**Article 19:**

- (1) The use of water and/or water sources other than for the needs as stated in Article 16 may only be made under a license.
  - (2) The use of water and/or water sources as meant in paragraph (1) of this Article covers use for the needs of urban activity, agriculture, power, industry, mining, water traffic, recreation, health and other necessities in accordance with development needs.
- (u) Government Regulation No. 24 of 1986 concerning the 30 year licensing period for foreign investment companies.
  - (v) Government Regulation No. 14 of 1987 regarding the transfer of entities and assets, and the delegation of part of the government's authority in the field of public works, to the provincial and local governments.

**Article 2:**

Without decreasing the duties and responsibilities of the Minister of Public Works, part of Public Works affairs are transferred to Heads of Level I and Level II Governments based upon the stipulations provided in the Government Regulation.

**Article 3:**

Part of Public Works affairs as meant in Article 2 which are transferred to Provincial/Level I Governments are:

- c: in the field of Human Settlement (Cipta Karya):
  - 6: the development of planning, construction, maintenance and management of clean water in the rural areas, piping systems and artesian wells.



**Article 4:**

Part of Public Works affairs as meant in Article 2 which are transferred to Local/Level II Governments are:

- c: in the field of Human Settlement (Cipta Karya):
  - 10: The construction, maintenance and management of infrastructure and facilities for clean water supply.

**Article 8:**

- (1) The Minister of Public Works organizes technical guidance and controls on the execution/implementation of Public Works affairs which have been transferred to and carried out by Level I Government and Level II Government.
- (2) Technical guidance as meant in paragraph (1) shall further be regulated by the Minister of Public Works after obtaining advice and consideration from the Minister of Home Affairs.
- (3) Technical control as meant in paragraph (1) shall further be regulated by the Minister of Public Works.

**Article 10:**

- (2) All charges (taxes) in the field of Public Works which have been transferred to Level I and Level II Governments become Level I and Level II Government income and shall further be determined in the Regional Government Regulation (Perda).
- (w) Government Regulation No. 20 of 1990 regarding water pollution control.
  - (x) Presidential Decree No. 54 of 1977 concerning regional basic provisions on investment procedures.
  - (y) Presidential Decree No. 26 of 1980 concerning regional investment coordinating boards [*Badan Koordinasi Pananaman Modal Daerah* ("BKPMMD")].
  - (z) Presidential Decree No. 35 of 1985 amending Presidential Decree Nos. 33 of 1981 and 78 of 1982 regarding the status, duties, and organizational structure of BKPM

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- (aa) Presidential Decree No. 17 of 1986 requiring that Indonesian investment entities in which a majority equity ownership is held by local participants be treated the same as domestic investments under Indonesian law. This Decree was amended by Presidential Decree No. 50 of 1987.
- (bb) Presidential Decree No. 21 of 1989 concerning the exhaustive list of 75 economic sectors that are closed for designated forms of new private investment. "Water supply" and "drinking water" are not listed as closed sectors. This seemingly does—but may not—supersede Article 6 of Law No. 1 of 1967 which designates nine economic sectors—including "drinking water"—as being closed to foreign investment because they are of strategic national importance for which the Government of Indonesia will retain exclusive authority. This Decree also supersedes Presidential Decree 15 of 1987 (which superseded Presidential Decree No. 22 of 1986) which established nonexhaustive lists of economic sectors open to new private investment and which listed "drinking water" as an open sector. Economic sectors open to new private sector investment by the Decree may still be closed or restricted by "prevailing laws and regulations" as stated in the Decree.
- (cc) Presidential Decree No. 23 of 1990 concerning the establishment of a national pollution board.
- (dd) Presidential Instruction No. 5 of 1984 concerning guidelines for the simplification and control of business licensing.
- (ee) Presidential Instruction No. 4 of 1985 concerning policies to expedite the flow of goods in support of economic activities.
- (ff) Regulation of the Minister of Mining and Energy No. 03/P/M/Pertamber of 1983 requiring licensing of all private use of ground and spring water and water drilling by the provincial governor acting upon the binding advice of the Directorate General of Geology within the Ministry of Mining and Energy.
- (gg) Regulation of the Minister of Home Affairs No. 3 of 1986 concerning cooperation by a regional enterprise with a third party. This made possible the establishment of joint cooperation undertakings between a regional enterprise and a private investor.
- (hh) Regulation of the Minister of Home Affairs No. 690-536 of 1988 dealing with guidelines for the pricing of water supplies by a PDAM. This provides that water supply prices must be decided by the head of the local government and be subject to gubernatorial approval following a proposal from the management of the water company and the favorable considered judgement of the supervisory board. This eliminated the requirement for ratification by DPRD TK. II provided in Regulation No. 690-1572 of 1985.

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**Article 2:**

The drinking water tariff will be based upon:

- (1) The ability to cover the following expenses:
  - a. Personnel
  - b. Electricity
  - c. Chemicals
  - d. Organization and Maintenance
  - e. General Administration
  - f. Depreciation
  - g. Rate of interest.
- (2) Clear calculations of revenue must be made or the rate of return must be based on a prior calculation.
- (3) The price of drinking water must be affordable by all members of the community.
- (4) Wealthier consumers must bear part of the cost of providing drinking water to poorer consumers.
- (5) The efficient use of water must be promoted.

**Article 3:**

The system applied for determining a drinking water tariff is the progressive tariff system.

**Article 4:**

- (1) Customer categories are divided into:

Category	I:	Social
	II:	Non-Commercial
	III:	Industry
	IV:	Special—Commercial
- (2) The Categories mentioned in paragraph (1) above may also be modified according to the situation and need.

**Article 5:**

The tariff of drinking water is determined by the Head of Region with his Decision Letter (Decree = *Surat Keputusan*) upon the proposal of the Board of Directors through the Board of Supervisors.

**Article 6:**

- (1) Prior to submission to the Head of the Region, the proposed tariff should first be discussed and considered by the Board of Supervisors.
- (2) The consideration by the Board of Supervisors covers political, social, economic and cultural aspects.
- (3) If it is considered necessary, the Board of Supervisors may alter the said proposal with or without the approval of the Board of Directors.
- (4) The decision of the Head of the Region regarding the tariff determination becomes effective after it is legalized by:
  - the Governor (for PDAM Level II Government)
  - the Minister of Home Affairs (for PDAM Level I Government).

**Article 7:**

- (1) The Board of Directors in submitting its proposal for determination of a tariff for drinking water to the Head of the Region, should base the proposal upon full consideration of subjects such as:
  - a. The objective of tariff determination
  - b. [AVAILABLE COPY UNREADABLE]
  - c. Price Calculation of water sale
  - d. Analysis of water price
  - e. The method of tariff investigation
  - f. Final Determination of the Tariff Structure.
- (2) —

- (3) The Head of the Region is not bound by the tariff proposal of the Board of Directors.
- (ii) Regulation of the Minister of Public Works No. 65/KPTS of 1989 establishing the Joint Technical Team for Water Supply Capital Investment.
- (j) Regulation of the Minister of Home Affairs No. 4 of 1990 concerning the guidelines for cooperation between a regional enterprise and a third party. This revoked Regulation of the Minister of Home Affairs No. 1 of 1983 concerning the same subject.

**Article 2:**

The basis for the cooperation between a regional enterprise and a third party shall be mutual interests of both parties which shall be arranged in a joint venture which

- a. fully establishes the legal rights and ensures the safety by full adherence to written provisions agreed by both parties,
- b. gives equal and appropriate benefits and profits to both parties.

**Article 3:**

The aims of the cooperation is for increased efficiency, productivity, and effectiveness of the Regional Enterprise in the efforts to continue and to ensure sustainability of the Regional Enterprise and to accelerate mobilization of business by means of:

- a. developing existing or already running businesses;
- b. establishing new enterprises based on considerations prospects and mutual benefits.

**Article 5:**

- (1) The options for cooperation shall be determined by the conditions and objectives of the Regional Enterprise and the capital agreed in the cooperation.
- (2) The cooperation shall be made in forms of:

- a. Management cooperation, operational cooperation, profit-sharing cooperation, joint-venture cooperation, financing cooperation, or production-sharing cooperation;
- b. Management contract, production contract, profit-sharing contract, and facilities sharing contract;
- c. Purchase of stocks or bonds from a limited liability corporation which has good prospects;
- d. Agency, usage, and distribution;
- e. Selling of stocks and bonds and going public with stocks and bonds;
- f. Technical assistance cooperation at national and/or international levels;
- g. Any combination of two (2) or more of the types of cooperation described in paragraphs a, b, c, and/or f.

**Article 6:**

The said cooperation shall be done without changing the legal entity status of the Regional Enterprise.

- (2) In drawing up the cooperation agreement both parties shall definitely agree on the type of cooperation, ratio of capital, sharing of profits and/or rewards, period of the cooperation, obligations, penalties, and termination of agreement and/or the possibility for extension, and other matters as necessary.
- (3) The execution of cooperation as defined in Article 5 shall be reported to the Minister of Home Affairs following the appropriate governmental chain of command.

**Article 8:**

- (2) The proposed partner for the cooperation (a Third Party), in addition to having the same objectives as the Regional Enterprise, shall meet the following requirements:
  - a. Shall meet the requirements of:
    - (for an Enterprise)—the status of a legal entity set up in accordance with the effective laws and regulations;

- (for an Individual)—the NPWP (Taxpayer's Registration Number)
  - (for a Foreign Institution/Private Enterprise)—the license/recommendation from the authority in accordance with the effective laws and regulations.
- b. Has positive values in terms of its *bona fides* and credibility, concerning:
- good attitude and dedication;
  - sufficient competence/experience in the proposed business;
  - sufficient capital.

**Article 9:**

- (1) The cooperation with a Third Party shall be executed by the Management of the Regional Enterprise in accordance with the following provisions:
- a. For an investment value of up to Rp. 500.000.000,—and with a period of cooperation no longer than one (1) year, the cooperation shall not require approval by the Head of Region/Authority.
  - b. For an investment value of Rp. 500.000.000,- and with a period of cooperation of over five (5) years, the cooperation shall only be effective after having had approval by the Head of the Region.
  - c. For an investment value of over Rp. 1.000.000.000,—and with a period of cooperation of over five (5) years, the cooperation shall only be effective after having been approved by the Minister of Home Affairs.
  - d. For an investment value and period of cooperation which is not as provided in Items a, or b, or c, the cooperation shall only be effective after having had the approval by the Authority prescribed of the maximum limit of investment.
- (2) The cooperation agreement as defined in paragraph (1) above shall be made in a deed of the Notary Public.
- (3) For a Joint Venture cooperation, in addition to meeting the requirements as defined in Article 8, paragraph (2), the parties in the cooperation shall provide the balance sheets

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and the profit and loss accounts in the past three (3) years as already audited by a Public Accountant.

- (4) The requirements defined in paragraph (3) above shall not apply to a Third Party which is a newly established corporation formed for the exclusive purpose of the joint venture cooperation.

**Article 11:**

If considered necessary, the cooperation agreement may be reviewed with the Authority (Minister of Home Affairs for Level I Government and Governor of Level I for Level II Government) before the signing.

**Article 12:**

- (1) Within six (6) months prior to the termination of a cooperation agreement, both parties shall together with the relevant Board of Supervisors of the Regional Enterprise, examine and evaluate all the assets and liabilities related to the cooperation and the prospects of the cooperation, and the possibility of extending the said cooperation period with a Third Party.
- (2) If necessary, the Head of Region may set up a Team of Verification and Appraisal consisting of elements of the Regional Government, concerned agencies, Board of Supervisors, and a Consultant competent in his field.
- (3) The Management of the Regional Enterprise shall prepare an accountability report to the Head of the Region in connection with the execution of a cooperation, with the attachments of the analysis results and evaluations as defined in paragraph (1) and/or paragraph (3) above in order to get approval of the extension or termination of the cooperation.
- (4) The termination of an agreement already approved by the Head of Region as defined in paragraph (3) must be recorded in a "Process Verbal" signed by both parties.



**Article 13:**

- (1) The extension of a cooperation period must be executed by the Management of the Regional Enterprise after having applied for an approval in principle by the Head of Region and the Authority.
- (2) The submission of an application as defined in paragraph (1) above shall have attached a report as defined in Article 12, paragraphs (1) and (2).
- (3) The administration process and all its procedures shall be in accordance with the provisions defined in Paragraphs 7, 8, 9, and 10.

**Article 15:**

General supervision of the execution of cooperation between the Regional Enterprise and Third Parties will be carried out by the Minister of Home Affairs and the respective Heads of Regions.

- (kk) Joint Ministerial Decree of the Ministers of Home Affairs, Public Works, and Finance Nos. 160 of 1978, 281 of 1978, and 360/KMK.011 of 1978 regarding execution and development of clean water construction projects with central government aid.
- (ll) Joint Ministerial Decree of the Ministers of Home Affairs and Public Works Nos. 3 of 1984 and 26 of 1984 and 4 of 1984 and 27 of 1984 regarding the establishment of local drinking water enterprises and the development of PDAMs. These Decrees assigned the Ministry of Public Works responsibility for initial water supply planning and development and assigned the Ministry of Home Affairs the principal responsibility for developing the nontechnical aspects of water enterprises. Joint responsibility was assigned to the Ministries of Home Affairs and Public Works for formulating guidelines for the organizational structure of PDAMs.
- (mm) Joint Ministerial Decree of the Ministers of Home Affairs and Public Works Nos. 5 of 1984 and 28 of 1984 concerning guidance about the calculation of drinking water tariffs and regarding the organization, accounting systems, structure, and cost calculations of water utilities.
- (nn) Decree of the Minister of Finance No. 540/KMK.011 of 1979 regarding the management of central government funds for the financing of PDAM projects.

- (oo) Decree of the Minister of Health No. 2180/YANKES/INSTAL/XI of 1981 regarding the establishment of water quality standards and an environmental team.
- (pp) Decree of the Minister of Public Works No. 269/KPTS of 1984 regarding BPAMs which provides for a shorter period before they are changed to PDAM status.
- (qq) Decree of the Minister of Finance No. 862/KMK.01 of 1987 regarding the issuance of securities through a stock exchange.
- (rr) Instruction letter of the Minister of Home Affairs No. 5 dated March 19, 1990, regarding the anticipated change of the form of all regional government enterprises to one or the other of two forms of legal entity, i.e., PERUMDA (*Perusahaan Umum Daerah* or Regional Public Company) and PERSERODA (*Perusahaan Perseroan Daerah* or Regional Limited Liability Company) upon enactment of a law to replace Law No. 5 of 1962.
- (ss) Circular letter of the Minister of Home Affairs No. 690-1595 of 1985 which authorized the creation of PMDUs.
- (tt) Circular letter of the Minister of Home Affairs No. 690/7072/SJ dated July 10, 1985, to all level one governors, all *bupatirs* and *walikotas* of level II, and all directors of PDAMs regarding the possible release by level one and two governments of PDAMs from the duty to provide 55% of their net profits to those governments as provided under Article 25 of Law No. 5 of 1962 if such funds are required for projected development and replacement needs.
 

First: to make preparation of the change of the form/type of the legal entity of all Enterprises owned by the Regional Government, which capital is partly or wholly owned as Regional separated assets, such as a *Perusahaan Daerah* (Regional Government Enterprise), *Perseroan Terbatas* (Limited Liability Company) and/or other business activities which in fact are managed according to sound economic principle, ... except the Bank *Pembangunan Daerah* (Regional Government Bank), into 2 (two) types of Legal Entity, i.e. the *Perusahaan Umum Daerah* (PERUMDA = Regional Public Enterprise) and/or the *Perusahaan Perseroan Daerah* (PERSERODA = Regional Limited Liability Company).
- (uu) Decision of the Chairman of BKPM No. 17/SK of 1986 concerning foreign share participation in existing businesses.
- (vv) Decision of the Chairman of BKPM No. 5/SK of 1986 regarding local equity participation requirements in joint ventures with foreign investors. This Decision

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followed and implemented the provisions of Article 27 of Law No. 1 of 1967, Circular Letter from the Chairman Nos. 1195/A/BKPM/X of 1974 and B 109/A/BKPM/II of 1975, and BKPM Internal Guidelines of 1981. The Decision was further modified by Decisions of the Chairman Nos. 08/SK and 16/SK of 1989. Also see Decision of the Chairman of BKPM No. 13 of 1986 which amended Decision Nos. 5 of 1986 and 10 of 1985 which largely concerned the procedures for application for approval and facilities for domestic and foreign investments.

- (ww) Guidelines on the Accounting System of PDAMs of August 1990 issued by the Minister of Home Affairs.
- (xx) Implementing Guidelines for Regulation No. 690-536 of 1988 (Interim Report) (undated) regarding the calculation of drinking water tariffs by PDAMs.
- (yy) Organizational structure of PDAMs (undated) issued by the Minister of Home Affairs.
- (zz) Decree of the Governor of the Special Province of Jakarta No. D.IV-a.12/1/49 of 1974 on the regulation of digging and drilling for groundwater in Jakarta Special Province.
- (a') Decision of Jakarta Governor No. 664 of 1980 concerning the organization, structure, and work division of the drinking water company of the Special Municipality of Jakarta ("PAM Jaya").
- (b') Provincial Regulation of East Java No. 6 of 1980 amending the provincial water regulation of East Java of 18 November, 1938, on the use of water.
- (c') Provincial Regulation of East Java No. 5 of 1983 concerning drilling and the use of underground water in East Java.
- (d') Provincial Regulation of East Java No. 2 of 1987 regarding the establishment of PDABs.
- (e') Surabaya PDAM Regulation No. KPTS/29/411.61 of 1985 regarding private sector service contracts for bill collection.

## COLLECTIONS OF, AND COMMENTARIES ON, INDONESIAN LAWS

A collection in the Indonesian language of relevant laws and regulations on regional enterprises (including water supply activities) is contained in a soft cover book entitled *Himpunan Peraturan Perundang-Undangan Perusahaan Daerah* published in 1990 by PUOD.

A collection of laws and regulations in the English language on private sector investments in Indonesia is contained in a soft cover book entitled *Investment Law and Regulations* published by BKPM in an unspecified year after 1985.

A general description of the Indonesian legal system in the English language is contained in a soft cover book entitled *Law in Indonesia* by Professor R. Subekti, S.H., published by Gunung Agung, Jakarta, in 1973.

**15. LIST OF ACRONYMS, ABBREVIATIONS, AND INDONESIAN LANGUAGE TERMS COMMONLY USED (SEE WORKING PAPER G)**

## ANNEX

### THE COLLECTED TEXTS OF SELECTED RELEVANT INDONESIAN LAWS, REGULATIONS AND OTHER DOCUMENTS

#### SHORT DESCRIPTION OF SELECTED PARAGRAPHS/ARTICLES OF INDONESIAN LAWS & REGULATIONS TO PSPUWS

1. *Basic/Constitutional Law—1945*

Article 33:

2. *Law No. 5 Year 1974*

Regarding: "Basic Principles of Administration in the Region (Level I and II Government)".

Objective: The implementation of a real and responsible autonomy of the Region (means Province/Level I and Local/Level II Government) which may secure the progress and development of the Region.

Selected Articles:

Article 2

To organize and establish an Administration, the territory of the Republic of Indonesia shall be divided in Autonomous Regions and Administrative territories.

Article 3:

- (1) In the framework of the implementation of the decentralization principle, shall be organized and established Region of the First Level and Region of the Second Level.

Article 7:

The Region has the right, is authorized and is obliged to organize and manage its own services in accordance with the prevailing laws & regulations.

**Article 8:**

The additional transfer of governmental affairs to the Region will be stipulated by Government Regulation (see further below as example: G.R. No.14 year 1987).

**Article 13:**

- (1) The Regional Government consists of the Head of the Region and the Regional House of Representative.

**Article 38:**

The Head of Region with the approval of the House of Representative issues the Regional Regulation (Perda).

**Article 39:**

- (1) Regional Regulation (Perda) and/or Decisions of the Head of Region may not be in contravention with the general interest and statutes of Regional Regulations of the higher level.
- (2) The Regional Regulation shall be signed by the Head of Region and counter signed by the Chairman of the Regional House of Representative.

**Article 55:**

Sources of Regional Revenue are:

- a. Original revenue of the Regional Government consisting of:
  1. revenue from regional tax
  2. revenue from regional retribution
  3. revenue from Regional Enterprise
  4. other legal regional revenue
- b. Revenue originating from subsidy from the (central) Government consisting of:
  1. subsidy from the (central) Government
  2. other contributions regulated by statutes.

- c. Other legal revenue.

**Article 59:**

- (1) The Regional Government may set up a Regional Enterprise of which the execution and maintenance shall be carried out based upon the principle of cost accounting.
- (2) Basic stipulations on Regional Enterprise shall be determined by Law (Statute).

Note: See Law No. 5/1962.

**3. Law No. 5 Year 1962 on Regional Government Enterprise**

**CHAPTER II: CHARACTERISTIC, OBJECTIVE AND FIELD OF ACTIVITY**

**Article 4:**

- (1) Regional Government Enterprise\* is established with Regional Government Regulation (Peraturan Daerah = PERDA), based on this Law.
- (2) The Regional Government Enterprise as meant in para (1) is a Legal Entity, the status of which is obtained with the existence of this Law.
- (3) The Regional Government Regulation as meant in para (1) comes into force after getting legalization from the superiors (For Special Regions of Level I Government is the President, For Provincial Level I Government is the Minister of H.A., For Local Level II Government is the Governor of Level I).

**Article 5:**

- (1) The Regional Government Enterprise is a production unit which have the characteristic of:
  - a. providing service

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\*It can mean:  
— Provincial (Level I) Government Enterprise  
— Local (Level II) Government Enterprise.



- b. to organize public need
  - c. to gain revenue
- (2) —
  - (3) —
  - (4) The important/main production branches for the Region which have the effect on the life of the community of the Region concerned, is managed by the Regional Government Enterprise, which capital wholly or partly belongs to the separated asset of the Regional Government.

### CHAPTER III: CAPITAL

#### Article 7:

- (1) The capital of the Regional Government Enterprise consists of assets wholly or partly belongs to the Regional Government, which forms a separated asset.
- (2) The capital of the Regional Government Enterprise does not comprise of shares.
- (3) —
- (4) —

### CHAPTER V: THE MANAGEMENT

#### Article 11:

- (1) The Regional Government Enterprise is managed by a Board of Directors, which number and composition is stipulated in its Establishment Deed (Articles of Association).
- (2) Members of the Board of Directors are Indonesian Nationalities to be appointed and dismissed by the Head of Regional Government\*

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\* — the Governor for Regional Enterprise of Provincial Level I Government.  
 — the Walikota (Mayor) for Regional Enterprise of Kotamadya/City Local Level II Government.

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- (3) The appointment as meant in para (2) is for a period of 4 (four) years at the latest. After the said period ends, the said member of the B.o.D. may be re-appointed.

**Article 15:**

- (1) The Board of Directors (B.o.D.) makes decision on the management policy of the Regional Government Enterprise (RGE).
- (2) The B.o.D. executes and manages the asset of the RGE.

**Article 16:**

The stipulations on the limited power (authority) of the B.o.D. are regulated in the R.G.E's Articles of Association.

**Article 17:**

In each RGE is to be established a Supervisory Board. Which is further regulated in the PERDA (the Regional Government Regulation on the establishment of RGE).

**CHAPTER VII: CONTROL**

**Article 19:**

The B.o.D. is under control of the Head of the Region or an Agency appointed by him.

**CHAPTER VIII: STIPULATION ON THE USE OF PROFIT AND THE CONTRIBUTION OF PRODUCTION SERVICE**

**Article 25:**

- (1) —

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— the Bupati for Regional Enterprise of Kabupaten/rural Local Level II Government.

- (2) The use of the net profit after deduction of depreciation, reserve and other real deductions within the Enterprise, is determined as follows:
  - a. for the Regional Development Fund 30%
  - b. for the Regional Expenditure Budget 25%
  - c. for General Reserve Fund, social and education fund, production service, Retirement Fund & Donation, the amount of each is stipulated in the Articles of association of the Enterprise, with a total of 45%.

#### CHAPTER XIV: PERSONNEL

##### Article 26:

- (1) The status, salary, retirement fund & donation and other income of the B.o.D. members and personnel/employee of the Regional Government Enterprise is regulated in the PERDA (Regional Government Regulation) and is effective after getting legalization from the Governor for Level II Government Enterprise and the Minister of H.A. for Level I Government Enterprise, taking into account the stipulations of the prevailing Regional Government Salary Regulation.

#### 4. *LAW on WATER RESOURCE No. 11 Year 1974*

##### Article 2:

Water and its resources, including the nature richness contained therein has social function and used for the maximum welfare of the people.

##### Article 3:

- (1) Water and its resources is managed/controlled by the State.
- (2) The State therefor gives the authority to the Government:
  - a. to manage and develop the use of water and/or water resources.
  - b. to formulate, legalize and/or issue license according to planning and technical planning of water/water resource management.

- c. to organize, legalize and/or issue license for the purpose, the use and the supply of water and/or water resources.
- d. to organize, legalize and/or issue license for the exploitation of water and/or water resources.
- e. to determine and arrange legal deeds and legal relations between persons and/or corporate bodies in water and/or water resources matters.

**Article 4:**

The authority of the Government as meant in art. 3 can be delegated to Government agencies/units, at Central as well as at Provincial and Regional Level and/or to certain legal entities based upon the requirements and procedure to be determined by Government Regulation.

**Article 5:**

- (1) The Minister, who is given the task of water resources affairs (Ministry of P.W., Directorate General of Water Resources), is authorized and responsible to coordinate all regulations concerning planning, technical planning, control, exploitation, maintenance, protection and the use of water and/or water resources; with due consideration of the interest of other related Ministries and/or Institutions.

**Article 11:**

- (1) The exploitation of water and/or water resources, aimed to enhance its benefit for the welfare of the people is basically carried out by central as well as Regional Government.
- (2) Corporate Body, Social Organization and or person exploiting water and or water resources, must obtain license from the Government.

**5. Law No. 1 Year 1967**

**Article 2:**

Foreign Investment in this Law means:

- a. foreign exchange which does not form a part of the foreign exchange resources of Indonesia, and which with the approval of the Government is utilized for financing an enterprise in Indonesia.
- b. equipment for an enterprise, including rights to technological developments and materials imported into Indonesia, provided the said equipment is not financed from Indonesian foreign exchange resources.
- c. that part of the profits which in accordance with this Law is permitted to be transferred, but instead is utilized to finance an enterprise in Indonesia.

**Article 3:**

- (1) An enterprise as intended by Article 2, which is operated wholly or for the greater part in Indonesia as a separate business unit, must be a legal entity organized under Indonesian Law and have its domicile in Indonesia.
- (2) The Government shall determine whether an enterprise is operated entirely or for the greater part in Indonesia as a separate business unit.

**Article 5:**

- (1) The Government shall determine the fields of activity open to foreign investment, according to an order of priority, and shall decide upon the conditions to be met by the investor of foreign capital in each such field.
- (2) The order of priority shall be determined whenever the Government prepares medium and long-term development plans, taking into consideration developments in the economy and technology.

**Article 6:**

- (1) Fields of activity which are closed to foreign investment exercising full control are those of importance to the country and in which the lives of a great deal of people are involved, such as the following:
  - a. harbors;

- b. production, transmission and distribution of electric power for the public;
- c. shipping;
- d. telecommunications;
- e. aviation;
- f. drinking water;
- g. public railways;
- h. development of atomic energy;
- i. mass media.

- (2) Industries performing a vital function in national defence, among others, the production of arms, ammunition, explosives, and war equipment, are absolutely prohibited to foreign investment.

**Article 18 :**

Every permit for investment of foreign capital shall specify the duration of its validity, which shall not exceed 30 (thirty) years.

**Article 23:**

- (1) In the fields of activity open to foreign capital, cooperation may be effected between foreign and national capital, with due consideration to the provisions of article 3.
- (2) The government shall further determine the fields of activity, forms and methods of cooperation between foreign and national capital, utilizing foreign capital and expertise in the fields of export and the production of goods and services.

**Article 27:**

- (1) Enterprises mentioned in article 3 of which the capital entirely foreign, are obligated to provide opportunities for participation by national capital, following specified period and in proportion to be determined by the Government.
- (2) When participation as intended by section (1) of this article is effected by selling pre-existent shares, the proceeds of such sales can be transferred in the original currency of the foreign capital concerned.

**Article 28:**

- (1) Provisions of this Law shall be implemented by coordination among the Government agencies concerned in order to ensure harmonization of Government policies regarding foreign capital.
- (2) Procedures for such coordination shall be subsequently determined by the Government.

**6. Law No. 6 Year 1968 Concerning Foreign Investment**

**Article 1:**

- (1) That which is intended by "Domestic Investment" in this Law is a portion of the property of Indonesian society, including rights and goods, owned either by the State or by National Private or Foreign Private domiciled in Indonesia, which has been reserved/made available for the operation of an enterprise insofar as such capital is not governed by the provisions of article 2 of Law No. 1 of 1967 concerning Foreign Capital Investment.

**Article 2:**

That which is intended by "Domestic Investment" in this Law is the use of property as referred to in article 1, either directly or indirectly for the operation of a business in accordance with or based upon the provisions of this Law.

**Article 3:**

- (1) A national enterprise is an enterprise of which at least 51% of the domestic invested therein is owned by the State and/or National Private Enterprise. This percentage shall be increased so that on January 1, 1974 it will amount to not less than 75%.
- (2) A foreign enterprise is an enterprise which does not satisfy the conditions of section (1) of this article.
- (3) Should an enterprise intended by section (1) of this article be a limited liability company, then at least the percentage of the

total shares as referred to in section (1) of this article must be identified by holder.

**Article 4:**

- (1) All fields of activity are in principle open to private enterprise. State activities in connection with the development of fields of private activity include fields to be initiated or pioneered by the Government.
- (2) Fields of State activity include especially those field of undertaking which the government is obligated to conduct.

**7. *Government Regulation No. 14 Year 1987***

**Article 2:**

Without decreasing the task and responsibility of the Minister of P.W., part of Public Works affairs are transferred to Heads of Level I and Level II Government, based upon stipulations provided in the Government Regulation.

**Article 3:**

Part of Public Works affairs as meant in art. 2 which are transferred to Provincial/Level I Government, are:

- c: in the field of Human Settlement (Cipta Karya):
  - 6: the development towards planning, construction, maintenance and management of clean water in the rural areas, piping system and artesian wells.

**Article 4:**

Part of Public Works affairs as meant in art. 2, which are transferred to Local/Level II Government are:

- c: in the field of Human Settlement (Cipta Karya):
  - 10: The construction, maintenance and management of infrastructure, facility of clean-water supply.



**Article 8:**

- (1) The Minister of P.W. organizes technical guidance and control on the execution/implementation of Public Works affairs which have been transferred to and carried out by Level I Government and Level II Government.
- (2) Technical guidance as meant in para (1) shall further be regulated by the Minister of P.W. after obtaining advise and consideration from the Minister of H.A.
- (3) Technical control as meant in para (1) shall further be regulated by the Minister of P.W.

**Article 10:**

- (2) All charges (taxes) in the field of Public Works which have been transferred to Level I and Level II Government become Level I and Level II Government income and shall further be determined in the Regional Government Regulation (Perda).

**8. *Government Regulation No. 22 Year 1982 on "Water Management"***

**Article 2:**

- (1) In the system of water management should be based on the principle of public benefit, balancing and everlasting.
- (2) Water right is the Right of water-use.

**Article 5:**

- (2) The Regional Government is responsible for the implementation of authority within the frame of "duty to assist the Central Government" towards water and/or water resources within his regional boundary.
- (3) The authority towards water and/or water resources crossing more than one regional boundary is still in the hands of the Minister of P.W.

**Article 11:**

- (1) The exploitation of water and/or water resources with the purpose of improving its benefit for the people welfare, is basically carried out by the Central as well as Provincial/Local Government.
- (2) Legal Entity, Social Body and/or Person exploiting water and/or water resources should obtain license from the Government and based on the principle of joint and mutual operation.
- (3) The implementation of this article will be further stipulated by Government Regulation.

**Article 13:**

- (1) Water for the need of drinking forms the top priority above other needs.

**Article 16:**

- (1) Any person has the right to use water for the need of his daily life and/or the animals under his care.
- (2) The use of water derives from water source as meant in para (1) of this article can be benefitted as long as not resulting damage on water source and its environment or public building concerned.

**Article 19:**

- (1) The use of water and/or water source besides for the needs as meant in article 16 must obtain license.
- (2) The use of water and/or water source as meant in para (1) of this article, covers the use for the needs of urban activity, agriculture, power, industry, mining, water traffic, recreation, health and other necessities in accordance with development.

9. *Regulation of Minister of Home Affairs No. 4/1990*

Article 2:

The basis for the cooperation (RGE & DSP) shall be for mutual interests of both parties which shall be arranged in a joint which:

- a. fully establishes the legal rights and ensures the safety by full adherence to written provisions agreed by both parties,
- b. gives equal and appropriate benefits and profits to both parties.

Article 3:

The aims of the cooperation is for increased efficiency, productivity, and effectiveness of the Regional Enterprise in the efforts to continue and to ensure sustainability of the Regional Enterprise and to accelerate mobilization of business by means of:

- a. developing existing or already running businesses;
- b. establishing new enterprises based on considerations prospects and mutual benefits.

Article 5:

(1) The options for cooperation shall be determined by the conditions and objectives of the Regional Enterprise and the capital agreed in the cooperation.

(2) The cooperation shall be made in forms of:

- a. Management cooperation, operational cooperation, profit-sharing cooperation, joint-venture cooperation, financing cooperation, production-sharing cooperation;
- b. Management contract, production contract, profit-sharing contract, and business-area-sharing contract;
- c. Purchase of stocks, bonds from a Limited Liability corporation which has good prospects;
- d. Agency, usage, and distribution;

- e. Selling of stocks, bonds, and going public with stocks and bonds;
- f. Technical assistance cooperation in national and/or international levels;
- g. Combination of two (2) or more of the types of cooperation described in paragraphs a, b, c, and f.

**Article 6:**

The said cooperation shall be done without changing the legal entity status of the Regional Enterprise.

- (2) In drawing up the cooperation agreement both parties shall definitely agree on the type of cooperation, ratio of capital, sharing of profits and or rewards, period of the cooperation, obligations, penalties, and termination of agreement and or possibility for extension, and other matters as necessary.
- (3) The execution of cooperation as defined in Article 5 shall be reported to the Minister of Home Affairs following the hierarchy.

**Article 8:**

- (2) The proposed partner for the cooperation (a Third Party), in addition to having the same objectives as the Regional Enterprise, shall meet the following requirements:
  - a. Shall have meet the requirements of:
    - (for an Enterprise)—the status of a legal entity set up in accordance with the effective laws and regulations;
    - (for an Individual)—the NPWP (Taxpayer's Registration Number)
    - (for a Foreign Institution/Private Enterprise)—the license/recommendation from the authority in accordance with the effective laws and regulations.
  - b. Has positive values in terms of bonafidity and credibility, concerning:
    - good attitude and dedications;
    - sufficient competence/experience in the proposed business;

— sufficient capital.

**Article 9:**

- (1) The cooperation with a Third Party shall be executed by the Management of the Regional Enterprise, in accordance with the following provisions:
  - a. For an investment value of up to Rp. 500.000.000,-; and with a period of cooperation no longer than one (1) year, the cooperation shall not require approval by the Head of Region/Authority.
  - b. For an investment value of Rp. 500.000.000,-; and with a period of cooperation of over five (5) years, the cooperation shall only be effective after having had the approval by the Head of the Region.
  - c. For an investment value of over Rp. 1.000.000.000,-; and with a period of cooperation of over five (5) years, the cooperation shall only be effective after having had the approval by the Minister of Home Affairs.
  - d. For an investment value and period of cooperation which is not as provided in items a, or b, or c; the cooperation shall only be effective after having had the approval by the Authority means:
    - Minister of Home Affairs for Level I Government,
    - Governor of Level II for Level II Government, with due observation of the maximum limit of investment.
- (2) The cooperation agreement as defined in paragraph (1) above shall be made in a deed of the Notary Public.
- (3) For a Joint Venture cooperation, in addition to meeting the requirements as defined in Article 8 paragraph (2), the parties in the cooperation shall provide the balance sheets and the profit and loss accounts in the past three (3) years as already audited by a Public Accountant.
- (4) The requirements defined in paragraph (3) above shall not apply to a Third Party/an Newly established corporation for the exclusive purpose of the joint venture cooperation.

**Article 11:**

If considered necessary, the cooperation agreement may be consulted with the Authority means:

- Minister of Home Affairs for Level I Government,
- Governor of Level II for Level II Government, before the signing.

**Article 12:**

- (1) Within six (6) months prior to the termination of a cooperation agreement both parties shall together with the related Board of Supervisors of the Regional Enterprise shall look through and evaluate all the assets and liabilities related with the cooperation and the possibilities related with the cooperation and the possibilities to extend the said cooperation period with a Third Party.
- (2) If necessary, the Head of Region may set up a Team of Verification and Appraisal consisting of elements of the Regional Government/concerned agencies, Board of Supervisors and a Consultant competent in his field.
- (3) The Management of the Regional Enterprise shall prepare a accountability report in the execution of a cooperation to the Head of Region, with the attachments of the analysis results and evaluations as defined in paragraph (1) and/or paragraph (3) above in order to get the approval for extensions or termination of the cooperation.
- (4) The termination of an agreement as already approved by the Head of Region as defined in paragraph (3) shall be recorded in a Process Verbal signed by both parties.

**Article 13:**

- (1) The extension of a cooperation period shall be executed by the Management of the Regional Enterprise after having applied for an approval in principle by the Head of Region and the Authority.

- (2) The submission of application as defined in paragraph (1) above shall be attached with the report as defined in Article 12 paragraph (1) and (2).
- (3) The administration process and all its procedures shall be in accordance with the provisions defined in Paragraphs 7, 8, 9, and 10.

**Article 15:**

General supervision to the execution of cooperation between the Regional Enterprise and Third Parties is carried by the Minister of Home Affairs and the respective Heads of Regions.

**Article 16:**

With the effectiveness of this regulation, Minister of Home Affairs Regulation No. 1/1983 is declared as invalid.

**10. *Minister of Home Affairs Regulation No. 690-536 dated 30 June 1988***

**Regarding: The Guidance on Water Tariff Determination by PDAM**

**Article 2:**

To determine the amount of drinking water tariff is based upon:

- a. The ability to cover the following expenses:
  1. Salary of the personnel
  2. The use of PLN electricity
  3. Chemicals
  4. O & M
  5. General Administration
  6. Depreciation
  7. Rate of interest.
- b. Clear calculation of revenue to be obtained or the rate of return based on prior calculation.
- c. Tariff of drinking water can be reached by any member of the community.

- d. The pattern of National Tariff Structure is "the strong help the weak".
- e. The pattern of the efficient use of water.

**Article 3:**

The system applied for determining drinking water tariff is the progressive tariff system.

**Article 4:**

- (1) Customer category is divided:

Category	I :	Social
	II :	Non-Commercial
	III :	Industry
	IV :	Special—Commercial
- (2) The Categories as mentioned in para (1) above, may also be specified according to situation and need.

**Article 5:**

The tariff of drinking water is determined by the Head of Region with his Decision Letter (Decree = Surat Keputusan) upon the proposal of the Board of Directors through the Board of Supervisors.

**Article 6:**

- (1) Prior submission to the Head of the Region, it should first be discussed and considered by the Board of Supervisors.
- (2) The consideration by the Board of Supervisors covers the political, social, economic and cultural aspects.
- (3) If it is considered necessary, the Board of Supervisors may alter the said proposal with or without the approval of the Board of Directors.
- (4) The decision of the Head of the Region regarding the tariff determination becomes effective after it is legalized by:
  - the Governor (for PDAM Level II Government)



— the Minister of H.A. (for PDAM Level I Government).

**Article 7:**

- (1) The Board of Directors in submitting its proposal for tariff determination of drinking water to the Head of the Region, should be covered with complete considerations/ suggestions, such as:
  - a. The objective of tariff determination
  - b. Photocopy not clear
  - c. Price Calculation of water sale
  - d. Analysis of water price
  - e. The method of tariff investigation
  - f. Final Determination of the Tariff Structure.
- (2) —
- (3) The Head of the Region is not bound with the tariff proposal of the Board of Directors.

**11. *Instruction Letter of the Minister of Home Affairs No. 5/1990 dated 19 March 1990 to all Governors of Level I and Bupatis/ Walikota of Level II***

**Regarding:** The change of the form (type) of Regional Government Enterprise into 2 (two) forms/types of Legal Entity, i.e. PERUMDA (Regional Public Company) and PERSERODA (Regional Limited Liability Company).

**First:** to make preparation of the change of the form/type of the legal entity of all Enterprises owned by the Regional Government, which capital is partly on wholly owned and as Regional set aside assets, such as Perusahaan Daerah (Regional Government Enterprise), Perseroan Terbatas (Limited Liability Company) and/or other business activity which in fact are managed according to sound economic principle, etc..... etc. except the Bank Pembangunan Daerah (Regional Government Bank) into 2 (two) types of Legal Entity, i.e. the Perusahaan Umum Daerah (PERUMDA = Regional Public Enterprise) and/or the Perusahaan Perseroan Daerah (PERSERODA = Regional Limited Liability Company).

**PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES**

**ISSUES FOR INVESTMENT IN INDONESIA**

**Working Paper C**

**PUBLIC POLICY AND PSPUWS—  
ISSUES AND OPTIONS**

**Prepared for the USAID Mission to Indonesia  
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## Working Paper C

### PUBLIC POLICY AND PSPUWS—ISSUES AND OPTIONS

#### EXECUTIVE SUMMARY

This paper has been partially the result of meetings and discussions with Government of Indonesia (GOI) officials involved in GOI's urban water supply activities. It is clear from their comments and the stated official position of GOI that there is growing enthusiasm for private sector participation (PSP) in Indonesia's economy generally and for private sector participation in urban water supplies (PSPUWS) specifically. Those officials clearly recognize that with Indonesia's rapidly growing urban population and its economic growth, demand for urban water supplies is increasing beyond the capacity of current infrastructure and institutions. They also are concerned that current urban water utilities can be more efficiently run and that changes in GOI policy, i.e., the introduction of the RDA (Regional Development Account) with regards to the financing of urban services, leaves them uncertain about possible sources of funding to make needed new investments and to replace deteriorating existing infrastructure.

The GOI seems to have adopted a welcoming posture regarding PSPUWS. There is a need, however, to understand fully the requirements of the private sector and to know more about or the likely consequences of PSPUWS with regard to existing GOI public policies and practices concerning urban water supply activities. This paper has determined that an essential first step in any formulation of GOI public policy with regard to PSPUWS is to attempt an educational introduction to the private sector and its impact on public utilities. This is necessary if PSPUWS is to be realistically appraised by GOI and if it is to have any realistic prospects.

In this paper, identification of the fundamental facts regarding PSP in a public utility is addressed. This must first be understood by the GOI before it can implement a program to encourage and authorize PSP. This information is summarized and deals with the consequences of the participation of the public sector in public utilities and regulatory, legal, and institutional issues.

Later portions of this paper give a summary description of the private sector, its requirements and dynamics. A synopsis is given of current global practice and thinking regarding privatization and PSP in what had formerly been sectors exclusively reserved for the public sector.

In the penultimate section of this paper, different models of possible participation by the private sector in Indonesia's urban water supplies are examined. For each instrument of PSPUWS considered, possible beneficial and detrimental consequences are enumerated.

In the last section of this paper there is a proposed number of questions to be used in public policy decision-making on PSPUWS. This decision-making questionnaire is placed in a context of a dynamic system through which a government constantly re-evaluates and reformulates its objectives and public policies based on continuing experience.

## WORKING PAPER C

### **PUBLIC POLICY AND PSPUWS— ISSUES AND OPTIONS**

#### **1. ESSENTIAL POLICY ISSUES REGARDING PSPUWS IN INDONESIA**

This Paper has been partially the result of meetings and discussions with Government of Indonesia ("GOI") officials involved in GOI's urban water supply activities. It is clear from their comments and the stated official position of GOI that there is a growing enthusiasm for private sector participation ("PSP") in Indonesia's economy generally and for private sector participation in urban water supplies ("PSPUWS") specifically. Those officials clearly recognize that with Indonesia's rapidly growing urban population and with its economic growth that the demand for urban water supplies is increasing beyond the ability of current infrastructure and institutions to meet that demand. They also are concerned that their current urban water utilities can be more efficiently run and that changes in GOI policy, ie. the introduction of the RDA (Regional Development Account) with regards to the financing of urban services leaves them uncertain about possible sources of funding to make needed new investments and to replace deteriorating existing infrastructure.

The GOI have adopted a welcoming posture regarding PSPUWS. They seek however to understand fully the requirements of the private sector and want to know more about or the likely consequences of PSPUWS with regards to existing GOI public policies and practices concerning its urban water supply activities. The production of this study is evidence of this. Consequently, this paper has determined that an essential first step in any formulation of GOI public policy with regards to PSPUWS is to attempt an introduction to the private sector and its impact on public utilities for GOI. This is necessary if PSPUWS is to be realistically appraised by GOI and if it is to have any realistic prospects.

Currently there appears to be a program of "implementing first, determining policy later" by the GOI with regard to PSPUWS. As one official expressed it, "We are learning by doing." This approach in the case of PSPUWS has resulted in a slow start and little progress for private participation.

It is in this regard that the paper has set out guide posts which serve as a framework in looking at PSPUWS. These include:

- **Choose the Right Model**

All categories of privatization/PSP, e.g., divestiture, asset leases, joint ventures, BOTs, service contracts, or private vendors, may not be applicable to or desirable in Indonesia's

water supply activities. GOI must choose those instruments of PSPUWS that best serve Indonesia's interests and circumstances, and there is a significant net benefit for Indonesia from PSPUWS.

- **Treat Monopolies as a Special Case**

Water supply utilities are classified and operate as monopolies. The private sector seeks to maximize profits. The only limits imposed on the private sector's profits is that provided by competition, the customers' willingness to pay, fiscal policy. If not subject to competition, PSPUWS must be regulated.

- **Private/Public Sector Issues**

PSPUWS will change GOI flexibility in its pursuit of its public policy objectives. This may be dealt with through: (a) clear, well thought out, and detailed policies and laws and (b) a regulatory framework that assures public interests.

- **Always Consider the Options**

PSPUWS should only be considered as one alternative in the context of all GOI water supply options.

- **Private Sector Requirements**

It is wasted effort for GOI to promote PSPUWS if the terms on which PSPUWS is permitted do not satisfy the private sector's minimum requirements. The private sector's minimum requirements *must* be taken into account and GOI *must* decide whether it is willing to and able satisfy them.

- **Clear GOI Public Policy Is the Critical First Step in PSPUWS**

Until GOI clearly establishes its PSPUWS public policies, efforts to promote PSPUWS confuse the PDAMS/PDABS, frustrate the private sector, and fail to achieve any relevant GOI objectives. GOI must clearly establish and disseminate its PSPUWS public policies before any other steps are taken.

- **Spread the Word**

When GOI has established PSPUWS public policies, rules, and procedures, it should make its decisions widely and fully known. The private sector must be informed so that its participation will be forthcoming. Implementing agencies (presumably PDAMS and PDABS) must be informed so that they may propose, evaluate, and authorize PSPUWS for specific projects in accordance with those public policies.



- **Establish a Regulatory Framework**

PSPUWS can be beneficial to consumers and may further the achievement of national objectives. It does so in many countries. However, this requires that PSPUWS operate within a regulatory framework created by GOI that protects the interests of both (a) the private sector and (b) consumers and (c) the GOI.

- **PSPUWS Is a Continuing, Dynamic Process**

PSPUWS will not work unless the private sector's performance is continuously: (a) regulated to protect consumers and GOI interests; (b) monitored to determine what the private sector is doing; (c) evaluated to determine how well the private sector is doing its job and achieving GOI policy objectives; and (d) reviewed to determine (i) how GOI objectives and policies should be reformulated based on practical experience and (ii) how the performance of specific private sector participants must be changed in order to fulfill their obligations and to better achieve GOI objectives and to conform to GOI public policies.

## **2. BACKGROUND TO PSPUWS**

Urban development planners in Indonesia face severe challenges in providing urban infrastructure services to Indonesia's rapidly growing towns and cities. Urban populations are growing at nearly twice the national growth rate. Indonesia's urban population is expected to increase from 52 million in 1990 to 79 million by the year 2000. The GOI central government has financed nearly 85% of urban infrastructure development expenditures, usually through foreign loans. Despite large investment programs, demand for the services exceeds the GOI's ability to budget for them.

Indonesia's official urban water supply sector is currently planned and built by the central government and owned and operated by corporate agencies of level two (and sometimes level one) governments. Some urban water supply systems are being operated inefficiently, and though they generate revenues sufficient to meet their operating costs, they do not provide for future capital development and replacement requirements. Further, these corporate agencies do not have full operating autonomy and their revenues are subject to levies by local governments which use a portion of those revenues for nonwater-related purposes.

Under the Basic Law of Indonesia, Indonesia's constitution, water resources may only be used by the government in accordance with the needs and for the benefit of the Indonesian people. As is true in every country, Indonesia's water supply public policy is based in part on the belief that the government must provide water to its people and industry on terms and conditions other than those strictly dictated by commercial considerations.

Many water supply needs of Indonesia are currently being met through the participation of the private sector. Private vendors sell water to consumers on commercial terms through sales of bottled water, sales by water vendors who physically carry water to consumers for sale, and by vendors who sell water in bulk from tank trucks or similar bulk water transportation vehicles. Many private parties obtain their water through private wells. In some recent cases, private sector participants have established self-contained water supply systems to provide water for their own collective use or for sale to industrial estates or new residential areas on commercial terms.

There is no significant existing element of the private sector in Indonesia which is skilled in the performance under contract of urban water supply-related services. Private sector investors are unlikely to be attracted to investments in existing urban water supply systems. Their existing infrastructures are often defective, their personnel staffing is usually unsuited for commercial operations, and their consumers are commonly those parties least able to pay full commercial rates for water. Where there are aquifers or other available underground water, consumers utilize wells on their own property in lieu of water taken from piped sources. Tariff schedules for water services have a social tariff that must be met. In addition,

other parties (i.e., local governments) may call upon municipal water utilities for a portion of their revenues.

Urban development policy in Indonesia now emphasizes the need for the decentralization of responsibility to regional government; the integration of urban sector planning between sectors; and increased user-financing. PSP in the provision of urban services is seen as augmenting this decentralization strategy because the private sector is expected to provide opportunities for increased efficiencies and off-budget financing directly to urban public utilities.

There now exists considerable GOI interest in the potential role of the private sector in urban water supplies. Several varied PPUWS initiatives are now in the planning and development stages. Indonesian experience of PSP in other infrastructure sectors is reported in Working Paper A of this study for comparison.

PPUWS gives rise to a number of basic issues. GOI uses the water supply sector as a means of implementing national policies on basic needs and social equity, but because the private sector is profit-driven these social objectives will not be foremost in the mind of any private sector participant.

PSP, although considered to be a way of reducing the large public role of government, requires active government planning and regulation if the expected benefits are to be realized. This may place a strain on the financial, technical, and administrative assets of the GOI.

PSP in urban infrastructure utilities is often discussed in terms of *beneficial effects* expected when compared with existing, usually government-owned and -run, investments. The private sector is said to, e.g., provide short-cuts through bureaucratic inertia; introduce innovative solutions; be more responsive to consumer needs; and bring better management. The private sector responds to market demands, however, which implies that lower income groups with a lesser ability to consume and pay for water have a disproportionately small influence on market decisions. To a degree, this is in obvious conflict with GOI socially-oriented public policy. This is the reason, of course, why essential public water supplies were originally organized as a social service.

This Paper looks at the role of PPUWS as one among many of GOI's possible *policy instruments* which may be used to implement government policy across a range of ministries and broadly affecting planning procedures and existing government institutions. This will require GOI to continuously monitor and evaluate PPUWS so that the positive benefits expected from it are not outweighed by any unacceptable frustration of GOI social policy.

### **3. ISSUES IN PSPUWS**

#### **3.1 What is Private Sector Participation?**

##### *Privatization and PSP*

"Privatization" is the participation by the private sector in activities that are currently or under existing policy the domain of the public sector. Privatization may include the sale by the public sector to the private sector of assets or companies. It may also include the performance by the private sector of activities currently performed by the public sector. The private sector will perform those activities under commercial contracts awarded by the public sector. It may include investments by the private sector in new activities which were formerly generally considered to be more appropriately performed by the public sector.

Privatization is generally undertaken for a number of reasons. The most common are: (1) to make more efficient the performance of activities and (2) to realize financial benefits and economies by the government.

Increased efficiencies in performance may be defined in terms of (1) the enhanced and more effective provision of services and the production of goods; (2) the more profitable sale of services or goods; or (3) the provision of the same services and goods to consumers at reduced prices. It is of critical importance that the desired measure and definition of efficiency be chosen in order to determine for practical and public policy purposes the desirability of increased private sector participation. Under any circumstances, efficiencies will only be realized through private sector participation (a) if the private sector possesses the competence and resources to assume a greater role in the economy in areas that had previously been exclusively reserved for the public sector; (b) if the public sector's performance is currently inefficient and if there is no practical prospect of an improvement in efficient performance by the public sector; (c) where circumstances are such that PSP may be able to effect greater efficiencies; and (d) if competition among private sector entrepreneurs and competition in the privatization process imposes free-market pressures for enhanced efficiency.

Direct of financial benefits will be realized by the government only if it has assets which it is willing to sell and which the private sector is willing to purchase. Even then, the calculation of the real financial benefits to the government of such asset sales is both difficult and controversial. Where no government assets are to be sold, the government may obtain economic benefits from PSP if (a) the private sector makes available funds unavailable from or through government sources; (b) the private sector makes such funds available on commercial terms that are more attractive than government-supported funds; (c) the private sector creates and transfers to the government infrastructure developments that would otherwise not be built; or (d) the public sector would make such inefficient use of any funds

because of incompetence or corruption that private sector utilization of these funds would be preferred.

*Privatization* may be strictly defined as a "transfer of ownership and control from the public to the private sector, with particular reference to asset sales." The main example of this is the sale of water utilities in the United Kingdom. Privatization implies institutional, legal and social/political changes and a reversal of past development policies which gave public enterprises a major role. Such ownership changes by themselves are unlikely to produce major efficiency gains unless accompanied by these other reforms. Public monopolies *may* become private monopolies with no gains by the general public.

PSP has a more limited definition, i.e., "the subcontracting of selected functions or components by an existing public utility to the private sector for the supply of specific services involving financing and/or human resources." In PSP projects, the public utility retains most of the control over the enterprise.

### *GOI Policy toward PSP*

GOI's policy with respect to increased PSPUWS is ambivalent. On the one hand, GOI has opened this area to private investment and welcomed private investment. On the other hand, certain rules and regulations that discourage investment have been retained. The GOI has not yet developed a consistent and fully integrated set of policies regarding PSPUWS. (See Working Paper B)

The formulation of a clear policy toward increased PSPUWS is complicated by the difference in viewpoints between local/provincial governments and the central government. Local governments get most of their investment funds from central sources and do not want to jeopardize this source of support which might occur if private investment became the required source of funding. The central government, as part of its decentralization policy, wants local government to take more responsibility for raising revenues and financing investment expenditures.

Local/provincial government is also anxious to keep water rates low in order to benefit their constituents while private firms would be inclined to raise rates in order to ensure an adequate profit. These different perspectives on the value of greater private involvement are complicated by efforts to decentralize decision-making to local government levels. Because roles and responsibilities within GOI are changing, it has been difficult to develop clear policies in this area.

### *Private Sector Interest In Commercial Urban Water Supplies Activities*

GOI has begun a series of initiatives to attract PSPUWS and has revised certain rules and regulations to accommodate the private sector. The opportunity for private investors in

PSPUWS has been open since 1983. Water supply pricing still has to be approved by the head of the relevant local government. Revenue streams were, therefore, under the control of GOI and not the investor. To date there has been only limited interest by private sector investors in Indonesian urban water supplies. The interest that has been shown has often been frustrated by difficulties in obtaining official authorization to engage in PSPUWS.

### **3.2 What are the benefits of PSPUWS?**

#### *Benefit goals or Intermediate Objectives*

PSPUWS will, as the brief discussion above has suggested, have significant impacts on PDAMs and other government institutions. PSPUWS is often expected by GOI to produce benefits far beyond those that can reasonably be expected. Dissatisfaction with public enterprise performance and the difficulty of getting performance improvement programs to work is at the heart of the appeal of privatization to policy makers. PSPUWS benefits are therefore seen as both *benefit goals* in themselves, and as *intermediate objectives* to create long term institutional changes.

Policy makers must be clear about the scope of the goals or objectives they want to achieve with PSPUWS because intermediate objectives, such as management efficiency gains, require intelligent policy design and the sensitive handling of institutional linkages if they are to be effective.

Expected immediate benefits from PSPUWS are as follows:

- *Private financing* of investments, which will take capital investment costs off budget and speed-up implementation programs.
- Private sector service and management skills are expected to improve *PDAM effectiveness* as a part of wider performance improvement programs.

#### *Private Financing of Capital Investment*

Private sector financing of urban water supplies is considered a major immediate benefit because it reduces the government's allocations to PDAMs' investment budgets, i.e., it takes the investments "off-budget." Government funds freed may then be used to finance other investments in the water supply sector or elsewhere.

#### *PDAM Effectiveness*

There is a broadly held view that private firms are better managed than public enterprises because they are unencumbered by a costly and inflexible civil service apparatus; staffing

levels are lower; employees are better motivated; and technology is more up to date. As a consequence, they are thought to produce services at a lower cost and of a better quality.

Most countries in the world are now making considerable efforts to make public enterprises more economically efficient and more effective in meeting development goals. Public enterprise reform attempts to map out and delineate the relations between, and the responsibilities of, the enterprise and government; to prevent a conflict of goals and instructions; to restrict bureaucratic interference in operations; and to make the public enterprise operate more like a business concern and less like an administrative service.

A key issue in PSPUWS policy is the extent to which private investment can contribute to overall efficiency and effectiveness gains in the PDAMs. There is a critical distinction to be made between the *economic efficiency* of converting resource inputs into outputs, and the *service effectiveness* of these outputs in achieving the original *objectives*. This is summarized in the "Value for Money" triangle shown in Figure 1 which is widely used in public enterprise analysis. In the case of the PDAMs, where social and developmental objectives are mandated by law, following purely commercial and financial objectives is not possible. It is essential that measures of efficiency and effectiveness be more closely defined so that the impact of PSPUWS on PDAMs can be measured.

The assumption that PSPUWS is a means to bring efficiency and effectiveness gains to the PDAMs depends on the ability of the private sector management to perform the services currently being carried out by the existing PDAM staff. In the current situation of a scarcity of skilled staff in the Indonesian water sector, there is a real risk that private firms will obtain their employees directly from the public sector and thereby reduce overall PDAM effectiveness. Nevertheless if PDAMs are better managed this way, it would be a net gain the sector.

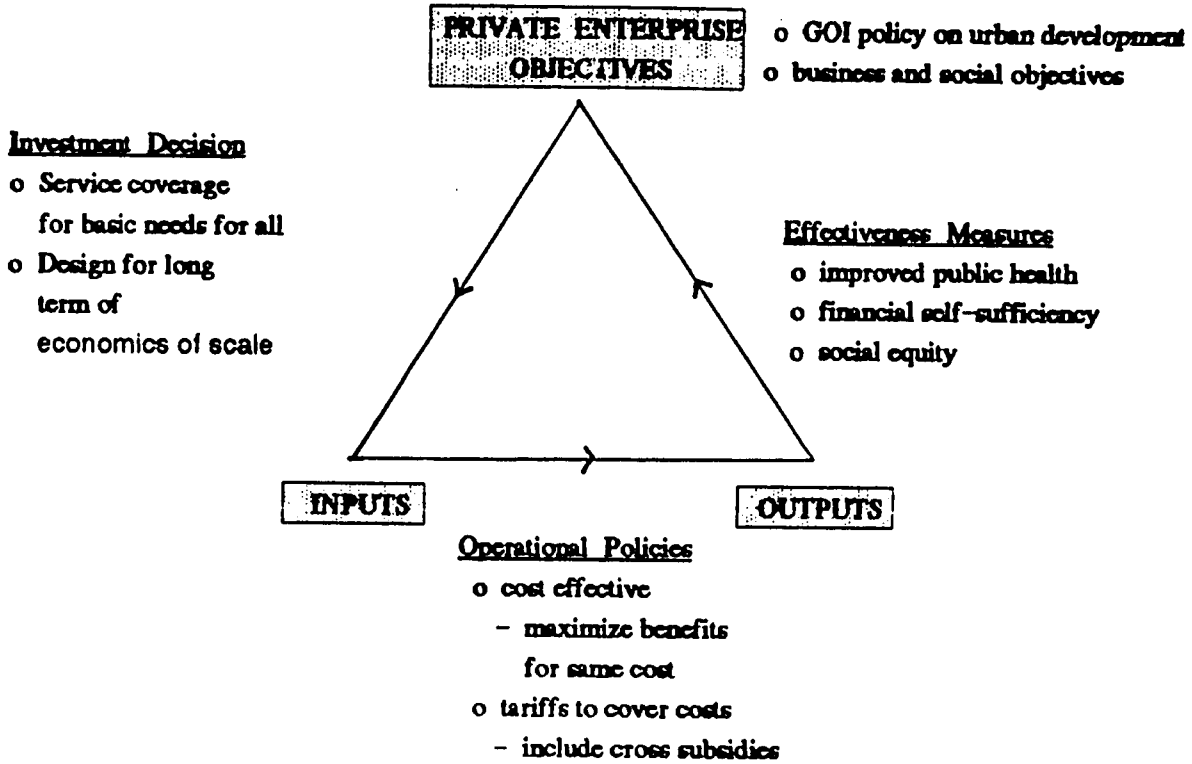
A further assumption is that the performance of the PDAMs cannot be further improved without PSPUWS contributions of managerial skills. This assumption is not proven until all practical measures of public enterprise reform and performance improvement have been explored.

It must be recognized, in any analysis of specific or general privatization measures in the water supply sector, that the participation of the private sector will reduce the control by the government over some aspects of water supply operations. In some instances, e.g., the awarding of private sector service contracts by PDAMs, this loss of control may be minimal and will have only limited consequences for the public policies of Indonesia. In other instances, e.g., BOTs, private sector participation in water supply activities may have a direct effect on important public policy objectives of Indonesia, e.g., the public policy of the cross subsidization of water supplies.

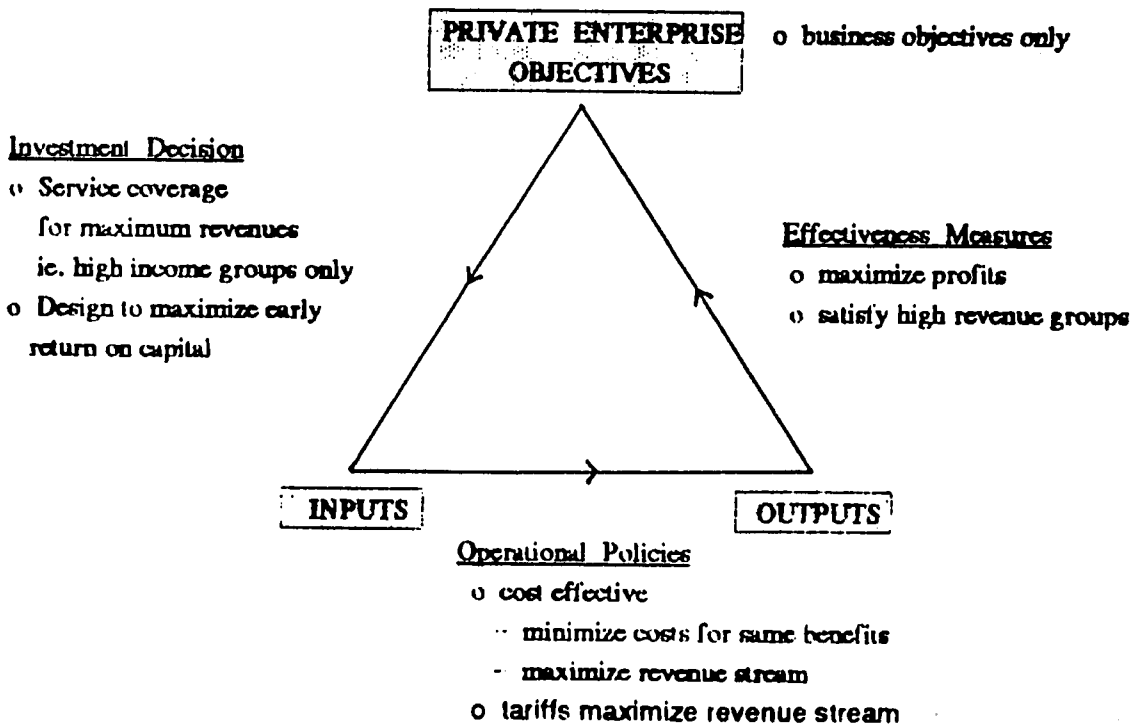
**Figure 1**

**Comparison of "Value for Money" Triangles  
for Public and Private Enterprise**

**a. Public Sector Enterprise**



**b. Private Sector Enterprise**





The GOI must make a determination regarding any privatization measures. The private sector will need to achieve a suitable rate of return and some autonomy of operation. These requirements may only be granted by the government in a trade-off of existing public policy and operational control measures. In each instance, a decision must be made regarding whether it is to the benefit of Indonesia that gains from private sector participation outweigh the costs of the loss of control and possible conflict of GOI public policies.

