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**PHILIPPINES
STUDY OF REGULATORY ISSUES
FOR WATER SUPPLY AND
SEWERAGE SECTOR
PRIVATIZATION**

FINAL REPORT

Price Waterhouse
**PAPS Project No. 492-0452
Contract No. 492-0452-C-00-2118**

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The views, statements and opinions contained in this report are the author's alone and not intended
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15 January, 1996

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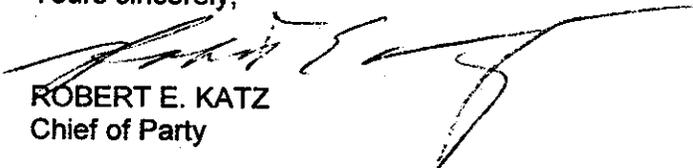
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Dear Mr. McCluskey :

Re: **STUDY OF REGULATORY ISSUES FOR
WATER SUPPLY AND SEWERAGE SECTOR PRIVATIZATION
Philippine Assistance Program Support (PAPS) Project
Contract No.: 492-0452-C-00-2118**

The Office of Government Services of Price Waterhouse LLP is pleased to submit this FINAL REPORT describing its analysis, observations and recommendations related to privatization efforts in the Philippine Water Supply and Sewerage Sector.

Yours sincerely,


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Chief of Party

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PHILIPPINES

STUDY OF REGULATORY ISSUES FOR WATER SUPPLY AND SEWERAGE SECTOR PRIVATIZATION

TABLE OF CONTENTS

	Page No.
ACRONYMS	i
EXECUTIVE SUMMARY	iv
I. OBJECTIVES OF THE STUDY	1
II. BACKGROUND	2
III. LEGAL FRAMEWORK AFFECTING PRIVATIZATION	4
A. Philippine Constitution	4
B. Water Code (PD 1067)	5
C. Local Government Code (RA 7160)	8
D. Public Service Law (CA 146)	9
E. General Banking Act (RA 337)	10
F. Securities and Exchange Commission (PD 902)	10
G. National Internal Revenue Code (RA 1158)	11
H. Metropolitan Waterworks and Sewerage System (PD 6234)	11
I. Provincial Water Utilities Act (PD 198)	13
J. National Water Resources Council (PD 424)	17
K. Rural Waterworks Development Corporation (EO 557)	18
L. Reorganization Act of the MPWH (EO 124)	19
M. Dissolution of RWDC and NWRC and Creation of NWRB (EO 124-A)	20
N. Omnibus Investment Code of 1987 (EO 226)	21
O. Foreign Investment Act of 1991 (RA 7042)	22
P. Bases Conversion Act (RA 7227)	23
Q. BOT Law (RA 7718)	24
R. Water Crisis Act (RA 8041)	26
IV. REGULATORY INSTITUTIONS	29
A. Local Water Utilities Administration (LWUA)	29

B.	Metropolitan Waterworks and Sewerage System (MWSS)	31
C.	National Water Resources Board (NWRB)	33
V.	RISK ASSESSMENT	35
A.	Natural Risks	35
1.	Natural Disasters	35
2.	Water Catchment Protection	35
3.	Pollution of Intake Waters	35
4.	Hydrology	36
B.	Sovereign Risks	36
1.	War and Insurrection	36
2.	Political Stability	36
3.	Nationalization and Expropriation	36
4.	Law, Order and Public Safety	36
5.	Enforcement and Administration of Laws	37
6.	Penalties for Water Theft	37
7.	Convertibility of Currencies and Expatriation of Profits	37
8.	Entry and Exit of Personnel	37
9.	Importation and Export of Goods and Equipment	37
10.	Labor and other Regulated Prices	37
11.	Renegotiation of Tariffs or Rates of Return	37
12.	Land Acquisition and Right of Way	38
13.	Payment by Government Departments and Agencies	38
14.	Tax Holidays and other Investment Incentives	38
C.	Commercial Risks	38
1.	Joint Venture Risks	38
2.	Project Cost Estimates	38
3.	Construction Period	39
4.	Financing Costs	39
5.	Operating Costs	39
6.	Operating Revenues and Demand	39
7.	Labor Relations	40
8.	Disconnection for Non-payment	40
9.	Other Risks	40
D.	Risk Mitigation	40
F.	International Arbitration	41

VI.	PERCEPTIONS BY THE PRIVATE SECTOR	41
A.	Legal System	42
B.	Government Guarantees	42
C.	Environmental Control	42
D.	Water Rights	42
E.	Mix of Local and Foreign Participation	43
F.	Transaction Costs	43
G.	Contractual Counterpart	43
H.	Summary of Regulatory Concerns	44
VII.	FINANCIAL AND SOCIAL CONSIDERATIONS	44
A.	CPI-based Price Adjustments	45
B.	Specific-Input Price Adjustments	46
C.	Rate of Return Price Adjustments	46
D.	Benchmark Regulation	46
E.	Threat of Regulation	47
F.	Ability and Willingness to Pay	47
VIII.	PRIVATIZATION OF MWSS	48
A.	Background	48
B.	Rationale for Privatization	49
C.	Legal Issues	50
D.	Proposed Regulatory Structure for Metro Manila Water Sector	51
1.	Wholesale Water Regulation	51
(1)	Regulatory Agency Structure	51
(2)	Alternative Pricing Formulae	52
(3)	Risk Allocation between Government and Private Parties	52
2.	Retail Water Regulation	52
(4)	Regulatory Agency Structure	53
(5)	Alternative Pricing Formulae	53
(6)	Risk Allocation between Government and Private Parties	55
3.	Application to Privatization Projects	55

	(1) Laiban Dam Project	55
	(2) MWSS Retail Privatization	55
	(3) MWSS Sewerage Privatization	56
IX.	PRIVATIZATION OF WATER DISTRICTS	57
	A. Background	57
	B. Rationale for Privatization	58
	C. Legal Issues of Water