In most instances of privatization, the government will be required—in order to assure that its minimal public policy purposes are maintained—to establish and maintain regulatory bodies; laws and regulations; and monitoring and review mechanisms to regulate, evaluate, and reallocate private sector participation in water supply activities.

### **3.3 Ownership, Regulation and Competition**

The benefits which may be generated by privatization are frequently only imperfectly produced when the private sector participation is in activities which are absolute or *de facto* monopolies.

Municipal water utilities are, by their very nature, natural monopolies. Further, water utilities provide an essential service to people and to commercial establishments. Governments will have public policy concerns regarding the supply of such a service which are based on noneconomic factors, e.g., humanitarian concerns, health concerns, environmental concerns, and the promotion of new commercial activities or residential patterns of expansion.

Because private sector participation in monopoly activities will often not subject the private sector participants to the free market mechanisms which produce efficiencies, it is of critical importance that private sector participants in monopoly activities be subjected to detailed, clear, and strictly enforced rules and that their profit-making and other activities be subject to the regulatory oversight of an independent governmental body.

#### *Ownership*

The question of the ownership of urban water supply assets has already been briefly discussed. The conclusion may be made that private ownership provides no assurance of increased efficiency in the delivery of public services unless there is open competition between private sector bidders and unless social and developmental objectives are protected by regulation and effective monitoring.

Most of the interest in PSPUWS in Indonesia has focused on the larger type of schemes, such as the Build, Operate, Transfer ("BOT") projects. Several of these have been "demand-driven" by *enclave-type* developments where water supplies have serviced much larger investments and public water supplies are essentially merely support services. Other

PSPUWS schemes for public water supplies have selected discrete components of the whole systems for investment, such as bulk water supply delivery.

Private investors characteristically want to make a return on their invested capital which is high enough to cover their perceived risks and to be free to sell their share of investment equity when and to whom they want. These conditions are often not present in large scale urban water supply investments, although small scale investments can offer a quick return and may sometimes be easily sold or used elsewhere (such as water vendor trucks).

### *Regulation and Competition*

Because urban water supplies have a monopoly character, regulatory mechanisms are necessary to monitor and control quality, prices, and externalities such as health and environmental effects and preserve the social equity objectives of the sector.

From the point of view of the private sector, tariffs are the most crucial aspect of management control because these determine the revenue streams (and profitability) of the investment. PDAMs provide an essential service to the people and to commercial establishments and therefore their tariff policies must meet both financial and social objectives.

## **3.4 Special Issues in PSPUWS**

### *Public Choice in Water Supplies*

Piped urban water supplies are a natural monopoly, but the users often have a choice of alternate suppliers ranging from water vendors to private wells although these alternative sources may not be hygienic or reliable. The question of private wells is important in some parts of Indonesia in that groundwater is often plentiful. Users are able to resist high tariffs by switching sources and this, rather than regulation, may be the most effective constraint on revenue streams and create the greatest uncertainty for private investors.

In areas where there is no groundwater, where it is heavily polluted, or where alternative sources are distant and expensive, water tariffs may be higher. In high income group areas, tariff questions are likely to be less contentious. This applies particularly to residential areas where owners have established self-contained water supply systems to provide water for their own collective use.

### *Cross Subsidies*

PDAM tariff structures contain a progressive charge structure such that the first charge block has a low unit price which may contain a subsidy for low income groups. Higher rate charge blocks have a higher unit price, which may meet or exceed the long run marginal costs of

supply and provide a disincentive to wasteful use. This tariff structure allows PDAMs to charge more to high income water users and to cross-subsidize the price of their services to the poor. If the high income earners are on separate systems, this potential transfer is lost to the PDAMs. However it must be noted the use of subsidies is a two edged sword. Subsidies have been much to blame for giving the wrong use signals for water. The use of subsidies in water pricing completely abrogates the use of the pricing mechanism for efficient resource use.

### **3.5 Approaches to PSP**

The role of PSP in urban development in Indonesia is being actively discussed by GOI. This Study may assist in this discussion. The subject has been approached in a number of ways. Iskandar (1988) has presented a framework which identifies and compares the characteristics of local government services and assesses the potential for privatization of water services. The summary table is given in Table 1 which suggests that essential service monopolies requiring high levels of finance and not exposed to competition are poor candidates for private investment.

A more recent approach by Rondinelli and Kasardo (1990) looks at the effects of service characteristics on differing forms of ownership,—i.e., public, mixed, and private. This Assessment Framework is given in Table 2. It may assist GOI to identify more clearly the technical/administrative options which are appropriate under different ownership forms.

**Table 1**

**Summary of Potential for Privatization of Local Government Services**

Characteristic Service	National Monopoly	Degree of Competition	Capitalization Finance market Access reg.	Externalities *	Essential Services	Cost of Regulating	Rate of change in Tech./Markets	Rating as Privatization Candidate 1
Water Supply	Yes	Low	High	High (pos)	Yes	Moderate	Low	Poor
Sewage	Yes	Low	High	High (pos/Neg)	Partial	Moderate	Moderate	Poor
Solid Waste	No	High	Low-Moderate	High	Yes	Low/mod	Low	Good/Substantial
Roads	Yes	Low	High	High	Yes	Low	Low	Poor
Flood control	Yes	Low	High	High	Yes	Low	Low	Poor
Housing	No	High	Moderate	Low	No	Moderate	Moderate/Low	Good/Partial
KIP	Yes	Low	High	High	yes	High	Low	Poor
Education	No	High	Moderate	High	Partial	Moderate	Low/Moderate	Good/Partial
Health	No	High	Moderate	Mood/High	Yes	Moderate	Moderate	Good/Partial
Markets	No	Low	Moderate	Low	Yes	Low	Low	Possible/Conces.
Bus terminal	Yes/No	Low	Moderate	Low	yes	Low	Low	Possible/Conces.
Cargo Terminal	Yes/No	Low	Moderate/High	Low	Yes	Moderate	Low	Poor/Concession
Shopping Center	No	High	Moderate/High	Low	No	Low	Moderate/High	Good
Ice Factory	No	Low	Moderate	Low	No	Low	Low	Good
Public Transport	No	High	Low/Moderate	Low	yes	Moderate	Moderate	Good
Fairs	No	Low	High	Low	No	Low	Low	Possible/Conces.
Rec. Centers	No	Low	Moderate	Low	No	Low	Low	Possible/Conces.
Parking Lots	No	Low		Low	yes	Low	Low	Possible/Conces.

**I. Explanation: ratings are given in the context of the three objectives of privatization**

1. Poor/Partial - These services are poor candidates for privatization of the ownership of service delivery systems, however, some aspects of service delivery could usefully be privatized.
2. Poor - These services are not recommended for privatization at this time.
3. Good/Substantial - These services offer substantial opportunities for privatization.
4. Good/Partial retained - These services may be effectively privatized but a segment of service delivery would need to be in the public sector.
5. Possible/Concession - There are circumstances where these services may be effectively privatized by offering them as concession operations. They could also be totally privately provided.
6. Poor/Concession - These services should be retained in public ownership but the operations may be privatized through concessions.

**Iskandar D. (1988)**

**"Privatization of Local Public Services"**

**from International Workshop, Ciloto, Indonesia, October 19 - 21, 1988  
PU/VROM**

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**Table 2**

**Framework for Assessing Opportunities for Privatization  
of Urban Services and Infrastructure Provision**

Organizational structure for service provision	Government	Public-private partnership or contracting	Private enterprise
Characteristic of service	Public goods	Public goods for which user charges can be levied	Private goods or public services for which costs can be recovered
Primary beneficiaries	Community	Identifiable groups	Individual or household
Public perception of necessity of services	Essential, basic needs, merit goods	Essential services	Discretionary services
Cost Characteristics	Indivisible	Divisible	Divisible
Relationship between demand and willingness to pay	Low	Moderate	High
Measurability of quantity and quality of service provided	Low	High	High
"Spillover effects" of service	High	High	Low
Capital Investment of service	Large, "lumpy"	Moderate or large	Low or moderate, incremental
Capacity of non-government organizations to provide services	Low	High in specialized areas	High
Technical or technological sophistication required	Low	Moderate or high	High

From Dennis Rondinelli and John Kasarda, "Privatizing Urban Services in Developing Countries: The Role of Private Enterprise in Urban Development," Research Triangle Institute, Research Triangle Park, NC, 1990.

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## 4. PLANNING, POLICY AND INSTRUMENTS

### 4.1. PSPUWS—Projects Approach or Policy Design

PSPUWS is often discussed in terms of the benefits expected from projects. That is, PSPUWS projects are the "inputs" in the planning process, the benefits are the "outputs," and the wider impacts are the externalities and secondary benefits expected.

However, all the literature on PSPUWS points out that the wider institutional framework and the *design of policy* to encourage the private sector is equally important. It may be useful to identify how PSP policies fit into the wider picture of government policy-making and the instruments that are available.

### 4.2. The Planning Process and Policy Instruments

A simplified functional diagram of PSPUWS in relation to Planning Levels and Policy Instruments is given in Figure 2.

Planning economic development, and the management of the economy, is organized into a hierarchical series of planning levels. At the *national level*, *policies* are concerned with broad themes which permit them to be used to help plan the long term direction of development.

National policies are translated into *sector specific policies* through the 5 year PELITA planning process within the various ministries. In turn, sector policies are translated into plans, programs and budgets with detailed project expenditures identified. National and sector planning are a top-down and bottom-up process.

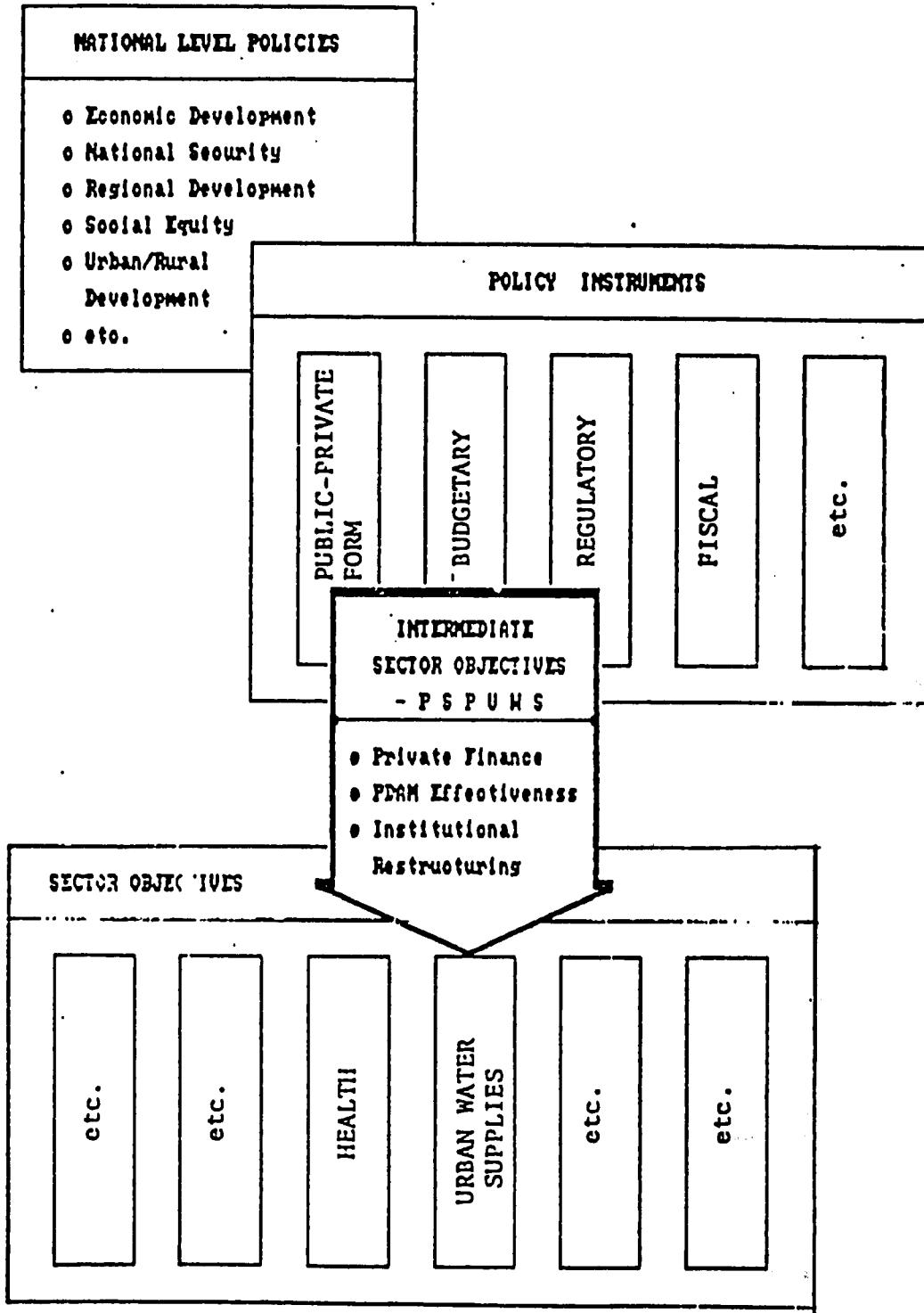
Governments also have a series of economic management *instruments* used to carry out national policies. These instruments include fiscal, monetary, regulatory, and budgetary policies and procedures. They may cover a number of ministries and be used to accomplish a number of different policy objectives. They are integrated into the administrative process and achieve a diverse range of sector policy objectives through complex administrative cross-linkages. Planners do not apply a single instrument to reach a single sector policy objective.

The *public-private form* of instrument can also be used to carry out national policies in the longer term. Changing the public-private mix has far-reaching implications for GOI and is ultimately concerned with the philosophy of national development.

In the more limited context of this study, PSPUWS is one part of the public-private form instrument. In planning terms, it consists of intermediate sector objectives as shown in Figure 2. These intermediate objectives may then be approached in terms of how they interact and combine to produce the desired sector objectives for urban water supplies.

**Figure 2**

**Functional Diagram of Planning Levels and Policy Instruments**



## 5. TECHNICAL/ORGANIZATIONAL OPTIONS FOR PSPUWS

In theory, there are an almost infinite number of ways that goods and services can be produced and delivered. In practice, for piped urban water supplies these may be classified into four models—although there are many variants and combinations possible:

- Build, Operate, Transfer ("BOT") Investments and Concessions
- Lease Contracts
- Management Contracts
- Service Contracts

### 5.1 BOT Concessions

#### a. *Description of Option*

A *concession* contract requires the concessionaire to provide investment capital. A typical concession approach is the so-called BOT model. Under this approach, the firm builds and then operates the water facility for a period of years and then transfers it back to the water authority. During this period the concessionaire has the authority to set tariffs within the policy framework established through the regulatory process. All revenues are retained and the firm tries to operate the facility on a profit-making basis by minimizing costs and maximizing revenues. Because the private firm owns the facility, there is a built-in incentive to maintain it in proper condition. Maintenance towards the end of the contract period requires careful oversight and detailed specifications with respect to turnover condition. Partial concessions occur when the firm takes over an existing facility, but finances and then owns capital additions during the life of the concession.

#### b. *Main Characteristics*

- In comparison to other approaches, because the firm owns the facility and has an incentive to reduce costs, the concession approach is the one most likely to encourage the introduction of managerial and technical efficiencies and least cost practices.
- The relative success of the concession approach depends heavily on the quality of the investment decisions made by the private firm. If these are based on faulty market analysis or an imperfect understanding of the economics of water supply, the efficiency of the water facility will be impaired.



- The transfer of tariff rate-making authority to the private firm (presumably within an established regulatory framework) together with the incentive to maximize revenues means that this approach is one most likely to raise concerns with respect to the pursuit of social policy objectives.
- Short of full divestiture, this approach comes the closest to full transfer of responsibility for water supply to the private sector. As a consequence, associated externalities with regard to unanticipated impacts in other sectors are high and it is difficult to accurately calculate the balance between true costs and benefits.
- The negotiating process and the resulting terms of agreement are extraordinarily complex and require a similarly high level of competence from the negotiating parties.

c. *Advantages and Disadvantages*

*Advantages*

- Of all options, this produces the maximum budgetary savings on capital investments.
- If feasible on a wide scale, this is the most effective way of tapping private sector resources and accelerating progress toward PELITA targets.
- Of all options, this is the most likely to introduce significant managerial efficiencies, cost savings and economic rationalization of the water supply sector.
- It involves a significant and dramatic stimulus for the private sector if broadly adopted.

*Disadvantages*

- All of the disadvantages described under Leasing Contracts which is considered below are applicable to BOTs.
- Of all options, this necessitates the most effective oversight and regulatory mechanism which does not yet appear to be in place in Indonesia.

- Of all options, this is the one most likely to raise fundamental issues with respect to the balance between economic efficiency and social equity objectives.
- Of all options, this involves the highest level of externalities in other sectors with a resulting difficulty in calculating cost/benefit returns.
- It is extraordinarily difficult to negotiate such agreements between PDAMs and private investors.

## **5.2 Lease Contracts**

### *a. Description of Option*

In a lease contract, a private firm rents an existing facility from a water authority and assumes responsibility for its operation and maintenance. The lessee is normally responsible for financing working capital needs and for replacement of some worn out equipment, such as pumps. Tariff rates continue to be set by the local water authority.

Compensation under a lease arrangement is normally a percentage of collected revenue with the balance passed back to the water authority as rental payment. Because income is linked to the volume of water paid for by the customer, the contractor has an incentive to increase coverage and improve the billing and collection system. Lease contracts are normally negotiated for six to ten years with the possibility of extension for up to a total of twenty years.

### *b. Main Characteristics*

- From a public policy perspective, their success depends heavily on the existence of close regulatory oversight in order to ensure compliance with policy objectives and to sustain a high quality of customer service.
- Effective implementation is dependent on a careful definition of the roles and responsibilities of the lessee with respect to the regulatory and policy-making functions of other government structures—particularly with respect to rate-making.

c. *Advantages and Disadvantages*

*Advantages*

- Together with concession arrangements, this is the approach most likely to lead to better management and economic rationalization of the water authorities.
- It involves significant budgetary savings since all but capital costs would be moved "off budget."
- It has the advantage of retaining control of critical investment decisions in the hands of government.
- It helps in meeting PELITA targets by freeing personnel and budgetary resources for additional investment.
- It involves a significant and dramatic stimulus to the private sector.

*Disadvantages*

- It rests heavily on the existence of an effective regulatory capacity which is not yet fully in place in Indonesia.
- While not inconsistent with the policy of decentralization, this would appear to tax the current capacity of local governments to plan and manage a revised set of relationships of this magnitude.
- Because rate-making authority is in part delegated to the private sector, this approach may bring to the surface sharp disagreements with respect to the balance between efficiency on the one hand and equity and basic needs objectives on the other.
- It establishes long-standing relationships between private sector firms and water authorities which may be difficult to alter or influence and which may vitiate the monetary benefits of increased PSP.
- It is difficult to negotiate.
- It may rely on the faulty premise that the private sector has extensive technical capabilities in needed areas.

## 5.3 Management Contracts

### a. *Description of Option*

In a Management Contract, the contractor assumes overall responsibility for the operation and maintenance of the water system with the authority to make all day-to-day operating decisions. In order to encourage the contractor to maintain the facility in good condition, the level of compensation is usually linked to a physical output, such as the volume of water delivered. The contractor is not responsible for capital improvements nor for risks associated with a drop in revenue. In some instances, profit sharing formulas have been designed although these are difficult to negotiate.

### b. *Main Characteristics*

- Its success depends heavily on the market availability of firms that have had extensive experience in water supply management.
- Because of the difficulty of isolating policy functions from operating functions, a sharp delineation of the roles and responsibilities of the contractor, the water authority and the regulatory body are critical to an effective relationship.
- It is particularly important to have a clear understanding with respect to decisions that may affect contractor revenues. Unless compensation is on a flat fee or cost plus basis, the level of anticipated contractor revenues can be indirectly influenced by decisions of the water authority and/or the regulatory body.
- Because it is cumbersome to rebid and replace an existing contract and because incumbents have a built-in competitive advantage, management contracts may be difficult to terminate.
- Effective regulatory oversight becomes increasingly important in the case of a management contract because the contractor may take actions that are inconsistent with the policy objectives of the water authority or regulatory agency and because the contractor, since it does not own the facility, may neglect its maintenance.
- The costs and benefits of a management contract are reasonably easy to calculate. While externalities are more complex than those for a service contract, most can be anticipated.

c. *Advantages and Disadvantages*

*Advantages*

- There is a significant across-the-board improvement in managerial efficiency—and probably in customer satisfaction.
- There is a likelihood of modest net cost savings through the introduction of efficiencies (although some of these may take the form of personnel reductions with costs of reabsorption born elsewhere).
- This taps the best of the private sector (managerial competence) without raising the policy—particularly pricing—issues associated with leasing and concessions.
- It may have some secondary benefits with respect to strengthening local governmental capacity.
- If adopted widely or universally, it would generate significant interest in the private sector.
- There are limited externalities so that the calculation of costs and benefits is reasonably straightforward.

*Disadvantages*

- It rests on the premise that sophisticated managerial competence in water authority management is available. It is far from clear that this is the case.
- It does little to accelerate progress toward the achievement of PELITA targets.
- It fails to tap private sector resources that could be invested in the water supply sector.
- It does not help to promote the organizational and financial autonomy of local water agencies.

## 5.4 Service Contracts

### a. *Description of Option*

Under a service contract, a private firm is engaged to provide a discrete service to a water authority—such as meter reading or bill collection. The water authority would retain overall responsibility for policy, management, investment decisions and daily operation except for those services that are contracted out. Compensation can be on a fixed fee or cost plus basis or related in some manner to the volume or magnitude of service provided. Performance incentives can be built into the compensation formula, although this introduces an unusual level of complexity. Service agreements are normally for a three to five year period and are recomputed periodically as an inducement to the providing firm to maintain the quality of service.

### b. *Main Characteristics*

- Its success will depend to a great degree on the availability of qualified subcontractors and a competitive market that will ensure that high quality services are provided at reasonable cost.
- Improvements in performance will also depend on whether the service was being handled inefficiently in the first place and on whether or not improvements are feasible in any case.
- A key consideration in assessing the benefits of this approach is whether the service contract includes a provision for long-term institutional strengthening that will, at some point, remove the need for continuation of the contract.
- Service contracts can be effective in most instances, regardless of whether or not there is comprehensive regulatory oversight.
- If service contracts are widely used, it becomes possible to conduct comparative analyses between water authorities in order to identify the contractors that are best qualified.

### c. *Advantages and Disadvantages*

#### *Advantages*

- It can be highly effective in improving performance in specific identified areas.

- It may involve modest cost savings—but introduced efficiencies have to be balanced against relatively more expensive contractor costs and the addition of a profit margin.
- It can improve customer satisfaction and may lead to higher revenues through, e.g., higher rates of bill collection.
- It may be the most effective approach if the long-term objective is institutional strengthening of PDAMs since service contracts can include a training component.
- It is clearly the preferred approach where regulatory mechanisms are weak or nonexistent.
- It is an effective first approach to PSP if the validity of alternative approaches is unclear or if a sequenced approach to greater PSP involvement is chosen.
- It appears to be the most consistent option with regard to the current state of government decentralization and the capacity of local government to assume responsibility for complex negotiations with private sector firms.

#### *Disadvantages*

- It does little to address the fundamental problem of placing PDAMs on a more rational and self-sustaining economic footing.
- It fails to tap the financial resources of the private sector. In comparison to alternative approaches, budgetary savings are minimal and may be nonexistent.
- It does little to accelerate achievement of PELITA targets.
- It forgoes the opportunity to significantly strengthen the private sector.
- It is an inadequate response to the proclaimed policy of significantly increasing PSP in the water sector and falls far short of governmental objectives in this respect.

## 6. PUBLIC POLICY DECISION-MAKING FRAMEWORK

GOI has established a policy of encouraging private sector participation. As the brief review in this Paper suggests, policies promoting PSPUWS will have wide-reaching institutional effects. Although PSPUWS may generate benefits to consumers and GOI, institutions and practices will have to be revised to accommodate the requirements of the private sector without which it will not participate.

It is essential that GOI determine clear and detailed public policies with regards to each PSPUWS Instrument. These public policies must be determined fully before any program of implementation is attempted. Once formulated, these public policies must be announced to the public sector—which will be asked to participate in Indonesia's water supply activities in accordance with those public policies—and be clearly conveyed to PDAMs and PDABs—which will be required to implement those public policies through the development of project-specific programs and the award to the public sector of project-specific contracts and investment opportunities.

Public policies regarding PSPUWS must be set by GOI. Those public policies must be established clearly and with the consensus of all agencies of GOI which must implement those public policies before PDAMs and PDABs may be expected to carry out those public policies with regard to specific projects. It is insufficient if GOI establishes only a general public policy regarding PSPUWS, i.e., a public policy that such PSPUWS is favored. GOI must establish distinct policies with regards to each of the different PSPUWS models. Once public policies have been established, they must be clearly conveyed to PDAMs and PDABs so that the policies may be implemented with regards to specific projects. They must also be publicized so that the private sector will be aware of in which activities PSPUWS will be welcome, in which activities PSPUWS will be unwelcome, and under what terms and conditions the private sector will be permitted to play a part in Indonesia's water supply program. This will allow the private sector to ascertain its level of interest in any such participation, will prevent the private sector from wasting its time and resources and those of the GOI in pursuing PSP projects which will ultimately be rejected by GOI, and will create confidence with regards to the way PSPUWS will operate which is essential for the planners of prospective private sector investment and contract performance activities.

In order for the GOI to establish its public policies regarding the various possible PSPUWS instruments, this paper has suggested a number of public policy oriented questions. These should help the GOI determine its various PSPUWS public policy.

There are three categories of background facts which must be assembled and analyzed. Those three categories are:

- (a) The benefits which GOI expects to realize from all forms of any particular PSPUWS instrument;



- (b) The public policy goals of the GOI which may be in conflict with all or specific PSPUWS instruments; and
- (c) The special conditions which exist in Indonesia which would make the use of all or specific PSPUWS instruments difficult or inappropriate.

Among the facts and conclusions which may be determined regarding the first point could be increased efficiency, new sources of financing, or transfers of activities from the public to the private sector. It is important in evaluating possible benefits from PSPUWS to define precisely what is meant by those benefits. For example, everyone would agree that efficiency is a desirable benefit, but various parties may define the term "efficiency" very differently. Some in the GOI may define increased efficiency in its water supply program as providing water to consumers at a lower price. Others might define that term to mean the provision of improved services to a larger group of consumers. The private sector may define "efficiency" as meaning the maximization of its net revenues from PSPUWS. "Efficiency" may be defined as some combination of these different concepts. If the different concepts are incompatible one with the other, there can be no complete determination of what is expected in the way of benefits from PSPUWS without first defining what the term means.

Regarding the second point, there are a number of public policies of the GOI with regards to water supply activities which have already been formulated. One example is the principle that the wealthier consumers of water should pay tariffs that are higher than the production cost of water in order to subsidize the delivery of water to poorer consumers. Some of these public policies have been expressed in current laws and regulations. Some of them are even mandated by the Basic Law.

Regarding the third point, there are conditions which are unique to Indonesia which will strongly influence the benefits which PSPUWS may be expected to provide and the willingness of the public sector to participate in Indonesian water supply activities. For example, the ability of consumers to pay commercial rates for water will strongly affect the willingness and ability of the private sector to participate. The competence of the Indonesian private sector to perform services in urban water supply activities more effectively than those services are now being performed by PDAMs will be decisive in any determination of whether specific PSPUWS instruments may be expected to result in improved efficiency. If the existing public sector has no competence in this field, or if the number of private sector parties with such competence is so small that they would not create competitive conditions for the award of service contracts, no efficiencies would be gained by awarding PSPUWS service contracts. This may compel the GOI to reconsider PSPUWS promotion with regards to the award of some service contracts; to engage in a program of training and encouragement in order to develop a private sector capability to perform such contracts; or to adopt more rigorous regulatory programs to monitor, evaluate, and revise its use of certain PSPUWS models.

Other conditions which are unique to Indonesia and its water supply which may influence GOI policies and private sector opportunities regarding PSPUWS are the institutional, financial, and physical condition of existing water utilities; the degree to which the strength and convertibility of the Indonesian rupiah may affect the decisions of investors; and the requirements and effectiveness of current Indonesian laws and regulations and the Indonesian judicial system. In every instance, GOI policy regarding PSPUWS instruments must be based on a cognizance, and take into account, existing Indonesian circumstances.

There are fourteen steps posed as questions in the proposed policy decision-making framework. The step-by-step decision-making process in question form are set out below. They are:

- (1) Has the GOI made a determination of public policy that requires it to alter the current mix in the Indonesian economy of the relative strengths of its public and private sectors?
- (2) What problems has the GOI determined exist in its water supply activities which it desires to correct through some means, which may include PSPUWS?
- (3) What options exist other than PSPUWS to remedy the identified problems deficiencies and to achieve the objectives of GOI regarding its water supply activities?
- (4) What benefits does the GOI believe may be gained through PSPUWS?
- (5) What public policies of the GOI may be impaired by PSPUWS?
- (6) Is the private sector—foreign and the domestic—competent and willing to engage in PSPUWS?
- (7) Will PSPUWS be used as a long-term practice or will PSPUWS be encouraged only on a short-term basis in order to achieve limited, intermediate objectives?
- (8) What are the terms and conditions required by the private sector in order for it to be willing to engage in PSPUWS?
- (9) Are those terms and conditions incompatible with more important public policy goals of the GOI and/or is the GOI able to satisfy those requirements?

- (10) To what extent is the GOI willing or able to offer incentives in order to attract PSPUWS?
- (11) If a particular aspect of PSPUWS is determined to be a desirable or acceptable option in achieving GOI objectives in its water supply activities, what are the limiting circumstances under which that aspect of PSPUWS is desirable or acceptable?
- (12) A regulatory structure must be established which may accommodate the interests of the private sector investor while it protects the basic interest of consumers and GOI public policies. Can such a regulatory structure be established and administered?
- (13) How, by whom, and under what terms and conditions will those contracts awarded to and investments authorized for the private sector in Indonesia's urban water supply activities be monitored, reviewed, evaluated, and be subject to authorization?
- (14) How will the private sector be informed of its opportunities and how will implementing agencies of the GOI be informed of the public policy regarding encouragement of that aspect of PSPUWS under the limiting conditions?

PRIVATE SECTOR PARTICIPATION IN URBAN WATER SERVICES  
ISSUES FOR INVESTMENT IN INDONESIA

WORKING PAPER D  
**INSTITUTIONAL CONSTRAINTS  
AND OPPORTUNITIES**

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## Working Paper D

### INSTITUTIONAL CONSTRAINTS AND OPPORTUNITIES

#### EXECUTIVE SUMMARY

This paper deals with institutional constraints and opportunities associated with private sector participation in urban water supply. Its primary purposes are (i) to give a picture of the existing government structure and administrative framework; (ii) to discuss major institutional constraints within the public agencies responsible for urban water supply; and (iii) to review institutional opportunities for increasing private sector participation in urban water supply.

The first major section of the paper provides a thorough picture of the existing government structure and administrative framework, describing the general functions of those agencies involved in urban water supply at central, provincial and local levels. At the central government level, the Ministries of Home Affairs (MOHA) and of Public Works (MOPW) are the two key agencies for urban water supply. The MOHA has overall responsibility through the Provincial Governors for the supervision and development of provincial and local government. Specific responsibility for administrative guidance to the local water enterprises (PDAMs) comes under the Directorate of Regional Finance of the Directorate General of Public Administration and Local Autonomy (PUOD) within MOHA.

The MOPW plays more of a technical role since it is responsible for implementation of a wide range of public works activities including water supply. The Directorate of Water Supply (DAB) within the Directorate General of Human Settlements (Cipta Karya) is the key agency responsible for evaluating water supply projects proposed by different local governments, and for the planning, design, execution and management of the water supply sector. During Repelitas I-IV, the DAB had responsibility for allocating funds, planning, technical design and construction of water supply projects.

At the provincial level, the main agencies involved in water supply are the Provincial Water Supply Project (PPSAB) and the Provincial Monitoring and Development Unit (PMDU). As the provincial arm of the Directorate of Water Supply, the PPSAB supports the planning, construction, management, operation and maintenance of BPAM water supply and distribution network systems. The PMDUs have been established more recently by Joint Ministerial Decision of MOHA and MOPW to assist the PDAMs in improving their performance.

At the local government level, there are two agencies involved in urban water supply activities; i.e., Local Water Supply Enterprises (PDAMs) and the Interim Water Supply Bodies (BPAMs). The PDAMs are autonomous local enterprises responsible to the Heads of Local

Government (Bupati/Walikota), with the main objectives being to build, operate and maintain water supply facilities for the community in an efficient manner. The BPAMs are temporary water supply bodies controlled by the MOPW via its provincial water supply project (PPSAB). There are currently about 151 PDAMs in operation throughout Indonesia as opposed to 140 BPAMs. In view of the decentralization policy of the GOI, there is an ongoing process of converting BPAMs to PDAM status. Hence, the primary public agencies involved in water supply essentially involve two vertical networks:

- the centralized system of MOPW/Cipta Karya/DAB/PPSAB/BPAM which has been responsible for the capital construction of many urban water supply and distribution systems; and
- the emerging decentralization system of MOHA/PUOD/PMDU/PDAM which is assuming greater responsibility for system extension and operations.

The second major section of the paper discusses institutional constraints or problems within the public agencies responsible for urban water supply, including organizational problems, manpower/personnel problem, training problems, lack of management autonomy, etc. The chief organizational problem has to do with the large number of agencies involved in provision of urban water supply. Thus, private investors desiring participation may find it very difficult to obtain approvals or to even understand what their options might be. The primary manpower problem is the limited personnel/manpower capability at the local level, especially on the staff of the PDAMs. Only 2-2.5% of total PDAM staff are managerial and technical staff. Yet another institutional problem is the lack of management autonomy among the PDAMs, which implies that private firms may find the PDAMs to be rather slow and indecisive organizations to deal with if they are negotiating contracts.

The final section of the paper discusses institutional opportunities for increasing private sector participation in urban water supply. The discussion focuses especially on opportunities to improve PDAM performance through private sector participation. In this discussion, a checklist of PDAM functions is formulated, and five broad options for private sector participation (BOT concessions, service contracts, management contracts, lease contracts and technical assistance) are then utilized to explore where and how PDAM performance can be improved in terms of the functions cited.

The final section also provides a review of some ongoing efforts to improve PDAM/BPAM performance. These efforts include technical-operational guidance provided largely by DAB, PPSAB and PMDU; management guidance provided by PUOD; various training programs provided both by MOPW and MOHA; the Water Enterprise Performance Assessment (WEPA) tool organized by DAB to assess the capability of water enterprises; and finally the Water Enterprise Management Information System (WEMIS) developed by DAB as a monthly



monitoring system providing technical and financial-administrative data to evaluate performance.

## WORKING PAPER D

### INSTITUTIONAL CONSTRAINTS AND OPPORTUNITIES

#### 1. INTRODUCTION

This working paper on private sector participation in urban water supplies (PSPUWS) deals with institutional constraints and opportunities. The primary purpose of this paper is to provide the institutional context, and to explicate the institutional problems and opportunities, for increased PSPUWS.

Section 2 gives a picture of the existing government structure and administrative framework, summarizing the general functions of those agencies involved in urban water supply at central, provincial and local government levels. This discussion provides the institutional setting within which various options for PSPUWS can be considered.

Section 3 then proceeds to discuss some of the institutional constraints and problems within the public agencies responsible for urban water supply. The implications of these constraints for private sector participation are also addressed in the section.

The final section concentrates on a discussion of institutional opportunities for increasing PSPUWS. This includes both a review of ongoing efforts to improve the performance of PDAMs and other agencies as well as a discussion of possible opportunities to improve PDAM performance by means of private sector participation.

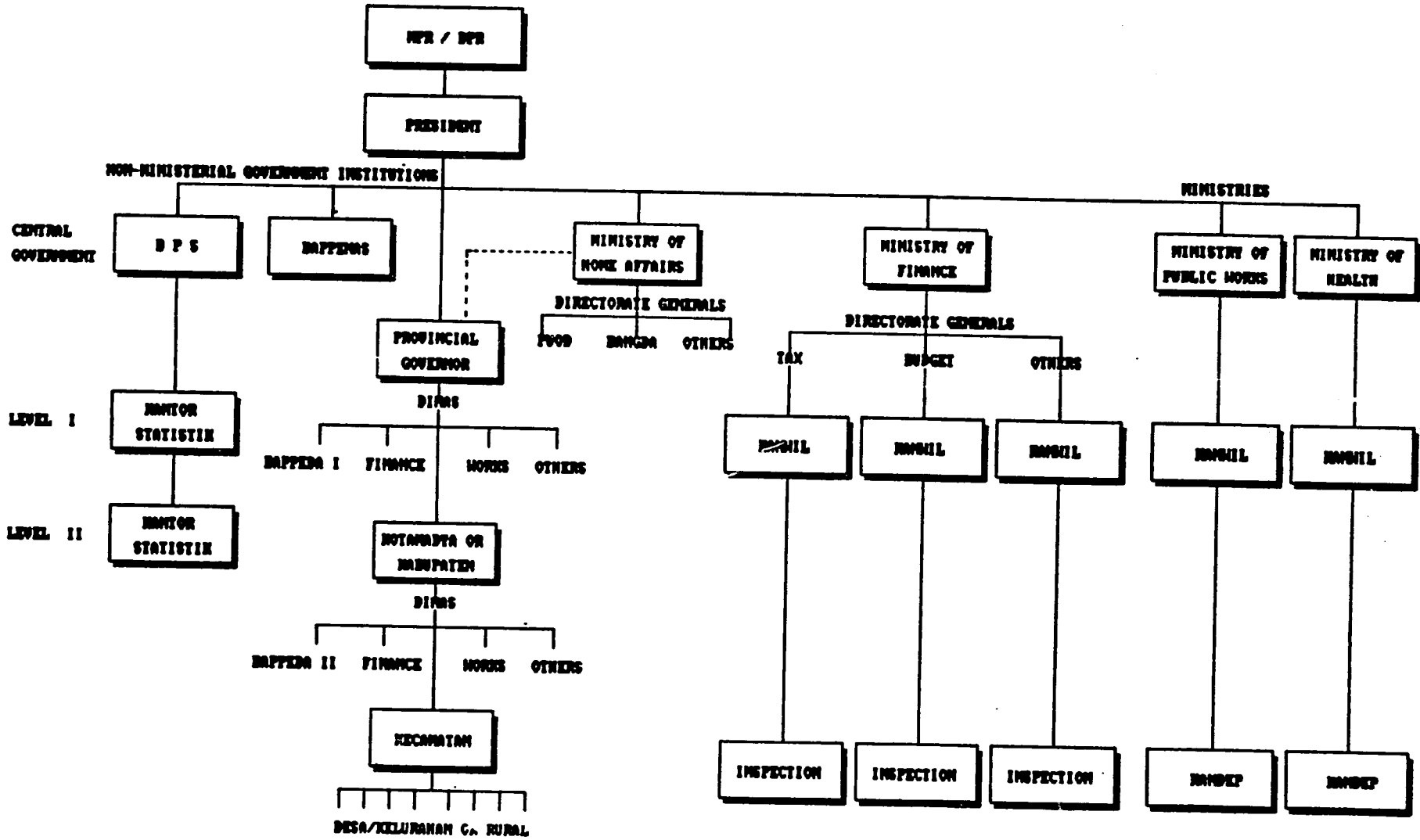
#### 2. GOVERNMENT STRUCTURE AND ADMINISTRATIVE FRAMEWORK

In this first major section of Working Paper D, we propose to give a picture of the existing government structure and administrative framework, describing the general functions of those agencies involved in urban water supply at Central, Provincial and Local levels. It is within this complex public institutional setting that the role of PSPUWS must be addressed in the balance of this paper.

The Central Government comprises a number of sectoral Ministries. The main functional divisions within most of the Ministries are Directorates General, each of which is divided into Directorates and Sub-Directorates. The various sectoral Ministries also have Provincial Offices (KANWILs), which report to their Ministry, but are coordinated locally by the Governor. Figure 1 indicates the overall government structure in simplified form at Central, Provincial and Local levels.

FIGURE 1

Structure of Government in Indonesia



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## 2.1 Central Government Agencies Involved in Water Supply

A number of Central Government agencies are involved in various aspects of urban water supply provision; i.e. Ministry of Home Affairs (MOHA), Ministry of Public Works (MOPW), Ministry of Finance (MOF), the National Planning Agency (BAPPENAS) and the National Investment Coordinating Board (BKPM).

### ***Ministry of Home Affairs (MOHA)***

This Ministry has a strong involvement with urban issues through its responsibilities for the supervision and development of local government. Its organizational structure is indicated in Figure 2. MOHA has overall responsibility through the Provincial Governors for all aspects of provincial and local government, including government-owned provincial and local enterprises (Perusahaan Daerah, PDs) e.g, for the water supply sub sector, PDABs and PDAMs.

Within MOHA there are five Directorates General of which the following two have particular responsibilities in relation to public utility services :

- Directorate General of Public Administration and Local Autonomy (PUOD);
- Directorate General of Regional Development (BANGDA)

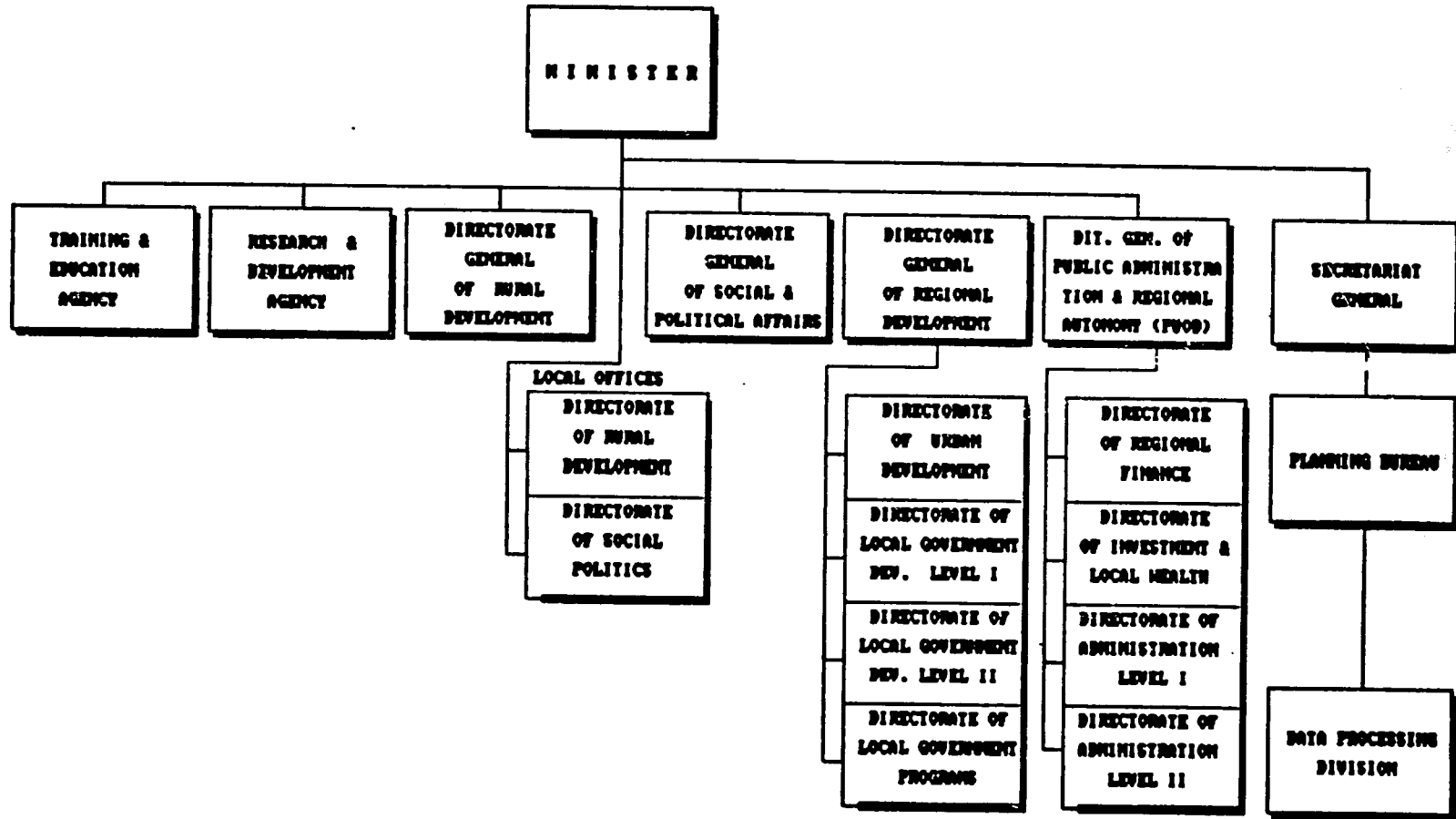
The principal functions of PUOD are: (i) to formulate technical policies and to give guidance and approval in the fields of regional government administration, in accordance with ministerial direction based on established policy; (ii) to give assistance to the provincial and local governments; and (iii) to monitor and control implementation within established policy frameworks.

The Directorates of Regional Finance and of Administration (Level II) within PUOD are most actively involved with urban matters, their major activities including:

- development of urban administration through decisions to expand municipality boundaries, upgrade towns to municipality status, or transfer district capital status between towns in a region;
- guidance to local authorities in the preparation of master plans, review and approval of such plans;
- improvement of urban services by assisting local government in the administrative aspects of infrastructure operation and development, *particularly water supply*. This involves raising funds, budgeting for

FIGURE 2

Ministry of Home Affairs—  
Administrative Structure



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operations, staffing requirements, strengthening management and maintenance procedures;

- formulation of policies in connection with the above activities.

The Subdirectorate of Public Enterprises within the Directorate of Regional Finance has specific responsibility for administrative guidance to the PDAMs and other regional enterprises.

The Directorate General of Regional Development (BANGDA) plays a coordinating role for cities and towns within the region, and administers the INPRES development grant program. The Directorate of the Urban Development within Bangda is specifically concerned with all aspects of urban administration and planning.

### ***Ministry of Public Works (MOPW)***

The primary role of this Ministry is in implementation of a wide range of public works activities, with the Directorates General of Cipta Karya (Human Settlements), Bina Marga (Highway Construction), and Pengairan (Water Resources) being most heavily involved. Its organizational structure is indicated in Figure 3. In the case of water supply, MOPW supports the MOHA on an agency basis with implementation of water supply developments.

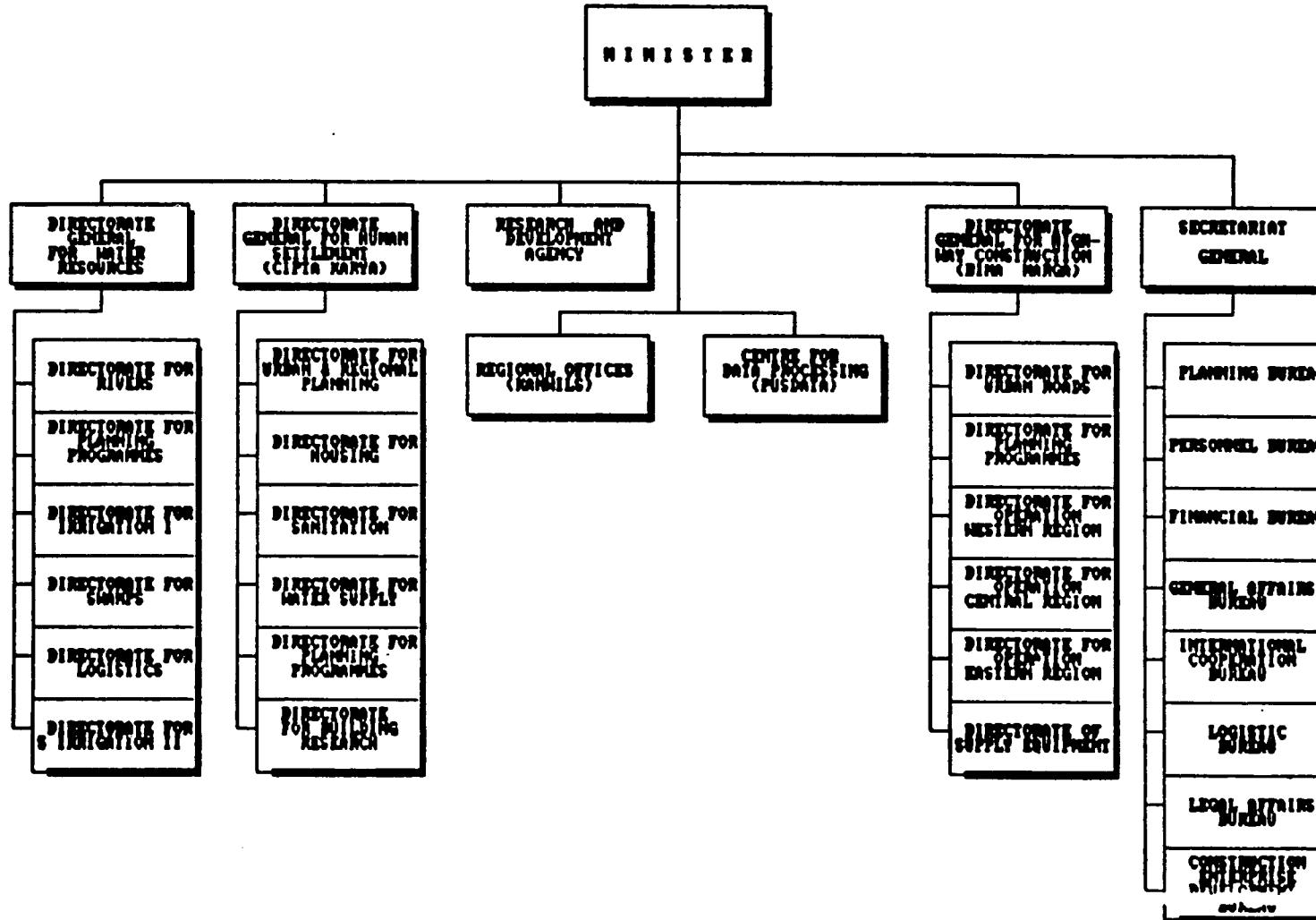
The Directorate of Water Supply within the Directorate General of Human Settlements is responsible for evaluating water supply projects proposed by different local governments, and for the planning, design, execution and management of the water supply sector. During Repelitas I, II and III the MOPW, through its Directorate of Bina Program (Program Planning Directorate) and Directorate of Water Supply, had responsibility for allocating funds, planning, technical design and construction of water supply projects. The Directorate of Water Supply's organizational structure is indicated in Figure 4.

The principal functions of the Directorate of Water Supply are:

- to plan urban water supply systems and register the number and locations of raw water resources;
- to formulate technical plans for raw water provision;
- to prepare, implement, control and guide water supply developments;
- to provide and manage equipment and supplies for water supply development;
- to give technical guidance in managing water supply projects.

FIGURE 3

Ministry of Public Works—  
Administrative Structure

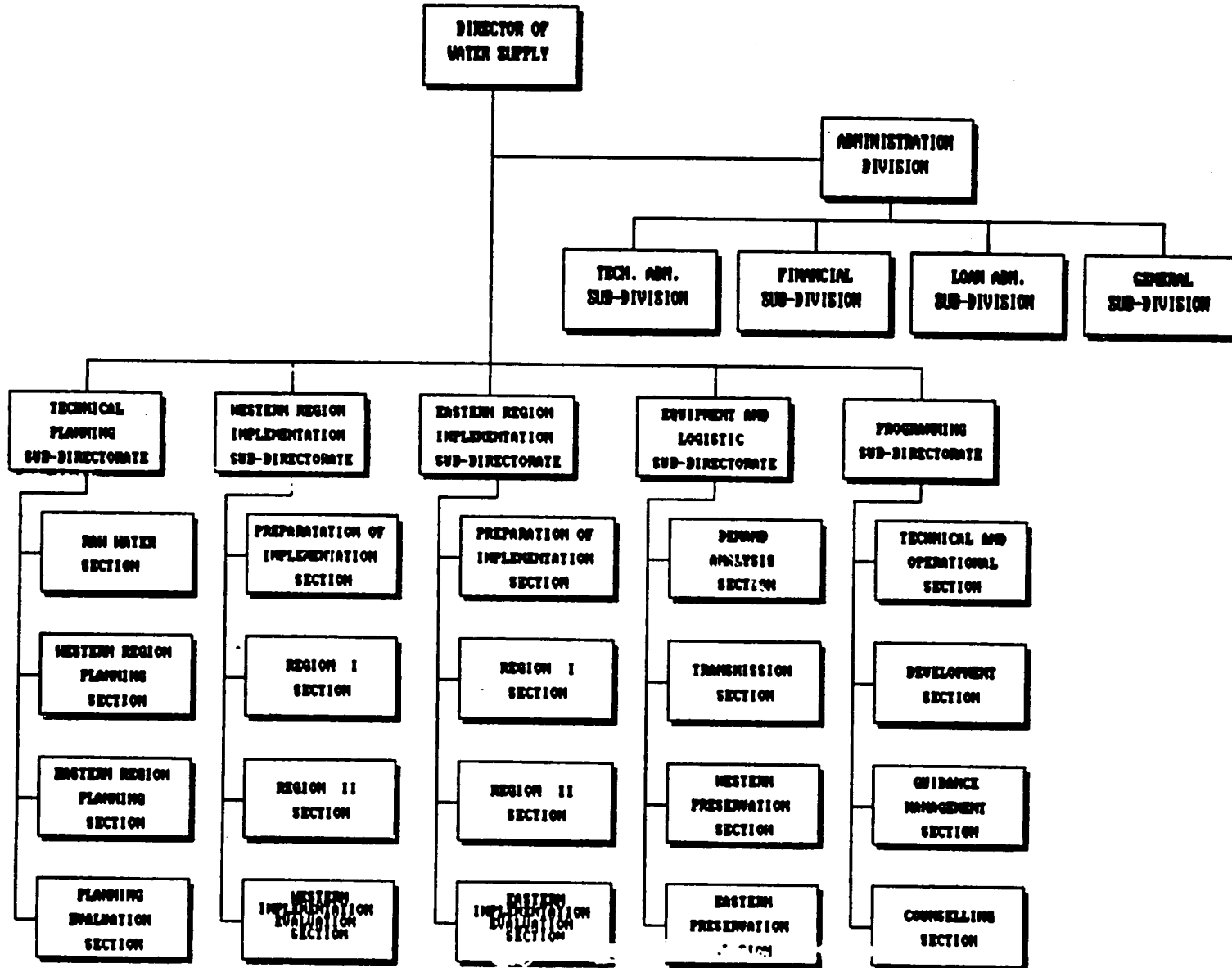


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FIGURE 4

Directorate of Water Supply  
Organization Structure



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- to manage the administrative activities of the Directorate.

The Directorate of Bina Program's primary contribution to the urban water supply sector has been in support of integrated planning through the "Integrated Urban Infrastructure Development Program" (IUIDP), in which water supply is treated as one of several sectors to be planned and implemented within local urban development projects. It is important therefore to ensure that plans for private sector participation in water supply projects are also taken into account in the IUIDP program. If, for example, private sector participation involves private investment off-budget, then public funds required for urban water supply may be reduced and there would be "additionality." Additionality is one of the main prerequisites for private sector participation. (See Paper E for a full discussion of additionality).

### ***Ministry of Finance (MOF)***

Matters concerning provision of urban services, including water supply, in this Ministry involve offices within the Directorates General of Budget, Internal Monetary Affairs and Taxes. The Ministry's organizational structure is indicated in Figure 5.

All central government budget (APBN) allocations are prepared through the Directorate of Development Budget within the Directorate General for Budget.

The Directorate General for Internal Monetary Affairs develops and administers subsidiary loans or project agreements with each city, through the Directorate of Investment Funds.

The Directorate for State Wealth (PKN) deals with different aspects of development projects put forward by Ministries such as Public Works, Housing, Communications, etc. It evaluates feasibility studies put forward by Cipta Karya or other agencies and costs of projects. PKN also has to determine the proportions of funding for local projects which should come from Central Government subsidies, and arrange appropriate loans.

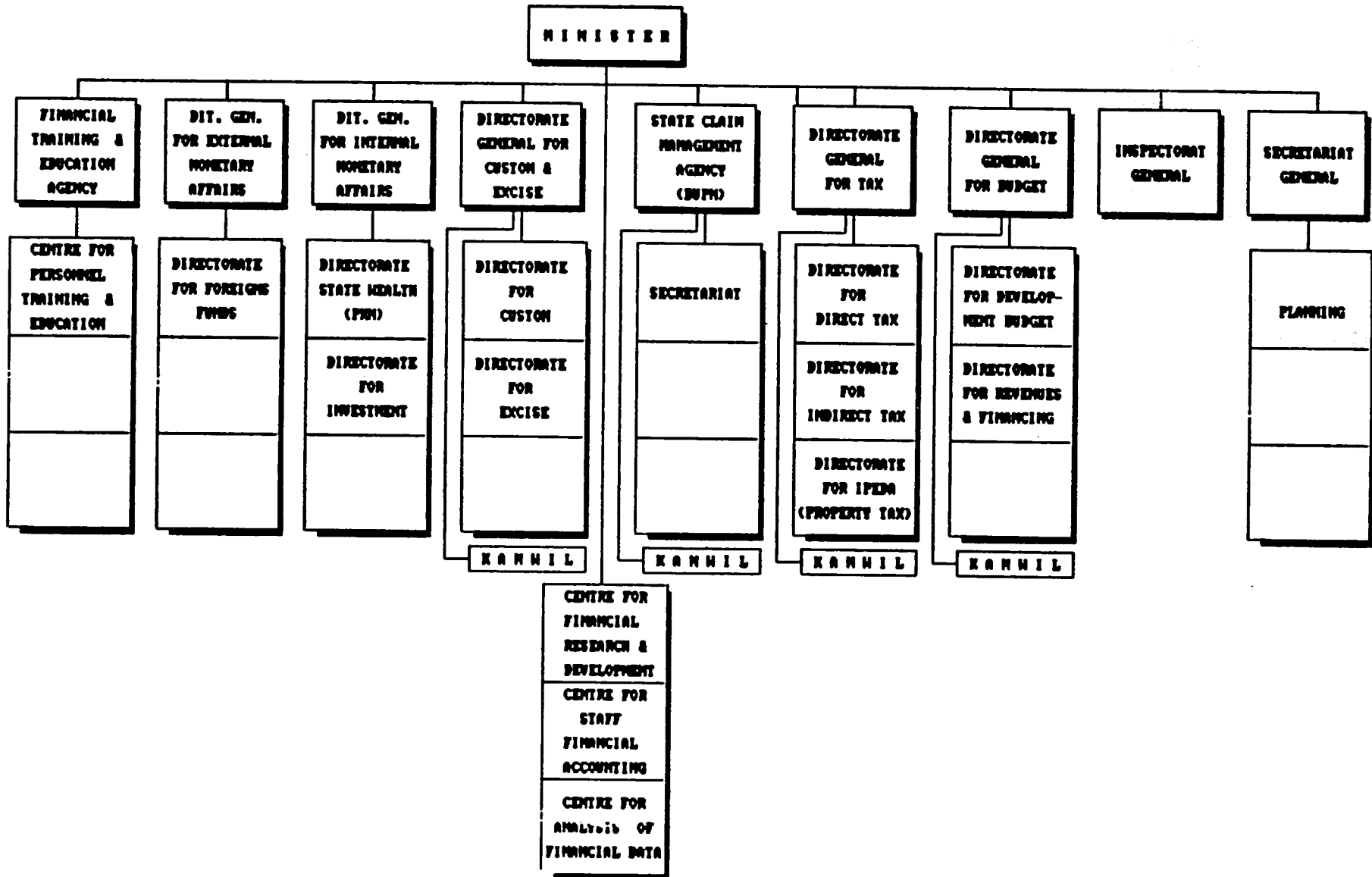
There appear to be no fixed procedures whereby the MOF would become, in normal circumstances, directly involved in the establishment and operation of joint venture companies for water supply development. Implementation of MOF policy in this respect is already delegated to the BKPM and is embodied in the licensing procedures applied to prospective investors by BKPM.

### ***National Planning Board (BAPPENAS)***

BAPPENAS plays a coordinating role between the other Ministries, evaluating projects put forward by them for Central Government funding, determining priorities and deciding which are to be included in the Annual Implementation Plan.

FIGURE 5

Ministry of Finance—  
Administrative Structure



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BAPPENAS is comprised of several sectoral divisions, each dealing with specific types of projects, and a Regional Affairs division which coordinates development between the regions. Its organizational structure is indicated in Figure 6.

### ***National Investment Coordinating Board (BKPM)***

The BKPM is a non-departmental government agency responsible to the President of Indonesia. The main function of the BKPM is to assist the President in determining government policies on investment, in processing investment approvals and the issuing of licenses, and in supervising investment implementation.

The specific major activities include :

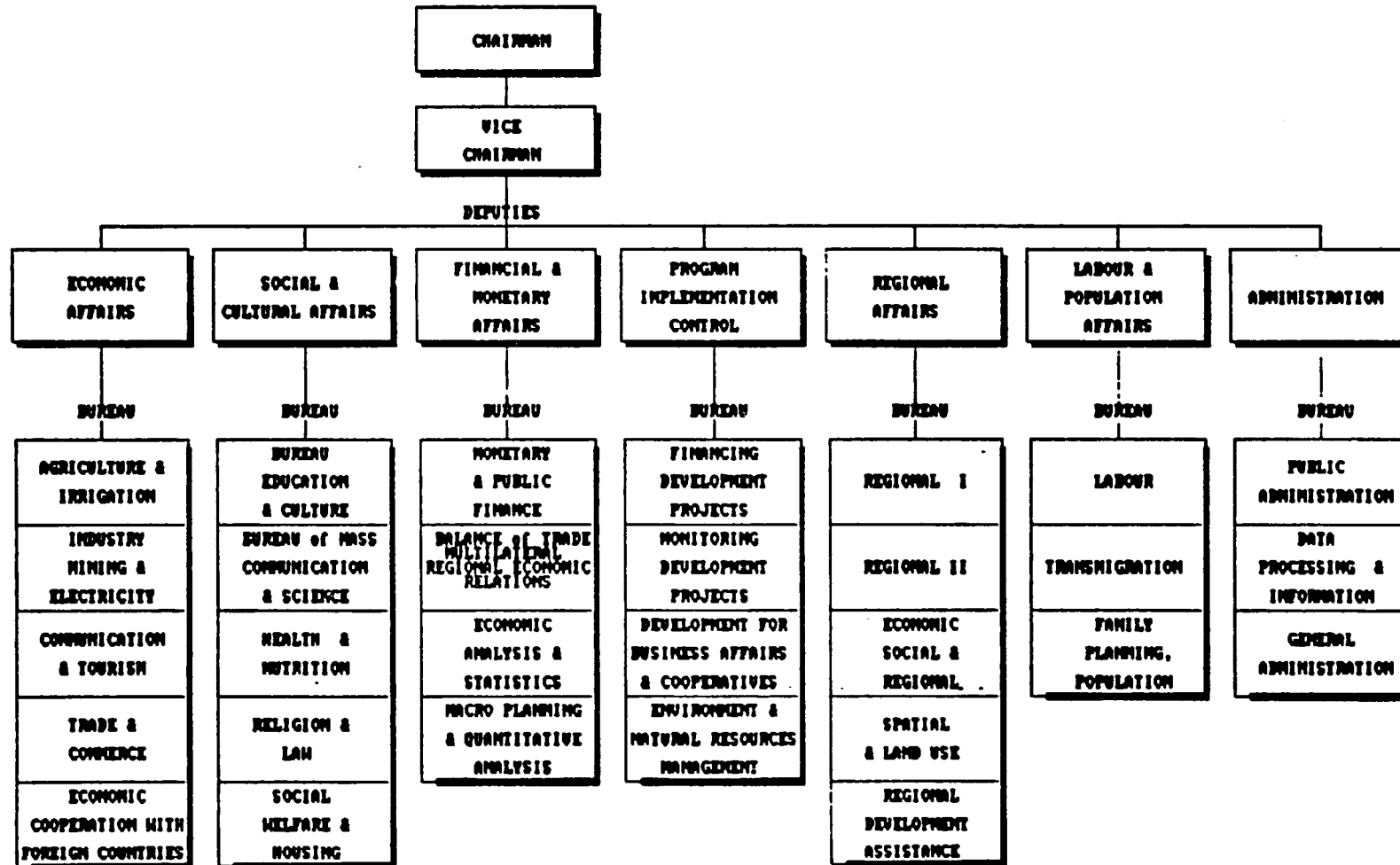
- the formulation of investment policy;
- coordination of sectoral and regional investment and formulation of an investment master plan;
- identification of investment priorities and sectors that are closed for investment;
- direction of investment to provinces in accordance with the master plan;
- providing information, guidance and promotional communications;
- screening and evaluation of investment applications;
- submitting evaluation results of foreign investment applications for approval by the President;
- approving domestic investment applications;
- issuing licenses and permits for investment implementation under authority of the concerned ministry;
- provide services and supervise implementation of approved investments.

BKPM has prepared a list of sectors that are closed for investment, which has been developed by BKPM through coordination with the sectoral ministries.

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FIGURE 6

BAPPENAS—Administrative Structure



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## 2.2 Provincial Level Agencies Involved in Water Supply

At the provincial level, the main agencies involved in water supply are Proyek Peningkatan Sarana Air Bersih (PPSAB) or Provincial Water Supply Project (PWSP) and Provincial Monitoring and Development Unit (PMDU). The IUIDP Technical Team, usually located within Sub-Dinas Cipta Karya Tk. I, also plays a role in integrated IUIDP planning, with urban water supply being treated as one of several sectors to be planned and implemented within local urban development projects.

### *Provincial Water Supply Project (PWSP)*

The PWSPs or PPSABs were established based on Joint Decree No. 3 and 4, 1984 and are responsible to the Directorate of Water Supply (Direktorat Air Bersih), Directorate General Cipta Karya, MOPW.

As the provincial arm of the Directorate of Water Supply, the main tasks of PPSAB are to support the planning, construction, management, operation and maintenance of BPAM water supply and distribution network systems. As such these PPSAB offices have "project" rather than "structural" status, and should cease to exist when all BPAMs have been converted to PDAMs. The organizational structure of PPSABs is indicated in Figure 7.

### *Provincial Monitoring and Development Unit (PMDU)*

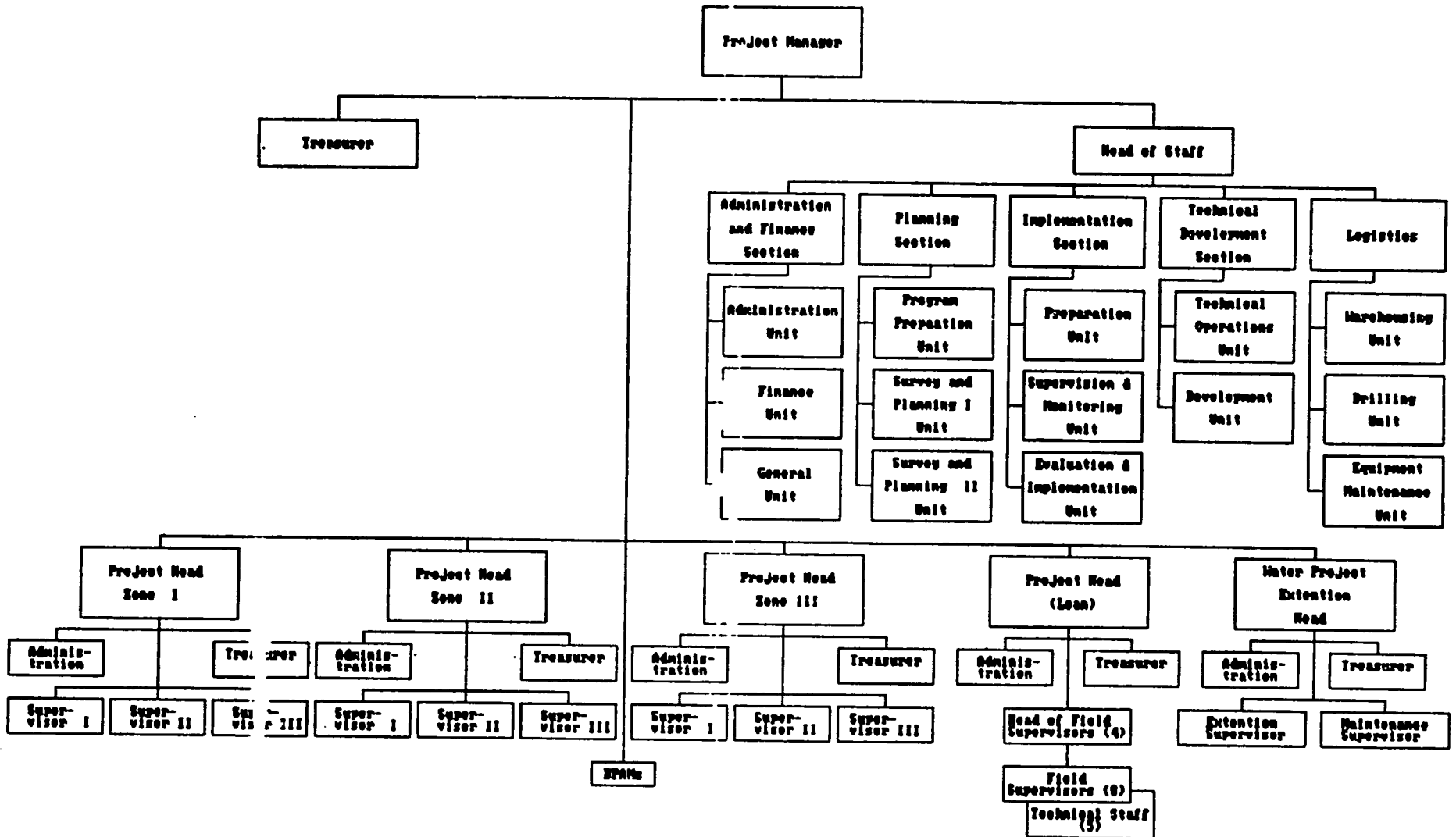
The PMDUs were established based on the Joint Ministerial Decision of the MOHA and MOPW No.4/1984 (27/KPTS/1984), and the ministerial decision No. 690-1595, 15 November 1985, of the MOHA. At this time, there are 21 PMDUs throughout Indonesia. Each PMDU is responsible to the Kepala Sub Dinas Cipta Karya in each province. The PMDU organizational structure is indicated in Figure 8.

The main tasks and functions of the PMDUs are :

- to monitor the performance of PDAMs on a regular basis and provide the central and regional authorities with the necessary information and reports;
- to assist the water enterprises in improving their efficiency as well as to provide technical and non-technical services to these enterprises;
- to report on a regular basis to the Provincial authorities on the performance of PDAMs within their jurisdiction;
- to assist in identifying training needs in the water enterprises in close cooperation with the Regional Training Center;

FIGURE 7

Typical Organization Chart of PPSAB

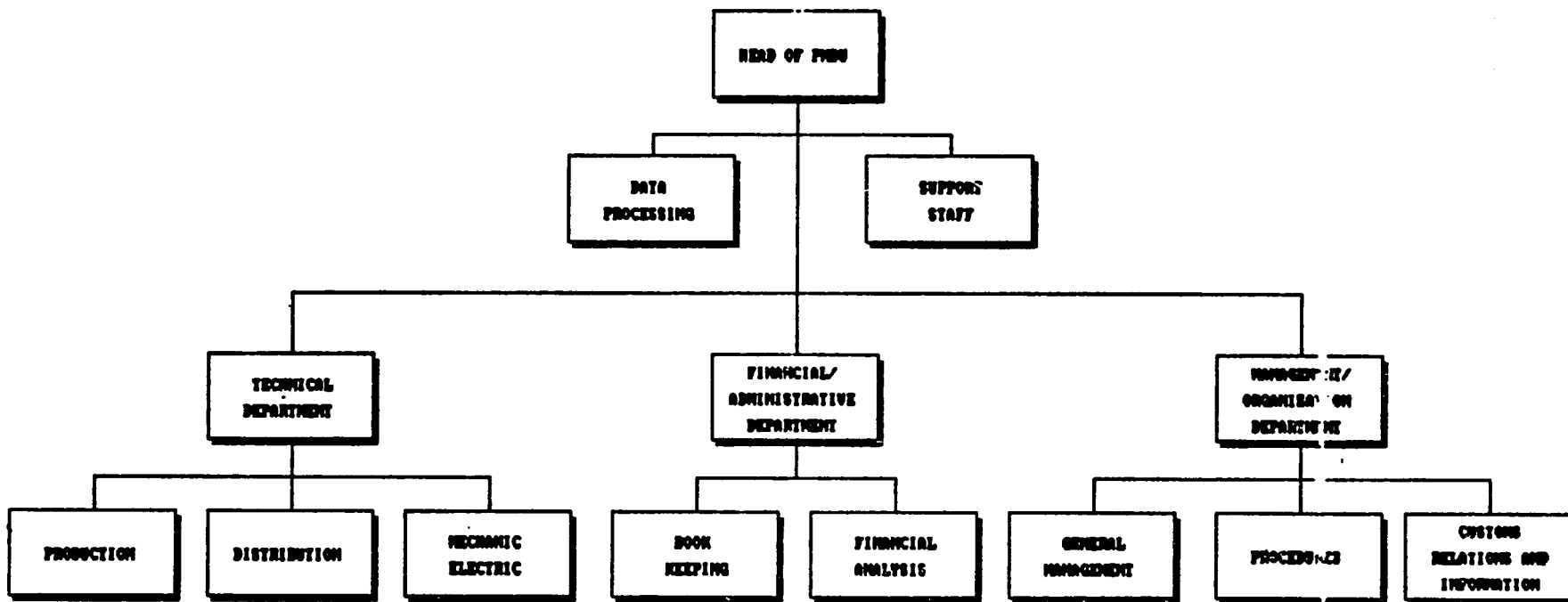


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FIGURE 8

Organizational Structure of PMDU



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- to assist water enterprises in preparing and assessing investment proposals for new water supply projects, and to obtain the necessary financial support for the implementation of the proposed projects.

Partly because the PDMUs have been created only within the past five years, they are still very weak in carrying out their functions. This is primarily because their professional staffs remain underqualified and inexperienced.

### 2.3 Local (Tk II) Level Agencies Involved in Water Supply

Local Government is known as Level II administration and consists of 50 Kotamadya (Municipalities) and about 250 Kabupaten (Regencies) throughout Indonesia. Kotamadya and Kabupaten are autonomous bodies under appointed Walikota/Bupatis and elected assemblies, with powers to prepare their own budget and master plan, collect local revenues and carry out development projects including water supply, subject to provincial approval.

There are two agencies involved in water supply activities within this Level II local government; i.e Perusahaan Daerah Air Minum (PDAM) or Local Water Supply Enterprise (LWSE) and Badan Pengelolaan Air Minum (BPAM) or Interim Water Supply Body (IWSB).

#### *Local Water Supply Enterprise*

The PDAMs were established based on Joint Decree No.4/1984, No 27/KPTS/1984, of the Ministry of Home Affairs and the Ministry of Public Works. Each PDAM is managed by a President Director acting with a board of supervisors who are executive heads of departments of the local government. This board of supervisors consists of Walikota/Bupati (chief), Secretary of the Local Government/Sekwilda (member), chief of Dinas PU Tk II (member), chief of Dinas Kesehatan Tk II (member) and chief of Regional Chamber of Commerce and Industry/KADINDA (member).

As a local government enterprise, the PDAM is responsible to the Walikota/Bupati. There are three types of PDAM, based on number of house connections, i.e :

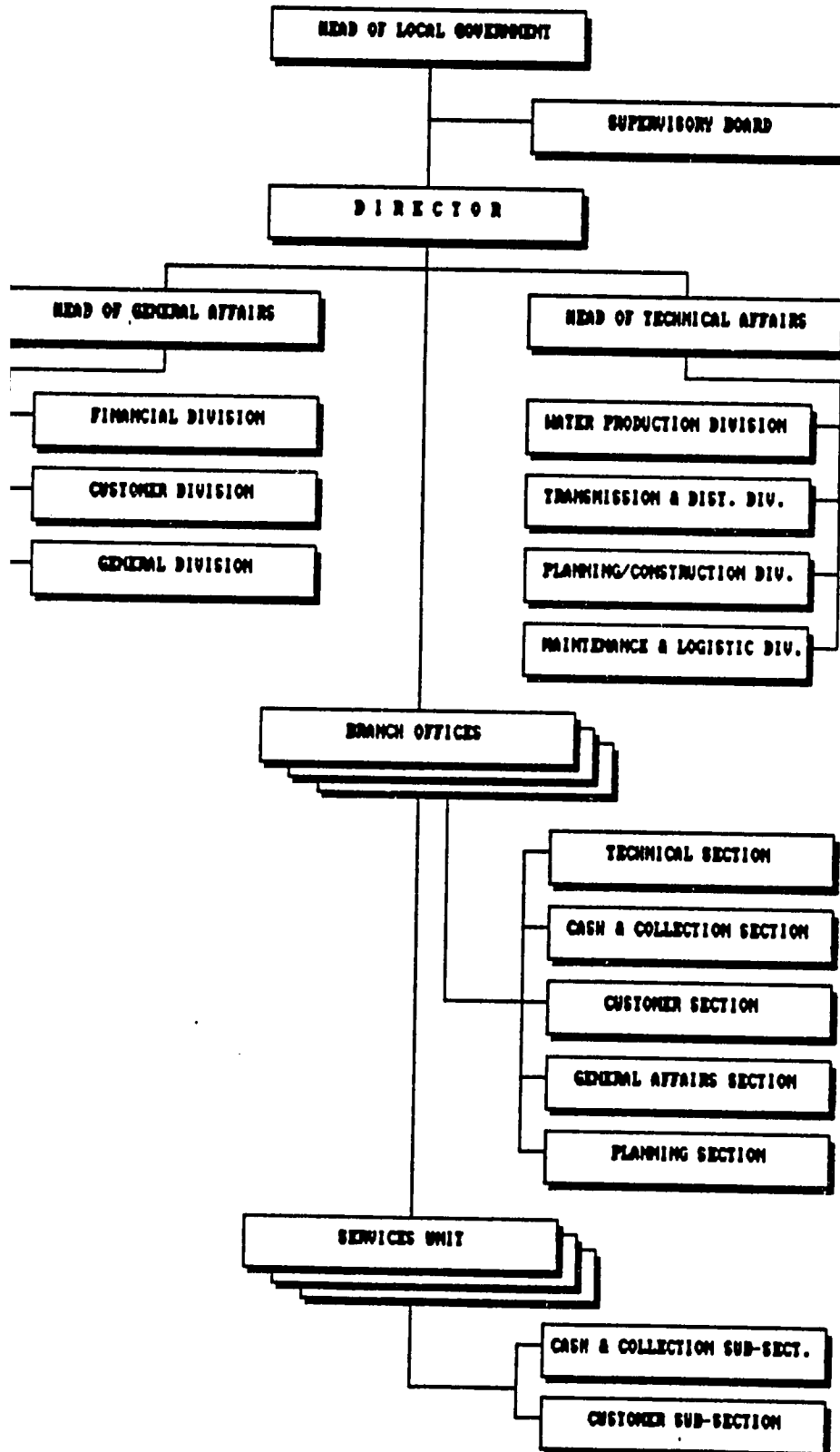
- type A, are PDAM which serve < 50,000 house connections;
- type B, PDAM which serve 50,001-100,000 house connections; and
- type C, PDAM which serve > 100,000 house connections.

The organizational structures of each type are indicated in Figure 9A, Figure 9B, and Figure 9C.



FIGURE 9A

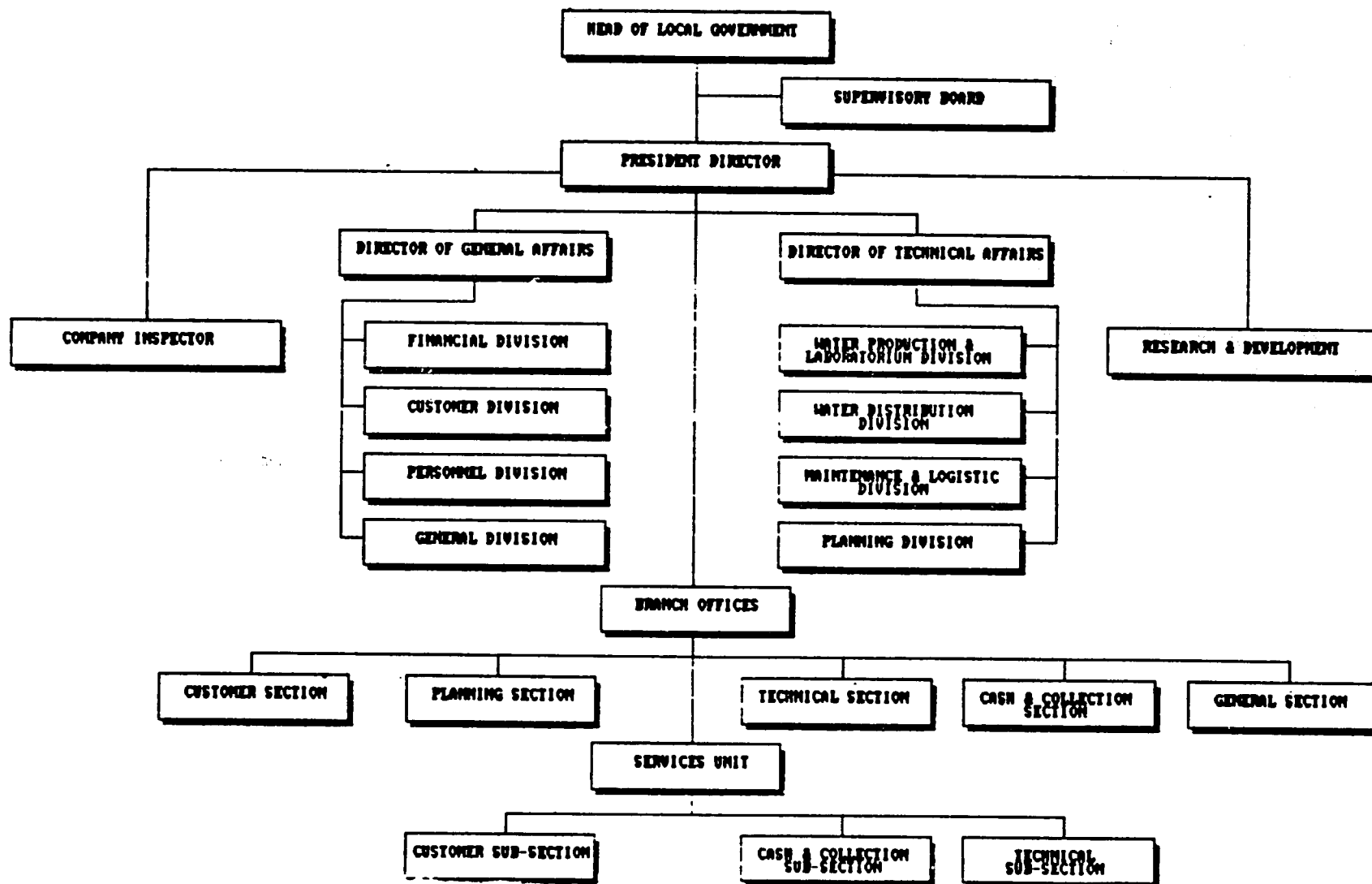
PDAM Organization Structure (Type A)



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FIGURE 9B

PDAM Organizational Structure (Type B)

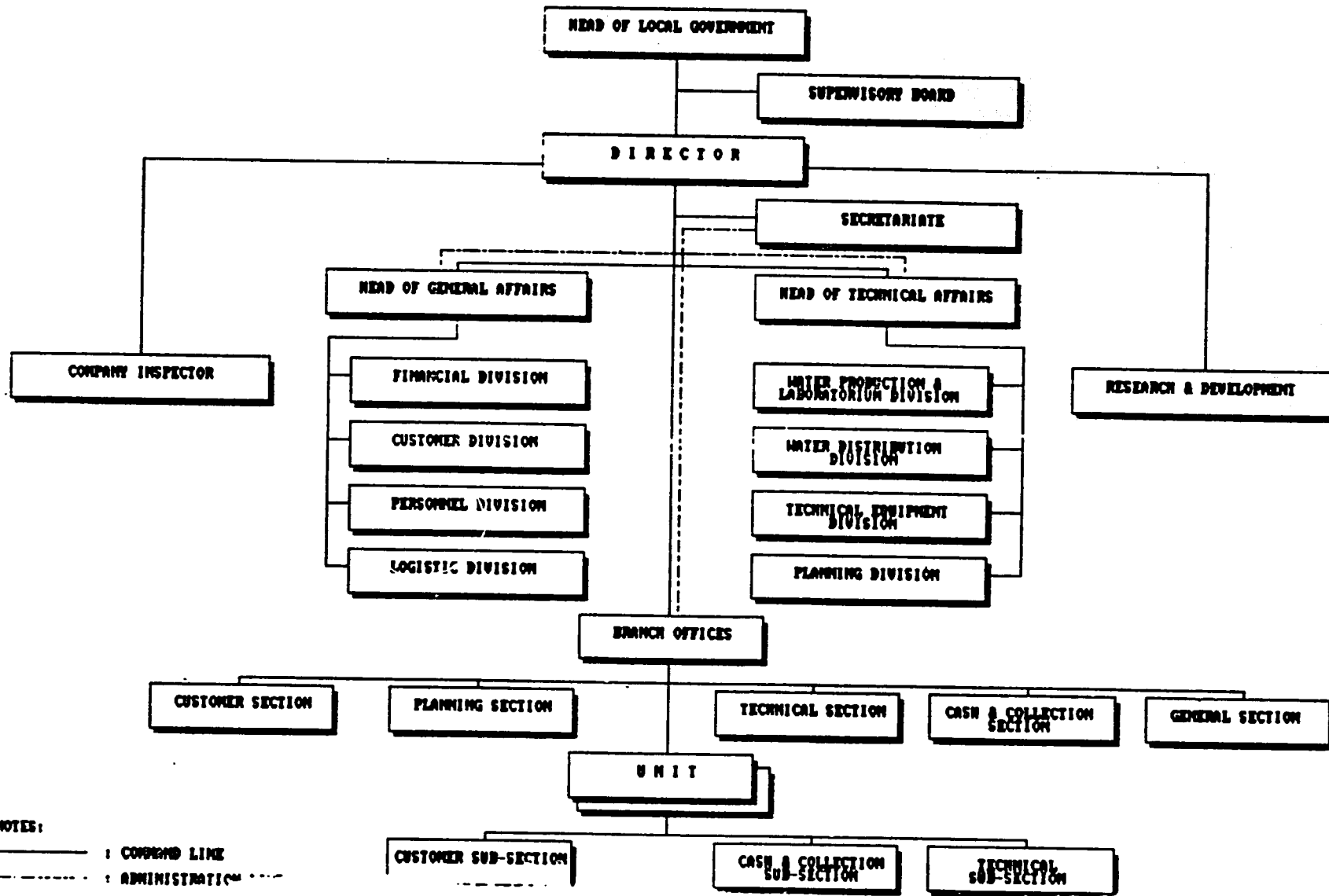


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FIGURE 9C

PDAM Organizational Structure (Type C)

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The PDAM organizational structure consists mainly of four divisions, i.e (i) the general affairs division dealing with finance, customers and general affairs; (ii) the technical division, dealing with water production, distribution, planning and equipment; (iii) branch offices, which also have technical, cash and collection, customer, general, and planning sections; and (iv) services unit which consists of cash and collection and customer sub-sections. The main structure of all of the three types of PDAM organizations is basically the same, with the differences being relatively minor.

The main tasks of PDAM are to manage the water enterprises in all aspects: technical, administration/personnel and customer relations.

The objectives of PDAM are :

- to build, maintain and operate the supply facilities for drinking water;
- to control the fair and efficient use of drinking water; and
- to organize the service of drinking water to the community in a systematic manner.

A PDAM is managed by a President Director acting with a Board of Directors who are executive heads of departments of the organization. The President Director and the Board of Directors are responsible to a supervising committee which is called the Supervisory Board.

The Supervisory Board is composed of:

- Chairman : Head of the local government level II (Walikota or Bupati)
- Secretary : Head of the economic department of the local government level II
- Members : — Head of the general government department of the local government level II  
— Head of the Public Works Dinas  
— Head of the Health Dinas

In the regulation of the MOHA No.690-1572 dated November 8, 1985, it is mentioned that the functions of the Supervisory Board are as follows:

- to formulate the policies of the enterprise in accordance with the general policies of the local government;

- to supervise the Board of Directors;
- to state and execute the policies, decrees, statements, and instructions of the Head of local government in relation to provide guidance to local government enterprise;
- to supervise the management of the enterprise, including the execution of the work plan, work program, and budget, and to submit its evaluation to the head of the local government;
- to make recommendations to the head of the local government regarding the enterprise's work plan and budget, received from the Board of Directors;
- to supervise the attainment of management efficiency; and
- to supervise all the enterprise's activities (e.g. to check the cash books, letters and all documents).

The planning function of the PDAMs generally remains weak at the present time, chiefly because most of these enterprises are new and only recently transferred from BPAM status in the MOPW. When they were BPAMs they depended heavily on PPSAB for managerial and technical direction (including planning). Given limited senior staff, most PDAMs continue to rely heavily on PPSAB.

#### *Interim Water Supply Body*

The BPAMs were established on the basis of MOPW Decree No.269/KPTS/1984. BPAM, the embryo of the Water Enterprise (PDAM), is controlled by the Ministry of Public Works via its provincial water supply office (PPSAB). Each BPAM is responsible for development of new piped water supply systems, as well as management and operation of existing water supply systems. When a particular BPAM reaches the "break-even point", or when the income is considered to be sufficient to cover all expenses, the system is transferred to the respective Level II authorities, and becomes a PDAM.

There are 3 types of BPAM, i.e:

- type A, are BPAM which serve < 2,500 house connections;
- type B, BPAM which serve 2,501-5,000 house connections;  
and
- type C, BPAM which serve 5,001-10,000 house connections.

The organizational structures of each type are indicated in Figure 10A, Figure 10B, and Figure 10C.

All of these organizational structures basically consist of two main divisions dealing with non-technical and technical matters, i.e. administration and finance division and technical division. The administration & finance division consists of four sections, i.e. cash & collection, accounting & billing, general administration & personnel and customer relations. The technical division also consists of four sections, i.e. water production, distribution, planning & supervision and maintenance. The differences between types is only in the sub-sections.

There are currently about 140 BPAMs in operation throughout Indonesia as opposed to 151 PDAMs. The Directorate General of Cipta Karya plans to transform many of these BPAMs into PDAMs (see next section) during the period 1990-1993.

In nearly all local governments, the BPAMs have been the initial water supply agencies created by MOPW/PPSAB as new piped water supply systems were developed in many towns. Although BPAMs are currently being phased out, there is still considerable potential for private sector participation in areas where they function. The types of private sector participation are much the same as with the PDAMs.

#### **2.4 Dynamics of Transition from BPAM to PDAM System Under Decentralization**

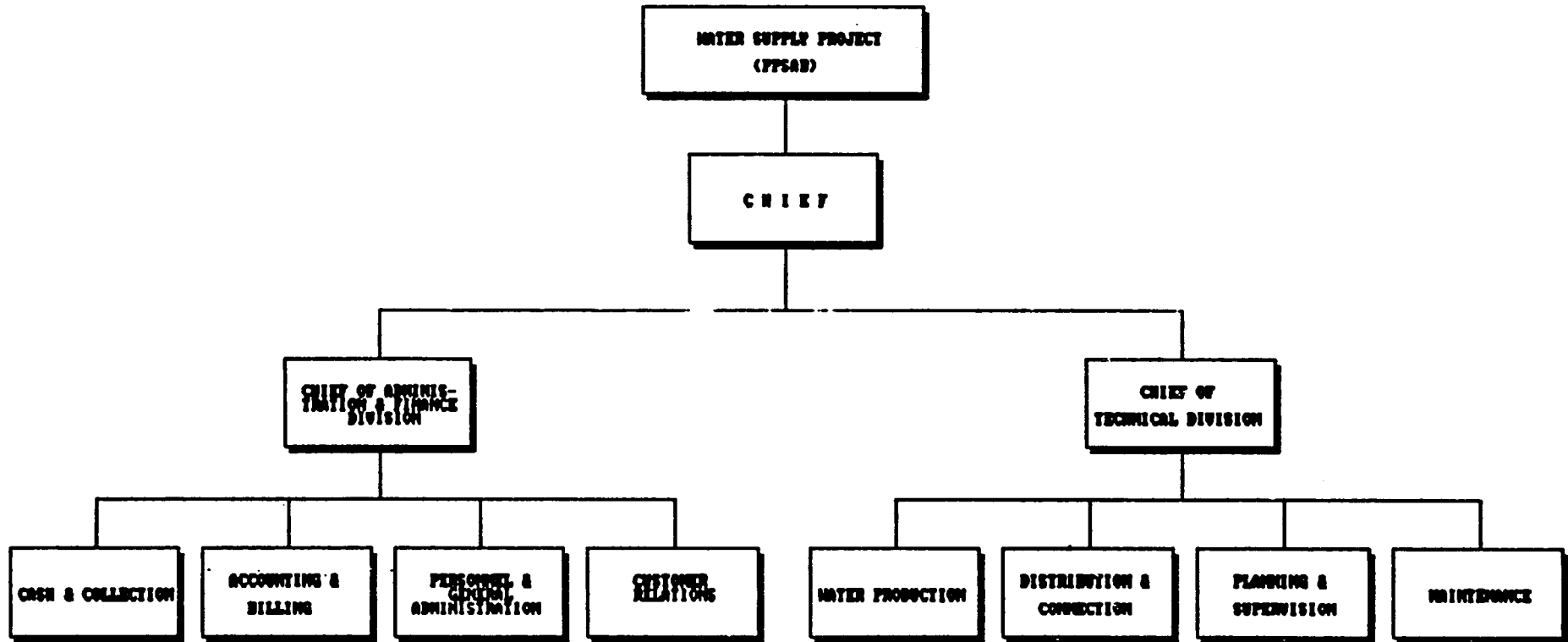
The above sections provide a brief description of the public agencies involved in urban water supply at central, provincial and local government levels. This description is in fact somewhat static since each agency is described separately and we are not able to visualize the vertical linkages between agencies and the change that is taking place over time.

In view of the decentralization policy of the GOI, there is in fact an ongoing process of converting BPAMs (provided under MOPW's relatively centralized system via DAB/Cipta Karya and PPSAB) to PDAM status (organized on the basis of local autonomy and reporting to MOHA via PUOD and PMDU). Hence the primary public agencies involved in water supply essentially involve two vertical networks :

- the centralized system of MOPW/Cipta Karya/DAB/PPSAB/BPAM which has been responsible for capital construction of many urban water supply and distribution systems; and
- the emerging decentralized system of MOHA/PUOD/PMDU/PDAM which is assuming greater responsibility for system extension and operations.

**FIGURE 10A**

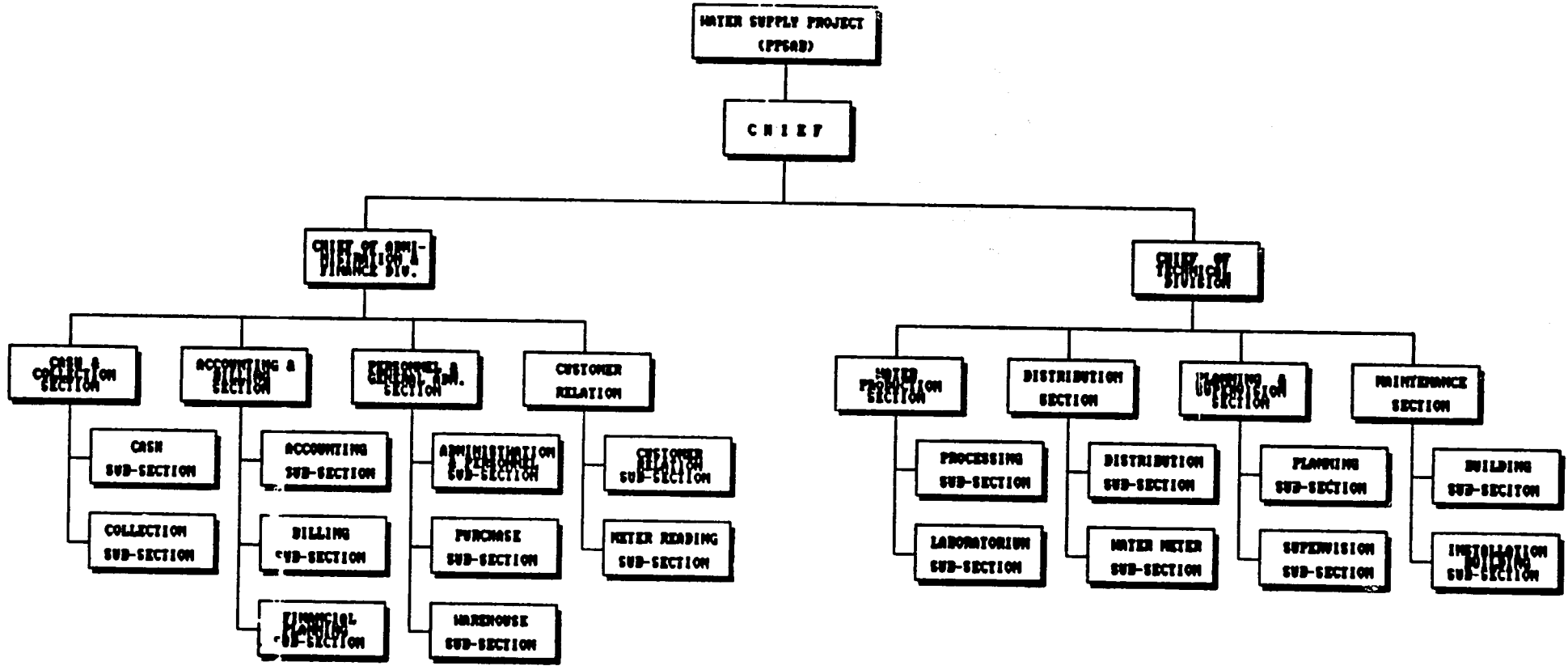
**BPAM Organizational Structure (Type A)**



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FIGURE 10B

BPAM Organizational Structure (Type B)

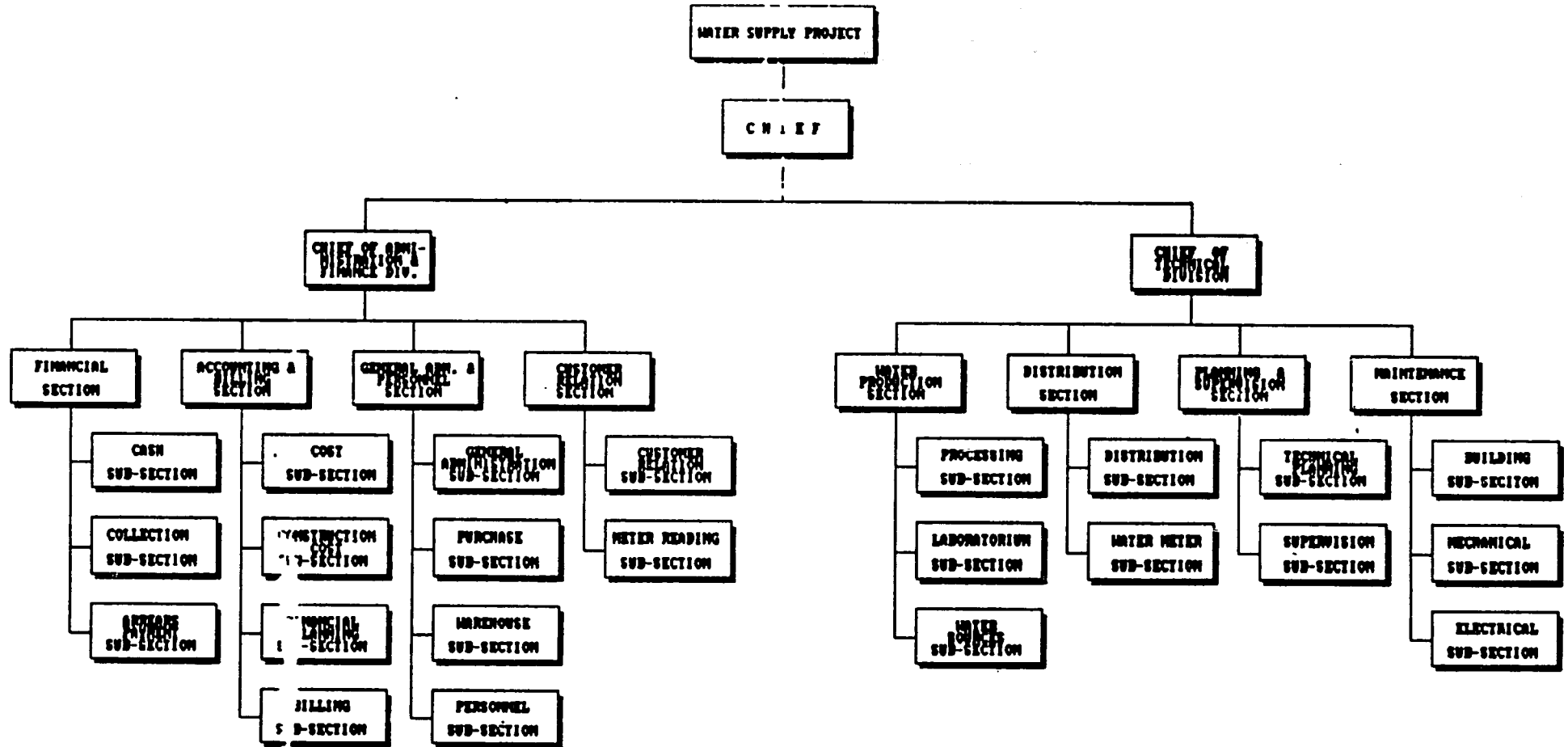


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FIGURE 10C

BPAM Organizational Structure (Type C)



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As of November 1990, there are still 140 BPAMs in existence and 151 PDAMs. However, it is planned that by the end of 1993, 74 of these existing BPAMs (53 %) throughout Indonesia will be converted to PDAM status. The basic criterion for conversion of BPAMs to PDAMs is that their financial performance reaches the "break-even point" (i.e. when revenue income is considered sufficient to cover all expenses).

At present, the basic urban water supply/distribution networks have been built by the MOPW/Cipta Karya/DAB/PPSAB/BPAM system, although extensions will of course be necessary. The GOI has decided that the operation and maintenance of these infrastructures should no longer be managed and executed by the centralized agencies, but become the responsibility of the appropriate structural national, provincial and local level institutions. This transfer of responsibilities implies changing many administrative, technical and financial aspects, and hence it must be implemented in a step-by-step integrated way, taking into account the manpower, knowledge and skills of personnel at all levels.

In short, these institutional changes resulting from decentralization in the urban water supply sector can be summarized as:

- transfer of responsibilities from MOPW/Cipta Karya/DAB/PPSAB/BPAM to MOHA/PUOD/Sub Dinas Cipta Karya/PMDU/PDAM;
- transfer of responsibilities to lower levels;
- realignment of responsibilities between the various institutions at all levels.

At the *central level*, this implies:

- strengthening strategic planning and coordination function;
- strengthening monitoring and evaluation function;
- reduction of operational function;
- reallocation of financial function.

At the *provincial level*, this implies:

- strengthening tactical planning and coordination function;
- participation in monitoring and evaluation function;
- strengthening of operational and financial functions.

At the *local level*, this implies:

- strengthening tactical planning and coordination function;
- strengthening technical operation and maintenance function;
- strengthening of operational and financial function;
- strengthening of community relation function.

#### **Case Study : PDAM Kabupaten Dati II Bekasi**

PDAM Kabupaten Dati II Bekasi was formed in 1982, serving only a small part of Kota Administratif Bekasi; initially only 300 house connections. The larger BPAM, under the direct guidance of DAB/Cipta Karya, continued to exist simultaneously, serving the remaining parts of the Kotip and several IKKs elsewhere in the Kabupaten. The BPAM systems provided a total of 8000 house connections at that time.

In 1987 the two organizations were combined into a single PDAM, with all personnel, capital assets and liabilities integrated into the one enterprise. During the past three years, the PDAM has expanded its systems to cover the Kotip and 7 additional kecamatans, with a current total of 269 1/s installed capacity and 11,500 house connections.

The general institutional problem posed by the integration of the two bodies has been that the original PDAM had no technical program for expanding its system while BPAM had a technical program but no resources once the financial subsidies from DAB/Cipta Karya were terminated. It would appear that the combined assets of the two bodies, along with proper management in the future, will be adequate to create a viable water supply enterprise.

### **3. INSTITUTIONAL CONSTRAINTS/PROBLEMS RELATED TO PSPUWS**

Some potential problems for private sector participation in urban water supply may arise because of existing institutional constraints and conditions within responsible public agencies; i.e. organizational problems, manpower/personnel problems, training problems, the lack of management autonomy, etc. Some of these constraints are briefly described in this section,

together with their implications for private sector participation in urban water supply (PSPUWS).

### **3.1 Organizational Problems/Constraints**

As can be seen from Figure 11, there are many agencies involved in provision of urban water supply. A private sector firm interested in an urban water supply project must deal with many agencies, not only at the local and provincial levels, but also at the central level. In the central government, an investment should be approved by the Ministry of Finance and National Planning Board (BAPPENAS), and the process should also go through the National Investment Coordinating Board (BKPM).

Because of the location of urban water supply projects in the level II government, a series of approvals beginning with the level II government itself, provincial government, Directorate General of Public Administration & Regional Autonomy (PUOD) and Directorate General of Regional Development Ministry of Home Affairs, should be accomplished.

On the technical side, approval from the Water Supply Directorate within Directorate General of Human Settlements in the Ministry of Public Works should also be requested.

At the provincial level, several agencies should be involved in day-to-day activities of a water supply project because, according to government regulation and policy, these agencies are entitled to be involved mainly in supervision of the water enterprise.

Technical supervision of the water enterprises, for example, is the responsibility of the Regional Office of Public Works (Kanwil PU), as the provincial arm of the Directorate of Water Supply. Kanwil PU, through the PPSAB office, has the tasks of supervising the planning, construction, operation and maintenance of water supply projects. It also has the task of supervising the management of the water enterprises.

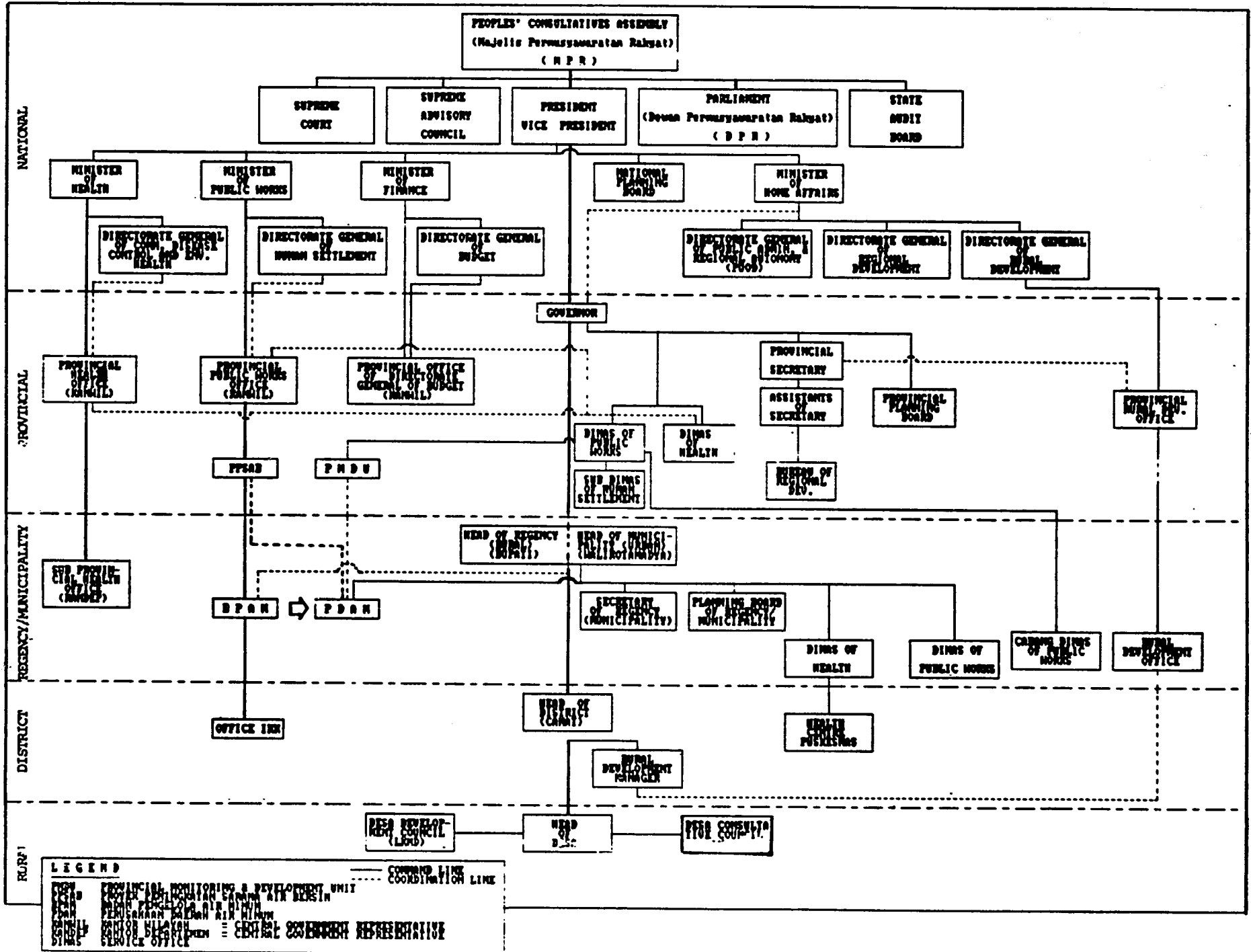
Besides the PPSAB office of Kanwil P.U., there is also the Provincial Monitoring and Development Unit (PMDU), which is located under Dinas P.U./Sub-Dinas Cipta Karya, and has the main task of supervising and guiding the management performance of water enterprises.

In view of this complex institutional setting, one of the implications for PSPUWS is that private investors desiring participation find it very difficult to obtain approvals, or to even understand what their options might be in the field. Given the amount of red tape involved, many firms will simply give up and do not try to pursue possible participation options.

Another organizational problem is that the functional responsibilities of involved agencies are sometimes unclear or overlapping. For example, there is no clear delineation as to what type

FIGURE 11

Organization Structure of the Indonesian Government for Water Supply and Sanitation



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of supervision and guidance should be provided to the PDAMs from the PPSAB offices as opposed to the PMDUs. If the PDAMs are confused as to where guidance comes from within government, they will also be confused as to how to deal with the private sector.

At the local level, the Directors of PDAM can't make any decision without approval from the Supervisory Board, and a number of difficulties arise in the functioning of the Supervisory Board, including:

- lack of clear policy directives to the PDAM, with the result that relatively minor matters have to await a meeting of the Supervisory Board;
- long delays between meetings of the Supervisory Board, creating difficulties for PDAM which can't act until a decision of the Board is taken. This is often caused by attendance problems of Board members, who have many other duties and obligations to meet.

Such delays in decision-making can frustrate private sector firms which require more rapid approval for their proposals. Hence, there are conflicting needs between public and private sectors with regard to the speed of decision-making.

### **3.2 Personnel/Manpower Problems**

The primary manpower problem is the limited personnel/ manpower capability at the local level, especially on the staff of the PDAMs. Whilst the total numbers of staff may be sufficient or even somewhat higher than desirable on productivity grounds, these public enterprises are particularly deficient with regard to professional (managerial and technical) staff, who generally represent only 2-2.5% of total staff in the present PDAMs. Whilst manning ratios of total water enterprise employees to population served and staffing composition vary from country to country, a recent WASH/USAID study in Tanzania used a manning ratio of 1 : 1600 and suggested that about 6% of total staff should be engineers and senior managers. This lack of adequate managerial and technical manpower is a major constraint on improvement of PDAM performance. One of the implications for PSPUWS is that it becomes difficult for underqualified PDAM personnel to deal with private sector representatives who will usually tend to be far better qualified.

A second problem related to limited personnel/manpower capability is that PDAM's technical personnel lack qualifications and experience in handling tenders and supervising the work of contractors. By definition this is a problem affecting PSPUWS.

Yet another problem is that local consultants are lacking in qualifications and experience, so that the quality of work suffers. Finally, there is a lack of qualified field supervisors within the

PDAMs, so that works are not efficiently carried out. Again, this automatically is a problem affecting PSPUWS.

Yet another manpower problem is that there are no clear and detailed job descriptions for PDAM staff members below the level of head of sub-department. The lack of job descriptions further illustrates the fact that professionalism is inadequate in the PDAMs and other local government agencies. Consequently, it is difficult for private sector representatives to deal with officials from the PDAMs.

Relatedly, there is no adequate career planning and opportunities for advancement within the PDAMs are limited. As a result, some of the more competent managerial and technical staff from PDAMs are lost to the private sector with the passage of time; not necessarily to the water supply private sector however.

A final manpower problem relates to the limited capacity of government to supervise or provide guidance to the PDAMs. Experienced managerial and technical personnel are in short supply in the two provincial level organizations (PMDUs and PPSABs) with responsibility to support the PDAMs. Due to this manpower deficiency, these bodies are not really able to perform their functions as well as expected.

### **3.3 Training Problems**

Basically, the PDAMs have no adequate training program, partly because they do not have enough funds for training activities. Since their highest priority is to reach the break even point financially, the PDAMs tend to be rather short-sighted and don't attach as much importance to training as they should. They simply respond to training opportunities as they are offered by other agencies (central or provincial). A related problem is that the PDAMs have no staff directly responsible for training.

Because there is not an adequate training program, the level of knowledge and professionalism of PDAM staff is likely to remain relatively low. As a result, PDAM officials will continue to find it difficult to deal with representatives from the private sector.

Another problem is that training personnel/staff in the urban water supply sector are insufficient and inadequate for the PDAMs/BPAMs, especially in connection with practical or field training. Relatedly, it is not clear which provincial level supervisory agency (PMDU or PPSAB) has overall responsibility for training in urban water supply.

Yet another problem is that training facilities are insufficient, especially for field/practical exercises.

Finally, there is the problem of personnel who receive specific types of training in PDAMs or BPAMs, only to have their positions changed so that the training is not relevant.

### **3.4 The Lack of Management Autonomy**

Yet another institutional problem related to PSPUWS is the lack of management autonomy among the PDAMs. As classical public enterprises, the PDAMs are faced with the very difficult task of fulfilling two conflicting objectives : one being that of achieving financial self-sufficiency as an enterprise and the other being that of realizing certain social objectives bestowed on it as a public entity. If these two objectives weren't enough, many local governments also expect that substantial portions of PDAM income be transferred to them for general use.

However, the signals PDAMs receive with regard to achieving financial self-sufficiency are not always clear and consistent, especially from the central government where there has traditionally been a strong dependency relationship. This relationship can be traced back to PDAM's historical origins as projects of MOPW and also to the financial pattern of DIP subsidies. The social objective that PDAMs are responsible for seeing to it that all citizens have access to clean water is generally clear, but the financial weaknesses of most PDAMs means that this equity objective is not always realized in practice.

Achieving the proper balance among such conflicting objectives is not an easy task under the best of circumstances. It requires an enterprise with capable leadership and with an ability to set clear goals and objectives. It also requires a high degree of management autonomy, or ability on the part of the organization to make its own management decisions without undue influence from other entities. Given the complex institutional setting in which the PDAMs find themselves, where several central, provincial and local government bodies have a stake in the enterprises, it cannot be said that a high degree of management autonomy currently exists.

This lack of management autonomy poses a problem for PSPUWS, because it means that private firms will find the PDAMs to be rather slow and indecisive organizations to deal with if they are negotiating concessions or contracts.

Based in part on the institutional constraints discussed above, it is possible to envisage the factors influencing the attractiveness of PDAMs for PSPUWS. The following table shows how several factors can have impact on the general attractiveness of PDAMs for private sector participation. To the extent that a particular PDAM falls on the left side of each continuum, it is more attractive for PSPUWS.



**Factors Influencing Attractiveness  
of PDAMs for PSPUWS**

Dimensions	Extreme Points	
1/. Financial self-sufficiency	PDAM has achieved at least break-even point	PDAM's expenses exceed revenues
2/. Managerial and technical capability	PDAM has strong managerial and technical capability	PDAM has weak managerial and technical capability
3/. Management autonomy	Relatively strong management autonomy in PDAM	PDAM management feels it must answer to higher levels of government
4/. Real Demand	Strong evidence of effective demand for water	Less real demand/ alternatives to piped water still acceptable
• Attractive for PSPUWS	Relatively High	Relatively Low

## **Case Study: PDAM Kabupaten Dati II Bekasi**

### *Institutional Constraints/Problems:*

PDAM Bekasi provides a good example of some of the institutional problems which all PDAMs must face. As cited above, the Director Utama verified that there was a lack of clarity regarding the relationship between PDAM on the one hand and both PMDU and PPSAB on the other. In general, they use PMDU for management advice and PPSAB for technical advice.

With regard to personnel/manpower problems, it was verified that the qualifications and skills of PDAM staff are very limited, although the total staff is sufficient. As of Nov. 1990, PDAM Bekasi had a total staff of 152 persons; with current number of house connections at 11,500, this gives 70 house connections per 1 staff. Given DAB's standard of 100 house connections per 1 staff, Bekasi is not efficient, but it is a large Kabupaten with several systems and hence the lower figure can be justified. The basic staff problem is, however, *qualitative*: there is only 1 sarjana technical (Ir.) and 2 sarjana non-technical (Drs.) on the entire staff; most other personnel have SMA or STM as highest degrees.

Another personnel/manpower problem is that career opportunities or ladders are limited for both PDAM and Pemda Tk. II officials. It is difficult for staff to shift from one organization to another, thus severely constraining the opportunities for advancement of any given staff member.

All of the training problems mentioned in the discussion above seem to be operating in the case of Bekasi. There is a need for practical, "in service" training in various financial, technical and managerial matters for relevant PDAM staff.

Yet another problem has to do with relationships between PDAM Bekasi and the private sector which, at the present time, have not been spelt out or are unclear. The Director Utama of PDAM felt that some kind of "peraturan kerja sama" is needed to spell out possible joint venture contracts and other aspects of the PDAM- private sector relationship. The Director Utama felt that PDAM should be able to obtain partial retribution from joint arrangements with the private sector in return for providing management advice/other services (P.T. Kemang Pratama cited as an example.)

A final problem pointed out is that regulations from higher level authorities are often thought by PDAM to be confusing or conflicting. PDAM would much prefer to have greater management autonomy as a local perusahaan daerah. The nature of PSPUWS should, in the last analysis, be decided by PDAM locally because it is the local level institutions that know the local situation best.

#### **4. INSTITUTIONAL OPPORTUNITIES FOR INCREASING PSPUWS**

##### **4.1 Summary of GOI Consensus re. PSPUWS**

In section 2 of this Working Paper, we have already given the basic government structure and administrative framework, describing the general functions of various agencies involved in urban water supply at central, provincial and local government levels. It is within this rather complex public institutional setting for urban water supply that the role of private sector participation is being sought.

Secondly, we have briefly discussed existing institutional problems/constraints within involved public agencies, together with their implications for PSPUWS, in section 3. This section shows that several institutional problems create difficulties for private sector participation.

In this fourth and final overall section, we propose to discuss some of the institutional opportunities for increasing PSPUWS. In this discussion, we shall concentrate especially on opportunities to improve PDAM performance through private sector participation. However, to begin with, we propose to give a brief summary of the current GOI position with regard to PSPUWS.

In fact, there is no single central government position with regard to PSPUWS. Different ministries put their emphasis on different aspects of the problem. However, there is an emerging broad consensus that, whilst basic provision of clean water to the entire populace

is a fundamental public responsibility which government cannot shirk, there are several ways in which private sector participation in the sector can be introduced to attract financial resources and to improve performance of the PDAMs and other agencies. Hence, although provision of urban water supplies remains the basic responsibility of government, the private sector can in many ways expand finances and improve service delivery.

Within this broad consensus, our study has shown that there are two general approaches supported by different ministries of the central government. These are characterized as follows:

- (1) The Ministry of Public Works (MOPW), Directorate General Cipta Karya, Directorate of Water Supply wants to see *increased private sector investment* in urban water supply. This takes such investment off-budget and users pay for the investment through tariffs. The vehicle for such an approach is largely BOT (or alternatively BOO). The present WASH study is focusing particularly on this approach, although other options for PSPUWS are also being considered.
- (2) The Ministry of Home Affairs (MOHA), Directorate General PUOD wants to see *PDAM performance improvement* as its basic approach. Although improvement of the water enterprises involves many non-PSP aspects, it is believed that various PSP services can be used to achieve the intended objectives. Options for private sector participation can involve service, management or leasing contracts for upgrading various functions of PDAMs.

These two general approaches—increased private investment and PDAM performance improvement—are not mutually exclusive: they can in fact be incorporated within a single strategy for PSPUWS. Before the private sector will invest in PDAMs, their overall performance must be improved. There are already considerable efforts being made to improve performance of PDAMs. These are elaborated below.

#### **4.2 Review of Ongoing Efforts to Improve PDAM Performance**

In this section we will describe some efforts already conducted to improve BPAMs/PDAMs performance, such as application of water enterprise assessment instruments (i.e, Water Enterprise Performance Assessment (WEPA) and Water Enterprise Management Information System (WEMIS) and training for water enterprise staffs.

##### ***General Guidance by Central Government Agencies***

To guarantee the continuity of water services, there have been several efforts to improve the water supply enterprise performance. The Ministry of Public Works cq the Directorate of Water Supply is mostly involved in building (guiding and training) the BPAM/PDAM staffs.

At the provincial level, the Regional Office of Public Works (Kanwil), together with Provincial Water Supply Project (PPSAB) and Provincial Monitoring and Development Unit (PMDU), conduct this building function for BPAM/PDAM.

The assistance from the Central Government cq Water Supply Directorate consists of providing guidance and assisting the BPAMs/PDAMs if they have problems of management and operations, and providing training including inservice training in all aspects (technical, administration, financial and management).

The technical-operational (teknis operasional) guidance to BPAMs/PDAMs consists of :

- System operation and maintenance of water installation, so the effectivity and the efficiency of the existing system increases.
- Increasing the capability of staffs in the technical division, i.e in the aspects of technical management, equipment maintenance, processing and water quality control, system operation and technical reporting.
- Directly assist in emergency operations, i.e. repairing damaged facilities or equipment or solving the problem of water processing.

With such technical guidance, BPAMs/PDAMs are expected to be able to improve their performance not only in water installation system, but also in the quality of management personnel.

The organization and financial administration guidance provides assistance on how to make the water enterprise fulfill its social objectives in providing water for the community, but also on how to fulfill the economic objective of financial self-sufficiency. For example, there is guidance on how to record all of the company transactions according to Indonesian accountancy principals, administration procedures of invoice, reimbursement and new connections.

The management guidance consists of:

- Increasing the managerial capability of the water enterprise directors and core staffs through training.
- Increasing the utilization of water through extension services to the community, so they are interested in becoming water customers.

There are also efforts from PUOD cq Sub-Directorate of Local Enterprise Building (Sub Direktorat Pembinaan Perusahaan Daerah)—Directorate of Regional Finance to assist PDAMs

in non-technical aspects such as management, legal aspects, accountancy, procedures, finance, system operation and maintenance, as well as public involvement in order to improve PDAM performance. The assistance of technical aspects will still come from the Ministry of Public Works.

The tasks of the Sub Directorate of Local Enterprise Building are preparing building and development material for cooperation between local enterprises and other agencies including the private sector, and analyzing and evaluating development of the local enterprises. Detailed functions related to PDAM are:

- (i) giving technical guidance for cooperation agreements with third parties;
- (ii) processing permission of principal of Home Affairs Minister for cooperation agreements of more than 5 years;
- (iii) evaluating draft cooperation agreements;
- (iv) processing the PDAM establishment; and
- (v) processing transfer of PDAM from BPAM.

### ***Water Enterprise Performance Assessment (WEPA)***

The Water Supply Directorate in MOPW already executed training programs for the water enterprises since 1975/1976. In cooperation with Government of Netherlands and IBRD, the Human Resources Development Project (HRDP) prepared a Water Enterprise Performance Assessment (WEPA) as a tool to assess the capability of the water enterprise. During the past few years, there have been between 20 and 40 PDAMs/BPAMs per year in which WEPA has been implemented to assess performance.

Comprehensive evaluation of water enterprise performance is formulated by using the Data Form Questionnaire and WEPA List. The main issues related to assessment of water enterprise performance are:

1. **Level of Services (Effectiveness)**  
Identify scale of service in relation to meeting the demand for water. Also identify whether the water quality and water test for the customers correspond to established standards.
2. **Efficiency**  
Identify to what extent all activities of the water enterprise are efficiently managed.

3. Finance  
Identify whether the water enterprise collects adequate money to cover all expenses.
4. Important Functions  
There are two important functions to be identified i.e the condition of material supplies—(is it well organized?), and bill collection—(is it efficient?).
5. Organization  
Identify whether the institutional environment of the water enterprises is capable of supporting personnel performance advancement.
6. Continuity  
Evaluate the water enterprise capability to assure the continuity of its operations.

WEPA is aimed to be a self-assessment tool for PDAM, but in the beginning the Water Supply Directorate, PPSAB and PMDU implement it for PDAM. Some of the PDAMs have already been trained and are capable to implement it themselves. About 40% of the PDAMs throughout Indonesia have already implemented WEPA to increase their performance.

#### ***Water Enterprise Management Information System (WEMIS)***

This system was developed by Water Supply Directorate cq Sub-Directorate for Technical Development/Human Resources Development Project (STD/HRDP). WEMIS was designed on the basis of the Monthly Technical and Financial-Administrative reports of the water enterprises. The input required at system level is technically oriented in order to evaluate the technical performance, but financial-administrative data must also be registered. The program processes system data and a smaller number of general enterprise-level data and produces monthly reports with performance indicators about systems and the enterprise as a whole. These reports are sent monthly to the PMDU which is responsible for PDAM monitoring.

The essential indicators of WEMIS to assess the water enterprise performance are:

1. Description of the water enterprise  
Presents the structure of the water enterprise, also the installed production and distribution capacity.
2. Level of Operations  
Analyses the number of connections by each type and the volume of water produced, distributed and sold.

3. **Effectiveness**  
Evaluates percentage use of water production and distribution capacity, coverage level of water supply system, average domestic water consumption and system with unsatisfactory water quality.
4. **Financial**  
Evaluates the financial condition of the water enterprise i.e profit/loss ratio, profit margin, average revenue, working ratio, and debt service coverage ratio.
5. **Efficiency**  
Evaluates the level of production losses and unaccounted for water.
6. **Liquidity**  
Assesses the cash and bank deposit to operating cost, total receivables, water sales, bill collection efficiency and velocity of accounts receivable.
7. **Staffing**  
Assesses adequacy of staffs, average number of staff related to the standard (1 staff for 100 connections), and average salary per staff member.

Experience has shown that some WEMIS applications can not show the clear deficiencies of PDAM because some PDAMs have trouble filling in the WEMIS form. If the PDAMs cannot provide the quantity and quality of input data completely, reliable and meaningful WEMIS performance indicators which lead to the structural measures for improvement cannot be taken.

The WEMIS application is conducted by PMDU under supervision of the Water Supply Directorate. There are 24 PMDUs throughout Indonesia, but not all of them are yet capable to implement WEMIS for PDAMs under their supervision.

### ***Other Activities for Improving PDAM Performance***

The main additional activity already undertaken to improve BPAM/PDAM performance is training. There are several types of training activities executed both by the Ministry of Public Works and the Ministry of Home Affairs.

### ***Ministry of Public Works (MOPW) Training***

The main executing agency for BPAM/PDAM training is the Sub Directorate for Technical Development, Directorate of Water Supply, which is responsible for preparation of a medium term training program and organizing the training activities. Training implementation at the provincial level is handled by Provincial Water Supply Project (PPSAB), PMDU or Provincial Training Unit (PTU) of the Water Supply Directorate, if any.



The training materials are prepared in module forms and inservice training is arranged to improve the knowledge and skill of water enterprise staffs. Trainers are provided by Water Supply Directorate, PPSAB and BPAM/PDAM who already perceive "training for trainers". At present, there are about 80 trainers spread in several specific training centers, e.g Bekasi, Bandung, Semarang, Surabaya, Medan etc.

Types of training courses conducted for BPAMs/PDAMs include the following :

- training for primary and secondary instructors (1 week)
- distribution network planning & cost analysis (2 weeks)
- program planning (4 weeks)
- basic training for the Director of PDAM or Chief of BPAM (2 weeks)
- basic training for Chief of Technical Division (2 weeks)
- basic training for Administration & Finance Division (2 weeks)
- supplementary training for the Director of PDAM or Chief of BPAM (2 weeks)
- training for chief of accounting section (2 weeks)
- training for chief of water production section (2 weeks)
- training for chief of water transmission/distribution section (2 weeks)
- training for chief of planning/supervision section (2 weeks)
- training for chief of workshop/maintenance section (2 weeks)
- training for chief of general administration/personnel section (2 weeks)
- training for pipe installation staffs (2 weeks)
- training for pump and generator staffs (2 weeks)
- training for finding water losses (2 weeks)
- training for the training staffs (1 week)

- training for chief of BPAM/PDAM/IKK unit (2 weeks)
- training for chief of customer relation section (2 weeks)

Up to the end of October 1990, 422 of BPAM staff and 225 of PDAM staff throughout Indonesia have participated in at least one of the above MOPW training courses. Although these numbers are impressive, it is still far from sufficient to increase water enterprise performance.

#### *Ministry of Home Affairs (MOHA) Training*

The responsible agency within Ministry of Home Affairs to provide training for PDAM is the Sub Directorate of Local Enterprise Building, Directorate of Regional Finance, in PUOD. The training instruments are not clearly defined. Training implementation is conducted by consultants, because the MOHA does not have enough staff to be the trainers.

There are five types of training conducted, i.e:

- training for operators e.g meter readers, conducted since 1988
- technical training for middle level of PDAM staff i.e chief of technical division for a period of six months
- management training for the Directors of PDAM, conducted through workshops, e.g water treatment workshop
- scholarships for the students of Sanitary Engineering in Bandung Institute of Technology. At the end of 1991, it is expected that MOHA can deploy 40 sanitary engineers as the result of the scholarship program; they will engaged by PDAMs for a minimum of five years
- financial training, which is still in the formulation stage. There is a plan for cooperation with University of Indonesia for scholarships to have professional managers and financial experts. MOHA developed accounting guidelines which are supposed to be used by PDAMs, but it hasn't been implemented yet due to insufficient funds to train PDAM staff to utilize the guidelines.

## **4.3 Opportunities to Improve PDAM Performance through Private Sector Participation**

### *Introduction*

The final section of this working paper concentrates on the way in which PDAM performance improvement can be supported through private sector participation. The underlying assumption in this discussion is that the primary objective is to improve the overall capability of the PDAMs as public enterprises. If the private sector can help achieve this objective through one or more of the options identified in this study, its participation should be welcomed. Private sector participation to improve PDAM performance does not need to be limited to capital investment schemes, since there are several other options (See Working Paper C for detailed discussion of PSP options).

Our intention in this paper is simply to explore in an introductory way how PDAM performance might be improved with the support of the private sector. The focus here continues to be institutional rather than financial or technical.

### *Summary of PDAM Functions*

We must begin with a classification or checklist of PDAM functions, so that possible areas for performance improvement can be identified. The following classification system is suggested, based in part on an analysis of PDAM organizational structure.

1. Policy Setting and Management
  - 1.1 Policy analysis and development
  - 1.2 Financial management
  - 1.3 Technical management
  
2. Planning, Programming and Budgeting
  - 2.1 Long-range/medium-term planning
  - 3.1 Annual programming and budgeting
  
3. Technical Operations
  - 3.1 Water production
  - 3.2 Water treatment
  - 3.3 Water distribution
  - 3.4 Maintenance

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4. Financial Operations
  - 4.1 Tariff policies
  - 4.2 Billing and collections
  - 4.3 Meter reading
  - 4.4 Accounting
  
5. Personnel
  - 5.1 Recruitment
  - 5.2 Salary, benefits and related policies
  - 5.3 Training
  - 5.4 Career planning
  
6. Customer Relations
  - 6.1 Promotion
  - 6.2 Relation with present customers

Such a classification of functions can of course be developed in considerably more detail, but this is believed to be sufficiently robust for the purpose at hand.

#### *Private Sector Participation to Improve PDAM Performance*

In Working Paper C, four broad options for private sector participation have been defined and their main characteristics and advantages/disadvantages cited. These are (i) BOT concessions, (ii) service contracts, (iii) management contracts and (iv) lease contracts. Generally speaking, the degree of responsibility or aspects covered by each of these PSP options are as shown in the diagram below.

In the discussion here, yet a fifth PSP option has been included, namely technical assistance contracts, because we believe that such advisory services offer another legitimate means for involving the private sector (in this case private consulting firms) in PDAM performance improvement.

It is now possible to give a preliminary assessment of how each of these PSP options can be applied for PDAM performance improvement. In carrying out this assessment, the following three questions need to be raised for each PSP option:

- (1) Where specifically do the opportunities for PDAM performance improvement exist within each PSP option, and why?
- (2) How precisely is PDAM performance improved in each case ?

Form Type	Degree of Responsibility	A	B	C	D	E	F	G
• Service Contracts		■						
• Management Contracts		■■■■■						
• Lease Contracts		■■■■■						
• Concession/BOT = Part		■■■■■■■						
	= Full	■■■■■■■■■						

- Note: A = Discrete routine operation  
 B = Overall day to day operation  
 C = Overall operation and maintenance  
 D = Capital improvement (rehabilitation/catch-up and replacement) of existing Investment  
 E = Rights to set up tariff  
 F = New capital investment (extension of the existing system)  
 G = New capital investment (new system)

Source: Working Paper C - Policy Issues

(3) What are the institutional implications for PDAM if PSP is conducted in the manner proposed?

The overall findings of this exercise are summarized in the functional framework chart on the following page. The chart is essentially a matrix linking the PDAM functions to PSP options, which allows the reader to see at a glance where there appear to be opportunities for PDAM performance improvement. The final paragraphs below discuss each option.

(i) BOT:

A BOT concession contract requires the concessionaire to provide investment capital. Under the so-called BOT (Build, Operate and Transfer) model, the firm builds and then operates a given water facility for a fixed period and then transfers it back to the public enterprise. Within the concession period, the firm can set tariffs within an established policy framework, and it tries to operate the facility as efficiently as possible.

Since the BOT option is utilized generally for large-scale physical facilities, the main PDAM functional area where it applies is with regard to Technical Operations (See functional framework chart). Specifically, BOT can be best applied to water production and treatment facilities (3.1-3.2), with treated water sold in bulk to the water enterprise. PDAM performance can be improved in this case because PSP financing is being provided "off-budget" and managerial efficiency of the facility can be increased. It may also be possible to

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include water distribution systems (3.3) as part of the BOT scheme, but this may be more difficult because of social equity concerns.

What are the institutional implications of using the BOT option for PDAM performance improvement? One problem is that the negotiating process and terms of agreement can be very complex, which may overburden PDAM's capability. The paper however suggests that BOT negotiations because they are so specialized should be organized in a central facility calling on expertise in other sectors, eg. the toll roads, power, and telecommunications. Another difficulty with this option is that it requires a very effective regulatory system which is not yet in place in Indonesia.

(ii) *Service Contracts:*

Under a service contract, a private firm is engaged to provide a discrete service to a PDAM, such as meter reading, bill collection, training, etc. The PDAM would retain overall responsibility for policy, management and planning, investment decisions and daily operations, except for those services that are contracted out. Compensation can be on a fixed fee or cost plus basis or related in some manner to the magnitude of service provided.

The service contract option, therefore, involves human capital rather than investment capital in generally small-scale routine activities which can vary widely. One possible candidate for a service contract is the planning, programming and budgeting function (2.1-2.2), but these activities may be more appropriately handled through advisory technical assistance, with basic responsibility retained by PDAM.

The meter reading and bill collection functions (4.2-4.3) are an excellent package for a service contract, in part because they are a discrete activity which can be assigned to a contractor. In this area it is possible to substantially improve PDAM efficiency and reduce costs of operation, especially if the bill collection function was being handled inefficiently to begin with. The training function (5.3) can also be let out as a service contract, either as an appropriate package on its own or together with other activities. Again, this has the advantage of being a discrete activity, although it may be expensive to let it out as a contract. The customer relations function (especially 6.2) is also an appropriate area for a service contract, particularly if it is linked to functions 4.2-4.3, but PDAM must continue to maintain its policy input.

There are several institutional implications of using the service contract option for PDAM performance improvement. For one thing it is important to consider whether the specific activity which might be let out as a service contract was being handled inefficiently in the first place. Another important consideration in assessing the benefits of this option is that there be provision for institutional strengthening to remove at some point the need for continuation of the contract.

(iii) *Management Contracts:*

In a management contract, the contractor assumes overall responsibility for operation and maintenance of the water system as it is, with authority to make all day-to-day operating decisions. The contractor is not responsible for capital improvements or new capital investments. All functions of the PDAM are, therefore, assumed by the contractor for a fixed period of time. Management contracts can bring about a significant across the board improvement in efficiency of the water enterprise.

However, there are a number of institutional implications of using the management contract option for PDAM performance improvement. For one thing, this option does not help to promote the organizational and financial autonomy of the local water enterprises, since the private sector firm assumes overall responsibility for operation of the system. In fact it is preferable if provision is made for a transfer of knowhow back to PDAM staff itself before the management contract is terminated. Yet another implication is that this option requires a sharp delineation of roles and responsibilities of the contractor, the water enterprise and regulatory authorities, if it is to be successful.

(iv) *Leasing Contracts:*

In a leasing contract, a private firm rents an existing facility from a water enterprise and assumes responsibility for its operation and maintenance and capital repayment. The lessee is normally responsible for financing working capital needs and for replacement of worn out equipment. Tariff rates continue to be set by PDAM. Leasing arrangements can involve a large-scale system but may also include smaller components, such as leasing out standposts/water kiosks in low-income urban areas.

By its nature, the leasing option is generally associated with a physical facility and therefore involves Technical Operations. Specifically, leasing frequently involves water production and treatment facilities (3.1-3.2) where significant budgetary savings can be obtained for the PDAM since all but debt service for existing capital would be off-budget. The option can also introduce considerable managerial efficiency, but control of new investment decisions remains in the hands of PDAM.

Smaller components of the PDAM distribution system (3.3), such as standposts or water kiosks in poor urban areas, could also be leased out in small scale contracts. This could be similar to the manner in which Perumtel leases out public telephones through warung telephones (wartel).

The functions of meter reading and bill collections (4.2-4.3) should also be included as part of the lease arrangement, but only in relation to those facilities/services which are leased out. As in the case of service contracts, these functions can be substantially improved in efficiency, especially if they were being handled inefficiently in the first place. And finally, the lease contractor will inevitably become involved in customer relations (6.1-6.2), at least in connection with the facilities being leased.

What are the institutional implications of using the leasing contract option for PDAM performance improvement? For one thing leasing contracts can be difficult to negotiate and may tax the current capacity of individual PDAMs to plan and manage such a set of relationships. This type of experience could be centralized. Also, as with the BOT and management contract options, effective implementation is dependent on a careful definition of the roles and responsibilities of the lessee vis-a-vis those of the involved government agencies.

(v) *Technical Assistance:*

Technical assistance (advisory) contracts can include virtually any aspect or function of the PDAMs, from advice on financial or technical management (1.2-1.3); to planning, programming and budgeting (2.1-2.2); through to assistance in personnel (5) and customer relations (6) functions. Technical assistance has great potential for bringing about PDAM performance improvement, although it is not normally thought of as a private sector participation option. It would appear that there is considerable scope for utilizing local consultants in an expanded manner to provide TA to the PDAMs.

There are several institutional implications of using technical assistance for PDAM performance improvement. Although no direct capital investment or even execution of human services are involved, the TA option of advisory services can have substantial positive impact. It is an excellent way to launch PSP on a small scale before the PDAMs become involved in larger scale privatization efforts. Unlike some of the other PSP options, TA can be initiated immediately without having to negotiate complex agreements.

This concludes our discussion of opportunities to improve PDAM performance through private sector participation, and thus this paper on Institutional Constraints and Opportunities. It is hoped that future efforts can concentrate on implementation of PDAM performance improvement activities utilizing the private sector in a wide variety of ways.



**PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES**  
**ISSUES FOR INVESTMENT IN INDONESIA**

**Working Paper E**

**PRIVATE SECTOR INVESTMENT**  
**NEEDS ASSESSMENT**

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PRIVATE SECTOR INVESTMENT NEEDS ASSESSMENT

EXECUTIVE SUMMARY

This paper identifies the private sector component of the private-public partnership that is evolving in the Indonesian water sector. The goal is to profile who and what the private sector is and examine opportunities that the private sector can realistically provide. Though involvement of the private sector has perceived benefits across a range of water supply activities, a prime objective of this involvement is to mobilize investment resources for water supply infrastructure—resources that are beyond the current capabilities of Government funding.

The study identified five models of private sector participation in water supply. These include service contracts, management contracts, lease contracts, concession arrangements, and complete private ownership of assets or divestiture. In reviewing these models the most immediate match to achieve the goal of increased private investment in the water supply sector appears to be the build-operate-and-transfer model (BOT). This model explicitly provides for the formation of capital in the sector; it also implicitly provides for "human" capital formation in terms of private sector management expertise and technology transfer.

At present in Indonesia there are two main types of formal, private, "off budget" investment in water supply projects—foreign and local. These are characterized as (1) supply-led source development projects and (2) "enclave" water supply developments. The former are characterized by development initiated by firms with a vested interest in water supply projects from a management, design, or construction base. The latter are developed by investors where water is part of a larger development effort. Typical examples include the development of water supply along with a tourist area, industrial estate, or private housing complex.

In reviewing worldwide experience in the development of BOT projects, it was apparent that the profile of international investments usually involve large scale efforts. It appears unlikely that international equity finance would be attracted to supply-led water investments of under US \$50 million due to the significant organization and management costs of putting a BOT-type arrangement together. The large scale of typical BOT investment and its unique nature in terms of financing packages, spectrum of investors, and legal arrangement indicate that there is little likelihood of more than a handful of internationally financed BOTs in the water sector in Indonesia over the next few years. The study concludes that a small but highly trained unit of individuals with experience in BOT projects across a range of infrastructure developments, including transport and power, would be sufficient to handle specific inquiries,

promote BOT, and provide support to the various provincial governments and municipal water authorities (PDAMs).

Evidence is slim on domestic investors' attitude and requirements for investment in water supply projects. It appears, however, that they feel more comfortable with investments of less than US\$10 million for projects with a longer time frame, such as water supply infrastructure. Overall the average size of domestic investment (nominated in Rupiah) is just over US\$ 10 million. One conclusion of the report is that there is an investment gap for water projects between US\$10 million and US\$ 50 million. This range appears to be too small for foreign investors and too large for domestic investors.

The cost of private capital, i.e., "off-budget" investment funding, is higher than sovereign or government-supported capital. The overall capital cost of BOT projects is higher (due to the perceived risk of nonguaranteed capital) than the more traditional public-sector-funded projects; but efficiencies in construction and operation are expected to be greater in private sector projects. The specific trade-off between higher costs of private finance and efficiency gains from private operations is still an open debate.

Though there is a natural tendency to compare a privately funded and operated water supply facility on an equal basis with existing water producing enterprises, i.e., the PDAMs, the study concludes that this is not appropriate. A purely financially driven BOT project operating within narrow cash flow requirements and revenue targets has a different set of operating criteria from the existing semi-autonomous government water supply enterprises (PDAMs). For example, the latter must include provision for a social tariff and provide fiscal support to municipalities through specific tax obligations.

The study includes an informal survey of potential and active investors in the water supply sector. Private sector investors were clear that they wanted a well defined policy by Government on how and where private sector investment in water supply would be most appropriate. The private sector wanted some type of guarantee or regulatory authority with respect to water revenue covering volume and price. The principle of tariff control by local government authorities with no independent arbitrator leads to unacceptable uncertainty for investors. A series of financial incentives were also put forward by private sector investors: foreign exchange guarantees, tax concessions, interest rate concessions, and the ability to carry forward loss during early years of operation.

Overall the paper provides a clearer understanding of the composition of the private sector and its concerns and requirements for investment in water supply projects in Indonesia. It is important to appreciate motivations of the private sector in order to fully realize its potential and to define where private sector interventions can be most effective.

## WORKING PAPER E

### PRIVATE SECTOR INVESTMENT NEEDS ASSESSMENT

#### 1. INTRODUCTION

The purpose of this paper is to identify the private sector component of the private-public partnership that is evolving in the Indonesian water sector. The goal is to profile who and what the private sector is and define the opportunities that the private sector can realistically provide. The private sector has been perceived by some as a panacea for many shortcomings in the sector including lack of investment capital and inefficient operation. It is believed that in a number of discussions and seminars on privatization that government, institutions and academics are represented but not the private investor.

The paper intends to put the promise of private sector investment participation in the water supply sector in perspective. The current buoyant investment climate in Indonesia is examined with a view to finding how best the water sector can benefit from this deregulated environment. The paper identifies two models of investment apparent in private sector involvement in water supply. These are (1) demand led or enclave model that is tied to a specific industry or development and (2) the "supply-led" model where a specific interest group has joined to develop a water resource.

The paper concentrates on capital investment in water supply through the use of the build, operate and transfer model. This model is defined using international experience as well as certain information on BOTs that is available from limited Indonesian data. The paper gives a summary of the trade-offs in using BOT with specific reference to additionality in sector finances and efficiency gains versus loss of control of sector resources.

Specific examples of current efforts in private sector investment participation in water supply, both local and foreign, were identified and principals in these selected activities were interviewed. Examples to date are however not plentiful. The results of these informal interviews give a useful background in order to further identify the most likely investor or investment opportunity in the sector. This section sets out an number of issues including opportunities and constraints as seen from the private investor that will need to be addressed if private sector participation is to achieve its expectation.

## **2. CONTRACTUAL MODELS OF PRIVATE SECTOR PARTICIPATION (PSP)**

### **2.1 Brief Description of the Models**

The literature concerning private participation in water supply has adopted five main types of contractual arrangements. These include service contracts, management contracts, lease contracts and contracts including concessions, and the complete transfer to private ownership or divestiture.

Under service contracts and management contracts, a public entity contracts with a private firm for the provision of specific services. A service contract is fairly limited in scope and covers a specific activity such as training or equipment maintenance. A management contract is more comprehensive and covers the full range of operations. The two are similar because the autonomous water authority (ie. the PDAM) bears the full commercial risk under both and the payment of the contractor is not usually directly linked to operational efficiency or cost control. Under lease contracts commercial risks are to some extent shifted to the contractor. A private firm "rents" the facilities from the public authority and is responsible for operation and maintenance and for working capital. Part of the rental fee usually included repayment of debt service and can be considered as a way to finance "off budget" debt repayment. Under a lease contract the assets are still owned by the public authority. Under the classic concession arrangement (build, operate and transfer—BOT) the capital investment as well as working capital are all financed by the BOT company. The assets and liabilities of the investment are completely the responsibility of the new company for the period of the concession.

### **2.2 Categories of Private Sector Investment with respect to the models of Private Sector Participation (PSP)**

#### *Capital Goods Formation*

One of the clear goals of the Government of Indonesia is to finance investment in the urban water supply sector from off-budget or "private" funds. In reviewing the models of (PSP) the most immediate match to achieving this goal appears to be with BOT. Other variants on this theme include BOO (build, own and operate, ie. without any obligation to transfer), BRT (build, rent and transfer) and BOOST (Build, own operate subsidize and transfer) These models explicitly provide for the formation of new capital goods in the sector. They also provide implicitly for "human" capital formation in terms of private management expertise of the facility for the duration of the agreement. A detailed description of the BOT model is set out in Section 4.

The models of performance improvement including provision of service contracts, management contracts and leasing arrangements also provide for "human" capital formation

and capital efficiency but not in the strictest sense capital goods formation. The emphasis of this paper is on investment in capital goods formation in the water sector - private investment in creation of new facilities (green fieldsites) and possibly refurbishment of and expansion of existing facilities.

### *Human Capital Formation*

It maybe useful however to look at the possibilities of the provision of "human" capital formation "off-budget" for the successful operation of water supply delivery. Explicit within management contracts are certain performance indicators that may well include management performance targets. The creation of a market for service contracts or management contracts to supply PDAMs would be capitalized by private sector organizations much in the same way contracting services have been successfully developed. This would in some cases abrogate the need for government sponsored programs. One possibility would be to contract out support functions of the PUODs. Examples that could be contracted out specifically include:

- assist the water enterprises in improving their efficiency, providing technical and non-technical services to the PDAM
- assist in identifying training needs
- assist water enterprises in preparing and assessing investment proposals; obtaining financial support for implementing these proposals.

Other more technical and water industry specific activities may be more difficult to contract out. The use of consultants for specific activities is fairly wide spread in water supply agencies. The use of accountancy expertise and training programs is currently common through PUOD to PDAMs through a number of well-known local accountancy and management firms. This type of service contract could be widened to include additional private sector institutions, such as the banking system. This would increase competitive bidding for service contract work. The rapid expansion of the banking sector during the late 1980's has created training capacity for organization and management as well as financial skills within banking organizations. The banking sector maybe available to channel their expertise into PDAMS through service or management contracts. At the very least they would be able to act as consultants. National resource saving would be implicit in the "efficiency" gains from private sector participation and the non-duplication of effort across sectors through the market.



### 3. PRIVATE SECTOR INVESTMENT CLIMATE

#### 3.1 Overview of the Current Situation

##### *Extent of Investment*

The current investment climate in Indonesia appears robust for both foreign and local investment. Confidence in the economy appears high and medium term real growth rates for non-oil GDP are growing at 6-7% per annum. Indonesia growth in the late 1970's and early 1980's almost exclusively based on oil revenues was sharply hit by the 1983 world downturn in oil demand. Even so, Indonesia was able to maintain a respectable 4.8% growth rate in the non-oil sector between 1981-1984. A rapid devaluation of the rupiah followed in 1983 with severe repercussions for those foreign investor holding rupiah equity during this period. The weakening of the oil-market in 1986 resulted in another 31% devaluation of the rupiah.

Indonesia has established a comprehensive policy to build up its non-traditional export sector. Since deregulation of the banking system in 1988 and the other measures—internationally priced inputs to exporters (no protected markets), relaxed import and industrial license restrictions, investment has been remarkably strong. To further encourage foreign investment the rupiah remains fully convertible on foreign exchange markets with minimum foreign exchange regulations on inflows and outflows. The Government also supports a subtle depreciation of the Rupiah against the US dollar of about 5% per year to maintain export strength and confidence in foreign exchange buying power. This has a more negative aspect in terms of foreign investments as repatriated foreign exchange earnings nominated in Rupiah will suffer.

The high number of investment approvals issued by the Investment Coordinating Board (BKPM) reflect the success of Indonesia as an attractive place for investment. Data from 1967 show that cumulative domestic investment (PMDN) is estimated at RP 117.2 trillion invested in 6451 projects which employ about 3.2 million people. Foreign investment is estimated at total of US\$ 34.7 billion in 1,596 projects directly employing about 694,000.

Table 1 looks at the breakdown between domestic and foreign investment between 1980-1990. Domestic project starts out faced foreign investment led projects by 5 to 1. By size of investment however the average Indonesian domestic investment was about US\$12 million compared to the foreign investment of US \$35 million or 3 times local led investment. This in part reflects the historically large foreign investment in natural resource development, specifically oil and gas which is now complemented by coal exploitation.

As discussed earlier a number of reforms since 1988 has improved dramatically the attractiveness of Indonesia to new foreign direct investors. Nevertheless the Government could relax further its restrictions on local ownership and divestiture requirement to say 49%

**TABLE 1**

Investment—1980-1990  
under Foreign (PMA) and Domestic (PMDN) Investment Facilities

Year	Foreign Investment			Domestic Investment		
	No. of Projects	Investments (US \$ Millions)		No. of Projects	Investments (Rp Billions)	
		Total**	Average		Total**	Average
1980	34	1,045	31	143	794	6
1981	27	989	37	190	1,146	6
1982	64	1,397	23	253	2,761	11
1983	35	2,882	82	368	3,655	10
1984	24	1,107	46	152	7,042	46
1985	30	849	28	250	2,099	8
1986	70	836	12	316	3,650	12
1987	130	1,455	11	566	4,517	8
1988	145	4,408	30	845	10,275	12
1989	(-161) <sup>1</sup>	4,719	(-)	(-131) <sup>1</sup>	19,594	(-)
1990	234*	6,500	27	650*	30,000	52
<b>TOTAL</b>	<b>793</b>	<b>27,514</b>	<b>35</b>	<b>3,733</b>	<b>84,670</b>	<b>23</b>

<sup>1</sup> Corrections By Bureau of Statistics

\* Estimates

\*\* Include All Investment, e.g. rehabilitation of existing plant

Source: The Indonesian Economy, Center for Policy Studies, September 1990, Vol. IX

of equity to allow a majority share to foreign ownership. This would bring Indonesia in line with some of its competitor countries, ie. Thailand and Malaysia which allow majority of foreign ownership in a number of direct foreign investment enterprises.

Total fixed investment, combining both foreign and domestic, has risen dramatically (See Table 2). The recovery in oil prices since 1986 has enabled the Government to expand its investment program by 6%. Private investment has risen to almost 18% outpacing government public sponsored investment by 3 times. Much of this new investment is directed towards increasing export capacity.

### *Type of Investment*

The profile of these new investments, though spanning a range of sectors, appear to focus in manufacturing on chemicals, paper and paper products and textiles. These three classifications represent over 50% of the BKIM investment approvals for the first nine months of 1990. Production has a high export content. The electronics area is starting to grow and attract considerable investment. The automotive, agribusiness and food processing industries are expected to continue to grow. Outside manufacturing construction of hotels, transport and real estate show strong investment activity (see Table 3). Further data are set out in Annex Table E1 and E2.

The above data represent investment approvals as recorded by the BKPM. Data however on investment realizations are not as complete. Realization of investment fall considerable below approvals. Estimates for actual industry starts are as low as 5% of approvals.

## **3.2 Investment Profile of Water Supply Projects**

### *The place of water supply investments: how water fits in*

From the recent investment data presented above it is very clear that opportunities for private sector investment abound across a number of sectors in Indonesia. The question is how does investment in water supply fit into the current pattern of private sector investment. Private sector investments in water supply have been implicitly permitted since 1983. They have been explicitly encouraged more recently as water supply projects are not listed in the Negative List of Investments 1989 (Presidential Decree No. 21, 1989).

The international investment profile of public utilities in which water utilities are included is of low risk with medium to low return on investment. Low risk is founded in the lack of competition in the water supply market, a public sector monopoly. This is balanced on the return side by limited growth potential and lack of industry diversification.

**TABLE 2**

Fixed Public Investment—1975-1989  
(at 1983 Prices)

Growth Rates (% per annum)

	Average 1975-83	Average 1984-85	1986	1987	1988	1989 <sup>1</sup>
Fixed Investment	10.7	-5.8	-5.5	2.6	10.3	13.0
--Public	12.6	-2.9	-19.1	-4.5	10.2	6.2
--Private	9.1	-8.6	8.7	8.1	10.4	17.7

<sup>1</sup>Preliminary

Source: Indonesia, Foundations for Sustained Growth  
World Bank, May 1990

**TABLE 3**

**Sectorial Distribution of Investments  
1989-1990**

CATEGORY	Domestic Investment Rp Billions		Foreign Investment (US \$ Millions)		Total (Rp Billions)		Percent (1990)
	1989	1990 <sup>1</sup>	1989	1990 <sup>1</sup>	1989	1990 <sup>1</sup>	
Agriculture	3,444	6,122	169	180	3,743	6,453	12
Forestry	233	173	4	2	230	177	.5
Mining	94	155	--	116	94	328	.5
Food Industry	549	723	223	69	944	847	2
Textiles	3,562	9,166	581	878	4,592	10,775	20
Wood Industry	772	1,126	106	121	961	1,348	2
Paper Industry	1,137	4,396	211	476	1,511	5,269	10
Pharmaceuticals	16	19	77	1	152	20	--
Chemical Industry	4,035	10,350	2,435	1,211	8,350	12,750	23
Minerals	267	3,087	184	111	593	3,290	6
Metals & Products	555	987	322	395	1,125	1,711	3
Other Industry	48	160	30	85	101	316	.5
Construction	146	73	16	74	174	209	.5
Hotels	1,265	2,602	98	432	1,439	3,394	6
Office Buildings	-0-	8	5	57	9	112	.5
Real Estate	936	941	62	622	1,046	2,081	4
Transport	289	1,582	5	791	298	3,032	6
Other	262	462	115	322	466	1,052	2
<b>TOTAL</b>	<b>19,594</b>	<b>42,641</b>	<b>4,719</b>	<b>6,636</b>	<b>27,956</b>	<b>54,805</b>	<b>100</b>

Notes: <sup>1</sup>January - August 1990

RP 1,772 = US \$, 1989; RP 1,833 = US \$, 1990 January - August  
Source: US Embassy, Jakarta Unpublished Economic Data

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Development of water projects are highly capital intensive and investment requirements are "lumpy" with heavy front loaded costs. Development of public infrastructure, i.e., water supply, roads, power are fixed and irreversible investment decisions and as such have a high opportunity cost of capital. Large capital investments once installed and committed cannot be used productively elsewhere in the economy. Further the limited ability to substitute labor for capital in the production process limits management's ability to respond to market forces. For example, if demand forecasts for water are overestimated the resulting over-capacity must still be paid for by current users. Mistakes in capital infrastructure are usually large ones. Finally domestic infrastructure is often funded with foreign capital but revenues are, by definition, always in domestic currency.

Water sector companies across the developing world face similar capital vis return profiles. The low risk and low/medium return expectation for water companies in developing countries is not as apparent as in developed countries. However, a selected group of water supply companies, most notable in the Latin American region have developed a series of management practices that have led to profitable water supply enterprises that apparently raise private capital easily. (See Yeppes, Management and Operational Practices of Municipal and Regional Water and Sewerage Companies in Latin America and the Caribbean, January 1990. Annex E7)

"Public infrastructure" investment is contrasted directly by investment in commercial enterprises, such as manufacturing and industrial estates, commercial building developments and tourism. These investments characterize the current investment boom in Indonesia and are often linked to foreign export markets. Manufacturing and commercial enterprises have more flexibility over factors of production, especially the substitution of labor and capital. They also are fairly free to respond to market forces, i.e., product lines can be altered to some degree to suit changes in demand and production costs. Tourist developments often have access to specific off shore capital resources due to "industry or name brand" led developments. Further a number of commercial enterprises including manufacturing and housing estates are characterized by a high rate of return on equity investment, i.e., 3 to 5 years.

### *The Fungibility of Investment Capital*

The relevance of these observations for different types of investment is source of investment. Clearly the capital market is segmented and not *fungible* (ie. switchable) across all investments. Currently the Indonesian capital market is characterized by a fairly short term time horizon of 3 to 5 year investments which fits more closely a manufacturing type investment with fairly rapid start-up time with regard to production and sales realization and therefore revenue streams. Real interest rates for this type commercial borrowing reflect in broad terms the cost of capital. Real interest rates on commercial borrowing were estimated by the World Bank for 1989 to be between 12% to 14% (22% in nominal terms). The domestic market for longer term capital is not developed; it is unclear how the domestic

capital market will respond to opportunities for longer term investment demanding fixed rates. At present longer term capital finance available is foreign. Selected opportunities for water sector financing are discussed in Paper F.

Longer term equity financing is unlikely to be attracted to the water sector without a specific vested interest. It is apparent from domestic and international examples that in infrastructure projects the contractors, operators and engineering design firms will be most interested in the development of large capital works. It is common that these types of firms will provide longer term equity financing in return for "up front" revenues for actual construction contracts. In such a way firms can leverage longer term commercial risk by getting sufficient returns during the construction phase from building and procurement contracts. These returns on capital are expected to reflect returns available in the short to medium term market.

### **3.3. Types of Water Supply Investment**

#### *Water as an Input and as an End Product*

It is important to review how investments in water supply in the private sector are initiated. Two categories are apparent; those that are supply driven and those that are demand driven. The initiators of the water project either are more interested in developing the source of supply or are more concerned with fulfilling a specific demand as part of a bigger package of infrastructure. Though examples of formal private sector water supply investments in Indonesia on a large scale are limited, selected examples reviewed fall into these categories. Developments at Umbulan Springs, Surabaya are supply driven and developments at Denpasar and Lhok Seumawe are part of (enclave) package developments. (See Case Studies in Paper A)

#### *"Enclave Developments"*

Using this simple typology, projects that are mainly interested in using water as an input and are fairly indifferent as to the source are demand driven, eg piped supply or wells. These projects include the number of industrial estates, tourist developments and private housing complexes that currently categorize private sector involvement in water. In "enclave developments" the provision of water supply is not the main objective of these projects, it is component part. Though water may be a critical input, it is not most critical. Further if small isolated development are **not** part of a water master plan, economics of scale common in water production can be lost. It is difficult in water projects to start small and work up.

Investors that are more in charge of the demand, demand driven, are likely to be better placed to attract investment because they are in more control of the end-use. It is unlikely that a high using water industry, eg textile dyeing, food processing would actively seek to develop in a area unprovided with water. Most manufacturing and assembly work that are

attracted to industrial estates require a minimal amount of water . In operational expenses, water would make up a very small amount of costs. Labor and power are likely the most significant. Overall industrial power demand is about 70% of total demand; for water between 10% to 15% of sales volume is for industry.

In reviewing the types of industry that are seeking approvals from the BKPM a number are however heavy water using industries. These include paper and paper production, food processing and chemicals. The lack of water would specifically restrict their investment and subsequent export potential. Investment in water supply within the context of a specific wider investment agenda, the "package approach", for example in connection with the above high water using industries is likely to attract capital financing. This is because water demand is tied to specific water using markets which have a high return profile that is wedded to exports, tourism etc.. The development of private housing estates also falls within this investment profile. These projects are developed quickly, ie. a 3 to 5 year return on investment and meet the requirement of the firm market demand for water.

### *"Supply-led" Developments*

Developing the source of supply, supply led developments, as has been defined most likely involves firms with specific expertise or construction interest in water supply. The single nature of the product, potable water, and the size of the investment make development of water investments a rather specialized area. The traditional development of supply-led developments include contractors, design and management firms, suppliers of equipment, etc. forming a consortium to develop a water source which is marketable. The supply-led developments are characterized by larger traditional 'lumpy' capital investments, e.g., treatment plants, source works, dams, etc.



## **4. BOT AND BOT TYPE FINANCING**

### **4.1 Definition of BOT**

As discussed the build-operate-transfer (BOT) model serves as a suitable vehicle to tap sources of private finance, ie. "off budget", for capital investment in water projects. The arrangement, aimed almost exclusively at new infrastructure projects, establishes a new private sector company that owns, finances, constructs, and operates a project for a defined period. In infrastructure projects this period is usually about 15 years, but can be a few as 7 or as long as 30. At the end of the agreed BOT operating term, sometimes called a concession, the company's shares are transferred to the host government authority. *Though BOT are popular with Government as they do provide "off-budget" infrastructure development that appears to be basically free of direct government support, it must be remembered that the consumers, ie. the water users, still have to pay.*

BOT approach attracts private sector risk capital because it is able to completely control and operate the project company in the start-up stages. BOTs have mainly been attracted to large infrastructure projects because of the relatively high start-up costs of organizing a BOT and the higher profit margins for contractors and operators who are the prime motivation behind these contracts. The BOT approach was developed in the late 1970s by international construction firms as a marketing initiative to keep business buoyant. BOT starts still reflect market conditions for international construction companies, suppliers, etc.

There are a number of BOT projects that have been designed worldwide but only a few are operating. (See Annex E.3 and E.4) Indonesia has participated in a number of BOT projects in transport (toll roads) and commercial buildings. It is considering participating in several BOT water projects. The Umbulan Spring Bulk Water Project, currently under negotiation, is a classic BOT type model.

### **4.2 BOT Organization**

The BOT operation starts with a new project company in which, typically, private investors have a majority ownership and the host government agency or representative a minority ownership. The private ownership is provided by the project sponsors. Project sponsors are mainly private international or local companies with a commercial interest in construction and/or operation of the project. They tend to be construction contractors, equipment suppliers and contractors. As the capital requirements for BOT infrastructure projects are large, the minimum size is estimated at about \$50 m, the project sponsors also need to bring in portfolio investors, such as international financial institutions, to provide sufficient equity. In Indonesia the lack of an equity market for longer term low risk/low to medium return investments can be bridged by use of the BOT. World Bank recently quoted returns on equity for a range of BOT projects were about 18%.

The balance between equity and loans is an important issue. Umbulan Springs has a debt equity ratio of about 60/40. The excess reliance on loans increases debt service. Other reasons for more equity is that equipment suppliers and management companies, for example, may perform better if they have an equity stake in the success of the project.

In addition to the equity investment, a BOT project needs debt financing. Such loans typically are provided by a combination of export credits, suppliers' credits, commercial bank loans and institutional loans. The cost of loan financing depends on a number of factors ie. credit rating of Indonesia, the current market for certain suppliers, ie. some suppliers may give excellent terms due to sluggish export markets, and current market rates. An important attribute of the BOT model is that loans are made to the new project company, not to the national government or state utility. From this arrangement, which is at the heart of the BOT structure, arises the issue of loan security. Loan security is usually managed by an escrow arrangement under which the project revenues from the utility sales flow through an agent for the lenders. The agent ensures debt service payment and captures the remaining cash generation in the early years of the operation for loan reserves as security for future revenue shortfalls.

The escrow account holds a balance of funds to be maintained in an amount which equals the debt service payments for an agreed period. This is a permanent "earnest" money deposit for loan service payments. It also acts as an early warning alarm for payment problems. The escrow account is built up with the draw down of loans during construction. It declines as loans are paid off.

Usually the BOT company enters into a number of other contracts for plant operations, suppliers, etc. One of the most important is the sales agreement, which guarantees purchase of the output of the new company, for example, a bulk water sales agreement. This is a "pay or take" concept. The sales agreement states specific terms that permits the company to meet its suppliers, lenders, and shareholders. This is where the issue of tariffs and control over tariff setting arises. A number of other issues are addressed in the sales agreement including the currency of payment, inflation and devaluation, etc.

The BOT financing structure has been labeled a limited recourse structure which means there is no direct unconditional guarantor for servicing of the project loans. Resource is limited to the project company and its assets, including real estate, plant and equipment, contractual rights—say use of a particular water source for a number of years, insurance, etc. The lenders' only resource for nonpayment by the project company is in the contractual documents.

Non-resource financing is common among privately owned projects in developing countries but most of these projects are in the industrial, manufacturing, oil and gas, or mining sector. This is because the goods produced by such "non-infrastructure" projects can be sold in a competitive world market in foreign currency. This makes financing much easier to organize

and cheaper. Water is a much less "commercial" good. Annex F.5 sets out an organization diagram of BOT company.

### 4.3 The question of additionality and its cost

In BOT the borrower is a private, newly established joint venture company. The venture must obtain financing on the merits of the project itself and its participants. There are no unconditional direct guarantees of fund availability. The assets of the project are used to secure funding with the risks shared among private shareholders, lenders, and other providers of risk capital. If a PDAM is securing equity with re-valued assets, it is important for the that these assets be net of any existing liabilities.

It is important to establish the reason why BOT is chosen for the financing operation. In the water sector in Indonesia, BOT is used as a way to attract private sector funding to what has traditionally been financed by direct government grants and sovereign lending through the World Bank, Asian Development Bank, etc. Sovereign lending is lending that is backed by the Government. All international lending agency loans are sovereign loans. These types of loans are not "off-budget".

The use of the BOT model is predicated on the premise that cheaper, less risky, "on-budget" finance is not available. The BOT project must bring *additionality* or extra funds to the sector. Any capital investment should use the least cost option of financing available. Clearly the actual construction costs on any optimized least-cost alternative will be the same, it is the financing package that will differ. The BOT investments within the water sector must be the most viable to compete on the capital market for risk capital at reasonable rates. The use of BOT is often precipitated by "sponsor" agents with specific interest in developing water supply. The ability of these "agents" to put together a specific deal for a specific project may make comparison of the project over a range of projects more difficult. Capital for the specific project is not fungible across sectors or even between projects in the sector. For example, the rate of return on a distribution system may be quite high but the BOT financing package may involve a steel company who is only really interested in risking venture capital on a pipeline in which the steel company can be a supplier and recoup costs through supplier contracts.

Because of the relatively higher costs of equity and debt servicing for a privately held company versus sovereign borrowing, by its very nature a privatized water facility tends to be more expensive than conventionally funded facilities. By and large most public sector infrastructure development is funded by grant or sovereign loan (World Bank, etc.) Currently in Indonesia Regional Development Account funds are expected to be on lent at between 13-18% fixed rate. This fund would be suitable for water resource development. The question is how much funding is available at these rates and can the BOT project provide bear the higher cost of capital. If so, it would be better to use BOT for commercially attractive projects leaving less viable projects for concessional funding. This additionality benefit may be lost if

so much government support for BOT is provided say in subsidized tariff schedules to consumers that the true rate of return on the project is overvalued.

A private enterprise would need to secure risk capital at higher than the RDA cost, say at the minimum of 22-25% for local funding, and this would be a floating rate in Indonesia. Foreign funding would be at a fixed rate. Rate of return on equity of BOTs is expected to be at least 18%. On a \$50 m project the annual amortisation would be about \$10 m at 20%, using concessional funds at 9.5% this would drop to \$4.5 m. It is clear that BOT costs to the overall economy is greater than if the project was simply funded by concessional finance. Proponents of BOT do argue that commercial efficiencies brought in by the private sector, as well as technology transfer and training more than makeup for the higher cost of capital. *Securing private finance is a major objective of PSP but is not a low cost options.*

From a national economy point of view, if the lack of infrastructure development such as water supply can hold up investment and general economic growth then the cost of these forgone benefits would need to be included BOT decision.

#### **4.4 Risks associated with BOT**

A number of risks have been associated with BOT model. Each risk increases the cost of the project in various ways. The most common risks are identified below:

(1) *Completion Risk:*

The BOT project has two distinct phases. These are: (1) the construction phase and the (2) the "public utility " operating phase. Considerable attention is given to the second phase in water supply projects because of concentration on tariff issues and revenue streams. However in terms of lenders and equity investors the construction phase is seen as considerably high risk. A big risk associated with construction is the construction delay. Delays can be caused for many reasons ie. site conditions, delay in delivery of materials, shortage of funds, manpower shortage, etc. These delays will cause construction costs to go up and funding requirements to go up without any realization of revenues flows. The second risk is cost over-runs associated with construction. Again these will force increases in loans and interest charges. Should the BOT project company default for any of these reasons, there will be no ready market for a partly built water treatment plant or half a pipeline.

The cost of the project is, of course, increased by a risk factor to compensate the contractor for the completion risk. World Bank and others report that commercial and a number of bilateral lenders and export credit guarantee agencies have been reluctant to assume completion risk. Several BOT projects have only been able to proceed because the host government has made subordinated loans to the project company to guarantee senior debt service through project completion.

Having the host government involved in this was a cheap alternative to commercial standby credit. Commercial subordinated debt financing would require high interest rates and commitment fees. Venture capitalists in the USA for example would require *annual* returns (not long term discounted returns) of say 40%. For Indonesia these rates are expected to be much higher. The question is in Indonesia's case whether this would violate the "off-budget" aspect of BOT. It would require budget funds to be earmarked for this purpose and not used in any other way.

(2) *Performance and Operating Risk:*

Once the BOT project is operating, the configuration of the cash flow and thus income and dividend rewards have certain characteristics in water supply projects that need to be accommodated. These performance and operating lists are divided into cash flow risk and equity risk and are explained below.

*Cash Flow Risk*

The cash flow for water supply projects as for other infrastructure projects is characterized by a low initial revenues and high interest costs and loan repayments. (This is evident in the 23 prospective water supply studies as reviewed in Paper F). In the initial years of operation it is clear that interest payments and loan repayments may be most at risk if the majority of the cash flow goes towards paying for operating expenses. Specifically in start-up operation risks of unforeseen O&M costs are high in untried systems. Should an insufficient cash flow problem occur, the defaulting BOT would have extreme difficulty in raising new loans to finance cash deficits.

*Equity Risk*

As explained equity contributors or sponsors have usually specific vested interests in investing in water BOTs. The long pay-back period on equity, specific nature of the business and lack of "risk" spreading alternative business within the new company, and the lack of the ability to "sell" shares easily and without loss in the initial years of the company all preclude a "competitive" start-up investment with other equity investments.

Lenders and creditors are assumed not to have specific vested interests in water supply projects. Their funds are fungible across a range of projects. Senior lenders must be convinced of the ability of the project to remain financially viable and assure repayment. To this end a number of mechanisms are usually part of a BOT to protect lenders. These include:

- *escrow accounts*  
Lenders demand that a special escrow account is established and maintained by an independent agent for the purpose of paying the senior debt service first before distribution to equity investors. These

funds come directly from project revenues and maintain a balance of at least six months debt repayment.

- *benefit trusts*  
Lenders are made beneficiaries of various contracts that the BOT company enters into, eg insurance contracts, warrantee, etc.
- *default guarantees*  
Lenders reserve the right to take over the company and bring in new management, operators in the case of financial or technical default. This would be before the company is declared bankrupt.

(3) *Foreign Exchange and Inflation Risk*

The risks associated with domestic inflation and foreign exchange depreciation affect investor and lenders in BOT projects. The relative long lead time for adequate returns on equity in water supply projects, ie the potential rewards, do not compensate equity investors and lenders for inflation risks or foreign exchange risks. Local investors want protection against domestic inflation; foreign investors want both protection against inflation and unfavorable changes in foreign exchange.

For inflation the classic guarantee is some sort of price escalation agreement or clause in the BOT contract. For water projects this usually means periodic adjustments in the water tariff or bulk water charge, either based on some relevant local index of inflation or real tariff increase over the rate of inflation. Tariff increases however usually lag behind actual inflation .

Some examples of estimates of inflation Indonesian water projects currently include 6% per year for the World Bank Second Jabotabek Urban Development Project. Tariff increases associated with the project are staged with initial increases of 40% for the first year (April 1991), 20% (1994) and 15%(1997). Overall the real increases necessary to achieve financial obligations indicate that tariffs need to increase at least 3.5% per year, i.e., over the rate of inflation. The Umbulan Spring Bulk Water supply Project assumes inflation at 10% per year. Estimates based on a partial description of the increase in the bulk water charge put real increases at between 3% and 5% per cent per year. The 23 Feasibility studies prepared by the DAB assume a 3% per year real increase in non-domestic tariffs and a 3% increase every two years in domestic tariffs. Clearly the inflation assumptions have a direct relationship to the expected tariff charged and the revenue streams.

Foreign exchange risk falls both in the construction period and in the "public utility" operating phase. Various types of BOT project configurations handle these problems in different ways. For the construction period the ratio of foreign currency to local currency will probably be relatively high in a water supply project depending on the

source of the equipment, pipe etc. For the Umbulan Springs Project the majority of the foreign exchange exposure arises during the project construction period. In its present configuration 65% of the total project costs (Rp. 238 billion = \$ 125 million) will be for imported goods and services. To hedge this foreign exchange exposure created by foreign currency payment obligation and the Rupiah dominated finance, the investors have proposed that at the time of financing the foreign exchange requirements be brought forward using the Indonesian swap market. As the construction period is relatively short, 3 years, the risk is not unduly large. In Malaysia in a similar situation the GOM provided a 17 year external risk undertaking to the BOT company to cover increased costs from adverse foreign exchange movements and adverse interest rate movements on foreign loans to the project.

The extent to which the GOI can give any sort of a future guarantee of the rupiah exchange rate is to some extent dependent on the current BOP in relation to the existing debt service ratio. If these guarantees are not forthcoming foreign investors may pull out and the project will be come more dependent on the local financial market which demands higher rates (40%) and appear to have a limited ceiling for investment, eg Rp. 20 billion. Further, in practice, there has yet to be a purely private BOT infrastructure project of any significant size in a developing country that did not have substantial financial commitments, at least in guaranteed financing, from the host governments.

In the "public utility" operating phase, the BOT project will be selling its output, water, into the local economy and will receive its earnings in local currency. Depending on the arrangement of financing, lenders and investors may want to be able to recoup their investment in the currency of the investment. For Umbulan Spring, during the operating period because there is relatively a small amount of foreign exchange debt, only an allowance for revaluation of the Rupiah has been allowed. In Turkey the payments to investors were required to be made in a basket of currencies designed to match the payments of the foreign lenders and investors. In the Philippines a foreign exchange surcharge was applied to power tariffs which reflected the devaluation of the local currency against the US dollar. In this way foreign exchange costs were passed directly on to the consumers.

(4) *Risk Over Tariff Control and Revenue*

Critical to all BOT schemes in infrastructure developments that straddle the public sector are control over revenue streams and thus tariffs. In water supply, costs of production and volume produced is within the control of the private company and efficiencies can be made on this side of the operation to lower costs. However certain assurances over the price of the commodity, the water tariff, must be in place to satisfy investors. Tariff control as currently held by the Government of Indonesia brings considerable uncertainty to investors. Given cost savings from efficiency gains, the only other way the BOT company can improve net income in the short run is by

increasing tariffs. Increasing volume sales by increasing connections or increasing connection fees are alternatives to increased revenue generation but are not considered satisfactory short-term solutions.

#### **4.5 BOT in the Current Context of Indonesia Water Supply**

BOT enterprises are necessarily commercially viable entities. The new company created under BOT agreement must be viewed by the investors and lenders as commercially viable. This means that financiers have to have the confidence in the overall commercial structure and ability of the new company to generate revenues and to provide a competitive rate of return on investment and to service debt. Cash flow and the ability to control revenues is critical to the financing structure. Utilities using private sector finance are financially driven. By the same reasoning they are driven by incentive criteria to perform in an efficient manner.

It is a natural tenancy of the water sector to view a private facility on an equal basis with other water producing enterprises, eg. PDAMs. In Indonesia this is far from an appropriate view. A financially driven BOT project operating within a specific range of cash flow and revenue requirements is an island in a sea of government and semi-autonomous water supply enterprises operating on a different set of criteria including a social tariff. Financial criteria for PDAMs are often subordinate to other objectives. Though PDAMs are making progress to adopt financial benchmarks for efficiency, the private sector is also moving forward in reaching even higher efficiency goals. (See paper F for discussion of tariffs and water pricing).

There is considerable discussion about the length of the concession period. Most investors appear not to give too much weight to returns which are over 15 years away. The idea that a BOT for 30 years would be significantly cheaper since the sponsor has a longer time to recoup their investment was seen as not an important consideration for a recent BOT bid selection in the Philippines for power projects. Most investors wanted about same total return in the first 15 years.

In contrast a very recent BOT in Bangkok, the Bangkok elevated road and rail system has a concession period of 38 years. This enormous project worth over \$3 billion however has the development of a significant amount of commercial property at the same time as the development of the road and rail infrastructure. The company will subsidize the low-fare infrastructure services from the property development which is extremely high return. (See Annex E4 for examples of BOT)

#### **4.6 BOT Benchmarks**

Each BOT financial organization is unique. This is because of the vested interests in the BOT company organization. For example in the Umbulan Spring Bulk Water Supply Project bi-



lateral concessionary financing is linked to suppliers credits for country specific suppliers of heavy equipment and other supply related contracts. In this way a trade-off occurs between grants for equity financing from the bi-lateral source against higher construction costs because of the conditionality of source of the imported items. The bi-lateral "sponsor" is taking a risk on long term returns against short-term "export" gains for it own national manufacturers' exports and suppliers of equipment.

In view of the specificity of each BOT contract, their confidentiality and complexity, the study has not tried to set out specific criteria that demonstrate if a BOT is a suitable financial option or that it should be rejected. The following table however sets out ranges of critical elements in BOT contracts that appear in a number of documented BOT examples.

### BOT Benchmarks

ITEMS	RANGES	NOTES
Debt/Equity	90/10 to 60/40	The larger the equity share, the lower the debt repayments. This trade-off will depend on the availability of equity finance and interest rates.
Rate of return on equity—Government guarantees	16% to 21%	Based on report of equity returns from selected BOT studies
Rate of return on equity—without Government guarantee	35% to 40%	Based on expected "venture" capital returns
Duration of Concession	7 years - 30 years	The shorter the concession, the less time the investor has to recoup his investment. Studies indicate that investors see 15 years as maximum with regard to return on investment.

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#### 4.7 **Summary: Trade-offs in BOT**

##### *Lessons from Existing BOT Projects: In the Water Sector*

The paper has concentrated on private sector participation in capital investment in water supply. This is seen from two perspectives the foreign investor and the local investor. Emphasis has centered on the BOT model which has a heavy foreign bias. Section 5 of this paper sets out general private sector investor requirements. These closely mirror BOT investor concerns.

The BOT model as currently understood in the international arena has at present only one example of a working water supply project. This is the Labuan water supply pipeline and treatment plant in Malaysia. It is estimated that the minimal size of BOT investment would need to be about \$50 m to attract serious foreign investment. The provision of bulk water supply appears the most documented model for BOT in water supply. BOT appears most workable when revenue streams are guaranteed through bulk water sales to a municipality or directly to large users for hotels, industrial use, etc.

The clear "special case" scenario of BOTs because of their size (at least \$50 million in foreign investment) and risk-reward requirements lead to the conclusion that they should be treated as exceptional and "one-off" investments. Their merits can be viewed on a case by case basis. In this respect, there is no point in providing extensive expertise on the establishment of BOTs involving foreign investment throughout the sector. There needs to be only a small cadre of individuals at central level with a thorough understanding of a BOT organization. Indonesia already has some expertise as a result of BOTs in other sectors, most notably the toll roads. It is understood that a well established legal firm in Indonesia was chief legal council for a large BOT project in Turkey.

##### *Lessons from BOTs: In the Transport Sector*

A recent report (July 1990) prepared for the Ministry of Public Works, Study for Investigating Appropriate Schemes for Private Investment into Projects under the Responsibility of the Ministry of Public Works, has a number of lessons that can be incorporated into general BOT appraisal. The report has the benefit of the foundation in the transport sector where there are already examples of working BOTs, ie. the various toll roads. Conclusions and recommendations from this report draw on existing Indonesian experience and not on speculation and theory or examples from other countries.

In summary the main concern of this report was that the tariff (a) was in control of the Government and (b) was nominated in rupiah. Both these aspects of the project brought uncertainty to investors. Both were recommended to be remedied by Government guarantees for compensation on tariff short falls and by foreign exchange risk guarantees.

## *Pro and Con Check List for BOT*

The following section summarizes the pros and cons of BOT in two important areas. These are (1) additionality and (2) efficiency gains.

### 1. Additionality

#### *Pro:*

- Provides "off budget" funds from the private sector to finance large water supply infrastructure projects that would not otherwise have been built
- permits "downstream" production of water-using industries strengthening industrial capacity, tourism, etc.

#### *Con:*

- cost of BOT projects is greater than the cost of traditionally financed projects due to:
  - (i) perceived private sector risks
  - (ii) cost of complex negotiations
- consumer bears extra costs in higher tariffs/user fees or Government bears costs in higher subsidies
- hidden costs of BOT which require a high level of Government support which may displace other projects

### 2. Efficiency gains

#### *Pro:*

- Significant cost efficiencies through private sector management
- Continuous transfer of technology from the contractor, equipment supplier and operator to the in country project company
- If BOT proceeds, project has probably satisfied commercial criteria for viability

- Can act as "benchmark" for other projects in the sector in terms of "efficiency" criteria

**Con:**

- Loss of control over tariff and rate setting, specifically with respect to requirements of a "social" tariff
- loss of control over construction, operations and maintenance, ie ownership of the facilities during the concession
- Loss of revenue base for the municipality
- All negative aspects listed above exacerbated by the long term contract for BOTs; complicated legal measures need to be taken if conditions change or BOT company defaults

## **5. THE PERSPECTIVE OF PRIVATE SECTOR INVESTORS INTERESTED IN WATER SUPPLY IN INDONESIA**

### **5.1 Overview**

Discussions were held with a number of investors currently actively interested in water supply. These included local investors as well as foreign firms and investors. Other investors were also contacted with a view to discussing water supply amongst a number of options for investment in Indonesia. The respondents in this informal survey asked not to be quoted specifically or named. Sources for these interviews however included the principals in several private sector efforts in water supply including Umbulan Springs, Lhok Seumawe, and Denpasar (See Paper A for more detail on case studies).

The views expressed in these interviews reflect the current understanding by the private sector of the opportunities and constraints for investment in the water supply sector in Indonesia. The specific observations as a result of these interviews hold no surprises. The following is simply an affirmation of the current situation as seen by the private sector investor.

### **5.2 Types of Investors and Investment**

The private investors contacted included those representing management services and consultants, civil engineering contractors, supplier/supplies contractors and several large investors with a mixed portfolio of investments. Researchers interviewed a number of sources to find "investors" but found that most fitted into the above categories.

The two major types of investment for water supply were as follows: (1) direct—bulk water supply (supply-led) and (2) indirect—as a part of an investor's package including real estate development, industrial estates, etc (package or enclave).

The investors interest in direct water supply projects were those that had vested interests in supply of products or expertise for the construction and management of the water supply facility. These included producers of cement, importers of pipe, etc. Contractors were also interested in investing when specific civil construction was to be included.

Investors expressed the view that the larger size of the investment the better because of bigger incentives to private sector participation. In fact large water supply projects were viewed by some investors to be "profitable" and secure in the long-run. These investors were cognizant of the fact that a number of other types of investment, say manufacturing appeared to be a more "profitable" investment but they felt now was the correct time to be thinking about investing in water projects. There seemed to be some momentum in the sector and they were interested to gain experience and be in on the "ground floor."

Clearly investors were keen to know more about possibilities in water supply investment. Some expressed interest in diversifying their current type of business into water supply projects. Others were cognizant of the "social" benefit of water supply and were interested in this aspect.

Finally some investors were specifically interested in water supply projects where they could collaborate with PDAMs who had good management and were well run.

### **5.3 Constraints Identified by Private Investors to Participation in Water Supply Projects**

A main constraint identified by investors was the lack of a clear policy of autonomy over the management of the water supply enterprises, i.e. PDAMs or totally private companies. Ambiguities arose over the Ministry of Home Affairs power to monitor and supervise all local government enterprises. This was particularly apparent as a number of investors were aware of the requirement that water tariffs must be approved by the head of local government. Investors confirmed that this created uncertainty as it was unclear how tariff rates would be set up in the future and who will have the specific power to set tariffs. Further there was no guarantee that tariffs could be adjusted periodically. Together these uncertainties lead to confusion as to what profit margins and what rate of return could be expected on investments.

Some investors said it was unclear who had the authority to actually bill and collect monies from end-users. They were unsure if only the PDAM or could the private company set up its own billing procedures? Also private investors wanted to know how closely they were obliged to work with the PDAM or could they set up in business totally independently of the local PDAM. A badly managed PDAM or one that was not commercially viable would be a burden as a partner in a joint venture water supply. Recently a loan application for a PDAM was rejected by a state bank due to its high level of unaccounted for water (UAW). This UAW was in excess of 40%.

Further it is still debated whether a PDAM is eligible to be a share holder in a joint venture company. If the PDAM is part of a company that fails, will the assets revert to the creditors. Investors and lenders want to know if PDAM's assets belong to the PDAM or are held "in trust" for the public good.

Other unknowns which investors expressed concern about was the single nature of the demand for the good and the lack of ability to switch into other commodities. Also the lack of "market" data about water demand—there was no guarantee that all water produced would be sold. Also sales of water had much to do with income levels and general economic stability over the long term. These factors were unknown to investors particularly in the domestic water sector.

Investors commented that the domestic capital market for long-term financing was not yet developed. The short and medium term financing available is relatively costly and private investors tend to shy away from domestic financing due to these high charges. They prefer outside financing due to lower interest rate charges. However the costs of the bureaucracy in administering foreign capital loans are recognized by domestic investors; foreign loans are considered complicated and time consuming.

According to one investor, it was more feasible to finance investments below Rp. 20 billion on the domestic capital market. Investments over RP 20 billion would more likely be financed by foreign investors. This is confirmed in Table 1 where the average domestic investment is about Rp 23 billion. Though this is very slim evidence, it appears that there is a financing gap between smaller projects of \$10 m that will be financed locally and larger totally private projects, say over \$50 m, that attract BOT type investors.

On the composition of shares between foreign and domestic investors there is some debate. Foreign investors would like to see local partners share the equity burden. There appears to be a tendency for domestic investor to put in an equity share as small as possible. Obviously the more equity participation in any company the lower the loan and interest repayment burden. Further, the higher the equity contribution, the more committed the investor is to the success of the company.

#### **5.4 Incentives required by Private Sector Investors in Water Supply**

As explained in the introduction to this paper, the responses synthesized in the informal survey of private investors makes no attempt to specifically prioritize the private sector requirements. The results of the ad hoc survey are meant to be indicative. Given this disclaimer, the following incentives were common to several investors.

##### *Clear Policy and Common Message*

Private sector investors want a clear and defined policy by government on the role they are asked to play in development of water supply. The GOI must clearly define its intentions in order to attract serious participants. In this effort the various government agencies involved should have "one" common message. Private investors are being instructed in different ways by different ministries and departments.

##### *Guarantees and Tariffs*

The private investor wants a guarantee from the local government on water sales. This includes both an agreement on staged tariff increases and on competition re: volume of water sold. These guarantees are important in bulk water sales agreements but also when consumers have alternative sources, such as private wells or river off-takes. The private

investor wants the GOI to regulate alternative sources of water supply to encourage use of the new network provided under the private system.

Private sector investors were quite explicit that they wanted freedom to establish the tariff and to change it. This was specifically mentioned in the context of commercial and industrial users. From the selection of investors interviewed, it was the percentage of industrial and commercial water use by volume sold that was important. Large private sector investors tended not to be interested in residential users.

### *Participation of PDAMs*

The private investor understood it was important for the PDAM to have access to plans and proposals put forward by the private sector. The private sector prefer that the PDAMs act as a "silent" partner and do not participate in the management of the joint venture. The complete independence of management was seen as a plus for the private investor in water. It would be possible for the PDAM to become a shareholder in the new water company and possibly sit on the Board of Directors but without a majority vote.

Private sector investors accepted that management training for PDAMs was part of good private sector practice. They appeared to accept that some of the PDAM personnel should be included in the management of the joint venture company to ensure a smooth hand-over at the end of the concession.

### *Financial Incentives*

A number of financial incentives were mentioned by private sector investors, these included:

- certain tax holidays, ie. delay in payment of value added tax
- interest rate concessions to allow a lower interest burden during early years (government subsidy)
- the ability to carry forward losses so that they could be to be amortized during the more profitable later years of the project when demand had expanded
- foreign exchange risk guarantees (foreign investors)

### *Funding of Initial Studies*

Certain private investors were anxious for the Government to conduct detailed feasibility studies of specific private sector participation opportunities in water supply. These studies should be conducted by a "third" party, ie. not the Government nor any other interested



consortium members. These studies should be full feasibility studies which are expected to cost up to 5% of the total capital cost of the project. On a project such as Umbulan Spring this could cost several million dollars.

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## 6. CONCLUSIONS

1. The study has observed that there are two main types of private "off budget" investment in water supply projects. These are characterized as (1) supply-led source development projects and (2) "enclave" water supply developments. The former are characterized by development initiated by firms with a vested interest in water supply projects from a management, design or construction base. The main example of this type of project at present in Indonesia is Umbulan Spring Bulk Water Supply. The latter type are developed by investors where water is part of a larger development. Water supply is an important component but not the most critical component. These projects are associated with a larger initiative eg. a tourist development, industrial estate, or a private housing complex. Lhok Seumawe is an example.
2. In reviewing options for international private investment in the Indonesian water supply sector, the study has concentrated on the BOT option which involves concession agreements. Given the international profile of BOT investments, it is unlikely international finance will be attracted to supply-led water investments under US\$ 50 million. This is an indicative figure based on world wide experience of BOT type foreign investments. The average power BOT is approximately US\$300 million. The latest BOT signed in Thailand for urban transport infrastructure is US\$1 billion. The capital cost of the Umbulan Spring Bulk Water Supply is estimated at US\$125 million.
3. International investors with vested interests in water supply appear not to be interested in using the BOT approach in smaller scale investments because of the significant organization and management costs of putting a BOT type arrangement together.
4. The large size of BOT investments and their unique nature in terms of financing packages and spectrum of investors and legal arrangements indicated the scope for more than a handful of internationally financed BOTs in the water sector is limited (eg say 5 over the next 10 years). For example a project identification study undertaken for 23 water supply projects earmarked for private sector "supply-led" developments, none of the projects was over \$50 m.
5. Evidence is slim on domestic investors, however it appears they feel most comfortable with investments less than \$10 million in projects with a longer term time horizon. Most shy away from longer term investments and look to the foreign capital market for this profile of finance. Though very indicative, this opens a financial gap for water projects between \$10 million and \$50 million. The former appear too small for foreign investors (unless part of a bigger package) and the latter large for domestic investors to finance.

6. Following from the apparent lack of suitable type BOT investments, the requirement for significant GOI capacity in management or in technical skills for in depth analysis of BOT projects is not found. A small but highly skilled unit of individuals with experience of BOT would apparently at this time be sufficient to handle specific inquiries, promote BOT and provide support as required to various provincial governments and municipal water authorities (PDAMs).
7. It may be possible for the GOI to package several water supply projects together to make the investment more attractive. Further inducements for attracting international investments include leveraging "concessional" investment resources, financial intermediaries, and loan guarantees, providing detailed feasibility studies, etc. The cost of providing significant incentives to some extent mitigates the entire purpose of private sector involvement, eg. additionality or using "off-budget" resources.
8. The cost of private capital, ie "off-budget" investment resources, is more expensive than sovereign or government supported capital. The overall capital cost of BOT projects is greater to national consumers than traditional public sector supported projects; efficiencies in private projects however are expected to be greater. The specific trade-off between higher costs of private finance and efficiency gains from private operations is still an open debate.
9. It is a natural tendency to view a privately funded and operated facility on an equal basis with other water producing enterprises in the sector eg. PDAMs. This is far from an appropriate view. A financially driven BOT project within a specific range of cash flow and revenue requirements is an island in a sea of semi-autonomous water supply enterprises operating on a different set of financial criteria including the provision of a social tariff (cross subsidies) and fiscal support to municipalities through specific tax requirements.
10. An informal survey of potential and active investors in the water supply sector was undertaken. A synopsis of incentives required by the private sector is set out below:
  - Private sector wanted a clear and defined policy by Government on the role they are asked to play. At present they are getting different signals from different authorities.
  - Private sector wants a guarantee from local government or the appropriate authority over water sales. They want a specific agreement on tariff increases and a guarantee over volume of water sales. The latter included regulation of alternative sources. The Government must commit to investors on a program of tariff adjustments over the investment/concession period. The principle of

tariff control by the government leads to complete uncertainty for the investor.

- The private sector saw complete independence of the management and operation of the water supply investment as a preferred method of operation. The less PDAM procedures that were required, the better.
- A series of financial incentives were listed; these included: tax holidays, interest rate concessions to allow a lower interest burden during early years of operation, ability to carry forward losses, and for foreign investors - foreign exchange rate guarantees.
- Funding of detailed feasibility studies by third party experts.

**ANNEX E**

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INDONESIA

COUNTRY ECONOMIC REPORT

Approved Domestic Investment by Sector, 1977-1989 /a  
(Rp billion)

Sector	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Agriculture, fisheries and livestock	49	100	39	30	60	62	681	277	899	1,879	2,885	2,698	3,418
Forestry	64	59	80	115	175	93	140	19	37	21	640	487	252
Mining	0	18	33	55	13	52	578	8	38	89	290	111	94
<b>Manufacturing</b>	<b>401</b>	<b>531</b>	<b>580</b>	<b>1,093</b>	<b>1,306</b>	<b>1,419</b>	<b>3,792</b>	<b>1,332</b>	<b>1,632</b>	<b>1,842</b>	<b>5,518</b>	<b>9,747</b>	<b>12,931</b>
Textiles	75	168	61	162	195	110	104	127	97	263	1,289	2,309	3,563
Chemicals	99	103	141	57	193	205	766	272	928	773	2,047	3,039	4,078
Electrical goods	0	0	0	0	0	0	0	0	0	0	0	0	0
Other manufacturing	228	261	378	874	918	1,104	2,922	933	607	806	2,183	4,309	5,291
Construction	0	3	5	4	8	16	195	67	270	74	50	31	146
Hotels	4	12	13	10	54	76	255	214	312	17	139	537	1,265
Real estate	35	15	6	16	5	74	204	31	267	169	174	846	936
Others /b	20	24	18	35	70	157	1,151	1	296	325	569	460	551
<b>Total</b>	<b>574</b>	<b>762</b>	<b>774</b>	<b>1,358</b>	<b>1,691</b>	<b>1,949</b>	<b>7,005</b>	<b>1,949</b>	<b>3,750</b>	<b>4,417</b>	<b>10,265</b>	<b>14,916</b>	<b>19,594</b>

/a Figures refer to intended capital investments, and represent original approvals plus approved expansion minus cancellations.

/b Includes transportation sector.

Source: Investment Coordinating Board.

1991

**INDONESIA**  
**COUNTRY ECONOMIC REPORT**

**Approved Foreign Investment by Sector, 1977-1989 /a**  
**(US\$ million)**

Sector	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Agriculture	21	3	16	56	25	9	10	0	9	126	117	8	122
Forestry	20	39	12	8	115	32	7	0	0	0	5	26	4
Fishery	3	23	21	3	22	3	21	0	11	4	12	46	47
Mining & quarrying	201	38	66	3	29	0	0	0	0	0	0	0	0
Manufacturing	<u>327</u>	<u>276</u>	<u>1,158</u>	<u>771</u>	<u>834</u>	<u>1,120</u>	<u>2,615</u>	<u>1,002</u>	<u>687</u>	<u>537</u>	<u>852</u>	<u>3,828</u>	<u>4,246</u>
Food	8	6	61	14	41	6	83	77	6	34	54	231	223
Textiles & leather	71	115	34	76	139	26	12	1	7	9	118	213	581
Wood & wood products	0	1	6	11	124	5	13	0	0	32	45	104	106
Paper & paper products	10	0	11	2	49	0	722	0	25	47	109	1,506	211
Chemicals & rubber	49	26	364	282	236	317	183	96	338	294	209	1,544	2,512
Nonmetallic minerals	98	20	77	222	20	57	50	0	3	0	251	30	184
Basic metals	18	10	561	0	85	3	836	609	65	39	7	61	106
Metal products	73	92	45	163	141	706	716	210	244	82	57	129	292
Others	0	7	0	1	0	0	1	9	0	0	3	10	30
Construction	1	5	1	8	49	11	44	17	122	65	42	2	16
Trade & hotels	<u>7</u>	<u>10</u>	<u>3</u>	<u>39</u>	<u>0</u>	<u>17</u>	<u>78</u>	<u>84</u>	<u>0</u>	<u>0</u>	<u>196</u>	<u>405</u>	<u>98</u>
Wholesale trade	0	0	0	0	0	0	0	0	0	0	0	0	0
Hotels	7	10	3	39	0	17	78	84	0	0	196	405	98
Transport & communications	0	0	0	25	0	0	0	4	0	70	213	3	5
Real estate and business services	20	4	44	0	18	204	108	0	29	25	20	117	181
<b>Total</b>	<u>609</u>	<u>397</u>	<u>1,320</u>	<u>912</u>	<u>1,091</u>	<u>1,397</u>	<u>2,882</u>	<u>1,107</u>	<u>859</u>	<u>826</u>	<u>1,457</u>	<u>4,435</u>	<u>4,719</u>

/a Intended Capital Investment. Amount represents original approvals plus expansions minus cancellations.

Source: Bank Indonesia and Investment Coordinating Board (BKPM).

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### Annex E3

#### BOT INFRASTRUCTURE PROJECTS IN DEVELOPING COUNTRIES REPORTED IN THE PRESS: A PARTIAL LIST

<u>COUNTRY</u>	<u>PROJECT</u>	<u>STATUS</u>
China	Sharjiao coal-fired power station in Guangdong	Operating
	Huaneng power project	Unknown
	Superhighway project	Unknown
Costa Rica	Road maintenance outside San Jose	Unknown
Cote d'Ivoire	Water distribution	Operating
Gabon	Manganese Ore Terminal	Proposed
Malaysia	North Kelang Straits Bypass (toll road)	Operating
	Kepong Interchange (toll road)	Operating
	Labuan water supply pipeline and treatment plant	Operating
	Labuan-Beaufort submarine electric cable	Under construction
	Kuala Lumpur Interchanges North South Highway	Under construction Under construction
Oman	Manah gas turbine power plant	Proposed
Pakistan	Hab River power plant	Contracts signed
	Fauji Foundation power plant	Letter of Intent
	Habibullah-Siemans Consortium power plant	Letter of Intent
Philippines	Metro-Manila power plant	Under Construction
	International container terminal	(Hopewell) Proposed
	Construction and operation of private commercial ports	Proposed
	300 MW coal fired power plant	Request for proposals issued

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<u>COUNTRY</u>	<u>PROJECT</u>	<u>STATUS</u>
Singapore	Mass Rapid Transit	Unknown
Thailand	Bangkok Second Stage Expressway	Under construction
	Bangkok Metro	In negotiation
Turkey	Akkuyu nuclear power plant	Abandoned
	1000 MW coal fired power plant	Contracts signed
	Additional coal fired power plants	Proposed
	Hydro power plants	Under construction (?)
	Bosphorus Second bridge	Under construction (non BOT)
	Bosphorus Third Bridge	Abandoned
	Bosphorus Tunnel	Proposed
	Istanbul Airport	In negotiation
	High-speed rail link between Istanbul and Ankara	Proposed
	Water plant (Izmir)	Abandoned
	Ankara Metro	Proposed
	Toll Roads	Proposed
	Port facilities and free trade zones	Proposed

Source: Augenblick, M. & Custer, B.S.-"The Build, Operate, and Transfer ("BOT") Approach to Infrastructure Projects in Developing Countries". Policy, Research, and External Affairs Working Papers; Infrastructure and Urban Development Department, The World Bank. August 1990. WPS 498.

## Annex E4

### REVIEW OF SELECTED MAJOR BOT PROJECTS

In spite of the considerable interest which the BOT formula has aroused in recent years, and the fairly substantial number of specific BOT infrastructure projects which have been proposed, and in some cases extensively negotiated, there seem to be relatively few such projects in developing countries which have managed to get to financial close and to have entered the construction phase, let alone being successfully completed. To review all of the BOT projects which have been proposed would be an impossible task because of the lack of reliable information publicly available. This annex, however, will review briefly the history of BOT projects in some of the countries which have been most interested in promoting the BOT formula.

#### China

One early BOT project, which was started in 1984 and has been operating successfully since 1987, involves a 700 MW coal fired power plant at Sharjiao in Guangdong Province, China. This project was built by a consortium led by the Hopewell Group of Hong Kong and largely financed by a syndicate of commercial banks put together by Citicorp. A Chinese government agency agreed to supply coal at a fixed price for the entire concession period and to purchase electricity up to 60% of design capacity for the same period.

China has been reported to be contemplating a number of other BOT projects, but our information is sketchy as to which are actually going forward. One factor which seems to have helped the Sharjiao project was the willingness of commercial banks to accept substantially greater credit risks than is normal in this type of project finance, presumably because of a desire to make a political gesture toward the PRC, and perhaps in an effort to gain entry into a new market with enormous potential. These factors are not normally present and may no longer be true even for China. This initial Chinese BOT project, therefore, is not regarded by commercial bankers as a model to be followed elsewhere.

#### Turkey

One of the first countries to conceive of the BOT approach to traditional infrastructure investments was Turkey. In the late 1970s, under the leadership of the Prime Minister, Turgut Ozal, and his younger brother Yussuf Ozal, a former employee of the World Bank and then head of Turkey's State Development Organization, Turkey sought to have a 1,000 MW nuclear power plant at Akkuyu built on a BOT basis at a cost of some US\$652 million. A

joint venture utility (the "JVU"), comprised of the contractor and the government-owned Turkish electric authority ("TEK"), was to finance, build, own and operate the plant for 15 years. During that period, TEK would purchase the plant's generated electricity from the JVU at fixed prices. At the end of the 15 years, the plant was to be turned over to the Turkish government.

Despite years of protracted negotiations between the Turkish government and the principal bidders for the project, Atomic Energy of Canada Limited and Kraftwerk Union of West Germany, this project was never implemented. Apparently the parties were unable to reach agreement on a satisfactory distribution of risks. On the one hand, the Turkish government took the position that under the BOT formula the government should not have to provide a sovereign repayment guarantee for the external debt to be taken on by the JVU, a guarantee for the purchase of a minimum amount of electricity, or exchange rate or convertibility guarantees which the project sponsors and lenders were seeking. On the other hand, in the absence of these guarantees from the Turkish government, neither the West German nor the Canadian export credit guarantee agency was willing to provide its guarantees for the sponsors' proposed investments or the contemplated export credits. Thus neither the sponsors nor the commercial lenders were willing to proceed.

Although the Akkuyu nuclear power plant project was never implemented, the Turkish government, as well as individual municipal governments in Turkey, continued to seek other BOT projects. These included a number of coal fired power plants (discussed in more detail below), the building of a 1.6 mile road tunnel under the Bosphorus, several port facility and free trade zone projects, a proposed expansion of the Istanbul airport, a high-speed rail link between Istanbul and Ankara, the development of a metro rail system for Ankara, a second and third bridge over the Bosphorus, a number of small hydroelectric power stations and the construction of various toll roads.

Information is sketchy as to how many of these projects are going forward.<sup>10/</sup> In the past, numerous agreements have been announced with respect to projects which have then fallen apart. Exemplary in this regard is the history of Turkey's attempt to obtain one or more large ( $\pm 1,000$  MW) coal fired thermal power plants. The history begins at least as early as September 1984 when the Turkish government asked the Bechtel group to carry out a pre-feasibility study for a 600 to 1,000 MW plant to be financed and built on a BOT basis. Bechtel's pre-feasibility

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<sup>10/</sup> Attached to this Report as Annex 3 is a note prepared by Jean-Jacques Lecat of Bureau Francis Lefebvre which provides additional details about many of these projects.

study was positive. Bechtel was then asked by the government to present a formal proposal. The proposal was submitted in September 1985. It called for a US\$1 billion, 960 MW plant to be built at Tekirdag on the Sea of Marmara west of Istanbul. The Bechtel consortium included Combustion Engineering of the United States, which was to supply the steam generator plant, and Kraftwerk Union which was to supply the turbine generator sets.

The project contemplated the formation of a private Turkish company to be owned 70% by the various sponsors (U.S., German and Japanese) and 30% by TEK, the Turkish government owned utility. TEK would agree to purchase electricity from the project company on a take or pay basis over the life of the project. The power tariff was designed to be sufficient under "base case" performance assumptions to pay off the project debt and to provide a reasonable return on the equity. According to Bechtel's proposal, the power tariff was expected to yield a "base case" internal rate of return to the equity investors of 20% per annum. It also provided some upside potential for better than "base case" performance, some protection for higher than anticipated inflation and some relief in the case of force majeure events.

A key feature of the power tariff was that TEK agreed to make its payments in a basket of currencies in proportion to the currencies required for the debt service payments due to lenders and the projected returns to the equity investors. This feature, although highly complex to work out in practice, dealt effectively with several major concerns which are typically present in a BOT project, namely foreign currency convertibility and exchange rate risk. The Turkish government also agreed to provide a sovereign guarantee of TEK's obligations and certain traditional foreign investment incentives, most notably relieving the project company of any obligation to pay Turkish corporate income tax.

An impasse was reached, however, between the Turkish government and the United States Eximbank. The government, in line with its view of the BOT concept and the stance it had taken in the Akkuyu project, did not want to provide any payment guarantees to cover the project debt. Eximbank wanted an unconditional sovereign guarantee for its large proposed loan to the project company. Negotiations between the government and Eximbank over this issue dragged on over 18 months. During this period, the government was approached by other sponsor groups, which were then encouraged to submit alternative proposals for other sites in the same size and cost range as the Bechtel proposal. The Turkish government apparently hoped that other export credit agencies would be more flexible than Eximbank and would agree to take some of the project risk, thereby putting pressure on Eximbank to do the same.

In January 1987, in the Bechtel negotiations, a compromise was finally reached on the loan security issue. The Turkish government agreed that if revenues generated by the power off-take agreement were not sufficient to service the project debt at any time until the project became fully operational (defined as three years of successful operation), the government would make subordinated loans to the project company to cover the shortfall. Eximbank accepted this compromise as functionally equivalent to a sovereign guarantee.

With this major issue resolved, the Turkish government announced it wanted to proceed with three coal fired plants and invited proposals from six different sponsor groups. In September 1987 the government ranked the various bidders based on the estimated power tariffs under each proposal. The first ranked group, which would be entitled to be the first project to proceed, was a consortium led by Seapac Control Services Pty. Ltd. of Australia. It included a major Japanese contractor, Japanese and U.S. equipment suppliers, and the Queensland, Australia government which was to supply the coal for the project. The proposed plant, to be built at Gazi, also on the Sea of Marmara, was slightly larger (3 x 350 MW) than the plant proposed by Bechtel. Its configuration had a major advantage over Bechtel's, in that it could still meet its minimum output projections even with one unit partially down, whereas Bechtel's 2-unit configuration probably could not. The projected cost was US\$1.4 billion. The equity investors, who were to finance about 20% of the project, were the Turkish government, for about one third of the equity, and Seapac, the Queensland government, TEK, the Japanese group (Chiyoda, Marubeni-Hitachi, Mitsui-Toshiba and Tokyo Electric-Tepsco), Westinghouse, IFC and others for the balance. The debt financing was to come from, among other sources, U.S. Eximbank, Japanese Eximbank, various Australian sources, commercial lenders (with export credit guaranties) and IFC.

The government of Queensland, however, soon withdrew its support, and Chiyoda and Westinghouse took over the leadership of the consortium. The Turkish government spent the first half of 1988 going through round-robin negotiations with the other sponsor groups, playing one off against the other, apparently in an attempt to get the lowest possible power tariff. In the course of these negotiations, the return to the equity investors under the "base case" performance assumption was cut to 16%, with virtually no upside for better performance, but severe penalties for failing to meet the base case. Moreover, protection for higher than expected inflation, relief to the equity investors for force majeure events or delays, and the ability to recoup losses in the early years by better performance in later years all disappeared from the deal.

At the end of this process, in August 1988, the Turkish government returned to exclusive negotiations with the consortium now led by Chiyoda and Westinghouse. The total project cost had been reduced to US\$1.3 billion and there had been some changes in the ranks of both the lenders and the equity investors. The Chiyoda consortium apparently had continued to meet or beat the concessions offered by the other sponsor groups. Bechtel at this point withdrew from further negotiations. By June 1989, the Chiyoda consortium had reportedly reached final agreement with the government on all points. Financial close for the Gazi project was expected between July and September.

A month later, however, the Gazi project had been put on hold by the Turkish government. In late October, the government announced that it had signed an agreement in principle with one of the other competing sponsor groups, a Japanese consortium led by Electric Power Development Corporation, for a \$1.3 billion MW coal fired power plant at Aliaga.

The tortured negotiating history described above suggests that the BOT approach has not been a wholly satisfactory solution to Turkey's power needs. Even if the Aliaga project is able to reach financial close and to start construction by April 1990, as currently proposed, the scheduled completion of the plant is not until sometime in 1993, nearly ten years from the government's original request to Bechtel for a pre-feasibility study. Yet the World Bank had determined in a 1985 study that Turkey would have to add a 1,000 MW plant each year for ten years, starting in 1990, to keep up with the expected growth in demand for electric power. Even if the Aliaga project now goes forward on schedule, therefore, the lost opportunity cost of failing to come to an agreement much earlier with one or another of the bidders may far outweigh the potential savings which the Turkish government may realize from having negotiated a lower power tariff.

Other BOT projects in Turkey have also had a troubled history. For the Ankara metro project, for instance, a consortium led by Canada's Urban Transit Development Corporation ("UTDC") was originally selected more than three years ago. Later the agreement with UTDC was abandoned and Turkey began negotiating with a consortium led by Bouygues, of France, only to announce in October of this year that a new agreement had been signed with UTDC. Negotiations over the Istanbul airport expansion project have apparently been going on for several years with the private parties feeling they are getting nowhere. As one news report put it recently, "many foreign negotiators are getting tired of receiving a green light from one ministry, a yellow from a second and then encountering a roadblock from the lower echelons of the state bureaucracy." Engineering News Record, Vol. 223, No.19, p.51, November 9, 1989.

## Malaysia

In contrast to Turkey, Malaysia over the course of the last several years has actually completed construction of three BOT projects and has three others under construction, although only one is comparable in size to the Turkish projects. Those completed are two toll road projects -- the North Kelang Straits Bypass at a cost of US\$20.5 million and the Kepong Interchange at a cost of US\$86 million -- and a project involving a water treatment plant and a submarine pipeline to the island of Labuan at a cost of US\$126.5 million. The Labuan-Beaufort Interconnection, involving laying a submarine cable for electricity, at a cost of US\$80 million, is under construction. Two more toll road projects, the Kuala Lumpur interchanges (expected to cost US\$300 million) and the remaining unbuilt portion of the North-South Expressway (expected to cost a further US\$3.5 billion), are also being implemented.

Although Malaysia's BOT experience, therefore, seems to have been positive, outside observers have raised a number of criticisms of the major project, the North South Expressway. It has been suggested, for instance, that the government's initial reluctance to provide a reasonable "security package" deterred truly private sponsors from bidding on the project. The eventual sponsor was a firm largely owned by certain officials of the Malaysian government. The firm did not have a proven track record or strong financial standing. In the end, the Malaysian government did provide an extensive security package, including government loans, traffic volume guarantees, exchange rate guarantees, and guarantees against various events of force majeure or government action.

## Thailand

Thailand is reported to be close to completing a major BOT infrastructure project, the building of a 30 kilometer toll road outside Bangkok, known as the Second Stage Expressway, which is to be operated by a private company. This 25 billion baht (US\$1 billion) project is based on a toll concession which is expected to run for 30 years beginning on March 1, 1990. The project is under the direction of the Expressway Rapid Transit Authority of Thailand ("ETA"). ETA is a state enterprise formed in 1972 for the primary purpose of implementing tolled expressways and mass transit systems in Thailand.

The financing, building and operation of the Second Stage Expressway has been given to the Bangkok Expressway Company, Limited ("BECL"), a company incorporated in Thailand and majority owned (approximately 2/3) by Kumagai Gumi Company, Limited, a major Japanese engineering and contracting firm. The remaining equity ownership is expected to be spread among various Thai

institutional investors and some international financial institutions. IFC and the Asian Development Bank were invited to participate. At a later stage, once the project becomes operational, BECL intends to sell shares to the public, partly new shares and partly a sale of Kumagai Gumi's existing shareholdings, reducing the latter to approximately 30% of the equity.

Compared to the time which has been taken to negotiate the various Turkish BOT projects referred to above, the negotiations in Thailand have been fairly rapid. In February 1988, BECL and Kumagai Gumi formed a consortium known as Bangkok Expressway Consortium ("BEC") to prepare, submit and negotiate (if selected by ETA) the terms under which BECL might be awarded the project. It is not clear whether this was an unsolicited proposal or a response to a request issued by ETA. In April, BEC was invited by ETA to begin negotiations. In late July, BEC/BECL was advised that ETA would recommend to the Thai Cabinet that BECL be awarded the project, subject to the execution of a binding agreement. On September 20, 1988, the Cabinet approved the award of the project to BECL, subject to final approval of the agreement by the appropriate government department.

In order to finance the estimated 25 billion baht (US \$1 billion) necessary to build the project, according to a September 1988 "Presentation to Investors," BECL was attempting to get 5 billion baht (\$200 million) of equity subscription commitments and 20 billion baht (\$800 million) of committed senior debt with recourse solely to BECL and its assets. The loans were expected to come primarily from commercial banks in Thailand and from multilateral and bilateral governmental lending institutions. In addition to offering BECL's assets as security to lenders for repayment of their loans, a bond pool containing performance bonds guaranteeing the obligations of the trade contractors under the major trade contracts was to be established.

The Thai government has taken a number of steps to facilitate the implementation of this project. First, it agreed to share with BECL, according to a revenue sharing formula, revenues from the existing government built toll road system. It issued a decree enabling ETA to acquire the land necessary for the building of the new expressway and caused the expressway concession to be placed on the eligible list for investment privileges. Such privileges include an eight year corporate income tax relief period, commencing from the first date that revenue is earned, and tax exemptions on dividends.

The government has also provided that, in the event of "exceptional occurrences," BECL would be entitled to delay the implementation schedule and would also have recourse to certain other remedies. Such remedies include one or more of the



following: an adjustment in the revenue sharing proportions; an increase in tolls on the system; an extension of the duration of the revenue allocation percentage then in effect; and an extension of the overall concession period of the project. The "exceptional circumstances" which could lead to such remedies include material increases in interest rates, material economic dislocation in Thailand, material delays in the relocation or diversion of utilities, government action or inaction (including undue interference with the execution of the project), unanticipated adverse ground conditions, significant disruptions in the local construction and building materials industry, and non-insurable events of force majeure.

Thailand has also been negotiating with a consortium led by Canada's Lavalin for the construction, on a BOT basis, of "Stage One, Phase One" of the Bangkok metro, at a cost of Can US\$2 billion (US\$1.6 billion). Lavalin has assembled a sponsor group led by Lavalin International (its international marketing and financing subsidiary) and the Urban Transit Development Corporation (another subsidiary which designs and builds railway rolling stock). The consortium includes Mitsubishi Corporation, Mitsubishi Heavy Industries, a group of Thai companies, and financial backers Morgan, Grenfell and Thai Farmers Bank. According to press reports, competition for this project was stiff between Lavalin, a group called the Asian European Consortium and the Sanko Japanese consortium. In the end Lavalin won, reportedly because it offered a more balanced package of technology, operating systems and finance. The relative cost of the package does not seem to have been the deciding factor.

The Thai government is committed to take at least 25% of the total equity when final figures are determined. It is estimated that this 25% will amount to around 10.5 billion baht (US\$416 million). The shortfall is to be made up by foreign investors. Approximately 50% to 60% of the cost of the project will be for imports. They will be partly financed by 23.6 billion baht (US\$934 million) worth of mixed credits, mainly from Canada, with a smaller credit from Japan. It was initially hoped that a final agreement could be reached in the summer of 1989, and that "Stage One, Phase One" of the metro would be in operation by 1994.

### Pakistan

Pakistan signed the basic contracts for its first major BOT project, the Hab River project, on December 23, 1989, and is actively seeking others as part of its overall policy to encourage private investment in the power sector. Pakistani officials, moreover, have outlined in various published statements orderly guidelines for evaluating and negotiating BOT projects. The government of Pakistan recognizes that it may wish to deal not only with competitive bids, in response to a request for proposals

initiated by the government, but also with unsolicited proposals from the private sector. It has developed a methodology for dealing with both kinds of proposals.

Competitive bids are invited only after feasibility studies have been conducted by the Pakistan Water and Power Development Authority ("WAPDA") or Karachi Electric Supply Corporation, the site of the power plant is known, the type and size of the plant has been determined and all other parameters, including the cost of the equipment, have also been generally determined. The government will evaluate all bids submitted and settle upon a project sponsor based primarily upon the lowest proposed power tariff. Other factors will also be considered, however, such as the overall conformity of the bid to the specifications in the tender documents and overall capital costs, financing charges and costs of operation and maintenance. The impact of these other factors on such issues as foreign exchange requirements or possible escalation in the power tariff over the life of the project is to be taken into account. Once the sponsor is picked, the government will issue a letter of intent, and the sponsor then will have a certain period of time to carry out its own feasibility studies, to obtain the necessary financing, and to negotiate and finalize the various contractual documents leading to financial close and the start of construction.

In the case of unsolicited proposals, the private party must carry out its own feasibility study, select its own site and determine the type, size and fuel for the proposed plant. Initial permission to carry out a feasibility study must, nonetheless, be obtained from the government. The government will then review the proposal to determine the appropriate power tariff, based on the government's understanding of the costs of the proposed equipment in the international market, standard construction costs, fuel costs, financing costs, operations and maintenance costs, and a projected 18% return on equity at a level of plant availability between 60% and 65% of designed capacity. The government will insist on full disclosure of all of the cost data and thus on full transparency of the tariff. The government also has as a benchmark its own cost of power. It is noteworthy, however, that the government has recognized the need to provide a realistic return on equity at an availability level which is sufficiently low to provide considerable downside protection as well as significant upside potential for better performance. When all of these details have been negotiated with the Ministry of Water and Power, the proposal will be formally submitted to the government for approval. If approved, a letter of intent will be issued and the project will proceed to finalization.

The government of Pakistan has indicated that BOT projects in the energy sector normally should be financed 25% by equity and 75% by debt. Although both the equity and the debt portions

are expected to have a foreign and a local component, the government has not set any fixed ratio between the two. Local financing has proved to be something of a problem in Pakistan. Local banks are reluctant to extend loans for the purpose of such projects, local financial markets are not as well developed as they might be, and the government is still in the process of seeking satisfactory methods of tapping the resources that are available both locally and from Pakistanis living outside Pakistan.

The World Bank has played an important role in private sector energy development in Pakistan. With support from the World Bank and other donors, a Private Sector Energy Development Fund (the "PSEDF") has been set up under the control of Pakistan's National Development Finance Corporation to be used to finance up to 30% of private sector energy projects. The initial funding amounts to US\$520 million, of which US\$146 million has been provided by the Bank, and the remainder by the Japanese Export-Import Bank, the U.K. Overseas Development Agency, the Government of Italy and USAID. All loans to the PSEDF are guaranteed by the government of Pakistan. Loans made by the PSEDF to BOT projects may be subordinated to loans provided by commercial lenders. The commercial lenders, in that case, would be financing only about 45% of the total cost of the project and would be senior in right of payment to both the PSEDF, which would be financing up to 30% of the total, and the equity investors, financing about 25%.

Pakistan's first major BOT project involves a 1,300 MW oil fired power plant to be sited near the mouth of the Hab River, in Baluchistan province, about 40 kilometers from Karachi. The sponsoring consortium is led by Hawker Siddeley Power Engineering of Great Britain and XeneI Industries of Saudi Arabia. The total Hab River project is currently estimated to cost some US\$1.1 billion to US\$1.3 billion. (Press reports of the precise figures are conflicting.)

In addition to the Hab River project, Pakistan has issued letters of intent to the Fauji Foundation for a 300 MW oil fired, steam driven power plant, and to a Habibullah Mines (Pakistan)-Siemens (Germany) consortium for two coal-fired steam stations totaling 130 MW. It is also considering a number of proposals for smaller oil fired and coal fired plants.

### Philippines

The Philippines has recently experienced rapid growth in energy demand, indicating an immediate need for the expansion of energy supply capabilities, particularly power generating capacity. To assist the Philippine government in addressing its energy problems, the World Bank carried out an energy sector study in 1988 and has proposed a US\$350 million loan to help

finance the first phase of a new development strategy for the Philippines energy sector. One of the components of this strategy is the encouragement of private sector participation through joint ventures and BOT schemes. For instance, it is intended that proceeds of the World Bank loan could be used by the Philippines National Oil Company and the National Power Corporation (the "NPC") to meet cash calls on these agencies in joint ventures with the private sector, e.g., BOT schemes.

A number of BOT projects have been proposed in the Philippines. One of the first to be implemented involves the development of a 200 megawatt gas turbine power plant in Metro Manila. This plant, which was initially estimated to cost about US\$42 million, is expected to be used primarily as a standby facility for "peak load" purposes. The project sponsor is Hopewell Holdings Limited of Hong Kong. An implementing agreement was entered into with the NPC in mid-November 1988. The Asian Development Bank and IFC were both initially slated to provide debt and equity for the project. Equity was also to be provided by Hopewell and Citicorp. Apparently IFC decided not to participate in this project in the end, and its precise status at the present time is not known, although it is reported to be going forward.

All of the electricity produced by the plant was to be sold under "take-or-pay" terms to the NPC. The NPC was to pay both a fixed monthly capacity fee for a contracted capacity of 200 megawatts, regardless of usage, together with an additional energy fee based on the actual amount of electricity generated. Total fee revenue would be used to pay operating expenses, taxes, debt service, and dividends. The NPC was to provide free fuel and free use of the project site for the entire contract period.

On the issue of risk sharing, the sponsors insisted that under the take-or-pay contract, part of the capacity and energy fees be paid in U.S. dollars into an offshore account in Hong Kong. The sponsors also insisted that the Philippine government provide a performance undertaking to back up the NPC's payment obligations under the agreement. Although the Philippine government was at first unwilling to provide anything more than a comfort letter assuring payment and foreign exchange convertibility, in the end the formal commitments sought by the sponsors were reportedly provided.

The Hopewell project apparently was the result of an unsolicited proposal and was not the subject of competitive bidding. In March 1989, however, the NPC issued a solicitation to pre-qualify potential bidders to undertake a 300 megawatt coal-fired power plant on BOT terms. According to the NPC, some 35 companies requested copies of the solicitation, and some 14 were eventually pre-qualified: five Japanese, four European, three American and one each from Australia and Hong Kong. The

official request for proposals was issued on November 5, 1989. The NPC wants to have the plant operational by 1993. It appears that the government does not plan to provide any guarantees to cover lenders for project risk due to sponsor failure or force majeure events. This may become a stumbling block in the Philippines, since experience in other countries suggests that foreign lenders and export credit agencies may not be willing to finance BOT projects in the absence of a security package which essentially insulates the senior lenders from project risk.

One question which has been raised by at least one potential bidder with respect to the Philippines' proposal relates to the specifications of the coal to be supplied by the NPC to the project. The proposal requires that the boiler and its auxiliary equipment be designed to handle both local and imported coals with specified typical analyses ranging from a best case to worst case scenario. Such vagueness forces the BOT sponsor to design a plant based on the worst case scenario, rather than being able to design for a specific grade of coal, the supply of which would be assured by the sponsors. This will considerably increase the cost of the plant. A question has also been raised as to what remedies the project company and its lenders will have if the fuel specifications are not met, or if delivery is interrupted.

The Philippine government has provided a set of standard foreign investment incentives and guarantees to potential sponsors. Sponsors will be registered with the Board of Investments and will be entitled to the privileges and incentives given by the government under Section 74, Republic Act No. 265 and the Omnibus Investment Code of 1987. These incentives include:

- the right of foreign investors to remit earnings from and to repatriate the entire proceeds of the liquidation of foreign investments in the currency in which the investments were made and at the prevailing exchange rate at the time of remittance or repatriation;
- the right of investors to remit, at the prevailing exchange rate at the time of remittance, such sums as are required for the payment of interest and principal on foreign loans and obligations;
- a guarantee by the Philippine government that property of the BOT firm will not be expropriated by the government except for public use or in the interest of national welfare or defense and upon payment of just compensation;
- a full exemption from income taxes levied by the Philippine government for four to six years from

commercial operations, with yearly extensions allowable under certain specified cases;

- certain provisions for the additional deduction of labor expenses;
- certain tax and duty exemptions on imported capital equipment;
- simplifications of customs procedures;
- exemptions from certain taxes on contractors; and
- other similar incentives.

**BANGKOK-RAPID MASS TRANSIT  
COMMUNITY TRAIN AND URBAN FREEWAY**

Equity worth about Bt 25 billion (US\$ 1 billion) will be brought into Thailand to fund the Bt 80 billion Bangkok elevated road and rail system by Hopewell. This huge equity base will enable Hopewell to start the project without having to talk to the financial institutions until the latter part of 1991, while construction can start as early as Christmas this year. The project is planned to be floated on the Securities Exchange of Thailand by 1993 or 1994. Hopewell also building a six-lane super-highway linking Hong Kong and Canton, a coal-fired power station in the Philippines and power plans in Shenzhen in southern China.

The speed with which Hopewell was able to conclude its agreement on the elevated road and rail system with the Thai government — which took only 10 months compared with several years for other major infrastructure projects — has surprised the public, although most welcome any projects to help alleviate the worsening traffic jam in the capital which is eating into the competitiveness of the economy.

The elevated road and rail system will be designed with four levels: on top will be the urban freeway, the second layer will be the rail transit, the third layer retail and station concourses and on the ground level will be retail shops and local roads.

The first phase of the project, divided into five, will take four years, covering a total distance of 18.8 kilometres. Subsequent stages will start on or before one year following the commencement of each stage. Upon the final completion, all the railways in Bangkok will be elevated.

Under the agreement, Hopewell will gain a concession period of 38 years to run the project, including an eight-year construction period to put up the elevated road and rail system, which will cover a total distance of 60.1 kilometres, but most of its revenue will derive from commercial property development on the 950,000 square metres of land provided by the railway agency.

The commercial property development will be undertaken simultaneously with the elevated road and rail system because the company will need revenue from it to subsidize the low-fare infrastructure services. The earnings from property development will be attractive enough to get support from the financial institutions.

For the railway agency, it will receive minimum benefits of Bt 54.11 billion from Hopewell during the concession. Upon the signing of the agreement, the railway agency was awarded Bt 300 million in

benefit payment from Hopewell. During the first to eight years of the concession period, another Bt 3.8 billion will be paid out, compared with Bt 13.95 billion during the ninth to 23rd years of the concession period, or annual compensation based on three per cent of turnover, whichever is greater, and Bt 36.06 billion during the 24th year to the end of the concession period, or 30 per cent of profit after tax, whichever is greater.

Hopewell expects to borrow a total of US\$ 2.4 billion to finance the project, of which Bt 35 billion will be in Thai baht and US\$ 1 billion equivalent in US dollar or other available foreign currencies. The financial advisers are working out various options so that the project will get initial fundings, which will include the launching of debt instruments or direct borrowings.

The Bangkok Bank and Citibank N.A. are acting as its financial advisers until the signing of the contract. Bangkok Bank has been chiefly involved in providing consultations in concessions or conditions to Hopewell on the legal or regulatory side, and Citibank on the possibilities of offshore financing.

Fund-raising for Hopewell's initial US\$ 1 billion to support the Bangkok elevated road and railway transit system will be mainly conducted by Hong Kong-based Wardley Corporate Finance Ltd, a subsidiary of the Hong Kong Bank Group. Wardley is also the lead underwriter for the US\$ 800 million syndication of Hopewell's super-highway in Guangdong, China.

The Bangkok elevated road and railway transit system will need promotional privileges from the Board of Investment, which will convene on November 26 to decide on the status of the project. The Cabinet has agreed that the project should receive BoI promotional privileges, which include an eight-year tax holiday and tariff exemption on imported machinery and equipment to construct the project. Without BoI approval, Wu said the project will not be able to get started.

Earlier this week, the Public Prosecutors Department raised the following remarks about the draft contract between SRT and Hopewell (Thailand):

o Hopewell Holdings of Hong Kong should be clearly identified as a contractual partner in the project instead of Hopewell (Thailand) alone because the Cabinet approved in May that Hopewell Holdings would be the partner to negotiate with the railway agency. At least, Hopewell Holdings should provide a guarantee that it would hold equity in Hopewell (Thailand) at a suitable ratio, and Hopewell (Thailand)'s scope of business activities should be clearly outlined during the concessions as pointed out in the contract, except that the Thai government will view otherwise.



o Hopewell should not be able to raise its toll fee or railway transit tickets in the event that other infrastructure projects are developed in competition against the company's elevated road and railway project because it will be enjoying an advantage over other projects, in that it will benefit from commercial property development.

o The contract allows only two representatives from the Ministry of Transport and Communications and the State Railway of Thailand to act as advisers to the project and have access to vital information on the project. The question has been raised that since the project is huge, it should have representatives from other government agencies, such as the Finance Ministry or the Office of the Auditor-General of Thailand.

o Before signing the contract, the Thai side should carefully study the basic fundamentals of the economy, the basis Hopewell uses in adjusting its toll fees or rapid railway tickets, so that it may have a clearer view.

The Public Prosecutor Department sent the draft contract back to the Ministry of Transport and Communications on November 2, noting that the ministry would have to negotiate further with Hopewell before the signing could take place.

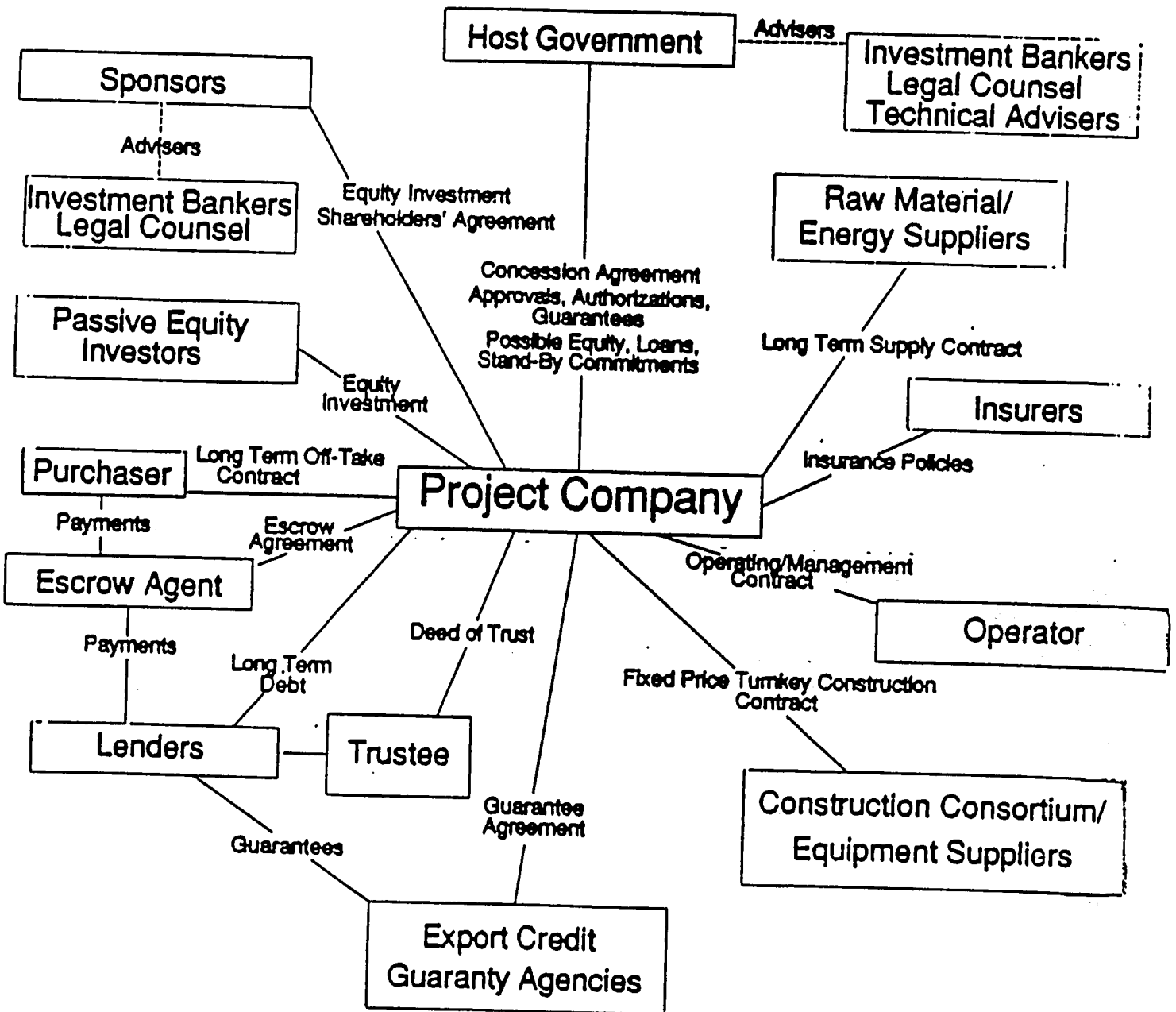
But the ministry could not complete it as the department suggested because Hopewell did not accept it, and the ministry softened its position and went ahead and signed the contract yesterday.

The speed with which the Ministry concluded its agreement with Hopewell has raised scepticism about the seriousness of the ministry in negotiating for the best benefits, as pointed out by the Public Prosecutor Department.

Source: The Nation Bangkok

November 10, 1990

# BOT PROJECT STRUCTURE



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## Annex E6

## INTEREST RATES OF COMMERCIAL BANKS, 1985 - 1989 (a)

	December				Sept.	Dec.	Feb.
	1985	1986	1987	1988	1989	1989	1990
						(g)	(g)
<b><u>Nominal deposit rates (b)</u></b>							
State banks	16.0	14.7	17.3	18.4	17.7	16.0	15.2
Private banks	17.8	16.2	19.3	20.3	19.5	17.6	17.2
<b><u>Real deposit rates (c)</u></b>							
State banks	9.6	6.9	11.2	10.1	10.0	9.2	8.4
Private banks	11.4	8.4	13.2	12.0	11.8	10.8	10.4
<b><u>Nominal lending rates (d)</u></b>							
State Banks	15.3	18.5	20.0	20.2	19.9	19.7	16.0
Private FX banks	24.2	23.0	23.6	23.8	22.7	21.7	n.a.
All deposit money banks	n.a.	n.a.	22.1	22.3	21.6	21.0	n.a.
<b><u>Real lending rates (c)</u></b>							
State Banks	8.9	10.7	13.9	11.9	12.2	12.9	9.2
Private FX banks	17.8	15.2	17.5	15.5	15.0	14.9	n.a.
All deposit money banks			16.0	14.0	13.9	14.2	n.a.
<b><u>Memo items</u></b>							
	<b><u>1985</u></b>	<b><u>1986</u></b>	<b><u>1987</u></b>	<b><u>1988</u></b>	<b><u>1989</u></b>		
LIBOR (e)	8.6	6.9	7.3	8.1	9.3		
<b><u>Inflation differential</u></b>							
between Indonesia and USA (f)	1.0	3.8	6.2	5.3	1.4		

(a) For Rupiah transactions, excluding liquidity credit program.

(b) Unweighted average rates on six-month time deposits.

(c) Ex-post rate calculated using actual CPI movement in the period.

(d) Average nominal rates on working capital.

(e) London Interbank offered rate on six month US Dollar deposits.

(f) US WPI, Indonesian adjusted CPI

(g) Unweighted average rate

Source : Bank Indonesia and IMF International Financial Statistics, World Bank, 1990

**Annex E7**

**Summary and Recommendations from**

***Management and Operational Practices  
of Municipal and Regional Water and Sewerage Companies  
in Latin America and the Caribbean***

**by Guillermo Yepes**

**INFRASTRUCTURE AND URBAN DEVELOPMENT PAPERS,  
REPORT INU 61, Jan. 1990**

**Infrastructure and Urban Development Department  
The World Bank  
Washington, D.C. U.S.A.**

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**MANAGEMENT PRACTICES OF MUNICIPAL AND REGIONAL  
WATER AND SEWERAGE COMPANIES IN LATIN AMERICA AND THE CARIBBEAN**

**Summary and Recommendations**

1. Institutional weakness is one of the most important obstacles that stands in the way of the efficient provision of water and sewerage services in Latin America. To address this concern, the World Bank undertook a study to help identify and disseminate information about successful management and operational practices in well-run sector companies in the Latin American region. The study also quantifies, to the extent possible, operational indicators that can be used as bench marks for other, less developed, sector agencies.
2. Sector companies in the region face a formidable task. To reach full service coverage by the end of the century they would have to serve some 522 million additional people, almost double the population now served, and invest at least US\$92 billion (according to 1985 prices). Investment needs will almost certainly exceed this estimate or, alternatively, service levels will be substantially lower if sector management is not able to implement modern and efficient operational practices. Supervising government agencies and the political establishment in these countries share some of this responsibility, as they need to recognize the urgency of supporting these changes.
3. Sector organizations in the region face similar problems and constraints. Among the most important are: a) high inflation, b) low investment priority in a scarce capital resource scenario, c) rapid and uncontrolled urban population growth, d) a large proportion of low-income population to be served, e) politically appointed managers and controlled rates, f) instability of technical and managerial positions, and g) low salaries and an untrained labor force.
4. A selected group of companies in the region (LAU companies) has managed to be successful despite these problems and constraints: They all have reached service levels for water and sanitation that are substantially above the corresponding national averages, and they all operate at efficiency levels that are substantially higher than those of most sector companies in the region. LAU companies still have room for improvement in comparison to well-run companies in industrialized countries (SFU companies). The efficiency gaps that separate LAU companies from SFU companies are, however, narrower than those between them and most other sector companies in the region.
5. A sampling of well-run companies in Spain and France (SFU companies) demonstrates some substantial differences with the LAU companies' sample, inter alia: a) private capital plays an important role in both the financing and in the operation of SFU companies, b) LAU companies operate in cities or regions with population growth rates substantially above those in Europe, and c) the two regional companies in Latin America operate in

relatively dispersed geographic areas. A comparison of the organizational structure of LAU and SFU companies showed no significant differences.

#### Practices to Emulate

6. LAU companies have been able to develop responsive management teams and sound managerial and operational practices despite environmental constraints, even though they have not attained the same level of efficiency of many companies in the industrialized nations. The most salient, but not always quantifiable, aspects that help explain their good performance are:
  - a. LAU companies have developed distinctive organizational cultures. Their managers are held in high esteem, and they in turn have been able to translate this trust into a mandate for company excellence.
  - b. LAU companies offer, by far, more job stability in mid-management and professional positions. Therefore, institutional memory is preserved and long-term objectives are kept in focus.
  - c. LAU companies' financial strength has been achieved by implementing reasonable rates that cover, at the very least, operational and maintenance requirements.
  - d. LAU companies' relations with customers are of the highest priority. This not only provides feedback on operations but reinforces community trust in the company.
  - e. Some LAU companies have, in addition, developed particular practices that deserve attention. Among them are the successful use of private contractors to increase staff productivity, the participation of private capital to finance and operate waste water reuse plants, and the development of an effective cost accounting system that allows better financial management. In addition, two companies have developed an organizational system that is responsive to the needs of small- and medium-size municipalities.
  
7. There are other areas in which European counterparts fare much better. European efforts in these areas should therefore be emulated by companies that strive for even higher efficiency. These include the following approaches:
  - a. The government, the company's board of directors, and the company's management all have clear roles. The first regulates and sets clear norms, the second formulates strategic plans, and the latter operates and carries out company operations with a high degree of autonomy.

- b. The private sector participates in company operations in order to foster independent decision making and to compel management to be more accountable for performance.
- c. Management and operational systems use state-of-the-art technology.
- d. The internal auditing department has been expanded to oversee and help to improve the operation and practices of the whole company.

### Monitoring Indicators

8. Monitoring indicators should be interpreted with caution, as they seldom can fully describe or capture all the peculiarities and problems of a company. Nevertheless, they are useful as a management and evaluation tool and are of great help in setting realistic objectives to improve operations and to design plans and strategies to reach them.

9. Operational indicators include staff per 1,000 water connections or per 1,000 water plus sewerage connections, salary cost as a percentage of total operating costs (depreciation not included), and unaccounted for water (UFW). These indicators are described more fully below:

- a. LAU companies show on average a ratio of 5.4 staff per 1,000 water connections or 3.0 per 1,000 water plus sewerage connections. These ratios imply a productivity level of at least double that of other companies in the region. SFU companies have a higher productivity level of 2.2 staff per 1,000 water connections as the result of extensive use of state-of-the-art technology and better trained staff.
- b. Personnel costs are the most important cost element of a water and sewerage company. In LAU companies this ratio is under 40%, which compares favorably with most other sector companies in Latin America, where it often exceeds 50%. The same ratio in SFU companies is under 30%.
- c. UFW, defined as the difference between metered production and consumption expressed as a ratio to metered production, is an elusive index because more often than not these volumes are not metered adequately. The average UFW for the LAU companies is 34%, in contrast to that of 40% to 60% of other companies in the region. In SFU companies this ratio is about 22%. The reduction of UFW is important not only as a conservation measure, but also because volumes of water thus saved replace or postpone the need for capital investments to develop new sources. A reliable assessment of UFW provides useful information in helping to improve the operation of the water distribution system. The experience of most companies in the region, on the other hand, also indicates that high values of UFW are often the result of

deficiencies in the commercial system and not of large leaks in pipes and losses in other appurtenances.

- d. Financial Indicators. It is difficult to make a clear comparative analysis of company finances in different countries. Government regulations that affect financial management, exchange rates, and revaluation of assets vary widely and cloud the analysis. Nevertheless, certain good practices can be highlighted. Good management of current assets ensures that these assets are used effectively and are available in a timely manner. Good indicators include a low level of accounts receivable and an adequate level of cash on hand. Internal cash generation should be adequate to cover all operating and maintenance costs and debt service obligations as well as to contribute to the expansion of the system. The working ratio gives a good indication of the capacity of a company to satisfy its operating costs (a value greater than 1.0 is totally unacceptable). The basis for sound financial management is a good accounting and forecasting system that provides timely and reliable information.

#### Operational Issues in Small Communities

10. This study has documented the fact that important economies of scale exist in the operation of water and sewerage systems in the Latin American region and elsewhere. While average salaries rise with the size of the company, operational costs per connection decrease. Large municipal or regional companies, therefore, are able to attract more competent personnel, which in turn allows them to operate at a higher efficiency level to offset larger unit labor costs. Because personal income tends to decrease as the population of a community decreases, small communities find it difficult to pay for good managers and a critical mass of operational staff. Therefore, quality of service suffers. These problems are not exclusive to the region. Their solution has been provided in Latin America and in Spain by regional sector companies in charge of all phases of operation. These companies are also in a better position to capture some of the economies of scale available in the construction of large works that can be shared by several municipalities.

#### An Agenda for Action

11. Most good management practices and monitoring indicators identified here seem obvious and simple to implement. In practice, a concerted and sustained effort is needed to reach the high levels of effectiveness and efficiency associated with these companies. Organizational learning must tread a narrow path. A loose organizational structure helps to facilitate innovation and can lead to increased self-confidence and risk taking. Success, on the other hand, may lead to stagnation and a stifling of experimentation needed for future learning. Thus, in emulating LAU companies'



practices, other companies not only need to be creative and to adapt good practices to local conditions, but must also maintain a systematic and continuous effort to improve efficiency and effectiveness.

12. Any strategy to achieve effective management begins with a firm commitment to improve and an open mind to try new ideas that may run contrary to the way things have been done in the past. Several paths have been followed to improve operations, and all have their merits and limitations. Among the most widely used are: a) twinning operations, which imply a horizontal cooperation between and transfer of experience from a well-run and an emerging company; b) targeting and bonus systems that focus on operating efficiency and on motivating management; and c) contract plans or negotiated agreements between governments acting as owners of a public enterprise and the managers of the enterprise itself.

13. Given the externalities and economies of scale in research and development, associations of utilities or central government organizations can be the focal point in documenting and disseminating successful management practices in their respective countries.

14. An efficient and effective sector company cannot survive, much less provide effective and efficient service, if it is not able to recover its costs and contribute to system expansion. Governments should, therefore, devise mechanisms to overcome not only economic but political, social, and institutional barriers that influence the adoption and effective implementation of adequate rates.

15. The findings of this study strongly suggest that good management practices should be placed at the center stage of any company striving to reach high levels of effectiveness and efficiency. The examples of successful management practices documented in this study show that adequate operational efficiency and effectiveness can be attained by all utilities in the region.

PRIVATE SECTOR PARTICIPATION IN URBAN WATER SERVICES

ISSUES FOR INVESTMENT IN INDONESIA

**Working Paper F**

**WATER SECTOR FINANCING:  
SELECTED ISSUES  
IN FINANCIAL ASSESSMENT**

Prepared for the USAID Mission to Indonesia  
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**WATER SECTOR FINANCING: SELECTED ISSUES IN FINANCIAL ASSESSMENT**

**EXECUTIVE SUMMARY**

This paper identifies financial issues that will be useful in the review of private sector participation in urban water supply. Areas examined include financial assessment, private-public participation options for water investment, and water pricing issues. There is also a brief look at selected financing options.

Considerable attention is given to identification studies for 23 towns; these studies were commissioned by the Government of Indonesia to attract private sector financing of capital investments in the water sector. The main objective of this review is to anticipate the requirements of the private sector in the interpretation of the results of these studies. While the report focuses on specific financial anomalies in the studies that may discourage private sector equity investment, the overriding concerns of the private sector are wider than financial results for individual projects. The underlying conditions for the control of the revenue stream are more important than calculations of the financial rate of return represented by the forecast revenue stream. For example, the private sector needs a clear and defined policy on staged tariff increases and on competition from other sources of treated water. These concerns need to be addressed in a regulatory framework that provides for independent arbitration between private sector financial requirements and public sector interests. Once this framework is in place, the standard measures of financial performance and viability will be useful.

Given the current lack of clear policy guidelines for the private sector, the studies were reviewed in terms of their financial usefulness for promoting private sector investments. The studies did not integrate existing operation conditions in the water supply sector into the cost and revenue forecasts. The studies were very optimistic in terms of operation and maintenance costs as a percentage of revenues. For example, the studies assumed O&M costs were about 13% of revenue; selected observations for existing systems indicated O&M costs were actually about 60% of revenue. The studies neglected the managerial dimension of the operation of the water supply projects which adds considerably to the cost of each enterprise. On the revenue side, nonrevenue water assumptions were optimistic—at about 20% of production, whereas current nonrevenue water in existing schemes is about 40%. Tariff assumptions were made on a straight-line basis assuming water sales would be 100% of water available for sale and that real increases in water tariffs would consistently be approved by local government at several percentage points above the rate of inflation.

The strength of the studies is in the detail of engineering data and cost estimates of the civil works. This gives the private investor an estimate of the size of the proposed development, an important element in the investment decision. Further the studies give good data on the type and range of demand, both domestic and nondomestic. Investors are more likely to be interested in nondomestic demand areas, such as industrial and tourist developments, because of the more-secure rate base and fewer but larger connections that have better economies of scale.

The paper discusses the joint participation of the private sector with existing PDAMs (autonomous water authorities). Several advantages are identified including the potential access to "sovereign" or guaranteed loan finance through the PDAM and the use of PDAM's existing "earning" assets to foster the new water company in its early years. A number of constraints are also identified in a potential joint PDAM private sector partnership, including the role of government in the supervision and monitoring of water supply enterprises which entail control over tariff rates and changes in those rates. This is seen by investors as limiting the autonomy of a joint venture. Further the management record and financial viability of existing PDAMs may not be positive enough for PDAMs to be strong partners in a joint venture. PDAMs with high unaccounted-for water and high operation and maintenance costs may be considered unacceptable risks as partners by the private sector. Some confusion is also apparent in terms of equity participation by the PDAM in a joint venture company. If the PDAM becomes part of the new company, its assets will become part of the new company. It will share in the loan repayments and liabilities as well as dividend payments. If defaults on loans occur, the assets of the PDAM declared as equity, i.e., the working water system, as well as other equity contributions will revert to the creditors of the joint venture company. In general, it is expected that the private sector interests in seeking opportunities for collaboration with PDAMs will have satisfied themselves that the development of new demand, e.g., from industrial estates, hotel complexes, or housing estates, will finance the costs of "turnaround" efforts of a PDAM and provide for financial viability of the development.

The study briefly considers domestic financial institutions that would be likely to invest in water supply developments. The profile of water development projects is an initial large capital investment recouped over a longer term (10-15 year period) with low risk but moderate return. At present local banks are lending for short to medium periods (up to 5 years), and only a very small proportion of lending is over a longer time frame—mainly for housing construction. Local banks are unsure of water investments due to their size, lack of liquidity, uncertainty of evaluating public works "assets," and the local banking sector's own current instability due to rapid deregulation.

The paper points out a number of issues in financial assessment that the private sector would consider in evaluating a water supply investment. The most important consideration, however, is the policy context in which financial measures are evaluated. For example, tariff levels can be set to achieve a specific rate of return on equity or to achieve a certain level of

social equity through cross-subsidies. The private sector needs to know what is required of its services in order to make rational investment decisions.

## WORKING PAPER F

### WATER SECTOR FINANCING: SELECTED ISSUES IN FINANCIAL ASSESSMENT

#### 1. INTRODUCTION

The purpose of this paper is to identify financial issues that will be useful in the review of private sector participation in urban water supply. These include areas of financial assessment, private-public participation options for water investments, issues in water pricing and selected financing options.

In keeping with the GOI's policy of encouraging private sector participation in capital investment in the sector, Section 2 of the paper has undertaken a review of 23 studies prepared by the GOI as suitable water projects for privatization. This review provides a detailed assessment on the usefulness of these studies from the private sector investment perspective. Comments are limited to financial considerations and make no judgement as to technical merit.

The relatively small sample of formal private sector initiatives in the water supply sector precludes any detailed comparative analysis between cost or revenue practices in a public and private enterprise. There are no privately financed water enterprises of any significance operating in Indonesia at present. Lessons learned from successful private sector water enterprises are necessarily taken from outside Indonesia.

Section 3 of the paper raises briefly the question of models of joint private-public sector participation in the water sector. Paper E has considered in detail the private sector investment model of BOT. This paper highlights the anticipated practical and theoretical problems in joint private-public sector investment opportunities involving existing PDAMs.

Leading to a discussion of the role of private sector investment participation in water supply Section 4 of the paper briefly discusses the underlying issues in the important area of water pricing. It highlights the different emphasis in achieving financial viability as a public goal and profitability as a private sector requirement. An enterprise cannot provide effective and efficient service if it is not able to recover all its real costs and contribute to system expansion. This appears to be the situation of the public water supply sector in Indonesia. Audited reports from several PDAMs were reviewed with respect to current operating norms and these are presented.

Finally Section 5 of the paper considers the reported gap with respect to water supply financing and lists selected opportunities that can be mobilized to fund water supply systems.



## **2. FINANCIAL ASSESSMENT ISSUES**

An underlying theme throughout this study is the attraction of private sector investment to water supply investments. In dealing with issues of financial assessment of potential water supply investment projects it is therefore necessary to view these from the point of view of the private sector investor. Lessons learned from a brief review of private sector attitudes toward investments in water supply, as related in Paper E, have been incorporated in the review of GOI initiatives to attract private sector investment participation in the sector. The most important consideration is the policy context in which the financial measures are evaluated; more critical than calculations for the financial rate of return represented by the forecast revenue stream are the underlying conditions for the control of the revenue stream. The private sector are quite explicit that they want a clear and defined policy, for example, on staged tariff increases and on competition between other sources of treated water.

The emphasis to date by the GOI in water supply has been to attract private sector investors to participate in capital investment projects. The most comprehensive attempt in this direction from the GOI has been the preparation of identification studies for 23 towns.<sup>1</sup> These exhibit characteristics of BOT investments as discussed in detail in Paper E. All the projects are assumed to be funded by the private sector and have a 20 year concession period. Further because of the emphasis on capital investment and technical information with respect to water supply only, the projects are assumed to be likely to attract "supply-led" capital investment, i.e. contractors, design and management firms, suppliers of equipment, etc.

### **2.1 Perspective of the Private Sector**

As Paper E elaborated any private sector group investing in water will have exact knowledge of the cost of production of water. This will take into account debt service, return on equity, dividends to shareholders, etc. The private sector operates in an area where market determination and discipline are the key elements with respect to the price charged for water and other allocative and production decisions.

Pricing decisions for water are financially driven. They depend on what costs have to be met. A main goal is to increase profitability and the rate of return on equity for shareholders. With respect to the latter however investment decisions in the private sector go beyond financial considerations that are apparent from cost or revenue data. Firms sometimes provide suppliers credits or low cost financing in hopes of entering a market or securing a bigger market share.

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<sup>1</sup>Pembuatan Studi Identifikasi Proyek Untuk Investasi Swasta Bidang Penyediaan Air Bersih di Indonesia, PT Gunung Gemilang, 1989

In reviewing the perspective of the private sector in investment in water supply the study has concentrated on the data presented in the 23 studies, as referenced above—as well as the three case studies presented in Paper A. A fairly detailed analysis has already been made on the 23 studies in the Private Sector Participation Identification Study (PT Deserco Development Services and Sir M MacDonald & Partners Asia) December 1989. This report builds on that analysis and takes the investigation further, however as this is a final report no attempt has been made to recalculate the data presented in these studies. With respect to specific private sector initiatives as outlined in the case studies, data are based on secondary sources. This paper has not attempted to evaluate the financial analyses presented in the three case studies as to their financial credibility or appropriateness for investment.

## **2.2 Assessment Criteria**

The 23 studies prepared under the auspices of the GOI have similar formats. Common estimates for a range of variables have been made across the 23 projects identified. A number of critical assumptions used to derive the financial results are reviewed below.

This study has also looked at a small selection of existing PDAM audit reports for six towns as a control to compare some of the assumptions made in the 23 studies with existing PDAM performance. Limited data on these PDAMs is set out in ANNEX F1. It was not possible to match all the identification studies with existing PDAM records to obtain a complete comparison between the existing situation and that assumed in the studies.

### **Size of Investment:**

As discussed in Paper E, it appears that the capital cost of the 23 potential private water studies identified fall into a financing 'gap'. All of the studies are below the \$50 million estimated cut-off for foreign BOT investment. Only 5 of the studies fall under the indicative Rp 20 billion domestic rupiah investment maximum.

### **Rates of Return:**

#### *Financial Internal Rate of Return*

The 23 studies relied heavily on the calculation of the financial rate of return as an indicator of financial viability. This is the discounted cash flow of financial revenues less capital costs as they occur over the 20 year time horizon of the project. The project identification studies set this almost universally at 20% (see Table 1). It is somewhat surprising that all the studies show a rate of return within such a limited range given the wide differences in capital costs. The McDonald study suggests that the IRR should be closer to 30% to attract private investors. Recent informal evidence suggests that domestic investors expect a 40% return on capital. In any event the treatment of capital costs in this way, i.e. in lump sum at the time of deployment in a financial analysis, is of limited value. It is often done as an intermediate

**TABLE 1**

**Selected Details of Potential Water Supply Schemes**

TOWN	Consumers		Scheme Capital Cost (Rp Million)	1995 Avg. Tariff (Rp/m <sup>3</sup> )	Project FIRR (w/o Tax)	FIRR to Equity * (25% Equity with Tax)
	Dom	Non-Dom				
Medan	70%	30%	42,216	407	26.3%	32.6%
Dumai	73%	27%	14,130	649	18.8%	17.5%
Surabaya	67%	33%	46,302	-	23.0%	-
Pontianak	82%	18%	36,000	505	19.4%	18.6%
Pekanbaru	80%	20%	7,850	362	19.2%	18.8%
Lhok Semawe	72%	28%	19,425	290	19.7%	19.9%
Banjarmasin	80%	20%	14,900	463	19.0%	18.0%
Candi Desa	27%	73%	2,000	313	20.9%	23.2%
Nusa Dua	52%	48%	29,000	621	19.4%	18.9%
Semarang	47%	53%	63,750	395	19.7%	19.8%
Bekasi	81%	19%	17,900	352	19.5%	19.3%
Pluit	34%	66%	19,896	483	20.8%	23.2%
Balikpapan	78%	22%	28,260	614	19.1%	18.2%
Bogor	80%	20%	34,700	502	18.8%	18.4%
Serpong	77%	23%	12,560	313	19.8%	18.2%
Gresik	20%	80%	39,840	530	21.6%	20.1%
Driyorejo	77%	23%	5,018	438	19.9%	-
Karang Pilang	67%	33%	46,302	211	19.3%	16.9%

\* FIRR to Equity: 25% Equity / 75% Debt Finance at 20% interest

Source: Pembuatan Studi Identifikasi Proyek Untuk Investasi Swasta  
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P. T. Gunung Gemilang, and ANNEX F2

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state to preparing an economic rate of return. This study has made no attempt to recalculate these results and uses the data for comparison purposes only. The objective of this study is to review the evidence as presented to a private investor, not to rework the data for alternative results.

### *Rate of Return on Equity*

The internal rates of return (IRR's) in the 23 studies have been calculated on a "Project IRR" basis. This approach (equivalent to assuming 100% equity financing) essentially measures the viability of projects before alternative financing methods are introduced. In projects where the Project IRR is higher than the interest rate on borrowed funds, equity investors may earn substantially higher returns than the Project IRR on their own equity investment through the "leverage" effect. Private sector investors thus use the Project IRR to measure the underlying physical soundness of projects but are primarily interested in the IRR to Equity after financing (and the associated risks).

Annex F-2 shows a recalculation of the IRR's from the 23 studies in terms of IRR to Equity. Note that as the Project IRR's are all close to 20% and the assumed interest rate is 20%, there is very little leverage effect in the results.

### **Concession Period**

Considerable attention and discussion center around the concession period. The 23 studies use a standard concession period of 20 years from the first year of construction. Clearly the shorter the concession period the less time the investor has to recoup his investment and therefore the higher the interest and amortization charges will be. From the small sample of possible water supply investments with concessions in Indonesia, concession periods range between 15 and 30 years.

From an international point of view, investors appear not to be concerned over returns after 15 years given their relatively low discounted value. Different lengths for concession periods can be accommodated in a financial spreadsheet through sensitivity analysis however it appears the length of the concession is not of critical importance to the investor. It may be more important to the public utility in terms of the "handover" and the responsibility to operate the facility when it comes into a higher maintenance phase.

### **Revenue Assumptions**

- Water Sales

The income assumptions which are the basis of the revenue streams in the 23 studies are at the center of any investors interest. The studies are based only on water sales and there are no other sources of income included, eg connection charges. Also the studies assume

TABLE 2 IDENTIFICATION PROJECT STUDY  
23 POTENTIAL PRIVATE WATER SUPPLIES

NO.	PDAM	SCHEME CAPITAL COST (Rp Mill.)	1995 WATER VOLUME (000 M3)			CAPITAL COST/ CAPACITY RATIO (Rp/m3 Annual Prod. Capacity)	1995 AVERAGE TARIFF (Rp/M3)	1995 WATER REVENUE (Rp Mil.)	1995 O & M COSTS		IRR TO EQUITY	
			PROD. =CAPACITY	WATER SOLD	EFFIC.				TOTAL (Rp Mil.)	AS % OF REVENUES	40% Equity/ 60% Debt	25% Equity/ 75% Debt
1.	Medan	42,216	45,330	36,266	80%	931	406	14,730	2,047	14%	26.1%	32.6%
2.	Dumai	14,130	6,901	5,455	79%	2,048	649	3,531	445	13%	15.5%	17.5%
3.	Surabaya	46,302	-	-	-	-	-	-	-	-	-	-
4.	Pontianak	36,000	24,005	19,016	79%	1,500	505	9,615	1,398	15%	16.4%	18.6%
5.	Pekanbaru	7,850	7,699	6,086	79%	1,020	362	2,208	440	20%	16.4%	18.8%
6.	Lhok Semawe	19,425	24,617	19,460	79%	789	290	5,655	1,183	21%	17.1%	19.9%
7.	Banjarmasin	14,900	10,661	8,388	79%	1,398	463	3,887	568	15%	15.8%	18.0%
8.	Candi Desa	2,000	2,327	1,829	79%	859	313	575	100	17%	19.5%	23.2%
9.	Nusa Dua	29,022	14,800	11,762	79%	1,961	621	7,326	942	13%	16.5%	18.9%
10.	Semarang	63,750	55,132	43,582	79%	1,156	395	17,276	2,987	17%	17.1%	19.8%
11.	Bekasi	17,900	18,071	14,285	79%	991	352	5,045	945	19%	16.7%	19.3%
12.	Pluit	19,896	14,560	11,510	79%	1,366	483	5,559	823	15%	19.5%	23.2%
13.	Balikpapan	28,260	14,600	11,542	79%	1,936	614	7,086	743	10%	15.9%	18.2%
14.	Bogor	34,700	22,539	17,817	79%	1,540	502	8,937	1,321	15%	16.0%	18.4%
15.	Serpong	12,560	14,765	11,672	79%	851	313	3,659	748	20%	15.6%	18.2%
16.	Gresik	39,835	27,651	20,110	73%	1,441	530	10,649	1,664	16%	17.8%	20.1%
17.	Driyorejo	5,018	10,015	8,708	87%	501	438	3,814	264	7%	-	-
18.	Karang Pilang	46,302	79,786	63,072	79%	580	211	13,310	2,853	21%	14.6%	16.9%
19.	Ujung Pandang	36,916	15,391	10,158	66%	2,399	576	5,851	589	10%	28.3%	32.4%
20.	Bandung Raya	81,790	20,813	16,556	80%	3,930	1,000	16,643	1,090	7%	25.1%	28.4%
21.	Tegal	31,529	10,050	7,035	70%	3,137	808	5,684	545	10%	29.3%	34.1%
22.	Merak	28,018	7,884	7,884	100%	3,554	489	3,855	295	8%	28.4%	32.9%
23.	Mataram	22,508	10,090	8,073	80%	2,231	510	4,121	811	20%	26.6%	29.9%

Source: Pembuatan Studi Identifikasi Proyek Untuk Investasi Swasta  
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1-18: P. T. Gunung Gemilang  
19-23: P. T. Lingkindonusa

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100% sales from the initial year of start-up. It is more common that sales are graduated, eg. based on population growth rates.

- **Water Production and Unaccounted for Water**

The assumptions on efficiency ie. the volume sold as a percentage of production are fairly optimistic. The investor studies overall assume about a 79% efficiency rate, ie. only about a 20% allowance for unaccounted for water (UFW). The current average is about 40% in our limited cross reference study. The current estimated UFW for Jakarta is about 50%. Private investors will be sensitive to the UFW assumptions made in the feasibility study and more realistic values observed throughout the sector. High UFW wastes expensive treated water and more critically makes future financial projections difficult because these are dependent on volume sales.

- **Tariffs, Revenue Collection and Demand Management**

A most critical issue for a private investor in water supply will be the robustness of the tariff assumptions. These are pivotal to any investment decision. A summary of the assumptions made in 17 of the 23 studies are set out in Table 4.

The basis of the tariffs are some what arbitrary. The studies have been conducted in constant prices with a relative tariff increase in the domestic tariff of about 1.5% every 2 year and for non-domestic tariff of 3% every year. This is consistent with observed forecasts across a range of feasibility studies in the water sector in Indonesia. The World Bank's Second Jabotabek Urban Development Project assumes that tariffs will increase 3.5% per year. The assumptions for Umbulan Springs have assumed that the bulk water charge will increase between 3 and 5% per year.

It is unclear from the 23 studies how the original tariff assumptions based on 1987/88 values were made. As discussed below, it is important that the cost of production and the price charged for water ( the tariff) have a specific relationship. It is known for example that a number of PDAMs do not make sufficient provision for depreciation of fixed assets (physical facilities) in their current financial accounting. PDAMs appear to be "profitable" but they not recovering their capital costs from revenues based on the set tariffs. The use of the current tariff base in projecting future revenue streams is likely to be totally inadequate and inaccurate due to the problem of debt management.

Table 4 further sets out assumptions on the increased tariffs in 17 of the 23 studies. It is clear that the real tariff increases vary widely over the range of studies. This is to some extent a function of the split between domestic and non-domestic users however this does not fully explain the large difference. Bekasi for example shows a real decrease in average tariffs. Investors would need to be satisfied that these assumptions have validity.

**TABLE 3****Selected Variables:  
Comparative Analysis of Data of Existing PDAM Records  
Versus 23 Feasibility Study Projects**

	<b>6 PDAMS AUDITED BY BKPM (1986-88)</b>	<b>23 NEW WATER SUPPLY SCHEMES (1990 Prices, 1995 Start-Up)</b>
<b>1. CAPITAL COST / M3 PRODUCTION CAPACITY</b>	<b>Rp 816 / m3</b>	<b>Rp 1,505 / m3</b>
<b>2. O &amp; M AS % OF REVENUE</b>	<b>63 %</b>	<b>15 %</b>
<b>3. EFFICIENCY (WATER SOLD / PRODUCTION)</b>	<b>60 %</b>	<b>80 %</b>
<b>UNACCOUNTED FOR WATER</b>	<b>40 %</b>	<b>20 %</b>
<b>4. REVENUE / M3 SOLD</b>	<b>Rp 354 / m3</b>	<b>Rp 493 / m3</b>

SOURCE: Table 2  
Annex F-1 and F-2

TABLE 4

Tariffs in Identification Studies for  
23 Potential Private Water Supply Projects

PDAM	1987/1988 AVERAGE TARIFF	1995 TARIFF			% INCREASE IN AVG. TARIFF (1995/1988)		
		DOMESTIC		NON-DOMESTIC		AVG.	
		%	TARIFF (Rp/m3)	%		TARIFF (Rp/m3)	TARIFF (Rp/m3)
1. Medan	239	70%	273	30%	716	406	70%
2. Dumei	268	73%	500	27%	1052	649	142%
3. Surabaya	-	67%	-	33%	-	-	-
4. Pontianak	490	82%	432	18%	837	505	3%
5. Pekanbaru	295	80%	321	20%	527	362	23%
6. Lhok Semawe	218	72%	-	28%	-	290	33%
7. Banjarmasin	200	80%	400	20%	721	463	132%
8. Candi Desa	-	27%	191	73%	358	313	-
9. Nusa Dua	-	52%	300	48%	969	621	-
10. Semarang	304	47%	270	53%	506	395	30%
11. Bekasi	432	81%	300	19%	575	352	-19%
12. Pluit	-	34%	389	66%	532	483	-
13. Balikpapan	573	78%	534	22%	894	614	7%
14. Bogor	407	80%	378	20%	991	502	23%
15. Serpong	-	77%	273	23%	448	313	-
16. Gresik	-	20%	164	80%	621	530	-
17. Driyorejo	-	77%	382	23%	627	438	-
18. Karang Pilang	-	67%	195	33%	243	211	-
.....	.....	.....	.....	.....	.....	.....	.....
19. Ujung Pandang	-	80%	-	20%	-	576	-
20. Bandung Raya	-	35%	-	65%	-	1000	-
21. Tegal	-	79%	-	21%	-	808	-
22. Merak	-	0%	-	100%	489	489	-
23. Mataram	-	0%	-	100%	510	510	-

## NOTE:

Studies 1-18: No inflation included in studies. From 1995 onward Real tariffs assumed to increase 3% every 2nd year for domestic and 3% every year for non-domestic.

Studies 19-23: 6% inflation included in studies. Nominal tariffs increase 12.3% - 16.5% per year.



Further there is no mention in the studies of demand management. All water projected for consumption appears to be sold. The studies assumed water is totally price inelastic. Evidence is not fully available on price elasticity of water in Indonesia. A recently example from Manado PDAM indicated that there was a drop in average consumption and a decline in collection efficiency after a relatively major across the board tariff increase. It may be noted that most of the 23 studies have a majority of domestic consumers as the rate base.

## **Cost Assumptions**

### *Operation and Maintenance*

The most problematic area in the presentation of the 23 studies is that of the cost of operation. It appears the studies in using standard engineering cost appraisal techniques have used a percentage of capital costs to estimate operation and maintenance. Table 3 illustrates the gap between the assumptions for the new studies. Operation and maintenance are only 13% of revenues, where as in the existing water production facilities O&M is 60% of revenue. This enormous difference has significant effect on the profitability of a water enterprise.

The studies have completely neglected the managerial dimension of the operation of the potential water supply project. This will add significantly to the costs of operation and therefore will be apparent in possible negative net revenue streams. These include costs for management, financial organization, bill collection, etc. It is probable that the 23 studies have included maintenance of the capital works in terms of manpower costs but not full management costs of the enterprise.

The costs and procedures for management are severely lacking in these studies as well as any regulatory procedures the private investor would have to meet in terms of water quality, eg WHO standards, or specific levels of service. The studies do not integrate in any way the new investments into the current management context of the existing water supply operations.

## **2.3 Lessons Learned for Future Financial Assessments**

### *General*

The studies appear to be more detailed than is needed in an "Identification" study and yet do not go far enough to be considered a feasibility study. For example, they only present one design option. There are no optimization studies and no sensitivity analyses.

### *Strengths:*

- The studies' strength are their engineering data and cost estimates. They should give the investor an idea of the size of the capital

investment. As has been pointed out in this study, size of the capital investment has a significant bearing on investor interest.

- The studies also give a good idea of type and range of consumer demand. Non-domestic demand, e.g., industrial, tourist etc. appears to be areas where investors are more likely to be interested because of the more secure rate base and fewer larger connections that have better economies of scale. No attempt has been made however to integrate water investment opportunities with high water using industries.
- The methodology in terms of financial feasibility studies is satisfactory. This study can refer to a number of standard texts on financial analysis in project appraisal (Harvey, C. Analysis of Project Finance in Developing Countries; Merret, A.J. and Sykes, A. The Finance & Analysis of Capital Projects). It is apparent that the analysis of the 23 towns did not use the existing comprehensive manual for accounting systems and practices (The Buku Pedoman issued jointly by the Ministries of Public Works and Home Affairs) - See Vol. II for suggested example of feasibility format

**Weaknesses:**

- The studies concentrate considerable effort on producing financial indicators that, as discussed above, are based on revenue projections that are in some doubt. If in fact these financial data are very poor, this undermines confidence and usefulness of the financial projections produced.
- A major failing in the analysis was that there was no attempt to incorporate any debt/equity analysis in the financial projections.
- Basic assumptions on existing tariffs are inadequate. They are set at historical cost of production and may not adequately include all costs of production e.g. cost of production, provision for debt service, depreciation, etc.
- Lack of any management dimension which leads to a very low operation and maintenance cost.
- Non revenue water assumptions are very low in the 23 studies.

### *Opportunities for Foreign BOT Investment*

Finally and as discussed at length in Paper E, the studies as prepared are apparently aimed at domestic investors. This is concluded by (1) relatively modest size of investment (2) presentation of the language of the studies and (3) lack of discussion of a number of issues that would be of interest to foreign investors. These include foreign exchange considerations and risks associated with foreign capital investments and revenue denominated in rupiah.

### **3. OPTIONS FOR INVOLVING THE PRIVATE SECTOR IN WATER SUPPLY INVESTMENT**

#### **3.1 Overview**

The previous section looked at the 23 existing financial studies for water investment and identified the strengths and weakness of their approaches. The following section provides suggestions for private sector participation. These include improving the efficiency of PDAMs, the mixing of private and public financing options, and private sector development without PDAM involvement.

There are two main options for involving the private sector in investment in water supply. These are (1) joint participation with an existing water enterprises, eg PDAM and (2) independent private sector participation along the lines of the BOT (as discussed in Paper E.) The 23 studies as discussed in Section 2 of this paper are taken to be projects identified as possible models of BOT. Both models should be able to encourage increased investment in the water supply sector. Neither of these investment configurations for water supply systems have been as yet tried in Indonesia.

As discussed earlier, a main thrust of private sector involvement is the attraction of "off-budget" investment resources. Experience so far in Indonesia indicate private sector capital is interested in development of new sites and capturing new demand rather than taking up equity in already established water enterprises should this become a viable option. One problem experienced in "privatization" of some utility companies is that they have been sold to a few buyers. This reflects a lack of competition in the market and may trade public inefficiencies for private ones.

#### **3.2 Private Sector Involvement: The Role of the PDAM**

##### *Constraints:*

As discussed in Paper E investors already perceive the PDAMs to have a number of constraints to a PDAM-private sector partnership. These include:

- Ministry of Home Affairs must monitor and supervise all local government enterprises. This may limit the autonomy of joint venture with PDAM. It also raises the vexed question of control over the tariff. Clearly if a private sector organization is aligned with a PDAM it must play by the existing PDAM rules.
- Management record and financial viability of existing PDAMs in some doubt. Recently a PDAM was turned down for a loan from a state bank because of its high level of UAW, eg 40%. Clearly a joint

venture company is only as sound as the sum of its parts. If the PDAM is weak, the private company may not be able to survive a weak partner

- Following on from the point above, private sector investors would prefer if PDAMs were part of the joint venture, they be "silent" partners and not be involved in management.
- If a PDAM enters into a joint venture or becomes a shareholder in a new water supply private company, the requirement for entry is most likely equity participation. The PDAM brings to the new enterprise equity in the form of its current (revalued) assets. By the nature of the working water system being the main assets of a PDAM, the entire system may be included as the equity. "Limited liability" in such a situation may be useful. Liability is still equal in all cases to the value of the equity participation. Legal advice indicates that it would not be acceptable to limit the "equity" liability say to only a percentage of the working system, i.e., half a pipeline or treatment plant.
- If the PDAM becomes a part of the new company, its assets will become part of the new company. It will share in loan repayments and liabilities as well as dividend payments. If defaults on loans occur, equity e.g., assets of the PDAM and other equity contributions will revert to the creditors of the joint venture company.
- It is also clear that with assets of the PDAM come its liabilities. It maybe that part of the assets are already "mortgaged" to repay existing loans. Value of assets maybe discounted or an allowance made for debt service. A number of PDAMs have expansion programs funded by ADB and World Bank loans and debt service would need to be taken in account in asset calculations.

#### *Advantages:*

- Using the toll road as a model, a feature of public sector participation was the contribution by the PDAM of its existing earning assets. These assets were used to pay capital costs, debt service, operation expense of the new company as it began operation. It is possible the current profits of the PDAM could be made available as earning assets to the new company.
- A considerable advantage to a joint PDAM-private enterprise would be access to "sovereign" loans and concessional finance. It is unclear

if RDA money, for example, would be available to be lent directly to the "private" joint firm or whether this would be part of the PDAM asset package.

### **3.3 Leveraging of Public Sector Capital**

Following on from the idea of using concessional financing to "leverage" or attract private sector financing needs to be given very careful consideration. As was established in Paper E the higher cost of "off budget" capital should be drawn to areas or projects (eg tourism, industrial estates) that can support this higher cost. Subsidizing private sector initiatives through "on-budget" concessional funding detracts from one of the main aims of private sector financing, e.g., additionality.

The current Umbulan Spring Bulk Water Project is an example. Although negotiations are not yet successful, it uses both public and private capital. The bulk water supply is provided through a joint venture company (BOT type) that is privately capitalized. The bulk water is sold to the City of Surabaya which then sells it to domestic and industrial consumers. The improvements in the distribution system needed to deliver the increase in water supply will be funded by concessional funding (public). In general bulk water supplies have been identified as the most likely way to proceed in the use of private financing for water infrastructure.

The above project is still in doubt as the private sector costs of the bulk water supply are assumed to be too high to be borne by the municipality given (1) its current appreciation of the tariffs its consumers will bear and (2) the extra costs it will need to assume to improve the distribution network. If GOI officials are satisfied that the private sector estimate is the realistic cost of bulk water provided by a BOT arrangement, the GOI has two alternatives. These are (1) build the bulk water supply using concessional funding (provided as subsidy) or (2) increase the subsidy directly to the City of Surabaya so that it does not need to pass on the increase in water prices to its consumers. Both these solutions invalidate a main principle of encouraging private sector participation, that is, additionality. "On-budget" resources are used to support "off-budget" resources. The trade-offs in such a situation are extremely complex. It goes beyond this study to evaluate the true costs of such a joint venture project and compare these costs with an infrastructure project financed directly by through RDA or GOI funds.

### **3.4 Recommendations for PDAMs**

Clearly if a PDAM is going to participate in a joint venture company or as a shareholder in a new BOT project company, other investors are likely to want to know specifically the financial performance and health of the PDAM. An exercise was completed recently for State Owned Enterprises (SOEs). The goals of this program are similar to the requirements of the water sector, ie. to increase private sector participation in areas previously the domain of the public sector.

SOEs were evaluated in response to Presidential Instruction (INPRES) No. 5 of 1988 and follow up guidelines from the MOF (June 28 1989). The financial performance of SOEs were survey using three standard measures of financial performance. These included profitability, liquidity and solvency. (See Table 5 for standard measures defined.)

Private firms seeking financial and legal collaboration may want to satisfy themselves that the PDAM are sufficiently financially solvent, specifically with regard to debt related indicators, as not to create too much burden on the new enterprise. The preparation of corporate plans or that standard measures of financial performance as set out above will satisfy these requirements. It is expected however that private sector interests seeking opportunities for collaboration have satisfied themselves that the development of new demand, eg. industrial estates, hotel complexes etc., will finance the costs of "turnaround" efforts of a PDAM and provide for financial viability.

### **3.5 Private Sector Development without PDAM Involvement**

From a financial point of view private sector participation in the water supply sector with no equity or shareholding obligation by PDAMs is a much more straightforward model. A high proportion of water supplies are already in the private sector. The most notable being deep wells for commercial and industrial use and shallow wells for domestic use. The former pay a "directed" water tax on amount of water used as well as having paid the capital cost of the development. Point sources such as these are really not the object of the desire to fund investment and expansion in water hardware.

The development of independent water enterprises which would provide piped water to industrial and residential consumers would duplicate the responsibility of the existing PDAMs. The costs and benefits of this type of arrangement would need to be carefully considered. Overall it appears Indonesia would lose economies of scale in water treatment works, etc. and there would be costs of duplication of effort in setting-up different types of technology, training programs, billing and collection routines, etc.

Not addressing the argument that cross-subsidies are an effective and efficient way to support low income water users, the loss of control of a high yielding rate base is considered a negative impact. It is possible that a special water development tax could be levied much the same way as a tax is levied on deep wells. This type of directed tax could act as direct transfer specifically to water agencies, e.g., a directed subsidy to low income groups for water development.

Finally the creation of separate enterprises are more attractive to the private sector primarily because they will have more control over costs and organization.

**TABLE 5****Key Financial and Service Ratios**

<b><u>Profitability</u></b>		
<b>Rate of Return on Assets (ROA)</b>	<b>=</b>	<b><u>Net Income Before Interest</u> Average Total Assets</b>
<b>Profit Margin Ratio</b>	<b>=</b>	<b><u>Net Income</u> Operating Revenue</b>
<b>Assets Turnover Ratio</b>	<b>=</b>	<b><u>Total Sales</u> Average Total Assets</b>
<b><u>Short-term Liquidity</u></b>		
<b>Current Ratio</b>	<b>=</b>	<b><u>Total Current Assets</u> Total Current Liabilities</b>
<b>Quick Ratio</b>	<b>=</b>	<b><u>Total Liquidity Assets</u> Total Current Liabilities</b>
<b><u>Long-term Solvency</u></b>		
<b>Debt-Service Ratio</b>	<b>=</b>	<b><u>Net Income Before Interest</u> and Depreciation Total Debt Service</b>
<b>Long-term Debt Ratio</b>	<b>=</b>	<b><u>Total Noncurrent Liabilities</u> Noncurrent Liabilities and Equity</b>
<b>Debt-Equity Ratio</b>	<b>=</b>	<b>Total Liabilities Liabilities and Equity</b>



## **4. ISSUES IN WATER PRICING**

### **4.1 Tariffs and the Cost of Water**

A fundamental issue in privatization is tariffs or water pricing. The following section examines the relationship between tariffs, cross subsidies, the issues of the cost of water and the price of water, and the implications for applying the full water costs for a public utility and a private sector enterprise.

For private sector companies, who are financially driven, revenue streams are the main indicator of performance and decision making. These companies have very detailed knowledge of the cost of water production—operation, maintenance and capital—and these costs plus some profit must be reflected in the sale price of water.

### **4.2 Tariffs and Cross Subsidies**

The use of water tariffs for income distribution through cross-subsidies is an important issue in the cost of water in Indonesia. Water tariffs appear to carry two types of subsidies. The first subsidy is directly between user groups, i.e. between low volume users and high volume users on a graduated scale, also between industrial users and domestic users. The second type of income distribution is more indirect, i.e. the use of PDAM revenues as a revenue earner for local Government in the form of a "tax" on "profits". The PDAM Jaya (Jakarta) is typical in this respect. As permitted under existing laws, the government authority (DKI) that runs Jakarta has been withdrawing funds from the PDAM equivalent to 50% of the PDAM's "net income after taxes". The remaining 50% is distributed as pension fund, staff bonus and general reserves.

The water tariff as currently designed in Indonesia carry with it more than the cost of production. This raises many questions as to the use of the water tariff as the most efficient way to achieve wider goals of income distribution and sources of finance for local government. These additional uses of the tariff cloud the fundamental relationship between the cost of water and the price of water. For example in a private water company, a percentage of retained earnings should and will be used for internal capital formation and investment in the company. Companies may choose to use incentives to reward staff for better performance. Taxation of course is employed to redistribute and control any excess profit that a private company generates after allowing for adequate returns to investors.

### **4.3 The Cost of Water and the Price of Water**

In any event the relationship between full cost of water production ( taking into account the cost of obtaining the water plus opportunity costs) and price in water (the tariff) should be clearly established. It is impossible to "price" water without a clear idea of the full costs.

Ignoring the full cost of water will undervalue the resource, lead to failures to invest at the appropriate time and cause serious misallocations of the resource between users.

It appears that a tariff regime has two different sets of objectives in the private sector and in the public sector. These are set out below. It is clear that the private sector objectives are more easily met. It is unclear if a public tariff regime can meet all the expectations that are anticipated. In practice, trade-offs occur between the various objectives of even the most carefully designed tariff.

## TARIFF OBJECTIVES

### PRIVATE

- Cost of production
- Capital formation
- Rate of return on equity

### PUBLIC

- Cost of production
- Capital formation
- Income distribution (Social Tariff)
- Fiscal distribution (used as Revenue Base)

An important point concerning tariffs is that in a private enterprise the water facility is totally dependent on its revenue stream provided by tariffs, connection fees, its own management of cash and capital resources. In public system, the authority is "defacto" supported by the Government and all the resources that this implies. This "cushion" effect is important to take into account when observing the rigor of financial management of public sector utilities. It is unlikely that any government would let its public services fail due to defaults on interest payments. This however may cause a private sector company to cease trading due to its loan obligations in private sector markets.

## 4.4 Public Sector Context

In Indonesia there are no formal private sector water facilities of significant size. Water is provide through totally government provided facilities i.e., BPAMs or through semi-autonomous facilities ie. PDAMs. Both types of facilities are supported by the GOI to some extent. The administrative organization of the current water sector is discussed in detail in Paper D.

### Public Sector Operations

#### *Capital Costs*

A recent detailed study on the financial evaluation of Indonesia water enterprises (McDonald, et al 1988) made it clear that the PDAM's did not know the full cost of water. It was evident that operations and maintenance costs were fully recorded but capital costs were somewhat ambiguous. In the 11 largest PDAM's interest and depreciation was used to define a measure

of "profitability" but it was not clear how realistically depreciation reflected real asset values. At present there is no standard requirement for a specific rate of return on assets to provide for internal cash generation to add to capital formation.

For example, at present PDAM Jaya is participating in a large expansion program funded through the World Bank. Part of the process is to sharpen financial management so that costs and revenues in the water sector can be more transparent. Specific requirements introduced as to capital formation include that the PDAM must provide sufficient internal cash generation to achieve an annual average of 30% of retained earnings to be used for capital formation. In order to achieve this financially prudent goal the 50% tax on profits that by law is required to be passed to the DKI Jakarta has been waved.

Even though the World Bank has sovereign backed loans the conditionality on these loans in terms of financial projections are quite specific. They parallel the same types of issues that are paramount in private sector assurances needed to participate in privatization. It is important to note that to achieve some of the financial conditionalities in terms of profit distribution DKI Jakarta will not continue to withdraw funds from PDAM Jaya equivalent to 50% of the PDAM's "net income after tax". In future this share of the net income will be retained within PDAM as DKI Jakarta equity. Previously these funds were distributed as staff bonuses, general reserves and pension funds. Specific financial undertakings include:

- tariff adjustment upwards every 3 years—40% in 1991, 20% in 1994 and 10% in 1997—on average 3% per year
- adjustment every three years of ground-water abstraction fee to assure adequate compensation for aquifer mining; to provide protection against unfair competition. This will induce present and potential users to switch over to PDAM Jaya water supply.
- sufficient internal cash generation to achieve an annual average of not less than 30% contribution towards capital expenditure; ie. retained earnings of 30% of positive cash flow
- maximum debt is no more than 70% percent of total capitalization

### *Operation and Maintenance Costs*

Implicit in the recent McDonald report (McDonald, 1988) was the observation that operation and maintenance was a somewhat neglected area in the PDAM organization. This raises questions as to whether sufficient expenses have been allocated for operation and maintenance to satisfactorily maintain the system. World Bank estimates indicate that O&M expenses should be up to 30% higher than budgeted which will add considerably to the real cost of water. It also reduces amounts available for capital investment, redistribution to

municipal government, and of course will result in deterioration in service. Overtime this will increase capital expenditure. More seriously in the short term this may erode the customer base as consumers seek alternatives or refuse to pay for a poor service.

It is clear that the PDAM's have taken a "backwards" accounting stance and allow costs of water and therefore pricing to be based only on average historical costs and revenue needs to meet these costs. This stance is not appropriate in situations where the utilities are facing increasing marginal costs (all the best projects have been built and now it becomes increasingly difficult to supply the same amount of water at the historical costs). Under these conditions a "forward" looking accounting stance is indicated. If this policy were pursued by the public sector as it is by the private sector, the emphasis on revenue requirements of utilities would be replaced by establishing adequate future investment funds.

The PDAMs operate under financial principles but in a non-market oriented sector. Procedures are mechanically driven and do not allow for true entrepreneur decision making which to some extent must take place in a competitive market. Privatization is more than financial fine-tuning. For example, salaries are tied to government rates and sometimes supported by government subsidies. Capital works have been provided cheaply and in many cases freely. Incentives has not been strong for improved performance. Tariff structures may or may not responde to meeting real costs of water production. A better accounting system or an MIS system will not deal with these underlying subsidies.

#### **4.5 Common Resource Pricing Issues**

Pricing is the major tool used by the economy for efficient resource use. Pricing is much more than cost recovery and tariffs; it should also lead to correct allocation decisions. This is true for both public and private pricing regimes. The public sector has been much to blame as the use of subsidies in water pricing completely abrogates this use of the pricing mechanism for efficient resource allocation. Subsidies often lead to sloppy performance of public water utilities and certainly give the wrong "use" signals. The "free" groundwater supplies have lead to the depletion of the aquifers below Jakarta. Groundwater supplies almost 60% of municipal water. Water costs will go up dramatically as new sources of raw water are brought on stream and existing sources are treated for heavy pollution. Most recently in Bangkok cost per m<sup>3</sup> of water have risen from \$.40 m<sup>3</sup> to over \$1.00 m<sup>3</sup> due to the new aqueduct bringing in water from over 30 km outside the city.

Water is price elastic at fairly low levels. It is well known that water use is directly related to prices charged—higher the prices, lower the usage. This was clear in a recent study of Manado PDAM. Tariff increases of 75% were off set by a decline in water sales (higher nonrevenue water). This indicates that it may be difficult to increase revenue streams by simply increasing tariffs. This prescription however seems to dominate revenue forecasts for new capital investments for public and private revenue forecasts. It is clear that over time cost of water increases due to higher level of service, disinvestment in the sector on existing

facilities and the higher real cost of new facilities (assuming cheaper sources were tapped first). In future water costs are going up, subsidies are going up or the level of service is going down.

## **5. AVAILABILITY OF WATER SECTOR FINANCING**

In this section the availability of funds from various sources is examined. Domestic financing is considered and selected options including bonds, mutual funds are discussed briefly.

### **5.1 The Financing Gap**

#### *Off-Budget Financing*

Estimates from the Support Study for Master Planning for Water Supply Subsector Policy (1987) indicate that total resource allocations for the water supply sector are RP 2.2 trillion (1987 prices) for Repelita V. Of this sum about 55% or 1.2 trillion is earmarked for development and local projects, ie investment financing. The role the private sector is supposed to play in meeting the targets is estimated at about RP 200 billion or about 20% of the investment budget.

The consultants have taken the view that the main objective of this section on private investment is "off-budget" financing. There is some confusion as to how much government involvement would be included in "off-budget" financing, ie say providing for foreign exchange risk through the extension of the SWAP facility or guaranteeing debt servicing. In any event the concentration of the report is on projects that are completely dependent on private sources of funds.

The following section looks briefly at a selection of 'off-budget' financing options aimed at the domestic market. Foreign funding aspects are covered under BOT considerations in Paper E.

### **5.2 Financing Options**

#### *Domestic Financing*

The investment profile of water supply investments as been elaborated in Paper E. Water supply investment typically have a large initial capital investment which makes them "lumpy". They also exhibit a low risk and moderate return profile. An informal survey was taken among several financial institutions which would most likely be involved in domestic financing of water supply investments. These results are related below.

At present local banks typically provide short-to medium term loans. Short-term has been defined by bankers as 1-3 years and medium term, 3-5 years. A small portion of their loan portfolio, may be up to 15%, are long term loans, between 12 to 20 years. These are mostly categorized as "consumer" loans and are almost exclusively for housing. This type of loan is given to employees of large companies. It is sometimes used as a promotion tool. There are a few examples of local banks providing larger loans in the form of "syndicated" loans for

longer term investments. The main example for this type of loan is in hotel construction. As the study has pointed out tourism is likely to attract substantial domestic and foreign funding because of the security in foreign exchange revenues and the relatively quick return profile.

In evaluating long-term loans, domestic banks were cautious. They needed to find "safe" low-risk investments and they were not sure if water supply, as it was currently observed, was a safe investment. They saw private sector participation in water supply as a very new area of investment. Local banks needed time to adapt to this new development as there was no track record in public sector investment. The amount of funding required for water supply would be large given their rather limited long-term investment portfolio.

Domestic banks liked investments that were more "liquid", ie. more easily transferable. The banks felt that they would have difficulty in transferring loans to water supply projects in certain circumstances. Further the loan collateral and valuation in assets with regard to water supply investments was very unclear.

Banks needed a detailed financial feasibility study when appraising a loan application. This would include identification of the equity providers. They were seen as the most important partners in any joint venture. The more equity participation, the less risk is assumed. If PDAMs were involved, local banks would only be interested in a joint venture providing there was some security against competing investments in the same sector. They would not be interested in a water supply project which would have to compete with a PDAM.

Finally the domestic banking sector pointed out that they, as institutions, were not yet stable. Deregulation had brought considerable competition and expansion. In general, bankers thought that there were a number of other project alternatives which may be more suitable to their lending portfolio and more profitable. Current deposits rates were between 21-22 percent per annum; the prime lending rate was between 24-25 percent. Rates of return on investment in Indonesia on short-medium term investments are reported to be as high as 40 percent.

### *Bond Markets*

Dealing specifically with a private joint venture company (BOT) it is possible to raise debt financing on the bond market. For a specific BOT project or private water supply project these would be "revenue" bonds that are backed solely by the revenue stream of the specific water project.

In 1983 the first long-term bonds first started to appear. PT Jasa Marga, the state-owned toll road company issued a number of bonds to finance construction. The maturity of the bonds was 5 years, which for some bonds is not considered long term. The Jasa Marga I bonds carried a 15.% coupon and they were 50% tax exempt. The Jasa Marga II bonds were issued

at 16.5% with a tax exemption only on the interest paid. The bonds for Jasa Marga are considered more fully in Paper A.

The difficulty in attracting revenue bonds to new companies is that they have no record of performance. It is likely that it will be difficult to find underwriters that will take on the responsibility for ensuring the bond sale and deal with the unsold bonds. As with shares, the underwriter has to ensure that all issued bonds are completely sold out.

Nonetheless since the PAKDES 1988 financial policy package, 22 companies now offer bonds on the Jakarta and Surabaya stock exchanges. This is an increase of 15 new companies since 1988. It is also interesting to note that the primary offering value has dropped from over 10 RP billion per company between 1977-88 to less than RP 7 billion per company. So while the number of companies tripled, the bond value has not quite doubled.

Government or municipal bonds are used in some developed countries to finance public infrastructure. These are "general obligation" bonds and are backed by the "full faith" and credit of the issuing authority, i.e. government or city. They are considered by investors as low risk low return investments and match the return profile of many public infrastructure investments. They often include tax advantages to attract investors. These types of bonds are particularly attractive to pension funds and insurance companies because of their relative low risk.

#### *Mutual Funds*

Though there is not believed to be any currently operating directed mutual funds for solely water supply development in developing countries, the idea has been suggested. (See P.T. Deserco Development Services & M. Macdonald - Private Sector Participation Identification Study). Mutual funds are a way to capture investment finance which may be suitable for longer term loans and therefore fit the investment profile of water supply. These funds would receive income from a variety of sources including large institutional investors, general public, etc and pay interest on the funds. The fund management however would be directed to water supply investments.

The question of the attractiveness of water supply investments from the general public through say municipal bonds, etc. rather than from specific water related investors will be to some extent a function of other offerings in the market place.

#### *Equity Finance :Government Support for Natural Resources*

The above financing models have been suggested to specifically fund water supply projects. A recent example of investment in timber estates may have some commonalities. As reported in the Jakarta post of November 7, 1990, an agreement was signed between six-



state owned banks to channel government equity capital and subsidized loans for the development of timber estates. Timber estates display some of the same characteristics as water supply projects, e.g., long lead time and investment returns in local currency. These projects are clearly using central budget resources from the reforestation fund to attract "off-budget" resources. It must be stated that these projects are unlikely to be financially viable on their own account without government subsidies, otherwise private investors would be already investing given the robust investment climate.

The specific details of the forest sector financing plan are as follows. The government equity capital and loans for a joint venture firm are set, respectively at 14% and 65% percent of the total investment. The debt equity ratio is 65/35 therefore the private sector is obliged to put in 21% equity. The government will also provide low interest loans. Half of the loans will be at an average commercial rate of 20% per annum and half of the loans will be interest free.

#### *Leasing and Project Debt*

Within the context of private sector participation in water supply as presented in this study, the most appropriate mechanism for re-allocation of the debt responsibility from the public sector to the private sector is through lease contracts. This study particularly refers to the fact that the assets remain under the ownership of the public or government authority but the financial responsibility for paying the debt and debt service is borne entirely by the lessee. As with a lease-type contract the financial risk for operation and maintenance is also borne by the lessee as well as requirements for working capital. The lessee retains a portion of tariff revenues as compensation and pays the remainder to the authority in rene.

The question here is not one of rescheduling debt service, but transferring it to private sector responsibility in terms of the lease agreement. The most experience with this type of contract is from France where leasing arrangements are used for water supply, sanitation and solid waste management services. These types of services have also spread to West Africa where they are successful in the Ivory Coast and in Guinea. For the African examples referred to above, the leasing firm is a joint local-foreign enterprise. The foreign partner has brought to the arrangement essential technical and managerial expertise. Considerable interest is currently apparent in the use of leasing contracts by water authorities. The World Bank has started a number of studies to review leasing contracts. (See Thelma A. Triche, *Private Participation in the Delivery of Guinea's Water Supply Services*, World Bank, 1990).

## 6. CONCLUSIONS

1. Considerable effort was given in this paper to a review of the financial analysis presented in 23 studies that the GOI had prepared as potential capital investment for private sector participation. In the evaluation of these studies information obtained from interviews with selected investors were used. Lessons learned from this analysis are presented briefly below:

- Studies appeared to be more detailed than is necessary for identification studies but did not go far enough for a complete feasibility study.
- The studies had adequate engineering data and cost estimates to give the investor an idea of the size of the investment. The size of the capital investment has significant bearing on investors' interest.
- The studies gave a good idea of the type and range of consumer demand. No attempt was made however to integrate water investment opportunities with high water using industries.
- Financial projects were based on historical tariff levels that may not meet full costs of production. Tariffs were also assumed to increase continually in real with 100% of water sold from the first year of production. There were no assumptions on debt/equity that were carried through to the financial analysis.
- Non-revenue water was assumed to be only 20%; for existing services it was closer to 40%. Operation and maintenance costs as a percentage of revenue were assumed to be only 13%; currently they are on average 60%.
- There is no attempt to put the investments in the current operating context of the existing PDAM or operating authority.

2. The projects put forward by the GOI for investment appear to be stand alone investments, eg "supply-led". They are aimed specifically at capital improvements in water supply provision. The lack of any discussion concerning concerns of foreign investors eg, foreign exchange guarantees and revenue streams nominated in rupia, indicate that the studies are aimed at the domestic investment market.

3. If PDAMs are actively going to participate in joint venture with the private sector, it is clear that they will need to improve their financial management. The private sector must satisfy themselves that PDAMs are financially solvent. It is unlikely that a private

sector firm will want to participate with a financially weak PDAM partner. Stated preference by the private sector is for investment with PDAMs as a "silent" partner.

4. Privatization is more than financial fine-tuning. Private sector operations have full knowledge of their costs of production, including sufficient internal cash generation for capital formation. They are able to calculate the required tariff or price of water needed to cover costs. PDAMs carry with their water tariffs various subsidies. The use of tariffs as a method of subsidy clouds the fundamental relationship between the cost of water and the price of water. This leads to difficulties in comparisons of the two types of organizations.

# BKPM AUDIT REPORT

YEAR	PDAM	WATER				INCOME STATEMENT					FACTORS				
		EQUITY (Rp Mil.)	PRO- DUCTION (000 m3/yr)	SOLD (000 m3/yr)	EFFIC.	REVENUE (Rp Mil.)	O&M COSTS (Rp Mil.)	DEPREC. (Rp Mil.)	OTHER INCOME (Rp Mil.)	PROFIT/ (LOSS) (Rp Mil.)	CAPITAL COST/ PROD. CAPACITY (Rp/m3 Capacity)	PROD. COST M3 PROD.* (Rp/m3)	O & M AS % OF REVENUE	P&L AS % EQUITY	REVENUE/ M3 SOLD
1988	Balikpapan	14,062	5,033	3,609	72%	1,977	1,373	518	354	440	3000	375	69%	3%	548
1986	Banjarmasi	3,911	13,190	6,824	52%	2,031	1,469	401	48	209	300	141	72%	5%	298
1988	Semarang	4,320	27,171	12,408	46%	3,149	1,674	1,460	69	84	160	115	53%	2%	254
1988	Surabaya	46,997	105,316	69,135	66%	34,496	14,150	6,721	(335)	13,289	440	198	41%	28%	499
1986	Pekanbaru	3,474	-	-	-	973	751	231	40	30	-	282	77%	1%	-
1986	Manado	2,290	12,572	8,457	67%	1,474	1,030	181	107	370	182	96	70%	16%	174
	AVERAGES				60%						816	201	64%	9%	354

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\* Production Costs = (O&M + Deprec.)/Production Volume

ANNEX F.1  
AUDIT SUMMARY

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ANNEX F.2

RATE OF RETURN ANALYSES:  
DEBT/EQUITY AT 60/40 AND 75/25

The following studies are included:

Medan  
Dumai  
Pontianak  
Perkanbaru  
Lhok Semawe  
Banjarmasin  
Candi Desa  
Nusa Dua  
Semarang  
Bekasi  
Balikpapan  
Bogor  
Serpong  
Gresik  
Karang Pilang  
Ujung Pandang  
Bandung Raya  
Tegal  
Merak  
Mataram

P D A M  
MEDAN

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O&M							
1												
2												
3												
4	1989											
5	1990		14,478	9,652								
6	1991		10,852	7,234								
7	1992	13,670	0	0	2,011	5,066	1,646	4,947	1,725	3,222	352	4,518
8	1993	14,080	0	0	2,023	4,996	1,646	5,415	1,889	3,526	422	4,751
9	1994	14,301	0	0	2,035	4,911	1,646	5,709	1,992	3,717	506	4,856
10	1995	14,730	0	0	2,047	4,810	1,646	6,227	2,173	4,054	608	5,092
11	1996	14,964	0	0	2,059	4,688	1,646	6,571	2,294	4,277	729	5,194
12	1997	15,413	0	0	2,071	4,543	1,646	7,153	2,498	4,655	875	5,427
13	1998	15,661	0	0	2,083	4,368	1,646	7,564	2,642	4,922	1,050	5,519
14	1999	16,130	0	0	2,095	4,158	1,646	8,231	2,875	5,356	1,260	5,742
15	2000	16,394	0	0	2,107	3,906	1,646	8,735	3,051	5,684	1,512	5,818
16	2001	16,885	0	0	2,119	3,603	1,646	9,517	3,325	6,192	1,814	6,024
17	2002	17,165	0	0	2,131	3,240	1,646	10,148	3,546	6,602	2,177	6,071
18	2003	17,680	0	0	2,143	2,805	1,646	11,086	3,874	7,212	2,613	6,245
19	2004	17,976	0	0	2,155	2,282	1,646	11,893	4,156	7,737	3,135	6,247
20	2005	18,515	0	0	2,167	1,655	1,646	13,047	4,560	8,487	3,762	6,370
21	2006	18,829	0	0	2,179	903	1,646	14,101	4,929	9,172	4,515	6,303
22	2007	19,394	0	0	2,191	0	1,646	15,557	5,439	10,118	0	11,764
23	2008	19,728	0	0	2,203		1,646	15,879	5,552	10,327		11,973

TOTAL	281,515	25,330	16,886	35,819	55,934	27,982	161,780	56,520	105,260	25,330	107,914
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IRR TO EQUITY = 26.1%

EQUITY 40.00% = 16,886  
LOAN 60.00% = 25,330

495

P D A M  
MEDAN

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O&M							
1												
2												
3												
4	1989											
5	1990		18,096	6,033								
6	1991		13,566	4,522								
7	1992	13,670	0	0	2,011	6,332	1,646	3,681	1,282	2,399	440	3,605
8	1993	14,080	0	0	2,023	6,244	1,646	4,167	1,452	2,715	527	3,833
9	1994	14,301	0	0	2,035	6,139	1,646	4,481	1,562	2,919	633	3,932
10	1995	14,730	0	0	2,047	6,012	1,646	5,025	1,753	3,272	760	4,158
11	1996	14,964	0	0	2,059	5,861	1,646	5,398	1,883	3,515	911	4,250
12	1997	15,413	0	0	2,071	5,678	1,646	6,018	2,100	3,918	1,094	4,470
13	1998	15,661	0	0	2,083	5,459	1,646	6,473	2,259	4,214	1,312	4,547
14	1999	16,130	0	0	2,095	5,197	1,646	7,192	2,511	4,681	1,575	4,752
15	2000	16,394	0	0	2,107	4,882	1,646	7,759	2,710	5,049	1,890	4,805
16	2001	16,885	0	0	2,119	4,504	1,646	8,616	3,010	5,606	2,268	4,984
17	2002	17,165	0	0	2,131	4,050	1,646	9,338	3,262	6,076	2,721	5,000
18	2003	17,680	0	0	2,143	3,506	1,646	10,385	3,629	6,756	3,266	5,136
19	2004	17,976	0	0	2,155	2,853	1,646	11,322	3,957	7,365	3,919	5,092
20	2005	18,515	0	0	2,167	2,069	1,646	12,633	4,415	8,218	4,703	5,161
21	2006	18,829	0	0	2,179	1,129	1,646	13,875	4,850	9,025	5,643	5,026
22	2007	19,394	0	0	2,191	0	1,646	15,557	5,439	10,118	0	11,764
23	2008	19,728	0	0	2,203		1,646	15,879	5,552	10,327		11,973

TOTAL	281,515	31,662	10,555	35,819	69,915	27,982	147,799	51,626	96,173	31,662	92,488
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IRR TO EQUITY = 32.6%

4,787

EQUITY 25.00% = 10,554  
LOAN 75.00% = 31,662

496

P D A M  
DUMAI

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		2,543	1,696								
5	1993		4,239	2,826								
6	1994		1,748	1,078								
7	1995	3,531	0	0	445	1,705	386	994	346	648	112	916
8	1996	3,576	0	0	447	1,682	386	1,061	370	691	142	935
9	1997	3,684	0	0	449	1,654	386	1,195	416	778	170	995
10	1998	3,732	0	0	451	1,620	386	1,275	444	831	204	1,013
11	1999	3,844	0	0	453	1,579	386	1,426	497	929	245	1,070
12	2000	3,896	0	0	455	1,530	386	1,525	531	993	294	1,086
13	2001	4,013	0	0	457	1,472	386	1,698	592	1,105	352	1,140
14	2002	4,067	0	0	459	1,401	386	1,821	635	1,186	423	1,149
15	2003	4,189	0	0	461	1,317	386	2,025	706	1,320	507	1,193
16	2004	4,247	0	0	463	1,215	386	2,183	761	1,422	609	1,199
17	2005	4,375	0	0	465	1,093	386	2,431	847	1,584	731	1,239
18	2006	4,435	0	0	467	947	386	2,635	918	1,717	877	1,226
19	2007	4,570	0	0	469	772	386	2,943	1,026	1,917	1,052	1,251
20	2008	4,635	0	0	471	561	386	3,217	1,121	2,096	1,263	1,219
21	2009	4,774	0	0	473	309	386	3,606	1,257	2,349	1,515	1,220
22	2010	4,843	0	0	475	0	386	3,982	1,388	2,594	0	2,980
23	2011	4,986	0	0	477	0	386	4,123	1,437	2,685	0	3,072
TOTAL		71,397	8,530	5,600	7,837	18,860	6,562	38,138	13,291	24,847	8,500	22,909

IRR TO EQUITY = 15.5%

EQUITY 40% = 5,600  
LOAN 60% = 8,530

497



P D A M  
DUMAI

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		3,179	1,060								
5	1993		5,299	1,766								
6	1994		2,119	707								
7	1995	3,531	0	0	445	2,119	386	581	202	378	148	617
8	1996	3,576	0	0	447	2,090	386	653	228	426	177	634
9	1997	3,684	0	0	449	2,054	335	795	277	518	213	691
10	1998	3,732	0	0	451	2,012	386	863	302	575	255	706
11	1999	3,844	0	0	453	1,961	355	1,044	364	680	306	760
12	2000	3,896	0	0	455	1,900	386	1,155	403	753	367	771
13	2001	4,013	0	0	457	1,826	385	1,344	468	875	441	821
14	2002	4,067	0	0	459	1,738	386	1,484	517	967	529	824
15	2003	4,189	0	0	461	1,632	385	1,710	596	1,114	635	865
16	2004	4,247	0	0	463	1,505	386	1,893	660	1,233	762	857
17	2005	4,375	0	0	465	1,353	335	2,171	757	1,414	914	886
18	2006	4,435	0	0	467	1,170	386	2,412	840	1,571	1,057	851
19	2007	4,570	0	0	469	951	386	2,764	953	1,801	1,316	871
20	2008	4,635	0	0	471	688	396	3,090	1,077	2,013	1,579	820
21	2009	4,774	0	0	473	372	356	3,543	1,235	2,305	1,855	799
22	2010	4,843	0	0	475	0	386	3,982	1,388	2,594	0	2,980
23	2011	4,985	0	0	477	0	356	4,123	1,437	2,686	0	3,072
TOTAL		71,397	10,597	3,533	7,837	23,373	6,562	33,625	11,718	21,907	10,632	17,837

IRR TO EQUITY = 17.5%

EQUITY 25% = 3,533  
LOAN 75% = 10,597

498

P D A M  
PONTIANAK

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O&M							
1	1989											
2	1990											
3	1991											
4	1992		6,480	4,320								
5	1993		10,800	7,200								
6	1994		4,320	2,880								
7	1995	9,615	0	0	1,398	4,320	983	2,914	1,013	1,901	300	2,584
8	1996	9,702	0	0	1,405	4,260	983	3,054	1,062	1,992	360	2,615
9	1997	9,993	0	0	1,412	4,188	983	3,410	1,187	2,223	432	2,774
10	1998	10,035	0	0	1,419	4,102	983	3,531	1,247	2,284	515	2,799
11	1999	10,388	0	0	1,426	3,998	983	3,981	1,357	2,624	622	2,955
12	2000	10,486	0	0	1,433	3,574	983	4,496	1,463	3,033	746	2,970
13	2001	10,801	0	0	1,440	3,724	983	4,654	1,623	3,031	895	3,118
14	2002	10,905	0	0	1,447	3,545	983	4,930	1,719	3,211	1,074	3,119
15	2003	11,232	0	0	1,454	3,331	983	5,464	1,907	3,557	1,259	3,253
16	2004	11,342	0	0	1,461	3,073	983	5,825	2,033	3,792	1,547	3,226
17	2005	11,652	0	0	1,468	2,763	983	6,438	2,258	4,180	1,857	3,335
18	2006	11,799	0	0	1,475	2,392	983	6,949	2,426	4,523	2,228	3,278
19	2007	12,153	0	0	1,482	1,946	983	7,742	2,704	5,038	2,674	3,345
20	2008	12,276	0	0	1,489	1,412	983	8,392	2,963	5,429	3,205	3,237
21	2009	12,646	0	0	1,496	770	983	9,397	3,283	6,114	3,850	3,247
22	2010	12,778	0	0	1,503	0	983	10,292	3,596	6,696	0	7,679
23	2011	13,161	0	0	1,510		983	10,668	3,728	6,940		7,923

TOTAL	191,046	21,600	14,400	24,718	47,398	16,711	102,137	35,569	66,568	21,564	61,457
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IRR TO EQUITY = 16.4%

6,569

EQUITY 40.00% = 14,400  
LOAN 60.00% = 21,600

499

P D A M  
PONTIANAK

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O&M							
1	1989											
2	1990											
3	1991											
4	1992		5,100	2,700								
5	1993		13,500	4,500								
6	1994		5,400	1,800								
7	1995	9,615	0	0	1,398	5,411	983	1,834	635	1,199	376	1,300
8	1996	9,702	0	0	1,408	5,320	983	1,991	698	1,249	450	1,883
9	1997	9,993	0	0	1,411	5,235	983	2,383	821	1,641	541	1,995
10	1998	10,035	0	0	1,419	5,127	983	2,551	989	1,637	648	2,003
11	1999	10,388	0	0	1,426	4,995	983	2,991	1,037	1,944	777	2,150
12	2000	10,486	0	0	1,433	4,942	983	3,228	1,124	2,104	933	2,154
13	2001	10,801	0	0	1,440	4,656	983	3,723	1,297	2,426	1,119	2,203
14	2002	10,905	0	0	1,447	4,432	983	4,043	1,409	2,684	1,343	2,274
15	2003	11,232	0	0	1,454	4,163	983	4,532	1,615	3,017	1,612	2,322
16	2004	11,342	0	0	1,461	3,941	983	5,357	1,764	3,293	1,934	2,342
17	2005	11,652	0	0	1,465	3,454	983	5,777	2,016	3,761	3,321	2,948
18	2006	11,799	0	0	1,475	2,990	983	6,351	2,217	4,134	2,785	2,357
19	2007	12,153	0	0	1,482	2,433	983	7,255	2,533	4,723	3,342	2,363
20	2008	12,276	0	0	1,489	1,765	983	8,041	2,609	5,233	4,010	2,506
21	2009	12,646	0	0	1,496	962	983	9,205	3,216	5,933	4,812	3,160
22	2010	12,778	0	0	1,503	0	983	10,282	3,596	6,696	0	7,079
23	2011	13,161	0	0	1,510		983	10,665	3,728	6,910		7,923

TOTAL	191,046	24,000	9,000	24,718	59,622	16,711	99,995	31,395	56,600	27,000	49,311
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IRR TO EQUITY = 18.6

EQUITY 25.00% = 9,000  
LOAN 75.00% = 27,000

500

P D A M  
PEKANBARU

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O&M							
1	1989											
2	1990											
3	1991											
4	1992		1,413	942								
5	1993		2,355	1,570								
6	1994		942	628								
7	1995	2,208	0	0	440	942	214	612	208	404	66	553
8	1996	2,327	0	0	441	929	214	643	219	424	78	560
9	1997	2,394	0	0	442	913	214	725	248	477	94	597
10	1998	2,315	0	0	443	894	214	764	261	503	113	603
11	1999	2,384	0	0	444	872	214	854	293	561	136	640
12	2000	2,406	0	0	445	845	214	902	310	592	183	644
13	2001	2,478	0	0	446	812	214	1,006	346	660	195	679
14	2002	2,301	0	0	447	773	214	1,067	367	700	234	679
15	2003	2,576	0	0	448	726	214	1,188	410	778	281	711
16	2004	2,601	0	0	449	670	214	1,268	438	830	337	707
17	2005	2,679	0	0	450	603	214	1,412	488	924	405	733
18	2006	2,705	0	0	451	522	214	1,518	525	993	466	721
19	2007	2,786	0	0	452	424	214	1,696	587	1,109	583	739
20	2008	2,814	0	0	453	308	214	1,839	638	1,201	700	716
21	2009	2,898	0	0	454	168	214	2,062	716	1,346	839	721
22	2010	2,928	0	0	455	0	214	2,259	785	1,474	0	1,668
23	2011	3,016	0	0	456		214	2,346	815	1,531		1,745

TOTAL	43,816	4,710	3,140	7,616	10,401	3,638	22,161	7,654	14,507	4,710	13,416
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IRR TO EQUITY = 16.4%

1,895

EQUITY 40.00% = 3,140  
LOAN 60.00% = 4,710

501

P D A M  
Pekanbaru

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		1.766	589								
5	1993		2.944	951								
6	1994		1.178	393								
7	1995	2.208	0	0	440	1,178	214	377	125	251	82	353
8	1996	2.227	0	0	441	1,161	214	411	157	274	98	369
9	1997	2.294	0	0	442	1,142	214	496	166	329	118	425
10	1998	2.315	0	0	443	1,118	214	540	183	357	141	430
11	1999	2.384	0	0	444	1,090	214	636	217	420	169	464
12	2000	2.406	0	0	445	1,056	214	691	236	455	203	466
13	2001	2.478	0	0	446	1,015	214	803	275	528	244	496
14	2002	2.501	0	0	447	966	214	874	300	574	293	495
15	2003	2.576	0	0	448	908	214	1,006	346	660	351	523
16	2004	2.501	0	0	449	838	214	1,100	379	721	422	514
17	2005	2.679	0	0	450	753	214	1,262	436	826	506	534
18	2006	2,705	0	0	451	652	214	1,388	480	908	607	515
19	2007	2,785	0	0	452	531	214	1,559	550	1,039	729	524
20	2008	2,614	0	0	453	385	214	1,762	611	1,151	874	491
21	2009	2,556	0	0	454	210	214	2,020	701	1,319	1,049	484
22	2010	2,928	0	0	455	0	214	2,259	785	1,474	0	1,586
23	2011	3,016	0	0	456		214	2,346	815	1,531		1,745
TOTAL		43,816	5,825	1,963	7,616	13,001	3,638	19,561	6,743	12,818	5,887	10,568

IRR TO EQUITY = 18.8%

EQUITY      25.00% = 1.963  
LOAN        75.00% = 5.888

502

P D A M  
LEOISEUMANE

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & H							
1	1989											
2	1990											
3	1991											
4	1992		3,497	2,331								
5	1993		5,828	3,865								
6	1994		2,331	1,554								
7	1995	5,655	0	0	1,183	2,331	530	1,611	557	1,054	162	1,422
8	1996	5,714	0	0	1,186	2,299	530	1,699	588	1,111	194	1,447
9	1997	5,585	0	0	1,189	2,260	530	1,906	661	1,245	233	1,542
10	1998	5,943	0	0	1,192	2,213	530	2,013	698	1,314	280	1,565
11	1999	6,127	0	0	1,195	2,157	530	2,245	780	1,465	336	1,659
12	2000	6,194	0	0	1,198	2,090	530	2,376	825	1,550	403	1,676
13	2001	6,379	0	0	1,201	2,010	530	2,638	917	1,721	483	1,768
14	2002	6,450	0	0	1,204	1,913	530	2,803	975	1,528	580	1,778
15	2003	6,644	0	0	1,207	1,797	530	3,110	1,062	2,027	696	1,662
16	2004	6,719	0	0	1,210	1,653	530	3,321	1,156	2,165	835	1,860
17	2005	6,921	0	0	1,213	1,491	530	3,667	1,284	2,403	1,002	1,931
18	2006	7,000	0	0	1,216	1,291	530	3,953	1,381	2,562	1,202	1,910
19	2007	7,211	0	0	1,219	1,050	530	4,412	1,538	2,874	1,443	1,961
20	2008	7,295	0	0	1,222	762	530	4,781	1,657	3,114	1,731	1,913
21	2009	7,514	0	0	1,225	415	530	5,344	1,864	3,479	2,077	1,932
22	2010	7,604	0	0	1,228	0	530	5,846	2,040	3,506	0	4,337
23	2011	7,832	0	0	1,231		530	6,071	2,119	3,952		4,462
TOTAL		113,092	11,656	7,770	20,519	25,738	9,010	57,825	20,136	37,689	11,656	35,043

IRR TO EQUITY = 17.1%

EQUITY 40.00%= 7,770  
LOAN 60.00%= 11,656

502

P D & J  
LOUISIANA

No.	Years	Sales	Cost			Interest	Deprc.	P/L Bifore Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance EOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		4,371	1,457								
5	1993		7,265	2,428								
6	1994		2,914	971								
7	1995	5,655	0	0	1,133	2,914	530	1,028	353	675	202	1,003
8	1996	5,714	0	0	1,166	2,873	530	1,125	387	737	243	1,025
9	1997	5,665	0	0	1,169	2,625	530	1,341	463	678	291	1,116
10	1998	5,948	0	0	1,192	2,767	530	1,459	505	955	349	1,136
11	1999	6,127	0	0	1,195	2,697	530	1,705	591	1,114	419	1,225
12	2000	6,194	0	0	1,196	2,613	530	1,853	643	1,211	503	1,237
13	2001	6,379	0	0	1,201	2,512	530	2,136	742	1,384	604	1,320
14	2002	6,450	0	0	1,204	2,391	530	2,325	608	1,517	725	1,322
15	2003	6,644	0	0	1,207	2,246	530	2,661	525	1,735	870	1,336
16	2004	6,719	0	0	1,210	2,073	530	2,906	1,011	1,895	1,044	1,362
17	2005	6,921	0	0	1,213	1,864	530	3,314	1,154	2,160	1,252	1,436
18	2006	7,000	0	0	1,216	1,613	530	3,641	1,266	2,372	1,503	1,490
19	2007	7,211	0	0	1,219	1,313	530	4,149	1,446	2,703	1,803	1,430
20	2008	7,295	0	0	1,222	952	530	4,591	1,601	2,990	2,164	1,556
21	2009	7,514	0	0	1,225	519	530	5,240	1,828	3,412	2,597	1,545
22	2010	7,604	0	0	1,228	0	530	5,846	2,040	3,306	0	4,336
23	2011	7,832	0	0	1,231		530	6,071	2,119	3,552		4,452
TOTAL		113,092	14,570	4,557	20,519	32,173	9,020	51,390	17,884	33,507	14,569	27,947

IRR TO EQUITY = 19.9%

EQUITY 25.00%= 4,857  
LOAN 75.00%= 14,570

504

P D A M  
 BANJARMASIN

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1,969											
2	1,990											
3	1,991											
4	1,992		2,682	1,788								
5	1,993		4,470	2,980								
6	1,994		1,788	1,192								
7	1,995	3,887	0	0	568	1,788	407	1,124	387	737	124	1,020
8	1,996	3,922	0	0	570	1,765	407	1,182	407	775	149	1,033
9	1,997	4,040	0	0	572	1,733	407	1,328	459	869	179	1,097
10	1,998	4,078	0	0	574	1,698	407	1,399	484	916	214	1,108
11	1,999	4,200	0	0	576	1,655	407	1,562	541	1,021	257	1,171
12	2,000	4,240	0	0	578	1,603	407	1,652	572	1,090	309	1,178
13	2,001	4,368	0	0	580	1,542	407	1,839	638	1,202	371	1,236
14	2,002	4,410	0	0	582	1,467	407	1,954	676	1,276	445	1,238
15	2,003	4,543	0	0	584	1,378	407	2,174	755	1,419	534	1,292
16	2,004	4,598	0	0	586	1,272	407	2,323	807	1,516	640	1,283
17	2,005	4,725	0	0	588	1,144	407	2,586	899	1,667	768	1,326
18	2,006	4,773	0	0	590	990	407	2,786	969	1,817	922	1,302
19	2,007	4,917	0	0	592	306	407	3,112	1,083	2,029	1,107	1,330
20	2,008	4,967	0	0	594	584	407	3,382	1,178	2,204	1,328	1,283
21	2,009	5,116	0	0	596	319	407	3,794	1,322	2,472	1,593	1,286
22	2,010	5,170	0	0	598	0	407	4,165	1,452	2,713	0	3,120
23	2,011	5,325	0	0	600		407	4,318	1,505	2,813		3,220

TOTAL	77,269	8,940	5,960	9,928	19,742	6,919	40,680	14,135	26,545	8,940	24,524
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IRR TO EQUITY = 15.8%

EQUITY 40.00%= 5,960  
 LOAN 60.00%= 8,940

505



P D A M  
BANJARMASIN

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1,989											
2	1,990											
3	1,991											
4	1,992		3,353	1,118								
5	1,993		5,588	1,663								
6	1,994		2,235	745								
7	1,995	5,627	0	0	568	2,235	407	677	230	447	155	698
8	1,996	5,922	0	0	570	2,204	407	741	253	488	186	709
9	1,997	4,040	0	0	572	2,167	407	894	307	587	223	771
10	1,998	4,076	0	0	574	2,122	407	975	335	640	268	779
11	1,999	4,200	0	0	576	2,068	407	1,149	396	753	322	838
12	2,000	4,240	0	0	578	2,004	407	1,251	432	819	366	840
13	2,001	4,358	0	0	580	1,927	407	1,454	503	951	463	895
14	2,002	4,410	0	0	582	1,834	407	1,567	549	1,037	556	869
15	2,003	4,543	0	0	584	1,723	407	1,829	634	1,195	657	935
16	2,004	4,528	0	0	586	1,590	407	2,005	696	1,309	800	916
17	2,005	4,725	0	0	588	1,430	407	2,300	799	1,501	961	946
18	2,006	4,773	0	0	590	1,237	407	2,539	862	1,656	1,153	910
19	2,007	4,917	0	0	592	1,007	407	2,911	1,013	1,698	1,383	922
20	2,008	4,957	0	0	594	730	407	3,236	1,126	2,109	1,660	856
21	2,009	5,116	0	0	596	398	407	3,715	1,294	2,421	1,992	836
22	2,010	5,170	0	0	598	0	407	4,165	1,452	2,713	0	3,120
23	2,011	5,325	0	0	600		407	4,318	1,505	2,813		3,220
<b>TOTAL</b>	<b>77,269</b>		<b>11,175</b>	<b>3,725</b>	<b>9,928</b>	<b>24,677</b>	<b>6,919</b>	<b>35,745</b>	<b>12,408</b>	<b>23,337</b>	<b>11,175</b>	<b>19,061</b>

IRR TO EQUITY = 18.0%

EQUITY 25.00%= 3,725  
LOAN 75.00%= 11,175

P D A M  
CANDI DASA

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principals	Cash Balance BOT
			Loan	Equity	O & M							
1	1999											
2	1999											
3	1999											
4	1999		360	240								
5	1999		600	400								
6	1999		240	160								
7	1999	575	0	0	100	240	55	180	57	124	17	162
8	1999	590	0	0	101	237	55	197	62	135	20	170
9	1999	607	0	0	102	233	55	217	70	147	24	178
10	1999	623	0	0	103	228	55	237	77	160	29	185
11	1999	641	0	0	104	222	55	260	85	175	35	193
12	2000	658	0	0	105	215	55	283	93	190	41	200
13	2001	677	0	0	106	207	55	309	102	207	50	212
14	2002	695	0	0	107	197	55	336	112	224	60	220
15	2003	715	0	0	108	185	55	367	122	245	72	229
16	2004	734	0	0	109	171	55	399	134	266	86	235
17	2005	755	0	0	110	154	55	437	147	290	103	242
18	2006	775	0	0	111	133	55	476	161	315	124	247
19	2007	792	0	0	112	108	55	523	177	345	149	252
20	2008	819	0	0	113	78	55	573	194	378	178	255
21	2009	843	0	0	114	43	55	631	215	416	214	257
22	2010	865	0	0	115	0	55	695	237	458	0	253
23	2011	891	0	0	116		55	720	245	474		229
TOTAL-		12,262	1,200	800	1,835	2,650	935	6,541	2,291	4,550	1,200	4,265

IRR TO EQUITY = 19.5%

EQUITY 40.00% = 800  
LOAN 60.00% = 1,200

501

P D A M  
CANDI DASA

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance EOT
			Loan	Equity	O & M							
1	1999											
2	1999											
3	1999											
4	1999		450	150								
5	1999		750	250								
6	1999		300	100								
7	1999	575	0	0	100	300	55	120	36	85	21	119
8	1999	580	0	0	101	296	55	136	42	96	25	126
9	1997	607	0	0	102	291	55	159	50	109	30	134
10	1998	623	0	0	103	285	55	180	57	123	36	142
11	1999	641	0	0	104	278	55	204	66	139	43	151
12	2000	655	0	0	105	269	55	229	74	155	52	158
13	2001	677	0	0	106	259	55	257	84	173	62	166
14	2002	695	0	0	107	245	55	287	94	192	75	173
15	2003	715	0	0	108	231	55	321	106	214	90	180
16	2004	734	0	0	109	213	55	357	119	238	107	188
17	2005	755	0	0	110	192	55	399	134	265	129	191
18	2006	775	0	0	111	166	55	443	149	294	155	194
19	2006	798	0	0	112	135	55	495	168	328	186	199
20	2008	819	0	0	113	98	55	553	188	365	223	195
21	2009	843	0	0	114	53	55	621	211	409	267	197
22	2010	865	0	0	115	0	55	695	237	455	0	203
23	2011	891	0	0	115		55	720	246	474		209
TOTAL		12,252	1,500	500	1,836	3,312	935	6,179	2,060	4,119	1,500	3,554

IRR TO EQUITY = 23.2%

EQUITY 25.00% = 500  
LOAN 75.00% = 1,500

508

P D A M  
NUSA DOA

No.	Years	Sales	Cost			Interest	Deprc.	P/L Bifore Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		5,224	3,483								
5	1993		8,731	5,820								
6	1994		3,452	2,322								
7	1995	7,326	0	0	942	3,487	792	2,107	731	1,376	242	1,926
8	1996	7,453	0	0	947	3,439	792	2,315	804	1,511	290	2,013
9	1997	7,717	0	0	952	3,381	792	2,592	901	1,691	349	2,134
10	1998	7,892	0	0	957	3,311	792	2,832	985	1,847	418	2,220
11	1999	8,129	0	0	962	3,228	792	3,147	1,096	2,052	502	2,342
12	2000	8,315	0	0	967	3,127	792	3,429	1,194	2,235	602	2,424
13	2001	8,564	0	0	972	3,007	792	3,793	1,322	2,472	723	2,541
14	2002	8,761	0	0	977	2,862	792	4,130	1,439	2,690	867	2,615
15	2003	9,024	0	0	982	2,689	792	4,561	1,590	2,971	1,041	2,722
16	2004	9,233	0	0	987	2,481	792	4,973	1,735	3,239	1,249	2,782
17	2005	9,510	0	0	992	2,231	792	5,495	1,917	3,578	1,499	2,871
18	2006	9,732	0	0	997	1,931	792	6,012	2,098	3,914	1,799	2,907
19	2007	10,024	0	0	1,002	1,571	792	6,659	2,325	4,334	2,158	2,963
20	2008	10,259	0	0	1,007	1,140	792	7,320	2,556	4,764	2,590	2,966
21	2009	10,557	0	0	1,012	622	792	8,141	2,843	5,298	3,108	2,962
22	2010	10,816	0	0	1,017	0	792	9,007	3,146	5,861	0	6,653
23	2011	11,141	0	0	1,022		792	9,327	3,256	6,059		6,661
TOTAL		154,505	17,437	11,625	16,694	38,505	13,454	65,842	29,942	55,900	17,437	51,927

IRR TO EQUITY = 16.5%

EQUITY 40.00%= 11,625  
LOAN 60.00%= 17,437

P D A M  
nusa dua

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		6,530	2,177								
5	1993		10,913	3,638								
6	1994		4,353	1,451								
7	1995	7,326	0	0	942	4,359	792	1,235	426	809	303	1,298
8	1996	7,493	0	0	947	4,289	792	1,455	503	952	363	1,361
9	1997	7,717	0	0	952	4,226	792	1,747	505	1,141	436	1,496
10	1998	7,692	0	0	957	4,139	792	2,004	695	1,309	523	1,576
11	1999	8,129	0	0	962	4,034	792	2,341	813	1,527	627	1,692
12	2000	8,315	0	0	967	3,909	792	2,647	920	1,727	753	1,766
13	2001	8,564	0	0	972	3,758	792	3,042	1,059	1,983	904	1,872
14	2002	8,761	0	0	977	3,578	792	3,414	1,169	2,225	1,084	1,933
15	2003	9,024	0	0	982	3,361	792	3,869	1,355	2,534	1,301	2,025
16	2004	9,233	0	0	987	3,101	792	4,353	1,518	2,836	1,561	2,066
17	2005	9,510	0	0	992	2,798	792	4,935	1,722	3,215	1,674	2,134
18	2006	9,732	0	0	997	2,414	792	5,529	1,929	3,600	2,248	2,144
19	2007	10,024	0	0	1,002	1,964	792	6,266	2,187	4,079	2,698	2,173
20	2008	10,259	0	0	1,007	1,424	792	7,036	2,456	4,579	3,237	2,134
21	2009	10,557	0	0	1,012	777	792	7,986	2,789	5,197	3,885	2,104
22	2010	10,816	0	0	1,017	0	792	9,007	3,146	5,861	0	6,653
23	2011	11,141	0	0	1,022		792	9,327	3,258	6,069		6,861
TOTAL		154,565	21,797	7,266	16,694	48,132	13,464	76,215	26,572	49,643	21,796	41,310

IRR TO EQUITY = 18.9%

EQUITY 25.00% = 7,266  
LOAN 75.00% = 21,797

90

P D & M  
SEMARANG

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principie	Cash Balance BOT
			Loan	Equity	G & M							
1	1989											
2	1990											
3	1991											
4	1992		11,475	7,650								
5	1993		19,125	12,750								
6	1994		7,650	5,100								
7	1995	17,276	0	0	2,957	7,650	1,740	4,899	1,708	3,191	531	4,400
8	1996	17,630	0	0	2,994	7,544	1,740	5,352	1,857	3,485	637	4,586
9	1997	18,159	0	0	3,001	7,416	1,740	6,002	2,095	3,907	765	4,862
10	1998	18,534	0	0	3,006	7,263	1,740	6,523	2,277	4,246	916	5,068
11	1999	19,090	0	0	3,015	7,080	1,740	7,255	2,538	4,722	1,101	5,361
12	2000	19,466	0	0	3,022	6,860	1,740	7,866	2,747	5,119	1,321	5,536
13	2001	20,073	0	0	3,029	6,595	1,740	8,709	3,042	5,667	1,566	5,821
14	2002	20,495	0	0	3,036	6,278	1,740	9,441	3,298	6,142	1,903	5,960
15	2003	21,110	0	0	3,043	5,898	1,740	10,429	3,644	6,785	2,283	6,242
16	2004	21,558	0	0	3,050	5,441	1,740	11,327	3,958	7,368	2,740	6,369
17	2005	22,265	0	0	3,057	4,892	1,740	12,515	4,374	8,141	3,266	6,593
18	2006	22,680	0	0	3,064	4,236	1,740	13,640	4,768	8,872	3,945	6,667
19	2007	23,361	0	0	3,071	3,447	1,740	15,103	5,280	9,823	4,734	6,829
20	2008	23,865	0	0	3,076	2,500	1,740	16,547	5,766	10,762	5,661	6,820
21	2009	24,581	0	0	3,085	1,363	1,740	18,393	6,431	11,961	6,817	6,864
22	2010	25,116	0	0	3,092	0	1,740	20,284	7,093	13,191	0	14,931
23	2011	25,869	0	0	3,099		1,740	21,030	7,355	13,676		15,416
TOTAL		361,090	38,250	25,500	51,731	84,465	29,580	195,314	68,257	127,057	38,250	118,367

IRR TO EQUITY = 17.1%

EQUITY 40.00%= 25,500  
LOAN 60.00%= 38,250

F D A M  
SEMARANG

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1.988											
2	1.990											
3	1.991											
4	1.992		14,344	4,781								
5	1.993		23,905	7,969								
6	1.994		9,563	3,186								
7	1.995	17,275	0	0	2,957	9,563	1,740	2,967	1,039	1,946	664	3,024
8	1.996	17,630	0	0	2,994	9,430	1,740	3,466	1,207	2,260	796	3,203
9	1.997	18,159	0	0	3,001	9,270	1,740	4,146	1,446	2,702	956	3,466
10	1.998	18,534	0	0	3,008	9,079	1,740	4,707	1,641	3,066	1,147	3,656
11	1.999	19,090	0	0	3,015	8,850	1,740	5,485	1,914	3,571	1,576	3,935
12	2.000	19,488	0	0	3,022	8,575	1,740	6,151	2,147	4,004	1,652	4,093
13	2.001	20,073	0	0	3,029	8,244	1,740	7,056	2,465	4,595	1,982	4,353
14	2.002	20,495	0	0	3,036	7,846	1,740	7,671	2,749	5,122	2,376	4,464
15	2.003	21,110	0	0	3,043	7,372	1,740	8,958	3,128	5,827	2,854	4,713
16	2.004	21,555	0	0	3,050	6,801	1,740	9,957	3,482	6,464	3,425	4,799
17	2.005	22,205	0	0	3,057	6,117	1,740	11,291	3,946	7,345	4,110	4,976
18	2.006	22,630	0	0	3,064	5,295	1,740	12,531	4,397	8,164	4,932	4,992
19	2.007	23,361	0	0	3,071	4,303	1,740	14,242	4,979	9,263	5,918	5,065
20	2.008	23,665	0	0	3,078	3,125	1,740	15,922	5,567	10,356	7,102	4,994
21	2.009	24,561	0	0	3,085	1,704	1,740	18,052	6,312	11,740	8,522	4,958
22	2.010	25,115	0	0	3,092	0	1,740	20,284	7,093	13,191	0	14,931
23	2.011	25,659	0	0	3,099		1,740	21,030	7,355	13,576		15,416
TOTAL		351,090	47,813	15,936	51,731	105,581	29,580	174,196	60,556	113,332	47,612	95,099

IRR TO EQUITY = 19.8%

EQUITY 25.00%= 15,936  
LOAN 75.00%= 47,813

92

F D A M  
REAS1

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1.985											
2	1.990											
3	1.991											
4	1.992		3,222	2,148								
5	1.993		5,370	3,580								
6	1.994		2,146	1,432								
7	1.995	5,045	0	0	945	2,148	489	1,463	506	957	149	1,297
8	1.996	5,092	0	0	951	2,118	489	1,534	530	1,003	179	1,314
9	1.997	5,245	0	0	957	2,082	489	1,717	595	1,122	215	1,396
10	1.998	5,295	0	0	953	2,039	489	1,804	625	1,178	258	1,410
11	1.999	5,454	0	0	969	1,968	489	2,006	697	1,311	309	1,491
12	2.000	5,507	0	0	975	1,926	489	2,117	735	1,382	371	1,500
13	2.001	5,673	0	0	981	1,852	489	2,351	817	1,534	445	1,578
14	2.002	5,729	0	0	987	1,763	489	2,490	866	1,625	534	1,579
15	2.003	5,901	0	0	993	1,656	489	2,763	951	1,802	641	1,550
16	2.004	5,961	0	0	999	1,528	489	2,945	1,025	1,920	769	1,640
17	2.005	6,140	0	0	1,005	1,374	489	3,272	1,139	2,133	923	1,698
18	2.006	6,203	0	0	1,011	1,189	489	3,514	1,224	2,290	1,108	1,671
19	2.007	6,389	0	0	1,017	968	489	3,915	1,364	2,551	1,329	1,711
20	2.008	6,457	0	0	1,023	702	489	4,243	1,479	2,764	1,595	1,658
21	2.009	6,550	0	0	1,029	383	489	4,749	1,656	3,093	1,914	1,566
22	2.010	6,722	0	0	1,035	0	489	5,198	1,813	3,385	0	3,674
23	2.011	6,924	0	0	1,041		489	5,394	1,882	3,512		4,001

TOTAL 100,367 10,740 7,160 16,881 23,716 8,313 51,477 17,914 33,563 10,740 31,136

IRR TO EQUITY = 16.7%

EQUITY 40.00% = 7,160  
LOAN 60.00% = 10,740

517



P D A K  
BEKASI

2

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1.989											
2	1.990											
3	1.991											
4	1.992		4,028	1,343								
5	1.993		6,713	2,238								
6	1.994		2,685	895								
7	1.995	5,045	0	0	945	2,555	489	926	318	608	196	911
8	1.996	5,092	0	0	951	2,648	489	1,004	345	659	224	925
9	1.997	5,245	0	0	957	2,563	489	1,196	412	763	256	1,004
10	1.998	5,295	0	0	963	2,549	489	1,294	447	847	322	1,014
11	1.999	5,454	0	0	959	2,455	489	1,511	523	985	385	1,091
12	2.000	5,507	0	0	975	2,409	489	1,635	566	1,069	464	1,094
13	2.001	5,673	0	0	981	2,315	489	1,886	655	1,233	556	1,166
14	2.002	5,729	0	0	987	2,204	489	2,049	711	1,338	658	1,159
15	2.003	5,901	0	0	993	2,070	489	2,343	816	1,533	801	1,220
16	2.004	5,961	0	0	999	1,910	489	2,563	891	1,672	962	1,199
17	2.005	6,140	0	0	1,005	1,717	469	2,929	1,019	1,910	1,154	1,245
18	2.006	6,203	0	0	1,011	1,467	469	3,216	1,120	2,097	1,385	1,201
19	2.007	6,389	0	0	1,017	1,210	469	3,673	1,260	2,394	1,662	1,221
20	2.008	6,457	0	0	1,023	877	469	4,068	1,418	2,650	1,994	1,145
21	2.009	6,650	0	0	1,029	479	469	4,553	1,623	3,031	2,393	1,127
22	2.010	6,722	0	0	1,035	0	455	5,196	1,813	3,365	0	3,874
23	2.011	6,924	0	0	1,041		485	5,394	1,882	3,512		4,001
TOTAL		100,387	13,425	4,475	16,881	29,646	8,313	45,547	15,639	29,709	13,425	24,597

IRR TO EQUITY = 19.3%

EQUITY 25.00% = 4,475  
LOAN 75.00% = 13,425

514

P D A M  
BALIKPAPAN

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		5,067	3,392								
5	1993		6,479	5,652								
6	1994		3,391	2,261								
7	1995	7,086	0	0	743	3,391	772	2,180	756	1,423	235	1,950
8	1996	7,155	0	0	745	3,344	772	2,294	796	1,497	282	1,987
9	1997	7,369	0	0	747	3,286	772	2,552	691	1,671	338	2,104
10	1998	7,442	0	0	749	3,220	772	2,701	939	1,762	407	2,127
11	1999	7,665	0	0	751	3,139	772	3,003	1,045	1,958	466	2,242
12	2,000	7,742	0	0	753	3,041	772	3,176	1,106	2,070	586	2,257
13	2,001	7,975	0	0	755	2,924	772	3,524	1,227	2,297	703	2,366
14	2,002	8,057	0	0	757	2,783	772	3,745	1,305	2,440	843	2,369
15	2,003	8,298	0	0	759	2,615	772	4,152	1,447	2,705	1,012	2,455
16	2,004	8,365	0	0	761	2,412	772	4,440	1,548	2,892	1,215	2,449
17	2,005	8,637	0	0	763	2,169	772	4,533	1,720	3,212	1,456	2,527
18	2,006	8,729	0	0	765	1,878	772	5,314	1,854	3,450	1,749	2,483
19	2,007	8,930	0	0	768	1,526	772	5,922	2,057	3,855	2,099	2,528
20	2,008	9,088	0	0	770	1,105	772	6,438	2,247	4,191	2,519	2,444
21	2,009	9,351	0	0	772	604	772	7,213	2,516	4,694	3,022	2,444
22	2,010	9,464	0	0	775	0	772	7,917	2,755	5,152		
23	2,011	9,748	0	0	777		772	8,035		5,335		5,197
TOTAL	141,161	16,957	11,305	12,310	77,445	19,104	77,712	27,098	50,616	15,957	45,762	

IRR TO EQUITY = 15.9%

EQUITY 40.00% = 11,305  
LOAN 60.00% = 16,957

515

P O A M  
BALIAPAPAN

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		6.355	2.120								
5	1993		10.596	3.533								
6	1994		4.235	1.413								
7	1995	7.056	0	0	742	4.239	772	1.332	460	672	294	1.350
8	1996	7.155	0	0	745	4.160	772	1.458	504	954	353	1.373
9	1997	7.369	0	0	747	4.110	772	1.740	603	1.137	424	1.465
10	1998	7.442	0	0	749	4.025	772	1.895	656	1.238	508	1.502
11	1999	7.665	0	0	751	3.923	772	2.219	771	1.448	610	1.610
12	2000	7.742	0	0	753	3.801	772	2.416	835	1.576	732	1.616
13	2001	7.975	0	0	755	3.655	772	2.793	972	1.822	879	1.715
14	2002	8.057	0	0	757	3.479	772	3.049	1.061	1.956	1.054	1.705
15	2003	8.296	0	0	759	3.266	772	3.499	1.219	2.260	1.255	1.767
16	2004	8.385	0	0	761	3.015	772	3.837	1.337	2.500	1.518	1.754
17	2005	8.637	0	0	763	2.712	772	4.390	1.531	2.860	1.822	1.810
18	2006	8.729	0	0	765	2.347	772	4.845	1.690	3.155	2.186	1.741
19	2007	8.990	0	0	768	1.910	772	5.540	1.933	3.607	2.624	1.755
20	2008	9.086	0	0	770	1.325	772	6.161	2.150	4.010	3.148	1.634
21	2009	9.351	0	0	772	755	772	7.061	2.465	4.596	3.778	1.590
22	2010	9.464	0	0	775	0	772	7.917	2.765	5.152	0	5.924
23	2011	9.746	0	0	777		772	8.199	2.664	5.335		6.107
TOTAL		141.191	21.197	7.055	12.910	45.697	13.124	58.350	23.620	44.531	21.197	36.456

IRR TO EQUITY = 18.2%

EQUITY 25.00% = 7.055  
LOAN 75.00% = 21.197

P D A M  
BOGOR

No.	Years	Sales	Cost			Interest	Deprc.	P/L Bifore Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1												
2												
3												
4	1989		6,246	4,164								
5	1990		10,410	6,940								
6	1991		4,164	2,776								
7	1992	9,837	0	0	1,321	4,164	947	3,405	1,185	2,220	289	2,578
8	1993	9,044	0	0	1,328	4,106	947	2,663	925	1,737	347	2,337
9	1994	9,315	0	0	1,335	4,037	947	2,996	1,043	1,954	416	2,484
10	1995	9,428	0	0	1,342	3,954	947	3,185	1,109	2,077	499	2,524
11	1996	9,711	0	0	1,349	3,854	947	3,561	1,240	2,321	599	2,669
12	1997	9,831	0	0	1,356	3,734	947	3,794	1,322	2,472	719	2,700
13	1998	10,126	0	0	1,363	3,590	947	4,226	1,473	2,753	863	2,837
14	1999	10,254	0	0	1,370	3,417	947	4,520	1,576	2,944	1,036	2,855
15	2000	10,562	0	0	1,377	3,210	947	5,028	1,754	3,274	1,243	2,978
16	2001	10,697	0	0	1,384	2,962	947	5,404	1,865	3,519	1,491	2,974
17	2002	11,018	0	0	1,391	2,663	947	6,017	2,100	3,917	1,790	3,074
18	2003	11,161	0	0	1,398	2,306	947	6,510	2,273	4,238	2,147	3,037
19	2004	11,496	0	0	1,405	1,876	947	7,268	2,538	4,730	2,577	3,100
20	2005	11,649	0	0	1,412	1,361	947	7,929	2,769	5,160	3,092	3,015
21	2006	11,998	0	0	1,419	742	947	8,890	3,105	5,784	3,711	3,021
22	2007	12,160	0	0	1,426	0	947	9,787	3,419	6,368	0	7,315
23	2008	12,525	0	0	1,433		947	10,145	3,545	6,600		7,547
TOTAL		180,812	20,820	13,880	23,409	45,975	16,099	95,329	33,262	62,067	20,820	57,346

IRR TO EQUITY = 16.0%

EQUITY 40.00%= 13,880  
LOAN 60.00%= 20,820

F D A M  
BOGGE

No.	Years	Sales	Cost			Interest	Deprc.	P/L Bifore Tax	Corporate Tax	P/L After Tax	Principie	Cash Balance BOT
			Loan	Equity	O & M							
1												
2												
3												
4	1989		7,808	2,603								
5	1990		13,013	4,338								
6	1991		5,205	1,735								
7	1992	9,537	0	0	1,321	5,205	947	2,364	821	1,543	361	2,129
8	1993	9,044	0	0	1,328	5,133	947	1,636	566	1,070	434	1,584
9	1994	9,315	0	0	1,335	5,046	947	1,987	689	1,296	520	1,724
10	1995	9,428	0	0	1,342	4,942	947	2,197	763	1,434	624	1,757
11	1996	9,711	0	0	1,349	4,817	947	2,596	903	1,695	749	1,692
12	1997	9,831	0	0	1,356	4,667	947	2,861	995	1,865	699	1,913
13	1998	10,126	0	0	1,363	4,487	947	3,329	1,159	2,170	1,079	2,036
14	1999	10,254	0	0	1,370	4,272	947	3,665	1,277	2,388	1,295	2,041
15	2000	10,562	0	0	1,377	4,013	947	4,225	1,473	2,752	1,553	2,146
16	2001	10,697	0	0	1,384	3,702	947	4,664	1,626	3,038	1,864	2,120
17	2002	11,016	0	0	1,391	3,329	947	5,351	1,867	3,484	2,237	2,194
18	2003	11,161	0	0	1,398	2,882	947	5,934	2,071	3,863	2,684	2,126
19	2004	11,496	0	0	1,405	2,345	947	6,799	2,374	4,425	3,221	2,151
20	2005	11,649	0	0	1,412	1,701	947	7,589	2,650	4,939	3,865	2,021
21	2006	11,998	0	0	1,419	928	947	8,704	3,041	5,664	4,639	1,972
22	2007	12,160	0	0	1,426	0	947	9,787	3,419	6,368	0	7,315
23	2008	12,525	0	0	1,433		947	10,145	3,545	6,600		7,547
TOTAL		150,812	26,025	8,675	23,409	57,469	16,099	83,835	29,239	54,596	26,025	44,670

IRR TO EQUITY = 18.4%

EQUITY 25.00% = 8,675  
 LOAN 75.00% = 26,025

P E A M  
SEEPONG

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance 30T
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		2,261	1,507								
5	1993		3,766	2,512								
6	1994		1,507	1,005								
7	1995	3,658	0	0	748	1,507	343	1,061	365	696	105	934
8	1996	3,655	0	0	753	1,466	343	1,113	383	730	126	947
9	1997	3,606	0	0	758	1,461	343	1,244	429	814	151	1,007
10	1998	3,644	0	0	763	1,431	343	1,307	451	856	161	1,016
11	1999	3,980	0	0	768	1,395	343	1,454	503	951	217	1,077
12	2000	4,001	0	0	773	1,351	343	1,534	531	1,003	260	1,085
13	2001	4,101	0	0	778	1,299	343	1,701	569	1,111	312	1,142
14	2002	4,164	0	0	763	1,237	343	1,801	624	1,177	375	1,145
15	2003	4,269	0	0	788	1,162	343	1,996	693	1,303	450	1,197
16	2004	4,355	0	0	793	1,072	343	2,127	738	1,369	540	1,152
17	2005	4,465	0	0	798	954	343	2,360	820	1,540	648	1,235
18	2006	4,513	0	0	803	835	343	2,532	880	1,652	777	1,218
19	2007	4,646	0	0	808	679	343	2,819	951	1,838	933	1,249
20	2008	4,700	0	0	613	492	343	3,052	1,062	1,969	1,119	1,213
21	2009	4,641	0	0	818	269	343	3,411	1,188	2,223	1,343	1,223
22	2010	4,596	0	0	823	0	343	3,730	1,300	2,431	0	2,774
23	2011	5,043	0	0	828		343	3,872	1,349	2,523		2,866
TOTAL		72,981	7,536	5,024	13,396	16,641	5,831	37,113	12,686	24,226	7,536	22,521

IRR TO EQUITY = 15.6%

EQUITY 40.00%= 5,024  
LOAN 60.00%= 7,536

P D A M  
SERPONG

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		2,826	942								
5	1993		4,710	1,570								
6	1994		1,664	528								
7	1995	3,858	0	0	748	1,664	343	684	233	451	131	663
8	1996	3,856	0	0	753	1,656	343	741	253	466	157	674
9	1997	3,806	0	0	756	1,626	343	679	301	577	188	732
10	1998	3,844	0	0	763	1,789	343	949	326	623	226	740
11	1999	3,960	0	0	768	1,744	343	1,105	381	725	271	796
12	2000	4,001	0	0	773	1,589	343	1,196	412	783	325	801
13	2001	4,121	0	0	776	1,624	343	1,376	475	900	390	853
14	2002	4,154	0	0	763	1,546	343	1,492	516	976	469	850
15	2003	4,269	0	0	768	1,452	343	1,706	591	1,115	562	895
16	2004	4,335	0	0	755	1,340	343	1,659	645	1,214	675	883
17	2005	4,455	0	0	756	1,205	343	2,119	736	1,363	810	917
18	2006	4,513	0	0	803	1,043	343	2,324	807	1,517	972	868
19	2007	4,549	0	0	806	849	343	2,649	921	1,728	1,166	905
20	2008	4,760	0	0	813	616	343	2,928	1,019	1,909	1,399	853
21	2009	4,841	0	0	818	336	343	3,344	1,164	2,180	1,679	844
22	2010	4,896	0	0	823	0	343	3,730	1,300	2,431	0	2,774
23	2011	5,043	0	0	828		343	3,672	1,349	2,523		2,866
TOTAL		72,961	9,420	3,140	13,396	20,802	5,831	32,952	11,430	21,522	9,420	17,933

IRR TO EQUITY = 18.2%

EQUITY 25.00%= 3,140  
LOAN 75.00%= 9,420

520

P D A M  
GRESIX

No.	Years	Sales	Cost			Interest	Deprc.	P/L Bifore Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1												
2												
3												
4	1989											
5	1990		7,069	4,712								
6	1991		16,632	11,222								
7	1992	9,768	0	0	1,632	4,760	1,554	1,797	622	1,174	332	2,397
8	1993	10,056	0	0	1,643	4,714	1,554	2,145	744	1,401	398	2,557
9	1994	10,339	0	0	1,654	4,634	1,554	2,497	868	1,629	476	2,705
10	1995	10,649	0	0	1,665	4,539	1,554	2,891	1,006	1,885	573	2,856
11	1996	10,948	0	0	1,676	4,424	1,554	3,294	1,147	2,147	686	3,013
12	1997	11,277	0	0	1,687	4,286	1,554	3,750	1,306	2,443	826	3,172
13	1998	11,585	0	0	1,698	4,121	1,554	4,222	1,472	2,750	991	3,316
14	1999	11,943	0	0	1,709	3,923	1,554	4,757	1,659	3,098	1,189	3,463
15	2000	12,280	0	0	1,720	3,685	1,554	5,321	1,856	3,464	1,427	3,592
16	2001	12,648	0	0	1,731	3,400	1,554	5,963	2,081	3,882	1,712	3,724
17	2002	13,008	0	0	1,742	3,058	1,554	6,652	2,322	4,330	2,054	3,830
18	2003	13,395	0	0	1,753	2,647	1,554	7,442	2,599	4,843	2,465	3,932
19	2004	13,776	0	0	1,764	2,154	1,554	8,304	2,931	5,404	2,958	3,999
20	2005	14,189	0	0	1,775	1,562	1,554	9,298	3,245	6,050	3,550	4,054
21	2006	14,592	0	0	1,785	852	1,554	10,400	3,534	6,766	4,260	4,060
22	2007	15,030	0	0	1,797	0	1,554	11,679	4,062	7,597	0	9,151
23	2008	15,457	0	0	1,808		1,554	12,095	4,227	7,668		9,422
TOTAL		210,944	26,901	15,934	39,240	52,779	26,418	102,507	35,774	66,753	23,901	69,256

IRR TO EQUITY = 17.8%

EQUITY 40.00% = 15,934  
LOAN 60.00% = 26,901



P D & M  
GASIE

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
			1,839	1,848								
			21,042	7,024								
	1992	2,733	0	0	1,812	3,275	1,554	602	204	338	415	1,537
	1993	10,132	0	0	1,643	5,232	1,554	957	332	635	495	1,691
	1994	10,639	0	0	1,654	5,793	1,554	1,336	462	575	597	1,833
	1995	10,345	0	0	1,685	5,873	1,554	1,757	609	1,146	717	1,955
	1996	10,345	0	0	1,675	5,530	1,554	2,185	760	1,426	560	2,122
	1997	11,277	0	0	1,687	5,355	1,554	2,676	931	1,747	1,032	2,259
	1998	11,595	0	0	1,656	5,152	1,554	3,191	1,111	2,050	1,238	2,395
	1999	11,343	0	0	1,709	4,904	1,554	3,776	1,316	2,460	1,486	2,528
	2000	12,259	0	0	1,720	4,607	1,554	4,349	1,534	2,855	1,763	2,656
	2001	12,643	0	0	1,731	4,250	1,554	5,113	1,764	3,329	2,140	2,743
	2002	13,006	0	0	1,742	3,822	1,554	5,888	2,055	3,633	2,568	2,819
	2003	13,595	0	0	1,753	3,308	1,554	6,781	2,367	4,413	3,082	2,886
	2004	13,775	0	0	1,764	2,632	1,554	7,766	2,712	5,054	3,696	2,910
	2005	14,159	0	0	1,775	1,952	1,554	8,906	3,112	5,796	4,437	2,912
	2006	14,592	0	0	1,786	1,055	1,554	10,187	3,559	6,628	5,325	2,857
	2007	15,030	0	0	1,797	0	1,554	11,679	4,082	7,597	0	9,151
	2008	15,457	0	0	1,808		1,554	12,095	4,227	7,868		9,422
TOTAL		210,944	29,876	9,959	29,240	65,974	26,418	89,312	31,156	58,156	29,876	54,698

IRR TO EQUITY = 20.1%

EQUITY 25.00% = 9,959  
LOAN 75.00% = 29,876

522

P I A M  
 TABANG PTLANG

No.	Years	Sales	Cost			Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT	
			Loan	Equity	O & M							Interest
1	1995.00											
2	1996.00											
3	1997.00											
4	1998.00		6.335	5.556								
5	1999.00		13.891	9.260								
6	1994.00	-	5.556	3.704								
7	1995.00	13,310	0	0	2,653	3,556	1,264	3,537	1,256	2,370	366	3,245
8	1996.00	13,441	0	0	2,672	3,479	1,264	3,528	1,333	2,493	463	3,295
9	1997.00	13,644	0	0	2,691	3,367	1,264	4,302	1,500	2,803	555	3,511
10	1998.00	13,952	0	0	2,910	3,275	1,264	4,533	1,580	2,952	656	3,550
11	1999.00	14,402	0	0	2,923	3,142	1,264	5,067	1,767	3,299	800	3,764
12	2000.00	14,549	0	0	2,945	4,982	1,264	5,355	1,856	3,487	960	3,791
13	2001.00	14,965	0	0	2,967	4,790	1,264	5,964	2,061	3,882	1,152	3,995
14	2002.00	15,141	0	0	2,988	4,560	1,264	6,331	2,210	4,121	1,362	4,003
15	2003.00	15,556	0	0	3,005	4,284	1,264	7,043	2,459	4,584	1,656	4,190
16	2004.00	15,761	0	0	3,024	3,952	1,264	7,521	2,626	4,895	1,950	4,169
17	2005.00	16,234	0	0	3,043	3,554	1,264	8,373	2,925	5,446	2,358	4,325
18	2005.00	16,410	0	0	3,062	3,076	1,264	9,008	3,147	5,861	2,866	4,259
19	2007.00	16,902	0	0	3,061	2,503	1,264	10,054	3,513	6,541	3,435	4,366
20	2008.00	17,088	0	0	3,100	1,816	1,264	10,908	3,812	7,096	4,126	4,234
21	2009.00	17,601	0	0	3,119	990	1,264	12,228	4,274	7,954	4,952	4,266
22	2010.00	17,795	0	0	3,135	0	1,264	13,396	4,683	8,713	0	9,977
23	2011.00	18,332	0	0	3,157		1,264	13,911	4,863	9,048		10,512
TOTAL		265,375	27,761	18,521	51,085	61,347	21,488	131,456	45,906	65,549	27,761	79,256

IRR TO EQUITY = 14.6%

EQUITY 40.00%= 18,521  
 LOAN 60.00%= 27,781

523

P I A K  
 LARANG PILANG

No.	Years	Sales	Cost			Interest	Deprac.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1988.00											
2	1989.00											
3	1990.00											
4	1991.00		10.418	3.473								
5	1992.00		17.363	5.768								
6	1993.00		6.945	2.315								
7	1994.00	13.316	0	0	2.653	5.945	1.264	2.248	780	1.468	462	2.249
8	1995.00	13.441	0	0	2.872	6.649	1.264	2.456	853	1.603	578	2.289
9	1996.00	13.844	0	0	2.891	6.733	1.264	2.956	1,029	1.927	694	2,497
10	1997.00	13.952	0	0	2.910	6.594	1.264	3.214	1,119	2,095	833	2,526
11	1998.00	14.402	0	0	2.929	6.426	1.264	3.751	1,317	2,454	1,000	2,725
12	2000.00	14.545	0	0	2.948	6.228	1.264	4,109	1,452	2,677	1,200	2,741
13	2001.00	14.955	0	0	2.967	5,988	1.264	4,756	1,662	3,104	1,439	2,928
14	2002.00	15.141	0	0	2,986	5,700	1.264	5,191	1,811	3,380	1,727	2,917
15	2003.00	15.595	0	0	3,005	5,355	1.264	5,972	2,054	3,868	2,073	3,079
16	2004.00	15.751	0	0	3,024	4,940	1.264	6,533	2,251	4,252	2,467	3,029
17	2005.00	16.234	0	0	3,043	4,442	1.264	7,455	2,614	4,671	2,965	3,150
18	2006.00	16.410	0	0	3,062	3,646	1.264	8,235	2,877	5,351	3,582	3,043
19	2007.00	16,902	0	0	3,081	3,125	1.264	9,428	3,294	6,134	4,236	3,100
20	2008.00	17,065	0	0	3,100	2,269	1.264	10,455	3,653	6,801	5,158	2,908
21	2009.00	17,601	0	0	3,119	1,238	1.264	11,980	4,167	7,793	6,189	2,866
22	2010.00	17,796	0	0	3,138	0	1.264	13,395	4,683	8,713	0	9,977
23	2011.00	18,332	0	0	3,157		1.264	15,611	4,853	9,046		10,312
TOTAL		265,376	34,727	11,576	51,085	76,684	21,486	116,119	40,539	75,580	34,726	62,342

IRR TO EQUITY = 16.9%

EQUITY 25.00% = 11,576  
 LOAN 75.00% = 34,727

524

P D & M  
UJUNG PANDANG

No.	Years	Sales	Cost			Interest	Deprc.	P/L Bifore Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loar	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		8,250	5,500								
5	1993		8,394	5,596								
6	1994		5,505	3,670								
7	1995	5,956	0	0	589	4,430	1,440	(501)	0	(501)	307	632
8	1996	6,579	0	0	607	4,368	1,440	2,164	751	1,412	369	2,483
9	1997	6,579	0	0	644	4,295	1,440	2,200	764	1,436	443	2,434
10	1998	12,354	0	0	663	4,206	1,440	6,045	2,110	3,935	531	4,844
11	1999	12,354	0	0	703	4,100	1,440	6,111	2,133	3,978	638	4,781
12	2000	17,789	0	0	725	3,972	1,440	11,652	4,072	7,560	765	8,255
13	2001	17,789	0	0	769	3,819	1,440	11,761	4,110	7,651	918	8,172
14	2002	25,616	0	0	794	3,636	1,440	19,746	6,905	12,841	1,102	13,179
15	2003	25,616	0	0	842	3,415	1,440	19,919	6,966	12,953	1,322	13,071
16	2004	40,025	0	0	870	3,151	1,440	34,564	12,091	22,473	1,587	22,326
17	2005	40,025	0	0	922	2,833	1,440	34,830	12,184	22,645	1,904	22,181
18	2006	52,934	0	0	953	2,453	1,440	-48,088	16,825	31,263	2,285	30,419
19	2007	52,934	0	0	1,011	1,996	1,440	48,487	16,965	31,523	2,741	30,221
20	2008	64,050	0	0	1,046	1,448	1,440	60,116	21,035	39,082	3,290	37,232
21	2009	64,050	0	0	1,109	790	1,440	60,711	21,243	39,468	3,948	36,961
22	2010	70,615	0	0	1,149	0	1,440	68,026	23,803	44,223	0	45,663
23	2011	70,615	0	0	1,218		1,440	67,957	23,779	44,178		45,618
TOTAL		589,882	22,149	14,766	14,614	48,910	24,480	501,878	175,737	326,141	22,149	326,472

IRR TO EQUITY = 28.3%

EQUITY 40.00% = 14,766  
LOAN 60.00% = 22,149

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P D & M  
UJUNG PANDANG

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		10,315	3,438								
5	1993		10,495	3,498								
6	1994		6,881	2,294								
7	1995	5,956	0	0	589	5,537	1,440	(1,608)	0	(1,608)	384	(553)
8	1996	8,579	0	0	607	5,460	1,440	1,072	369	703	461	1,681
9	1997	6,579	0	0	644	5,366	1,440	1,127	388	738	553	1,625
10	1998	12,354	0	0	663	5,257	1,440	4,994	1,742	3,252	664	4,025
11	1999	12,354	0	0	703	5,125	1,440	5,066	1,774	3,312	797	5,555
12	2000	17,789	0	0	725	4,965	1,440	10,659	3,725	6,934	956	7,416
13	2001	17,789	0	0	769	4,774	1,440	10,806	3,776	7,030	1,146	7,322
14	2002	25,616	0	0	794	4,544	1,440	18,636	6,587	12,250	1,377	12,313
15	2003	25,616	0	0	842	4,265	1,440	19,065	6,667	12,398	1,653	12,156
16	2004	40,025	0	0	870	3,938	1,440	33,777	11,616	21,961	1,983	21,418
17	2005	40,025	0	0	922	3,542	1,440	34,121	11,936	22,185	2,380	21,245
18	2006	52,534	0	0	953	3,066	1,440	47,475	16,610	30,865	2,856	25,449
19	2007	52,934	0	0	1,011	2,495	1,440	47,988	16,790	31,198	3,427	25,212
20	2008	64,050	0	0	1,046	1,809	1,440	59,755	20,908	38,847	4,112	36,174
21	2009	64,050	0	0	1,109	987	1,440	60,514	21,174	39,340	4,935	35,645
22	2010	70,615	0	0	1,149	0	1,440	68,026	23,803	44,223	0	45,663
23	2011	70,615	0	0	1,218		1,440	67,957	23,779	44,178		45,618
TOTAL		589,882	27,686	9,229	14,614	61,138	24,480	489,650	171,645	317,806	27,686	314,600

IRR TO EQUITY = 32.4%

EQUITY 25.00% = 9,229  
 LOAN 75.00% = 27,686

526

P D A M  
BANDUNG RAYA

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		8,302	5,535								
5	1993		22,294	14,862								
6	1994		18,478	12,319								
7	1995	16,645	0	0	1,090	9,815	3,190	2,548	885	1,553	681	4,172
8	1996	18,349	0	0	1,155	9,579	3,190	4,325	1,507	2,516	818	5,191
9	1997	18,349	0	0	1,181	9,515	3,190	4,453	1,556	2,907	981	5,116
10	1998	20,230	0	0	1,252	9,319	3,190	6,469	2,256	4,211	1,177	6,224
11	1999	20,230	0	0	1,261	9,083	3,190	6,676	2,330	4,345	1,413	6,122
12	2000	23,376	0	0	1,358	8,801	3,190	10,029	3,504	6,525	1,695	8,020
13	2001	23,376	0	0	1,391	8,462	3,190	10,335	3,611	6,724	2,034	7,630
14	2002	45,822	0	0	1,474	6,055	3,190	33,103	11,580	21,523	2,441	22,272
15	2003	45,822	0	0	1,511	7,567	3,190	33,554	11,738	21,816	2,929	22,077
16	2004	71,595	0	0	1,602	6,961	3,190	59,823	20,932	38,891	3,515	36,566
17	2005	71,596	0	0	1,643	6,278	3,190	60,465	21,164	39,321	4,216	38,293
18	2006	86,631	0	0	1,742	5,434	3,190	76,265	26,687	49,578	5,062	47,706
19	2007	86,631	0	0	1,785	4,422	3,190	77,231	27,025	50,206	6,074	47,322
20	2008	95,511	0	0	1,896	3,207	3,190	87,218	30,520	56,698	7,289	52,599
21	2009	95,511	0	0	1,948	1,749	3,190	86,624	31,012	57,611	8,747	52,055
22	2010	105,301	0	0	2,055	0	3,190	100,045	35,010	65,036	0	68,225
23	2011	105,301	0	0	2,124		3,190	99,967	34,939	64,996		65,186
TOTAL		950,279	49,074	32,716	25,501	105,357	54,230	761,181	265,310	494,871	49,074	500,027

IRR TO EQUITY = 25.1%

EQUITY 40.00% = 32,716  
LOAN 60.00% = 49,074

P D A M  
BANDUNG RAYA

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		10,376	3,459								
5	1993		27,667	9,289								
6	1994		20,766	10,609								
7	1995	16,643	0	0	1,090	11,807	3,190	556	188	356	819	2,739
8	1996	16,349	0	0	1,155	11,643	3,190	2,351	820	1,541	983	3,748
9	1997	16,349	0	0	1,181	11,446	3,190	2,532	890	1,552	1,180	3,662
10	1998	20,230	0	0	1,252	11,210	3,190	4,576	1,596	2,982	1,416	4,756
11	1999	20,230	0	0	1,251	10,927	3,190	4,832	1,665	3,147	1,599	4,536
12	2000	23,379	0	0	1,359	10,557	3,190	8,243	2,879	5,364	2,039	6,515
13	2001	23,378	0	0	1,391	10,179	3,190	8,618	3,010	5,606	2,447	6,351
14	2002	45,622	0	0	1,474	9,590	3,190	31,468	11,008	20,460	2,936	20,714
15	2003	45,622	0	0	1,511	9,102	3,190	32,019	11,201	20,818	3,524	20,464
16	2004	71,596	0	0	1,502	8,398	3,190	59,406	20,436	37,970	4,225	35,932
17	2005	71,596	0	0	1,643	7,552	3,190	59,211	20,718	38,493	5,074	36,609
18	2006	66,631	0	0	1,742	6,537	3,190	75,162	25,301	46,861	6,089	45,962
19	2007	66,631	0	0	1,789	5,319	3,190	76,334	26,711	49,623	7,307	45,506
20	2008	95,511	0	0	1,896	3,856	3,190	86,567	30,292	56,275	6,768	50,636
21	2009	95,511	0	0	1,946	2,104	3,190	93,269	30,868	57,381	10,522	50,049
22	2010	105,301	0	0	2,055	0	3,190	100,046	35,010	65,036	0	68,225
23	2011	105,301	0	0	2,124	0	3,190	99,987	34,989	64,995	0	68,188
TOTAL		950,279	59,033	22,757	26,501	130,356	54,230	759,190	256,614	486,577	59,033	475,774

IRR TO EQUITY = 28.4%

EQUITY 25.00% = 22,757  
LOAN 75.00% = 59,033

528

P D A M  
TEGAL

No.	Years	Sales	Cost			Interest	Deprec.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1988											
2	1990											
3	1991											
4	1992		6,032	4,022								
5	1993		6,193	4,129								
6	1994		6,692	4,461								
7	1995	5,664	0	0	545	3,765	1,230	126	37	86	253	1,055
8	1996	7,517	0	0	559	3,731	1,230	1,997	692	1,305	315	2,219
9	1997	7,517	0	0	593	3,665	1,230	2,025	703	1,323	378	2,175
10	1998	10,376	0	0	608	3,552	1,230	4,945	1,726	3,222	454	3,995
11	1999	10,376	0	0	645	3,502	1,230	5,001	1,745	3,257	545	3,942
12	2000	15,194	0	0	662	3,399	1,230	9,909	3,462	6,447	653	7,024
13	2001	15,194	0	0	702	3,252	1,230	10,000	3,494	6,506	764	6,952
14	2002	25,676	0	0	721	3,105	1,230	20,622	7,212	13,410	941	13,699
15	2003	25,676	0	0	764	2,917	1,230	20,757	7,262	13,505	1,129	13,605
16	2004	33,959	0	0	786	2,631	1,230	29,252	10,232	19,020	1,355	16,895
17	2005	33,959	0	0	833	2,420	1,230	29,476	10,311	19,165	1,626	16,769
18	2006	41,090	0	0	855	2,095	1,230	36,907	12,912	23,995	1,951	23,274
19	2007	41,090	0	0	910	1,705	1,230	37,245	13,030	24,215	2,341	23,104
20	2008	45,302	0	0	937	1,236	1,230	41,899	14,659	27,240	2,810	25,660
21	2009	45,302	0	0	993	674	1,230	42,405	14,835	27,569	3,372	25,427
22	2010	49,946	0	0	1,025	0	1,230	47,691	16,686	31,005	0	32,235
23	2011	49,946	0	0	1,086		1,230	47,630	16,665	30,965		32,195
TOTAL		453,312	16,917	12,612	15,227	41,774	20,910	357,901	135,662	252,239	16,917	254,231

IRR TO EQUITY = 29.8%

EQUITY 40.00%= 12,612  
LOAN 60.00%= 16,917

6/29



P D L M  
TEGAL

No.	Years	Sales	Cost:			Interest	Depr.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		7,541	2,514								
5	1993		7,742	2,591								
6	1994		8,365	2,765								
7	1995	5,664	0	0	545	4,729	1,250	(820)	(294)	(527)	325	375
8	1996	7,517	0	0	559	4,564	1,230	1,064	356	698	394	1,534
9	1997	7,517	0	0	593	4,555	1,230	1,105	352	727	473	1,464
10	1998	10,378	0	0	608	4,490	1,230	4,050	1,411	2,659	557	3,301
11	1999	10,378	0	0	645	4,377	1,230	4,126	1,438	2,686	681	3,237
12	2000	15,194	0	0	662	4,241	1,230	9,061	3,165	5,696	617	6,309
13	2001	15,194	0	0	702	4,077	1,230	9,185	3,209	5,976	980	6,226
14	2002	25,675	0	0	721	3,851	1,230	19,646	6,940	12,905	1,176	12,959
15	2003	25,675	0	0	764	3,646	1,230	29,035	7,007	13,031	1,411	12,549
16	2004	33,959	0	0	766	3,364	1,230	28,579	9,997	18,562	1,694	18,119
17	2005	33,959	0	0	833	3,025	1,230	28,871	10,099	18,772	2,033	17,970
18	2006	41,090	0	0	858	2,619	1,230	36,363	12,728	23,655	2,439	22,446
19	2007	41,090	0	0	910	2,131	1,230	36,619	12,881	23,939	2,927	22,242
20	2008	45,302	0	0	937	1,545	1,230	41,590	14,550	27,039	3,512	24,757
21	2009	45,302	0	0	993	643	1,230	42,235	14,777	27,459	4,215	24,475
22	2010	49,945	0	0	1,025	0	1,230	47,691	16,686	31,005	0	32,235
23	2011	49,945	0	0	1,086		1,230	47,630	16,665	30,966		32,196
22,003												
TOTAL		455,612	23,647	7,882	13,227	52,216	20,910	377,457	132,007	245,450	23,647	242,714

IRR TO EQUITY = 34.1%

EQUITY 25.00% = 7,882  
LOAN 75.00% = 23,647

630

P D A M  
NERAK

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principie	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		3,663	2,446								
5	1993		6,922	4,614								
6	1994		6,221	4,147								
7	1995	3,355	0	0	295	3,362	1,093	(895)	(320)	(575)	233	264
8	1996	6,257	0	0	307	3,315	1,093	1,552	537	1,015	280	1,825
9	1997	6,257	0	0	326	3,259	1,093	1,589	550	1,039	336	1,755
10	1998	9,025	0	0	340	3,192	1,093	4,400	1,534	2,866	403	3,555
11	1999	9,025	0	0	360	3,112	1,093	4,460	1,555	2,905	454	3,514
12	2000	14,325	0	0	376	3,015	1,093	9,844	3,439	6,405	561	6,917
13	2001	14,328	0	0	398	2,899	1,093	9,938	3,472	6,466	697	6,862
14	2002	20,632	0	0	416	2,759	1,093	16,364	5,721	10,642	836	10,893
15	2003	20,632	0	0	441	2,592	1,093	16,506	5,771	10,735	1,033	16,824
16	2004	25,861	0	0	461	2,391	1,093	21,936	7,671	14,264	1,204	14,153
17	2005	25,861	0	0	469	2,151	1,093	22,148	7,746	14,402	1,445	14,051
18	2006	31,316	0	0	511	1,862	1,093	27,850	9,742	18,109	1,734	17,463
19	2007	31,316	0	0	541	1,515	1,093	28,167	9,853	18,315	2,081	17,527
20	2008	37,893	0	0	566	1,099	1,093	35,135	12,291	22,844	2,497	21,440
21	2009	37,893	0	0	600	599	1,093	35,601	12,454	23,146	2,996	21,243
22	2010	40,200	0	0	629	0	1,093	38,478	13,461	25,017	0	26,110
23	2011	40,200	0	0	666		1,093	30,441	13,448	24,993		26,036
TOTAL		374,939	16,811	11,207	7,722	37,122	18,581	311,514	108,927	202,587	16,811	264,357

IRR TO EQUITY - 28.4%

EQUITY 40.00% = 11,207  
LOAN 60.00% = 16,611

P D & M  
MERAX

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		4,586	1,529								
5	1993		8,652	2,884								
6	1994		7,776	2,532								
7	1995	3,855	0	0	295	4,203	1,093	(1,736)	(614)	(1,122)	292	(320)
8	1995	6,267	0	0	307	4,144	1,093	723	246	476	350	1,219
9	1997	6,267	0	0	326	4,074	1,093	774	265	509	420	1,162
10	1998	9,025	0	0	340	3,990	1,093	3,602	1,255	2,347	504	2,935
11	1999	9,025	0	0	360	3,890	1,093	3,682	1,283	2,400	605	2,868
12	2000	14,328	0	0	376	3,769	1,093	9,090	3,176	5,915	726	6,282
13	2001	14,328	0	0	398	3,623	1,093	9,214	3,219	5,995	871	6,217
14	2002	20,632	0	0	416	3,449	1,093	15,674	5,490	10,194	1,045	10,242
15	2003	20,632	0	0	441	3,240	1,093	15,858	5,544	10,314	1,254	10,152
16	2004	25,851	0	0	461	2,999	1,093	21,338	7,452	13,876	1,505	13,463
17	2005	25,851	0	0	469	2,658	1,093	21,611	7,558	14,053	1,606	13,340
18	2005	31,316	0	0	511	2,327	1,093	27,385	9,579	17,606	2,167	15,732
19	2007	31,316	0	0	541	1,893	1,093	27,789	9,720	16,069	2,601	16,561
20	2008	37,893	0	0	566	1,373	1,093	34,661	12,195	22,665	3,121	20,637
21	2009	37,893	0	0	600	749	1,093	35,451	12,402	23,049	3,745	20,397
22	2010	40,200	0	0	629	0	1,093	38,478	13,461	25,017	0	26,110
23	2011	40,200	0	0	666		1,093	38,441	13,445	24,993		26,065
								17,729				
TOTAL		374,939	21,014	7,005	7,722	46,403	18,581	302,233	105,679	196,555	21,014	194,122

IRR TO EQUITY = 32.9%

EQUITY 25.00%= 7,005  
LOAN 75.00%= 21,014

532

P D A M  
MATAKAM

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		587	391								
5	1993		6,720	4,480								
6	1994		6,198	4,132								
7	1995	4,121	0	0	811	2,701	878	(269)	(94)	(175)	187	516
8	1996	4,497	0	0	1,010	2,664	878	(55)	(19)	(36)	224	618
9	1997	4,497	0	0	1,020	2,619	878	(20)	(7)	(13)	269	596
10	1998	6,731	0	0	1,205	2,565	878	2,083	726	1,357	323	1,912
11	1999	6,731	0	0	1,218	2,500	878	2,135	744	1,391	388	1,381
12	2000	8,754	0	0	1,384	2,423	878	4,069	1,418	2,651	465	3,064
13	2001	8,754	0	0	1,397	2,330	878	4,149	1,446	2,703	558	3,023
14	2002	14,190	0	0	1,679	2,218	878	9,415	3,281	6,134	670	6,342
15	2003	14,190	0	0	1,694	2,084	878	9,534	3,323	6,212	804	6,235
16	2004	20,433	0	0	2,174	1,923	878	15,458	5,387	10,071	965	9,984
17	2005	20,433	0	0	2,191	1,730	878	15,634	5,448	10,186	1,158	9,906
18	2006	25,588	0	0	2,617	1,498	878	20,595	7,177	13,417	1,390	12,906
19	2007	25,588	0	0	2,636	1,220	878	20,854	7,268	13,586	1,668	12,796
20	2008	31,423	0	0	3,168	887	878	26,490	9,232	17,258	2,001	16,135
21	2009	31,423	0	0	3,190	487	878	26,868	9,364	17,505	2,401	15,981
22	2010	34,831	0	0	3,527	0	878	30,426	10,603	19,823	0	20,701
23	2011	34,831	0	0	3,551	0	878	30,402	10,595	19,807	0	20,685
TOTAL		297,015	13,505	9,003	34,472	29,847	14,926	217,770	75,893	141,877	13,473	143,330

IRR TO EQUITY = 26.6%

EQUITY 40% = 9,003  
LOAN 60% = 13,505

533

P D A M  
MATARAM

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		734	245								
5	1993		8,400	2,800								
6	1994		7,748	2,583								
7	1995	4,121	0	0	811	3,376	878	(944)	(329)	(615)	235	28
8	1996	4,497	0	0	1,010	3,329	878	(720)	(251)	(459)	282	127
9	1997	4,497	0	0	1,020	3,273	878	(674)	(235)	(435)	338	101
10	1998	6,731	0	0	1,205	3,205	878	1,443	503	940	405	1,412
11	1999	6,731	0	0	1,218	3,124	878	1,511	527	984	487	1,375
12	2000	8,754	0	0	1,384	3,027	878	3,465	1,208	2,258	584	2,551
13	2001	8,754	0	0	1,397	2,910	878	3,569	1,244	2,325	701	2,502
14	2002	14,190	0	0	1,679	2,770	878	8,863	3,089	5,774	841	5,311
15	2003	14,190	0	0	1,694	2,601	878	9,017	3,142	5,874	1,010	5,743
16	2004	20,433	0	0	2,174	2,399	878	14,982	5,221	9,760	1,212	3,427
17	2005	20,433	0	0	2,191	2,157	878	15,207	5,300	9,907	1,454	9,331
18	2006	25,528	0	0	2,617	1,866	878	20,227	7,049	13,178	1,745	12,311
19	2007	25,588	0	0	2,636	1,517	878	20,557	7,164	13,393	2,094	12,177
20	2008	31,423	0	0	3,168	1,039	878	26,278	9,158	17,120	2,512	15,486
21	2009	31,423	0	0	3,190	596	878	26,759	9,325	17,433	3,015	15,297
22	2010	34,831	0	0	3,527	(7)	878	30,433	10,606	19,827	0	20,705
23	2011	34,831	0	0	3,551	(7)	878	30,409	10,597	19,811	0	20,629
TOTAL		297,015	16,881	5,627	34,472	37,238	14,926	210,379	73,317	137,062	16,914	135,074

IRR TO EQUITY = 29.9%

EQUITY 25% = 5,627  
LOAN 75% = 16,881

GA

P D A H  
PLUIT

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & M							
1	1989											
2	1990											
3	1991											
4	1992		3,581	2,388								
5	1993		5,969	3,979								
6	1994		2,387	1,592								
7	1995	5,559	0	0	823	2,388	776	1,572	548	1,024	165	1,635
8	1996	5,680	0	0	825	2,354	776	1,725	601	1,124	199	1,701
9	1997	5,850	0	0	827	2,315	776	1,932	673	1,259	238	1,797
10	1998	5,978	0	0	829	2,267	776	2,106	734	1,372	286	1,862
11	1999	6,158	0	0	831	2,210	776	2,341	816	1,525	343	1,958
12	2000	6,293	0	0	833	2,141	776	2,543	886	1,657	412	2,021
13	2001	6,482	0	0	835	2,059	776	2,812	980	1,832	494	2,114
14	2002	6,626	0	0	837	1,960	776	3,053	1,064	1,989	593	2,172
15	2003	6,825	0	0	839	1,841	776	3,369	1,174	2,195	712	2,259
16	2004	6,978	0	0	841	1,699	776	3,662	1,276	2,386	854	2,308
17	2005	7,187	0	0	843	1,528	776	4,040	1,408	2,632	1,025	2,383
18	2006	7,350	0	0	846	1,323	776	4,405	1,535	2,870	1,230	2,416
19	2007	7,570	0	0	848	1,078	776	4,868	1,697	3,172	1,475	2,472
20	2008	7,742	0	0	850	782	776	5,334	1,859	3,475	1,771	2,480
21	2009	7,975	0	0	853	428	776	5,918	2,062	3,855	2,125	2,507
22	2010	8,157	0	0	855	0	776	6,526	2,274	4,252	0	5,028
23	2011	8,402	0	0	857	0	776	6,769	2,359	4,410	0	5,186

TOTAL	116,812	11,938	7,958	14,272	26,375	13,192	62,973	21,946	41,027	11,920	42,299
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IRR TO EQUITY = 19.5%

EQUITY 40% = 7,958  
LOAN 60% = 11,938

P D A K  
PLUIT

No.	Years	Sales	Cost			Interest	Deprc.	P/L Before Tax	Corporate Tax	P/L After Tax	Principle	Cash Balance BOT
			Loan	Equity	O & H							
1	1989											
2	1990											
3	1991											
4	1992		4,477	1,492								
5	1993		7,461	2,487								
6	1994		2,984	995								
7	1995	5,559	0	0	823	2,984	776	976	340	636	207	1,205
8	1996	5,680	0	0	825	2,943	776	1,136	396	740	248	1,268
9	1997	5,850	0	0	827	2,893	776	1,354	472	882	293	1,360
10	1998	5,978	0	0	829	2,834	776	1,539	536	1,003	357	1,422
11	1999	6,158	0	0	831	2,763	776	1,788	623	1,165	428	1,513
12	2000	6,293	0	0	833	2,677	776	2,007	699	1,308	514	1,570
13	2001	6,482	0	0	835	2,574	776	2,297	800	1,496	617	1,656
14	2002	6,626	0	0	837	2,451	776	2,562	893	1,669	740	1,705
15	2003	6,825	0	0	839	2,303	776	2,907	1,013	1,894	888	1,732
16	2004	6,978	0	0	841	2,125	776	3,236	1,128	2,108	1,066	1,816
17	2005	7,187	0	0	843	1,912	776	3,656	1,274	2,382	1,279	1,879
18	2006	7,350	0	0	846	1,656	776	4,072	1,419	2,653	1,535	1,894
19	2007	7,570	0	0	848	1,349	776	4,597	1,602	2,995	1,842	1,929
20	2008	7,742	0	0	850	981	776	5,135	1,790	3,346	2,210	1,911
21	2009	7,975	0	0	853	538	776	5,808	2,024	3,784	2,653	1,907
22	2010	8,157	0	0	855	0	776	6,526	2,274	4,252	0	5,028
23	2011	8,402	0	0	857	0	776	6,769	2,359	4,410	0	5,186
TOTAL		116,812	14,922	4,974	14,272	32,983	13,192	56,365	19,643	36,722	14,882	35,032

IRR TO EQUITY = 23.2%

EQUITY 25% = 4,974  
LOAN 75% = 14,922

536

**PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES**

**ISSUES FOR INVESTMENT IN INDONESIA**

**Working Paper G**

**LIST OF REFERENCES, CONTACTS  
AND GLOSSARY**

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## 1. LIST OF REFERENCES

1. Administrative Analysis - An Introduction to Rules, Enforcement and Organizations  
Christopher Hood  
Wheatsheaf Books ISBN 0-7450-0187-4.
2. Control Systems for Public Enterprises in Developing Countries  
Praxy Fernandes, Editor  
International Center for Public Enterprises in Developing Countries, 1982
3. Human Resources Development HANDBOOK  
Guidelines for Ministries & Agencies Responsible for Water Supply & Sanitation  
World Health Organization, WHO/CWS/ETS 34.3, September 1984 Edited By Neil Carefoot & Howard Gibson
4. Human Resources Development Project  
For Community Water Supply in Indonesia  
Government of Indonesia, Dep. of Public Works,  
Directorate General of Human Settlements, Directorate of Water Supply.  
Second Edition, December 1985.
5. Human Resources Development Project, For Community Water Supply in Indonesia - Introduction to Water Enterprise Management Information System (WEMIS).  
Government of Indonesia, Dep. of Public Works,  
Directorate General of Human Settlements, Directorate of Water Supply.  
November 1987.
6. Human Resources Development Project, For Community Water Supply in Indonesia - Method For Analysis of Water Enterprise Management Information System (WEMIS) Output  
Government of Indonesia, Dep. of Public Works,  
Directorate General of Human Settlements, Directorate of Water Supply.  
November 1987.
7. Human Resources Development Project, For Community Water Supply in Indonesia - Importance of Management Information Systems  
Government of Indonesia, Dep. of Public Works,  
Directorate General of Human Settlements, Directorate of Water Supply.  
November 1987.

8. Housing Development Management Policy, Particularly Water Supply and Sanitation Sectors.  
Directorate General of Human Settlements, Dep. Public Works.
  
9. Institutional Development of The Water Supply Sector  
Country Paper 1: Indonesia, PAS/86/160  
UNDP/World Bank  
Asia Water Supply and Sanitation Sector Development Project  
With Assistance From The Dutch Government  
May 1990
  
10. Organizational Structure and Job Description of Ministry of Public Works  
Decision Letter of Public Works Minister No.: 211/KPTS/1984  
November 1987.  
Ministry of Public Works.
  
11. Policy of Water Resources Utilization in the Urban and Industrial Area. Session I - Urban Water Management Seminar, Tarumanegara University, 14 - 15 November 1990  
Ir. Soebandi Wirosoemarto  
Directorate General of Water Resources, Dep. of Public Works.
  
12. Policy of Urban Water Management  
Session V - Urban Water Management Seminar, Tarumanegara University, 14 - 15 November 1990,  
Ir. Soenarjono Danoedjo.  
Director General of Human Settlements, Dep. of Public Works.
  
13. PMDU 4 : Strengthening of Four Provincial Monitoring and Development Units.  
Inception Report, National Level Advisors  
DHV Consultants, IWACO Consultants for Water & Environment
  
14. Private Sector Opportunity in Water Supply and Sanitation  
Ir. Subiyanto (BKPM), Seminar on Private Cooperative Role in Water, 27 - 29 September 1990  
Directorate General of Human Settlements, Dep. Public Works.
  
15. Procedure of the Water Supply Project Proposal and Management Handover  
Joint Ministers Decree No.3 Year 1984, No. 26/KPTS/1984 of Public Works Minister and Home Affairs Minister

16. Private Sector Participation Identification Study  
First East Java Water Supply Project (IBRD Loan 2275-IND)  
Volume I - Main Report and Appendices  
Directorate General of Human Settlements, Ministry of  
Public Works  
December 1989
17. Report and Information of Directorate of Water Supply,  
Ministry of Public Works in Water Supply Programs  
Consultation Meeting  
November 1990
18. Support Study For Master Planning For Water Supply  
Subsector Policy, Draft Final Report - Introduction and  
Summary  
Directorate General of Human Settlements, Ministry of  
Public Works  
September 1988
19. Support Study For Master Planning For Water Supply  
Subsector Policy, Alternative Strategy Report, Volume:5  
Directorate General of Human Settlements, Ministry of  
Public Works  
October 1988
20. Study Project, The Role and Function of PUOD in Assisting  
the Development of Water Supply Enterprises  
Directorate General of Public Administration and Local  
Autonomy (PUOD), Ministry of Home Affairs  
February 1989
21. The Effects of Markets on Public Enterprise Conduct; and  
Vice Versa  
Leroy P. Jones and Ingo Vogelsang  
International Center for Public Enterprises in Developing  
Countries, 1983
22. Urban Strategy Assistance Indonesia  
Research Triangle Institute (RTI)  
USAID Mission to Indonesia  
Jakarta, Indonesia. March 1990
23. Water Supply Sector in Indonesia  
Directorate of Water Supply  
Directorate General of Human Settlements, Ministry of  
Public Works.  
September, 1989
24. PT. JASA MARGA  
Laporan Volume Lalu Lintas Bulan Agustus 1990

25. Republic of Indonesia, Ministry of Public Works,  
Secretariate General  
Study for Investigating Appropriate Scheme for Private  
Investment Into Projects under the Responsibility (SIC)  
of the Ministry of Public Works,  
Draft Final Report  
TRANSROUTE  
July 1990
26. Republic of Indonesia, Ministry of Home Affairs,  
Secretariate General, Bureau of Planning  
Urban Institute and Manpower Development Study, Draft  
Final Report  
PT. Hasfarm Dian Konsultan in association with DHV  
Consulting Engineers, December 31, 1988
27. Analysis on Electricity Pricing,  
Study for the Development of Infrastructure  
Pricing Policy Project, 1986
28. Investment Opportunities on Power Supply in Indonesia by  
A.Andoyo, Paper presented at the Specialist Group  
Meeting, Minerals and Energy Forum, Pacific Economic  
Conference, Aukland, New Zealand, 19-22 August 1990
29. Electricity Generating has bright long term prospects.  
C.I.C. No 15-19 August 1990.  
PT.Capricorn Indonesia Consult Inc.
30. Strategy Execution Development of Telecommunications in  
Repelita V, Anonymous
31. Power Plant Construction Projects - Challenges, Strategy,  
and Status of Implementation - by Ir.Kodyat Samadikun
32. The Urban Institute and PT.Hasfarm Dian Konsultan. Data  
Book on Urban Housing in Indonesia, Housing Policy  
Studies Project, 28 November 1988.
33. Ministry of Public Works, Directorate General of Human  
Settlements, Directorate of Environmental Sanitation -  
National Solid Waste Management Strategy, PT. Bumi  
Prasidi Biepsi in association with Beture Setami, france  
and Trans Asia - URS International, USA  
May 1990
34. WORLD BANK Technical Paper 14 (1983)  
"Water Supply and Sanitation - Project Preparation  
Handbooks"  
Grover,G., Burnett,N., McGary,M.  
Vol 1 Guidelines  
Vol 2 Case Study - Identification Pre Feasibility  
Vol 3 Case Study - Feasibility Studies

35. UNDP/IBRD MITS Project, Nepal (1990)  
"Project Preparation Manual for Rural and Semi-Urban  
Water Supply System"  
Watt, S.B.
  36. RDA Borrowers Manual (Draft) 1990  
"Sector Specific Guidelines for the Contents and  
Presentation of Project Feasibility Reports"  
Urban Water Supply Projects  
Ministry of Finance, Indonesia
  37. Mc Connel S. (1981)  
"Theories for Planning" Heinemann Pubs
  38. Asian Development Bank (1988)  
"Indonesia Urban sector Profile : An Update"  
Social Infrastructure Div, Infrastructure Dept.
  39. World Bank (1984) No 4800-IND  
"Indonesia : Urban Services Sector Report" Vol I.
  40. GOI 1988  
"Support Study For Master Planning for Water Supply  
Subsector Policy"  
Vol 1 Introduction & Summary  
Vol 2 Evaluation of Existing Systems  
Vol 5 Alternative Strategy Report  
Addendum to Strategy Report - Guidelines for Water Supply  
Programme Preparation
  41. UNDP/World Bank RAS/86/160 (1990)  
"Institutional Development of the Water Supply Sector -  
Indonesia, Nepal, Philippines and China"
  42. GOI - DG CK (1990)  
"Study for Investigating Appropriate Schemes for Private  
Investment in DGCK Projects"  
Transroute Consultants
  43. PUOD (1990) Draft  
"Terms of Reference on PDAM Effectiveness Improvement"
  44. World Development  
Pergamon Press ISSN 0305-750x  
May 1989  
"Privatization - Special Issue"
- N.van de Walle Privatization in Developing Countries :A  
Review of the Issues

- H.Bienen and J.Waterbury      The Political Economy of Privatization in Developing Countries
- H.Vernon-Wortzel      Privatization : Not the Only Answer and L.H.Wortzel
- M.R.Bishop and J.A. Kay      Privatization in the UK : Lessons from Experience
- J.Nellis and S.Kikeri      Public Enterprise Reform : Privatization and the World Bank
- W. Glade      Privatization in Rent Seeking Societies
- P.A.Yotopoulos      The (Rip)Tide of Privatization : Lessons from Chile
45. Bracken. I (1986)  
"Urban Planning Methods - Research and Policy Analysis"  
Methuen Pubs.
46. ADB (1986) Manila RP  
"Water Supply and Sanitation - Sector Strategy Review"
47. Fernandes.P 1986  
"Managing Relations Between Government and Public Enterprises"  
Management Development Series No.25. ILO.ISSN 0074-6703
48. Raffelis G.A (1989)  
"Water and Waste Water Finance and Pricing"  
Lewis Publishes ISBN 0-87371-181-5
49. DGCK - Bina Program  
"Water Supply and Sanitation Sector Study - Indonesia"  
ADB TA 1107-INO
50. Hagwood BW, Gunn LA (1989)  
"Policy Analysis for the Real World"  
OUP ISBN 0-19-876184-8
51. WHO IRC Water and Sanitation Centre (1987)  
"What Price Water"  
Occasional Paper Series - Wijk-Sijbesma,C.
52. Schultz J, Caulfield I (1989)  
"Planning for Charge - Strategic Planning in Local Government"  
Longman Pubs ISBN 0-582-04084-2

53. Investment Law and Regulations - BKPM.
54. Peraturan Pokok Pananaman Modal, Edisi 1987 - 1988.  
BKPM.
55. Procedures for Applications for Approvals and Facilities  
for Domestic & Foreign Investments.  
BKPM.
56. List of Sectors that are closed for Investment 1989.  
BKPM.
57. Himpunan Peraturan Perundang-undangan Perusahaan Daerah.  
PUOD, Depdagri, 1990.
58. Study for Investigating Appropriate Schemes for Private  
Investment into Projects under the Responsibility of the  
Ministry of Public Works (Draft Final Report, July 1990).
59. Umbulan Spring Bulk Water Supply Project
  - Private Investment Proposal, Volume 1 - The  
Consortium, Nov. 1988
  - Private Investment Proposal, Volume 2 - Technical &  
Financial Proposal, November 1988,
  - Private Investment Proposal, Supplementary  
Submission, January 1989 - The Bromo Consortium.
60. Ringkasan Proposal Peran Serta Swasta pada Pembangunan  
Sistem Penyediaan Air Bersih Wilayah Kuta/Nusa Dua dan  
sekitarnya.
61. Efisiensi Penagihan Rekening Air, PDAM Kotamadya Surabaya  
1990.
62. Pedoman Sistem Akuntansi PDAM, Agustus 1990  
PUOD/Depdagri.
63. Petunjuk Pelaksanaan Permendagri No. 690-536, 1988  
tentang Tarif Air Minum PDAM.  
Laporan Akhir, Buku I + Buku II.  
PUOD Depdagri.
64. Struktur Organisasi PDAM.  
PUOD/Depdagri.
65. Peran Serta Swasta pada Pembangunan Sistem Penyediaan Air  
Bersih Wilayah Kuta/Nusa Dua dan sekitarnya.  
Studi Kelayakan  
PT. Perencana Aneka Sarana Consulting Engineers.



66. Private Participation in the Delivery of Guinea's Water Supply Services.  
Thelma A. Triche.
67. Private Investment and Macro Economic Adjustment An overview  
Luis Serven and Andres Solimano
68. Guidelines on Privatization for Use by Government Agencies Malaysia Prime Minister's Department, Economic Planning Unit, 1985
69. Privatization : Issues and Problems  
Professor George Yarrow, Hertford College
70. Penyertaan Modal Daerah Pada Pihak Ketiga, Hubungannya dengan Penyediaan Air Minum
71. WORLD BANK, "Selected Issues of Public Resource Management, 1988"  
Indonesia 1988
72. WASH TECHNICAL REPORT NO.57, "Approaches for Private Sector Involvement in Rural Water Supply Systems,"  
April 1989
73. WASH TECHNICAL REPORT NO.53, (Draft) "Guidelines for Conducting a Financial Management Assessment of Water Authorities,"  
October 1990
74. WASH FIELD REPORT NO.289, "Application of the WASH Financial Management Guidelines to Indonesia's Autonomous Water Supply Enterprises"  
January 1990
75. WORLD BANK, "Poverty Assessment and Strategy Report"  
May 1990
76. WORLD BANK TECHNICAL PAPER NO.65 "Management Contracts Main Features and Design Issues" Hegstad and Newport,  
1987
77. USAID-ENERGY OFFICE, "The Build-Operate-Transfer (BOT) Concept" Seminar Paper E.Y.Lam, Conventional Energy Technical Assistance Project, 1988
78. CITICORP INTERNATIONAL LIMITED, "Development of Power Plants in the Philippines with Private Ownership" (Unpublished paper),  
William Dykes, Managing Director, Hongkong, 1988

546

79. WASH FIELD REPORT NO.314 (Draft), "Alternatives for Capital Financing of Water Supply and Sanitation" July 1990
80. PRIVATIZATION OF WATER SYSTEMS IN FRANCE, "Journal of the American Water Works Association" Deschams, J.D. February 1986

## 2. LIST OF CONTACTS

Mr. Soenarjono Danoedjo	Director General, Cipta Karya
Mr. B.S. Tambunan	Ministry of Home Affairs/PUOD
Mr. S. Panjaltan	Ministry of Home Affairs/PUOD
Mr. Eddy Kuniadi	Ministry of Home Affairs/PUOD
Mr. A.R. Tambing	Director, DAB/DGCK
Mr. Soekrisno	Expert Staff to the Minister of Public Works
Mr. B. Purwanto	Directorate of Water Supply, Cipta Karya
Mr. W. Adiputra	Directorate of Water Supply, Cipta Karya
Mr. M. Zuhidi	Chairman of the Umbulan Bulk Water Scheme Project Technical Team
Mr. H. Z. Djapli	President Director of Investment PDAB, East Java
Mr. N. Hasyim	Financial/Administrative Director of PDAB, East Java
Mr. K. Asmorototo	Technical Director of PDAB, East Java
Mr. Soebijanto	Expert Staff to the BKPM's Chairman
Mr. Y. Rahman	DITJEN BANGDA
Mr. Dedy Sofyan	Director of PDAM Bekasi
Mrs. Kusmiyati	Directorate of Water Supply, Cipta Karya
Mr. Ben Fisher	World Bank
Mr. E. Fernando	World Bank
Mr. R. Moul	Mott Macdonald Indonesia Ltd
Mr. M.N. Vivekananthan	Mott Macdonald Indonesia Ltd
Mr. P. Jezek	Private Power Advisor/USAID
Mr. J. Bastin	DEPKEU/Harvard
Mr. W. Hollinger	Price Waterhouse
Ms. N. Hoppe	Price Waterhouse
Mr. Budisantoso	Planning Bureau, PT Jasa Marga
Ir. B. Hartanto	Business Development Bureau, PT Jasa Marga
Mr. C. Copleman	URS
Mr. L. Sumiarso	Directorat Jeneral Listrik dan Energi Baru
Dr. A. Liebenthal	World Bank
Mr. Benny Bayu	Perumtel
Mr. Mulia Tabunan	Perumtel
Mr. Taufiq Akbar	Perumtel
Mr. D. Salleh	Cipta Karya
Mr. B. Arief	Cipta Karya
Mr. Jan Bunter	DHV
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Mr. G. Churchill	Legal Consultant, Professor University of Indonesia
Mr. M. Romanos	DSP/BAPPENAS
Mr. G. Hoogeveen	BIPBRAN DCK

Mr. W. Frej	USAID/Jakarta
Mr. P. Gajewsky	USAID/Jakarta
Ms. L. Ross	USAID/Jakarta
Mr. S. Parker	USAID/Jakarta
Dr. J. McCullough	Municipal Finance Project, Ministry of Finance
Dr. J. Taylor	Municipal Finance Project, Ministry of Finance
Mr. W. Kugler	Municipal Finance Project, Ministry of Finance

### 3. LIST OF ACRONYMS, ABBREVIATIONS, AND INDONESIAN LANGUAGE TERMS

*Adat*

Indonesian traditional ethnic and religious legal systems

**BANGDA**

Directorate General of Regional Development Affairs (*Direktorat Jenderal Pembangunan Daerah*) under DEPDA

*Bank Indonesia*

The Indonesian government-owned central bank

**BAPPENAS**

National Planning and Development Board (*Badan Perencanaan Pembangunan Nasional*)

*Bina Perusahaan Daerah*

Directorate for the Development of Regional Enterprises (*Direktorat Bina Perusahaan Daerah*) under PUOD

**BKPM**

Investment Coordinating Board (*Badan Koordinasi Penanaman Modal*) responsible for "one stop" service for receiving applications for, considering, and authorizing foreign and facilitated domestic investments in Indonesia

**BKPMD**

Regional Investment Coordinating Boards (*Badan Koordinasi Penanaman Modal Daerah*)

**BOT**

Build, Operate, and Transfer investments

**BPAM**

An embryonic water utility project under the national budget (*Badan Pengelola Air Minum*) created and administered by PU

**BPHN**

The central government agency (*Badan Pembinaan Hukum Nasional*) assigned the task of coordinating and harmonizing current laws and regulations as well as—although this role is poorly utilized by the central government—drafting the form of new laws

**Budget**

In this case, the Directorate General of the Budget (*Direktorat Jenderal Anggaran*) under DEPKEU

***Bupati***

Regent (executive) of a level one regency area (*kabupaten*)

***Camat***

Executive head of a *kecamatan* regional subunit of level two government

**Cipta Karya**

Directorate General of Human Settlement (*Direktorat Jenderal Cipta Karya*) under PU

**Customs**

In this case, the Directorate General of Customs (*Direktorat Jenderal Bea Cukai*) under DEPKEU

**DAB**

Directorate for Clean Water (*Direktorat Air Bersih*) under Cipta Karya

**DEPDAGRI**

Ministry of Home Affairs (*Departemen Dalam Negeri*)

**DEPERIN**

Ministry of Industry (*Departemen Perindustrian*)

**DEPKES**

Ministry of Health (*Departemen Kesehatan*)

**DEPKEU**

Ministry of Finance (*Departemen Keuangan*)

***Dewan Pengawas***

Board of supervisors of PDAMs and PDABs

***Dinas***

A provincial (level one) or local (level two) administrative agency which is the regional equivalent of a national ministry

**DITJENAIR**

Directorate General of Water Resources (*Direktorat Jenderal Pengairan*) under PU which deals only with irrigation water and similar matters

**DPR**

The national legislature (*Dewan Perwakilan Rakyat*)

DPRD TK. 1

Provincial legislature (*Dewan Perwakilan Rakyat Daerah Tingkat I*)

DPRD TK. 2

Local legislature (*Dewan Perwakilan Rakyat Daerah Tingkat II*)

*Gubernur*

Provincial governor

*Inpres*

Formal written presidential instructions (*Instruksi Presiden*) to ministries and government agencies

*Instruksi Gubernur*

Provincial governor's instructions to level two executives and level one administrative agencies

*Instruksi Menteri*

Written ministerial instructions sent to subordinate officials and offices

IUIDP

The Integrated Urban Infrastructure Development Program, a central government effort to coordinate the programs of a number of central government ministries into a single development program that is responsible to local governments

KANDEP

Local (level two) offices of national ministries (*Kantor Departemen*)

KANWIL

Provincial (level one) office of a central government's ministry (*Kantor Wilayah*)

*Kabupaten*

Local (level two) government regency area in rural areas

*Kecamatan*

Subordinate level two government district under a *kotamadya* or *kabupaten*

*Kelurahan*

Subordinate level two government district under a *kecamatan*

*Kepala Desa (Kades)*

Executive (village headman) of a level two rural area *kelurahan*

***Kepala dinas***

Head of a level one or two administrative agency

***Kepmen***

Ministerial decision (*Keputusan Menteri*)

***Keppres***

Presidential proclamations (*Keputusan Presiden*)

***KLH (Menteri Negara)***

State Minister for Environmental and Population Affairs (*Menteri Negara Kependudukan dan Lingkungan Hidup*)

***Kotamadya***

Local (level two) municipal government area in urban districts

***Lurah***

Executive of a level two urban area *kelurahan*

***Mahkamah Agung***

Indonesian Court of Cassation or Supreme Court

**Mining and Energy**

In this case, the Ministry of Energy (*Departemen Pertambangan dan Energi*)

**Monetary Fund**

In this case, the Directorate General of the Monetary Fund (*Direktorat Jenderal Moneter*) under DEPKEU

**New Order**

The present Government of Indonesia which assumed power during the period 1965-1966

**Old Order**

The Government of Indonesia from independence in 1945 through 1965-1966

***Pancasila***

The official national ideology of Indonesia, whose five cardinal principles are (a) monotheism, (b) a common bond of humanity shared by all the peoples of Indonesia, (c) national unity, (d) consultative and consensual government, and (e) social justice for all the peoples of Indonesia



**PDAB**

A level one provincial government-owned water enterprise (*Perusahaan Daerah Air Bersih*) which develops multi-use water sources and resells water from these sources to PDAMs

**PDAM**

Regional enterprise water utility (*Perusahaan Daerah Air Minum*) owned by a level two local government (or in special cases by a level one provincial government) and theoretically operated as an autonomous and economically viable enterprise

**PELITA/REPELITA**

The five year economic plans of the Government of Indonesia (*Pembangunan Lima Tahun* for the current plan/*Rencana Pembangunan Lima Tahun* for past and prospective plans)

*Pengadilan Negeri*

Indonesian level two Courts of First Instance

*Pengadilan Tata Usaha Negara*

Indonesian Administrative Laws Courts to be established in 1991

*Pengadilan Tinggi*

Indonesian level one Courts of Appeal

**PERDA**

DPRD TK. I or II enactment (*Peraturan Daerah*)

**PERMEN**

National ministerial regulations issued as a decree (*Peraturan Menteri*)

**PERSERODA**

Regional Limited Liability Company (*Perusahaan Perseroan Daerah*), a company with issued shares which will be one of the two acceptable legal forms of regional enterprise following enactment of a law to replace Law No. 5 of 1962

**Pertamina**

The Indonesian national oil company (*Perusahaan Pertambangan Minyak dan Gas Bumi Nasional*)

**PERUMDA**

Regional Public Company (*Perusahaan Umum Daerah*), a company without issued shares which will be one of the two acceptable legal forms of regional enterprise following enactment of a law to replace Law No. 5 of 1962

PMA

Foreign Investment Company (*Penanaman Modal Asing*) authorized by BKPM

PMDN

Domestic Investment Company (*Perusahaan Modal Dalam Negeri*) authorized by BKPM

PMDU

An advisory level one governmental agency (*Proyek Monitoring and Development Unit*) which monitors and assists PDAMs

PP

Central government regulations (*Peraturan Pemerintah*)

PPSAB

Provincial level one office of DAB (*Proyek Peningkatan Sarana Air Minum*) which provides administrative monitoring and assistance to BPAMs (and sometimes in practice—confusingly and with no apparent authority—to PDAMs and PDABs)

P.T.

The Indonesian limited liability company (*Perseroan Terbatas*) authorized by the still-valid Commercial Code of the Dutch East Indies of 1847 which is modeled on and similar to the limited liability companies common to most civil code legal systems

PU

Ministry of Public Works (*Departemen Perkerjaan Umum*)

PUOD

Directorate General of General Governmental Affairs and Regional Autonomy (*Direktorat Jenderal Pemerintahan Umum dan Otonomi Daerah*) under DEPDAAGRI

Regional Enterprise

A local level two (or in some cases provincial level one) wholly or partially government-owned enterprise (*Perusahaan Daerah*), e.g., a agriculture market, hotel, transportation service, or municipal parking lot as well as a water utility

SEKNEG

State Secretariat (*Sekretariat Negara*)

SK Gubernur

Governor's decree (*Surat Keputusan Gubernur*)

*Surat Edaran Menteri*

Ministerial circular letter

*Surat Keputusan Bersama Menteri*  
Joint ministerial decree

*Surat Keputusan Ketua BKPM*  
Decision of the Chairman of BKPM

Tax  
In this case, Directorate General of Tax (*Direktorat Jenderal Pajak*) under DEPKEU

*Tingkat dua*  
Level two, i.e., local, government

*Tingkat satu*  
Level one, i.e., provincial, government

TKPP  
Coordination Team for Urban Development (*Tim Koordinasi Pembangunan Perkotaan*)  
under BAPPENAS

*Walikota*  
Level two mayor of a city (*kotamadya*)

#### 4. NOTES OF OFFICIAL MEETINGS

**Report of Meeting  
Tuesday, November 20th., 1990 : 09.00 - 12.30  
Meeting Room, DAB**

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**A. SUBJECT :**

Discussion on Draft Working Papers :

- o. Working Paper C : A Review of Laws and Regulations concerning PSPUWS.
- o. Working Paper D : Issues Policies and Options in PSPUWS.

**B. LIST OF PARTICIPATION : see Annex A.**

**C. MEETING ARRANGEMENT :**

The meeting was chaired by Bapak Soekrisno - Assistant to The Minister of PW on Infrastructure Investment. The Consultant's presentation on Working Papers C and D were made by Gregory Letterman and Simon Watt respectively. See Annex B attached.

**D. DISCUSSION :**

Speakers from the client organization responded to the WASH Project Team presentation. The main points of discussion are reported below.

***Comments on Working Paper C***

**Mr. Soekrisno - Assistant to the Minister**

He felt that this study promises a "big-hope" for PSPUWS, and he also asked about the Final Result of The Study. "The Clarity" of Laws and Regulations related to Urban Water Supply Enterprise has become an important issue. The question is how we can overcome the constraints arising from the lack of clarity? Further, Soekrisno suggested that the Team should be able to produce something like : a picture or summary (Table/Executive) which will represents all possible conflicting issues in line with Laws and Regulations of PSPUWS policy (e.g : BKPM's Negative List compared to Law: No. 1/1967).

He also commented on the statement in Working Paper C : page 38 - para.4. This statement should be more descriptive. He reminded the Team not to ignore a consideration of how far the Tariff Structure is capable of reflecting the cross subsidy function of Water Services ? And how should it to be composed? How flexibly can the Private investor use their Right of Operation to alter the tariff structure?

Finally, the Team is requested to include the discussion on various PSP projects that have already been implemented (such as : Kisaran-Sumut, Denpasar, Lhoksemauwe, and Surabaya/BOT).

**Mr. Simanjuntak - Kasubdit MOHA**

The Team has to consider Reg. no. 14/1987 and he suggested that the Team can give a comment/analysis on PDAM Dualism Status : Public Service vs Profit Maximizing.

**Mr. Tambing - Director of DAB**

He asked about experiences in others countries in PSP activities - this should be as a part of the WASH Study. He also commented on the Government guarantee that will be requested by Private Investors related to their Investment Plan - how will this issue be covered ? And is there any indicator for Bulk Water Projects in order to achieve a certain Funding Standard? (e.g : like in the case of Toll Road - there is an indicator : Average Daily Traffic (ADT) which determined the options for Funding alternatives).

***Comments on Working Paper D***

**Mr. Djoko Rismianto - Staff DAB**

He restated about how to cover the gray area, new development area and specialized area (industrial area, commercial area, etc) in line with PSPUWS operation - how will the policy discussion cover this condition ? Is there any possibility to define the percentage of Population served by piped systems in a given town, so that Pusat could assume that if this percentage is already achieved, PDAM can do the rest ? He also stated that the main difficulty of determining the effective and fair service is the problem to locate clearly the poorer areas within the urban area. Next Mr. Soekrisno continued that in order to define the good water services, we must have a clear picture about :

- o. the type of area to be served (physically and spatially),
- o. the type of service to be provided - as it differs between towns, and
- o. the type of investment to be used.

These types above should be expressed in the Policy Paper and it is important to always remember that Water Supply Affairs still has a political connotation - and further it implies that Water Supply should not be managed as an "enclave." Or in other words, if the Private Enclave Approach is the alternative, what consideration should be made to ensure that the Private investor will serve the surrounding area as a social function ?

**Mr. Panjaitan - Kasubdit MOHA**

On what level of interest will the Private Sector join with the PDAMs on water supply affairs ? And how can the cross subsidy approach overcome the dual policy status of Water Supply sector ? As an implication, what should Central Government should do if Private Investors want to be involved in PDAM mechanism ?

There are several things to consider with respects to PSP Policy matters, such as :

- o. Who and how is control the quality of water provided? He answered that it should be Government responsibility.
- o. What about the taxes consideration (paid to GOI); this factor could raise the cost of water provided or decreasing the net revenue to the PDAM.

As an input, he informed that MOHA have already prepared a report on PDAM Accounting Systems and Tariff Calculation for Drinking Water based on certain design factors. The Team should obtain this Report.

**Mr. Jafrie Zainuddin - Director of PDAB East Java**

He informed that PLN/Electricity Enterprise has already introduced an industrial rate of tariff. And he also stated that based on the Letter No. 690/3377/PUOD, dated 4 September 1985, the 55% of PDAM net revenue is no longer transfered to Tingkat II Government anymore or in others words this portion of revenue should be handed back to PDAM as revenue.

**Mr. Soekrisno - Assistant to the Minister**

He asked what is the criteria that should be provided by Government to The Private/PSP in order to give them an opportunity for investment ? He requested that those criteria should be addressed in the Policy Paper. The important aspect is how can Water Supply PDAMs attract Private Investors "on their point of view" (since the Water Supply in Indonesia operates as a monopoly, not in competition) ?

**E. SOME CONCLUSIONS :**

1. The Report (and all related Papers) should be translated into Bahasa Indonesia (?).
2. Prepare to have an expose with the Minister of Public Works.
3. Please give list of all relevant references used in this study.
4. please make a global overview of this study approach in clear and systematic basis for easy understanding.
5. List of the PSPUWS Problems : Use the do and don't method to assist GOI staff.

RP7HTG2.DAB

**PRIVATE SECTOR PARTICIPATION  
IN URBAN WATER SUPPLIES**

**USAID/WASH PROJECT**

**M E E T I N G   A G E N D A**

**20th November 1990**

- 9:00 - 9:15            Chairman Introduction  
                          by : DAB
- 9:15 - 9:30            Review of 1/11/1990 Meeting Report  
                          Presentation of Project Working Papers  
                          by : WASH
- 9:30 - 10:15          Paper C - Review of Laws and Regulation  
                          by : Gregory Letterman
- 10:15 - 11:00         Paper D - Issues and Policies  
                          by : Simon Watt
- 11:00 - 11:30         Other Business

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DEPARTEMEN P.U. DIREKTORAT JENDERAL CIPTA KARYA  
**DIREKTORAT AIR BERSIH**

JL. R. PATAH I/I LT. VII KEB. BARU, TROMOL POS 325 JKT. Telp. 738064-738063-712837-778340. TELEX: 4718 DTP IA

Nomor : UM. 01.01.Ca.6 - 1017/90  
Lamp. : satu (1) berkas.

Jakarta, 17 November, 1990

Kepada Yth.  
Daftar terlampir  
di -  
**J A K A R T A**

**Perihal : RAPAT MENGENAI STUDI PARTISIPASI SEKTOR SWASTA (PSP)  
DALAM BIDANG PENYEDIAAN AIR BERSIH BANTUAN USAID  
(WASH PROJECT)**

Sebagai kelanjutan dari rapat yang telah dilaksanakan mengenai perihal sebagaimana tersebut diatas, yang telah berlangsung pada tanggal 1 Nopember 1990 yang lalu (notulen rapat terlampir), dengan ini kami mengharapkan kehadiran Saudara dalam rapat pada :

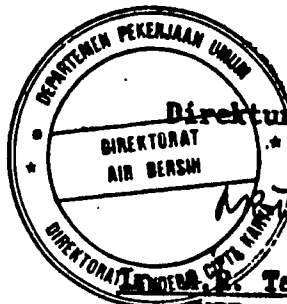
**H a r i** : Selasa, 20 Nopember 1990

**J a m** : 09.00 WIB

**Tempat** : Ruang Rapat Direktorat Air Bersih  
Jl. Raden Patah I/1 Lantai 7 Wing 4  
Kebayoran Baru, Jakarta - Selatan

**A c a r a** : Expose hasil pelaksanaan pekerjaan Konsultan  
" WASH PROJECT " mengenai Aspek Hukum,  
Kebijaksanaan dan Pedoman.

Demikian kami sampaikan untuk menjadi maklum dan atas perhatian serta kehadiran Saudara kami ucapkan terima kasih.



Direktur Air Bersih

DIREKTORAT  
AIR BERSIH

**E. Tembing, Dipl. SE**  
NIP. : 110012013

- Tembusan Kepada Yth.
1. Bapak Direktur Jenderal Cipta Karya;
  2. Direktur Bina Program, DJCK;
  3. Para Kasubdit. dilingkungan DAB;
  4. Konsultan Wash Project
  5. A r s i p.

7/hr6-undangan

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**PRIVATE SECTOR PARTICIPATION IN URBAN  
WATER SUPPLIES (PSPUWS) PROJECT**

**WASH Project - Jl.Cilacap No. 3, Menteng, Jakarta 10310 - Telp.: 351-340 ; 359-463**

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November 17, 1990

Dear Sir,

We have arranged the second of our information/working group meetings for Tuesday, 20th November 1990, 9 AM at DAB office.

Please find attached the following :

- \* Letter of invitation
- \* Report of Meeting dated 1 November 1990.

During the next meeting, we intend to discuss the Legal Paper, and the Policy Framework Paper.

Yours sincerely,

*Simon Watt.*

Simon Watt, Team Leader

L-SW-006

# USAID

## NAMES MENTIONED FOR STEERING COMMITTEE

1. Drs. Soekrisno - Staf Ahli Menteri Bidang Kerjasama Luar Negeri - MPW
2. Ir. Prayogo Padmowihardjo - Pegawai Tinggi DPP - Cipta Karya - MPW
3. Ir. Parulian Sidabutar - Director BIPRAN Cipta Karya - MPW
4. Ir. A.R. Tambing, Dipl. SE - Director DAB - MPW
5. Ir. H. Soedarsono Soekardi - Director BANGDA - MOHA
6. Drs. B.S. Tambunan SE - Director PUOD - MOHA
7. DR. Fuad Bawazier - Director - Ministry of Finance
8. Ir. Sahat Pandjaitan - Kasubdit - PUOD - MOHA
9. Ir. Rachmat Rani, Dipl. SE - Kasubdit - DAB - MPW
10. William Frej - USAID
11. Ir. H. Susanto M. - Ketua Tim Teknis PU
12. Ir. Risyana Sukarna, Dipl. H - Kasubdit BIPRAN - MPW
13. Ir. Widjanarko - Kasubdit BIPRAN - MPW
14. Drs. M. Butar-butur/Drs. Yusri Rokman - SUBDIT Bina Pengembangan Potensi Kota, Dit. Bina Bangdes, Ditjen BANGDA - MOHA
15. John Taylor - Konsultan

## NAMES MENTIONED FOR RESOURCE PERSON

1. John Bastin - Ministry of Finance
2. Peter Jessek - USAID
3. DR. John Herbert - BAPPENAS
4. DR. Ir. Budhy Tyahyati Soegianto - BAPPENAS
5. Dr. Romanos - DSP
6. Ben Fisher - WORLD BANK
7. Drs. Soedirman - DAB - MPW
8. Ir. Widiyanto Adiputra, Dipl. SE - DAB - MPW
9. Gatot M. SH - DAB - MPW
10. Bambang Purwantor MSc - DAB - MPW
11. Drs. Soedirman M. SH - BIPRAN Cipta Karya - MPW
12. Drs. Suharto Basuki - BSP
13. Ir. Joko Rismianto - DAB - MPW
14. Ir. Hidayat Kaelani - BIPRAN - MPW
15. Drs. Adi Susetyo - DAB - MPW

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**PRIVATE SECTOR PARTICIPATION  
IN URBAN WATER SUPPLIES**

**REPORT OF MEETING  
THURSDAY, NOVEMBER 1ST, 1990 - 9:15 - 12:00  
MEETING ROOM, DAB DIRECTORATE, 7TH FLOOR**

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**A. SUBJECT :**

Discussion of Draft of WASH Project Work Plan and related information on PSPUWS.

**B. LIST OF PARTICIPATION : See Annex A**

**C. MEETING ARRANGEMENT :**

The meeting was chaired by Bapak Rachmat Rani (DAB). The consultants Work Plan and Approach were introduced by the WASH Team Leader, Simon Watt. See Annex B.

**D. DISCUSSION :**

Speakers from the client organizations responded to the WASH presentation. The main points of discussion are reported below.

**Ir. S. Pandjaitan (Kasubdit at PUOD) -**

Up to now there are 565 Public Enterprises (PE) in Indonesia, of which 166 are PDAMs. These 565 PE's not only cover Water Supply (WS) Sector, but other sectors such as Fisheries, Shipping, Agricultures, Market, etc. To organize all PE's above the Ministry of Home Affairs (MOHA) has already prepared and implemented guidelines (and regulations).

Based on experience, the problems that generally exist with the PDAM's are management performance weaknesses and budgetary limitations to expanding existing WS investment.

Three points that could be a cause of PDAM problems are : unqualified/unskilled staff; rate of tariff too low; and/or complexity of government involvement (ie. the Mayor/Bupati and Legislatif council/DPRD have to be involved in tariff approval).

Further, Pandjaitan stated that what he needs most is a methodology to attract the private sector in participating in WS supplies.

He pointed out that, from MOHA's point of view, tariff levels could not be left to the private sector; this raises problems because the main objective of the private investor is to balance risks against profits, ie. set a tariff as high as possible.

A difficulty exists with Joint Ventures if the utility should fail financially and GOI lose its assets.

Pandjaitan asked for Regulation No. 4 (1990) to be evaluated and if necessary, suggestions for revision should be made.

Ir. Soebijanto (BKPM) -

The success of this project will be measured by the future impact in attracting the Private Sector to invest in Urban Water Supplies! Three things are needed from the study with respect to the Private Sector :

- \* Urban Water Supply Sector Profile (Project Profile)
- \* Private Sector Needs Assessment, and
- \* Public Policy Issues related to WS policy

The consultant should consider a range of options for PSPUWS development :

- \* PSP development without Government Policy/Regulations,
- \* PSP development under certain related Government Policy/Regulation, and
- \* Combination in between.

Hopefully, from the above we can identify which private participation method to develop that matches the various levels of public enterprise conditions in Indonesia. He also requested the consultant to prepare a financial WS Project Profile that presents all relevant information related to PSPUWS investment.

Ir. Djoko Rismianto (DAB) -

He stated that the Financial Aspects, especially related to tariff structure, are very important : for instance, how PDAM revenue can influence Local Own Revenue Improvement (which is in line with GOI Policy - "decentralization"). He also pointed out the importance of implementation schedules related to the budgetary cycle. He concluded that if GOI still subsidizes the strong PDAMs (like Jakarta, Surabaya), the Private Sector will not be interested in collaboration with the government.

In his point of view, each of PSPUWS options should be included in the studies (service contract, management BOT, etc). The choice of option will depend on the type of spatial frame (existing area, new expansion, and grey area) and land use intensity (industrial area, new residential complex, regional facilities center, etc).

Ir. Hidayat (DAB) -

Suggested that the existing guidelines be evaluated. He also suggested that PDAM strengths and weaknesses with respect to Private Sector Participation be assessed.

**E. CONSULTANTS SUMMARY OF VIEWS EXPRESSED :**

1. MOHA has already prepared and implemented guidelines for the cooperation of Public Enterprises with the Private Sector - they need a methodology to improve the effectiveness of the guidelines.
2. GOI is restricted against selling out Government Public Utility Capital to the Private Sector (based on UUD 45 Pasal 33). It means no Divestiture option for PSPUWS.
3. PDAM Problems are mostly related to poor performance because of Managerial weaknesses; private sector participation is expected to bring better management practices.
4. The most immediate requirement for attracting PSP is how to create simple, clear, and flexible guidelines which can apply to Indonesia Policy development and encourage PSPUWS.
5. The study should review the different needs and conflicts of both GOI and the Private Sector in a balanced way. The requirement of the Private Sector for a "market tariff" conflicts with the social role of the water sector in meeting basic needs. Another issue concerns the guarantees

the private sector may insist upon to protect its investments in case the utility fails financially; and the problems to GOI if a joint venture fails. A big question here is whether or not GOI can allow a water utility to fail.

6. Methods of financial analysis should include a review of the tariff legislation with respect to who can set tariff levels; and the ways in which the tariff actually set by PDAM's can be disaggregated into economic, social, and financial components.

#### F. FUTURE MEETINGS

Future information and working meetings have been agreed for the following dates :

- \* 20th November -- 9 am -- at DAB office
- \* 11th December -- 9 am -- at DAB office.

Appropriate copies of the consultant's Working Papers/drafts etc. will be circulated before the meetings.

A meeting in February 1991 to present the findings of the PSPUWS has been proposed. Final arrangements will be made following discussion with GOI Ministries, WASH/USAID and the Consultants.

RPTMTG-1/j

**ANNEX A : LIST OF PARTICIPATIONS**

**DIREKTORAT JENDERAL CIPTA KARYA -  
DEPARTEMEN PEKERJAAN UMUM**

**DIRECTORATE GENERAL OF HUMAN SETTLEMENTS -  
MINISTRY OF PUBLIC WORKS**

R A P A T  
M E E T I N G : Rencana Kerja Program WASH Project

T A N G G A L  
D A T E : 1 November 1990

J A M  
T I M E : 09:00

T E M P A T  
P L A C E : Ruang Rapat Direktorat Air Bersih

P I M P I N A N  
C H A I R M A N : Ir. Rachmat Rani Dipl.SE  
Ir. Prayogo P.

<u>NO.</u>	<u>N A M E</u>	<u>S T A T U S</u>	<u>OFFICE</u>
1.	Soebijanto	Staf Ahli	BKPM
2.	Darmawan	Staf Ahli	BKPM
3.	H.R. Roesli	WASH	USAID
4.	S. Pandjaitan	PUOD	DEPDAGRI
5.	Yusri Rahman	DITJEN BANGDA	DEPDAGRI
6.	Bill Frej	USAID	American Embassy
7.	Soedirman	KSD PI	BIPRAN DCK

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8. Widiyanto KSTP DAB

NO.	N A M E	S T A T U S	OFFICE
9.	Michael Romanos	DSP/BAPPENAS	Cik Ditiro 29A
10.	Gerard Hoogeveen	BIPRAN DCK	INS/89/014
11.	Joko R.	Staff	DAB
12.	Hernanto	Biro KLN	KLN
13.	Hidajat Kaelani	Staff	Dit. BIPRAN
14.	Johan Bastin	Advisor DEPKEU	Harvard/DEPKEU
15.	Raymond Gauthier	HIID	Harvard/DEPKEU
16.	Moh. Maulana	HDK/WASH	USAID
17.	Rashid Thabrani	WASH	USAID
18.	Letterman Greg	WASH	USAID
19.	Jane Walker	WASH	USAID
20.	Tantri Marbun	WASH	USAID
21.	Stark Biddle	WASH	USAID
22.	Simon Watt	WASH	USAID
23.	Rachmat Rani	KSDPT	DAB
24.	Prajogo	DITJEN CK	DEP. PU
25.	B. Nanggali	WASH	USAID
26.	Saptarini	Ks.AB & PLP	DITJEN BIPRAN CK
27.	Pambang P.	Staf DAB	DAB
28.	Adang Zakaria	K. Perencanaan	BKPM
29.	Cut Viyantimala	KASEKSI	DITJEN PUOD
30.	Adi S.	Staf	DAB
31.	Somba Tambing	Staf	DAB

<b>NO.</b>	<b>N A M E</b>	<b>S T A T U S</b>	<b>OFFICE</b>
32.	Gatot M.	Staf	DAB
33.	Daru S.	Staf	DAB
34.	Rudy A. Arifin	Staf	DITJEN BIPRAN CK
35.	Ratriayani	Staf	DITJEN BIPRAN CK

**ANNEX B - BRIEFING MEETING MATERIAL**

**PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES**

**BRIEFING MEETING**

**THURSDAY 1st NOVEMBER**

**Purpose of Meeting :**

- i. to present the Project Team's Work Plan and Output, and
- ii. to allow GOI the opportunity for final input into the Project.

**Agenda :**

- i. Introduction to Meeting - DAB/GOI
- ii. Presentation of Work Plan and Outputs WASH Team
- iii. Discussion, comments from GOI.

**Attached Information :**

- o Summary of WASH Team Approach
- o Work Plan and Outputs
- o Project Scope of Works

WASHMTG-01/11-j

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## **SUMMARY OF WASH TEAM APPROACH**

### **1. Project Integrating Statement**

After reviewing the Scope of Works, relevant literature, and discussions with GOI officials, we have agreed that the Project should :

- o Develop a policy framework for Private Sector Participation in Urban Water Supplies (PSPUWS).
- o Formulate practical strategies to increase the effective pace and level of PSPUWS within institutional and legal constraints, including practical guidelines.

### **2. Balance Chosen for Work Plan**

#### **a. Balance between Policy and Practice for GOI Clients.**

Client requirements for the Project are multiple and we propose to strike a reasonable balance between Policy and Practice by producing three (3) Report Volumes during the Project covering both policy issues and practice :

- o Volume I : Policy Framework
- o Volume II : Administrative Procedures and Guidelines
- o Volume III : Working Papers (A - G)

The purpose of these volumes and papers is given below.

#### **b. Balance between Build Operate Transfer (BOT) and other options.**

The two basic strategies for PSPUWS are :

- o finance/funds - to obtain private sector funds & relieve GOI of financial burden ie. BOT option
- o performance improvement - to improve the effectiveness of public sector utilities ie. service contract options

Most current interest lies with the BOT option which may have a limited impact on Urban Water Supplies throught Indonesia; other PSPUWS options will have a wider impact.

We propose to study all practicable options; learn from current GOI experience; and focus on the most appropriate options and their hybrids.

### 3. Project Outputs

We intend to produce the outputs given in Table 1; our Work Plan is shown in Table 2.

The purpose of each of the outputs is listed below.

**VOLUME I : POLICY FRAMEWORK FOR PRIVATE SECTOR PARTICIPATION (PSP) IN URBAN WATER SUPPLIES**

Purpose : o to develop policy framework and make an Action Plan for increasing private sector participation in urban water supply.

**VOLUME II : ADMINISTRATIVE PROCEDURES AND GUIDELINES**

Purpose : o to develop models of the administrative procedures required for PSPUWS for the different levels of local government and the various Ministries.

o to develop appropriate administrative guidelines on the tasks required at each procedural step in PSPUWS project preparation, implementation, and operation.

**VOLUME III: WORKING PAPERS**

**A. PSP IN URBAN SERVICES - BACKGROUND**

Purpose : o to provide a background to PSP in urban services in Indonesia and internationally.

o to identify and compare the characteristics of urban services and the lessons learned in PSP.

o to compare the alternative PSP models for urban water supplies.

## B. REVIEW LAWS AND REGULATIONS CONCERNING PSPUWS

- Purpose :
- o to provide a legal background to PSPUWS within Indonesian Government, Commercial and other Institutions.
  - o to recommend legal amendments to existing laws and regulations which may be required by PSPUWS.
  - o to review regulations regarding the involvement of foreign investment in urban water supplies.

## C. PUBLIC POLICY ISSUES

- Purpose :
- o to identify key public policy issues that need to be considered in designing a strategy to increase private sector participation.
  - o to analyze these issues as basis for considering alternative approaches.

## D. PRIVATE SECTOR NEEDS ASSESSMENT

- Purpose :
- o to examine the Private Sector investment climate for the water sector.
  - o to identify the spectrum of capital/investment sources, both local and international and requirements to attract these resources.

## E. INSTITUTIONAL CONSTRAINTS AND OPPORTUNITIES

- Purpose :
- o to provide an overview of existing GOI institutions within which PSPUWS will be located.
  - o to describe the planning, programming and budgeting procedures which may be involved in PSPUWS approaches.

## F. FINANCIAL ASSESSMENT FRAMEWORK

- Purpose :
- o to develop a financial assessment framework to review the existing assumptions for analysis of PSP in urban water supplies.
  - o to highlight appropriate financial criteria for selecting PSP options.

**G. URBAN WATER SUPPLY SECTOR PROFILE**

- Purpose** :
- o to prepare on urban water supply sector profile similar to BKPM existing profile.
  - o to describe the options for raising PSP capital for urban water supplies.



DEPARTEMEN P.U. DIREKTORAT JENDERAL CIPTA KARYA  
**DIREKTORAT AIR BERSIH**

JL. R. PATAH I/1 LT. VII KEB. BARU. TROMOL POS 326 JKT. TELP. 738064-738083-712837-778240. TELEX: 4719 DTP IA

Nomor : UM 01 01 Ca.6-1026/90  
Lamp. :

Jakarta, 23 Oktober 1990

Kepada Yth  
Daftar terlampir  
di  
**JAKARTA**

Perihal : **Rapat mengenai Partisipasi Sektor Swasta dalam bidang  
Penyediaan Air Bersih.**

Dalam rangka pelaksanaan program "WASH PROJECT" mengenai perihal  
sebagaimana tersebut diatas, dengan ini kami mengharapkan kehadiran  
Saudara untuk hadir dalam rapat pada :

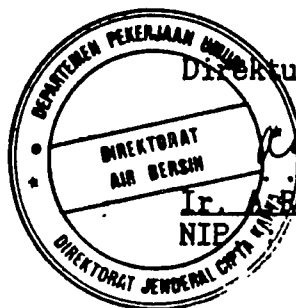
H a r i : Kamis, 1 Nopember 1990

J a m : 09.00 WIB

Tempat : Ruang Rapat Direktorat Air Bersih  
Jl. R. Patah I/1 Lantai 7 Wing 4  
Kebayoran Baru, Jakarta Selatan.

Acara : Pembahasan Draft Rencana kerja program  
"WASH PROJECT" mengenai partisipasi Sektor  
Swasta dalam bidang Penyediaan Air Bersih.

Demikian kami sampaikan untuk menjadi maklum. Atas perhatian dan  
kehadiran Saudara kami ucapkan terima kasih.



Direktur Air Bersih

*[Signature]*  
Ir. AsB. Tambing, Dipl. SE  
NIP. 110012013

Tembusan :

1. Bapak Direktur Jenderal Cipta Karya;
2. Bapak Sekditjen. Cipta Karya;
3. Kepala Subdit. Perencanaan Teknis, DAB
4. Kepala Subdit. Pengaturan, DAB
5. Kepala Bagian Tata Usaha, DAB
6. A r s i p.

bpswasta.nn

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October 18, 1990

## **U S A I D**

### **NAMES MENTIONED FOR STEERING COMMITTEE**

1. Ir. Soekrisno - Staf Ahli MPW
2. Ir. Prayogo Padmowihardjo - Staf Ahli MPW
3. Ir. Parulian Sidabutar - Director BIPRAN Cipta Karya
4. Ir. A.R. Tambing Dipl. SE - Director DAB
5. Ir. H. Soedarsono Soekardi - Director - BANGDA
6. Drs. B.S. Tambunan SE - Director - PUOD
7. DR. Fuad Bawazier - Director - Dept. Min. of Finance
8. Ir. Sahat Pandjaitan - Kasubdit - PUOD
9. Ir. Rachmat Rani Dipl.SE - Kasubdit - DAB
10. William Frey - USAID

### **NAMES MENTIONED FOR RESOURCE PERSON**

1. Johan Bastin - Ministry of Finance
2. Peter Jessep - USAID
3. DR. John Herbert - BAPPENAS
4. DR. Ir. Budhy Tyahyati Soegiarto - BAPPENAS
5. DR. Romanos - DSP
6. Ben Fisher - USAID
7. Drs. Soedirman - DAB
8. Ir. Widiyanto A, Dipl.SE - DAB
9. Gatot M. SH - DAB
10. Bambang Purwanto MSc. - DAB
11. Drs. Soedirman Martodihardjo SH - BIPRAN Cipta Karya

TABLE : 1

**PROJECT REPORT STRUCTURE**

<b>PROJECT REPORT OUTPUTS</b>	<b>PAGES</b>	<b>TASKS</b>	<b>TEAM MEMBER RESPONSIBLE</b>
Vol. I - Public Policy Framework	20 - 30	Preamble 2, 3, 4 & 5, 6	All
Vol. II - Administrative Procedures and Guidelines	75 - 100	7	SW + All
Vol. III - Working Papers :			
A. PSP Context in Urban Services	10 - 20	1, 2, & 3	JW, SW, TM
B. Sector Profile - UWS	10 - 20	2, 4, 5, 7, 8	SW, JW, SB
C. Review Laws & Regulations Concerning PSPUWS	40 - 50	5, 7, 8	RT, DS, GL
D. Public Policy Issues	10 - 20	2, 3, 6	RR, SB
E. Institutional Constraints + Opportunities	10 - 20	2, 3, 5, 7, 8	RR, SB, RT
F. Private Sector Needs Assessment	10 - 20	2, 4, 8	JW, BW
G. Financial Assessment Framework	10 - 20	2, 4, 6, 7, 8	JW, SW

**NOTE :**

2. - Working Paper Major Task from Scope of Works

TABLE : 2

WORK PLAN - INDONESIAN FIELD WORK PHASE

PROJECT REPORT OUTPUTS	MONTH	OCT.		NOV.				DEC.		
	WEEK	22-	29-	05-	12-	19-	26-	03-	10-	17-
	NO.	4	5	6	7	8	9	10	11	12
Vol. I - Public Policy Framework										
Vol. II - Administrative Procedures and Guidelines										
Vol. III - Working Papers										
A. PSP context in Urban Services										
B. Urban Water Sector - Profile - UWS										
C. Review Laws & Regulations										
D. Public Policy Issues										
E. Institutional Constraints + Opportunities										
F. Private Sector Needs Assessment										
G. Financial Assessment Framework										
<b>STAFF ON PROJECT</b>										
Stark Biddle										
Jane Walker										
G. Letterman										
Simon Watt, Radja Roesli, Tantri Marbun, Rashid Thabrani, Boike Nainggolan										
<b>ADVISORY MEETINGS</b>										
<b>OUTPUTS</b>										

Inception Report

Draft Report

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PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES PROJECT  
CENTRAL INTEGRATING MISSION STATEMENT

In order to satisfy the requirements set forth in the Scope of Works, the team has adopted an integrating mission statement:

"Over the next two months the WASH Team will work with our GOI counterparts, to formulate practical strategies (1) designed to ultimately increase the effective pace and level of private sector participation (2) in urban water supply within and subject to identified policy (3) and institutional constraints and objectives. (4)"

Explanation:

1. Strategies will take the form of guidelines to be addressed to senior officials at the policy level in the three key Ministries mentioned in the Scope of Works.
2. It is recognized that increased private involvement in this important sector needs to be based on a clear understanding of policy objectives. The purpose is not to increase private sector share per se but to achieve higher order objectives. The pros and cons of different models and approaches must be assessed against these objectives.
3. Two policy categories: those known and enunciated; those unclear or where there is incomplete consensus. Full analysis of latter may not be feasible in view of time constraints.
4. The Team recognizes that there are multiple hierarchical objectives and that some may be inconsistent. An important function at the effort is to disentangle and prioritize these in order to facilitate policy choice. Given time constraints, the Team may not be able to fully analyze pros & cons of all issues.

22/10/90

## PRIVATE SECTOR PARTICIPATION IN URBAN WATER SUPPLIES

WASH/USAID CONTRACT      EXTRACT FROM "SCOPE OF WORKS"

### II. PROJECT OBJECTIVES

The objectives of this short-term technical assistance activity are to prepare for the Directorate of Water Supply of the Ministry of Public Works (the Executing Agency), the Directorate General of Regional Government and Autonomy (PUOD) of the Ministry of Home Affairs and the Joint Technical Team for Water Supply Capital Investment the following:

1. An assessment of Indonesia's past experiences in private sector involvement in urban infrastructure and service provision, operations and financing;
2. An assessment of the nature and extent of prevailing governmental consensus in relation to the type and form of preferred participation by the private sector in water supply;
3. A review on private sector responses to emerging opportunities for participating in the provision, operation and financing of water supply;
4. Review of assumptions for financial analysis in particular for private sector investment in conjunction with concession duration;
5. Support for the development and implementation of new regulations which will be required to expand the role of the private sector in water supply;
6. An assessment of the most viable options available to raise investment capital for private sector investment in water supply development;
7. The establishment of administrative guidelines required by government staff for the preparation, evaluation, selection and implementation of private sector project proposals; and
8. The preparation of sector profiles for Water Supply Capital Investment Projects and other service projects, as appropriate, based on the Investment Coordinating Board (BKPM) Sector Profile publication.

Volume I Policy Framework for Private Sector Participation in Urban Water Supplies

Purpose Develop policy framework and make an action plan for increasing private sector participation in urban water supply.

- Contents
- 1 - Synthesize principle findings :
    - sector constraint
    - policy objective
    - private sector interests
    - etc.
  - 2 - Review Policy Framework and Strategy optimum
  - 3 - Evaluate Options for PSP-UWS against constraints/objectives.
  - 4 - Recommend Action Plan
  - 5 - Identify Implications for PSP-UWS on :
    - Law & Regulations
    - Investment code
    - Public policy
    - etc.
  - 6 - Administration Procedures and Guidelines

Purpose

- o to develop models of the administrative procedures required for PSPUWS for the different levels of local government and the appropriate Ministries.
- o to develop administrative guidelines on the tasks required at each procedural step in PSPUWS project preparation, implementation, and operation.
- o to focus mainly on Build, Operate and Transfer (BOT) projects in the urban water sector.

Contents

1. Introduction to Guide Lines
2. How the Guidelines should be used
3. Requirements of Agencies
4. Administrative Procedures
  - Service Contracts
  - Management Contracts
  - Lease
  - BOT
  - Divestitive
5. Guidelines on reporting procedures
  - Identification and Preparation Phases
  - Implementation Phase
  - Operation and Regulation Phases.

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WORKING PAPER A      PSP IN URBAN SERVICES - BACKGROUND

Purpose

- o to provide a background to PSP in urban services in Indonesia and internationally.
- o to identify and compare the characteristic of urban services and the lessons learned in PSP;
- o to compare the alternative PSP models for urban water supplies.

Contents

1. Review GOI policies on PSP in Urban Infrastructure
2. Review actual PSP investment (1985 - 90)
3. Review models of PSP in urban water supplies
4. Overview of PSP urban services
  - . electricity
  - . telecommunication
  - . highways
  - . solid waste
  - . urban water supplies
  - . other (eg customs)
5. International Context



WORKING PAPER B      REVIEW LAWS AND REGULATIONS CONCERNING PSPUWS

Purpose

- o to provide a legal background to PSPUWS within Indonesia government, commercial and other institutions.
- o to recommend legal amendments to existing laws and regulations which may be required by PSPUWS
- o to review regulations regarding the involvement of foreign investment in urban water supplies.

Contents

1. General Background to Indonesian Legal Systems.
2. Inventory of laws and regulations concerning urban water supplies.
3. Analysis of adequacy of existing regulations.
4. Recommended changes to legal and regulatory laws with respect to PSPUWS.
5. Relevant PSP experience in other sectors.
6. Review public enterprise/commercial legal constraints
7. Legal arrangements of investment profiles
8. Review relevant legislation on tax, tariff and fiscal policies.
9. Decentralisation laws with respect to PSPUWS
10. Regulations on foreign/domestic investments.

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WORKING PAPER C     PUBLIC POLICY ISSUES

Purpose

- . Identify key public policy issues that need to be considered in designing a strategy to increase private sector participation.
- . Analyze these issues as basis for considering alternative approaches.

Contents

1. General Public Policy Issues,
  - a. Defining the public interest
  - b. Measuring Cost Benefits
  - c. Ownership & control
  - d. Equity vs Efficiency
2. Indonesian Public Policy Issues,
  - a. Decentralisation and PSPUWS
  - b. Scale of potential PSPUWS
  - c. Effect in Basic Needs Approaches
3. Alternative Approaches in the Indonesian context.
  - a. Standard models of Private Sector Participation.
  - b. Pros and Cons from the Indonesian perspective.
  - c. Adaptations to the standard approach.

Purpose

- . Examine the Private Sector investment climate for the water sector.
- . Identify the spectrum of capital/investment sources, both local and international and requirements to attract these resources.

Contents

1. Availability of long term Private Sector Capital.
2. Incentive Requirements for PSPUWS
3. Indonesia and International Perspectives
  - Reasons why to invest.
4. Structure of Finances - Types of Investment.
  - . Debt
  - . Equity
  - . Capital
5. Overview of Potential Investors and Sources of Investment.

WORKING PAPER E      INSTITUTIONAL CONSTRAINTS AND OPPORTUNITIES

Purpose

- o to provide an overview of existing GOI institutions within which PSPUWS will be located.
- o to describe the planning, programming and budgeting procedures which may be involved in PSPUWS approaches.

Contents

1. National, Regional and Local Government Structures and administrative framework for PSPUWS.
2. Programming procedures and PSPUWS investments in relation to PDAMS's.
3. Human Resources capabilities for PSPUWS development.

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WORKING PAPER F      FINANCIAL ASSESSMENT FRAMEWORK

- Purpose
- . Develop a financial assessment framework to review the existing assumptions for analysis of PSP in urban water supplies.
  - . Highlight appropriate financial criteria for selecting PSP options.

- Contents
1. Overview of Financial Frameworks at PDAM (and Utility Level)
  2. Develop PSP Financial Thresholds
    - . Reporting criteria
    - . Performance Indicators
    - . Time frame
  3. Interface of PSP/PDAM
    - . Operating practices and procedures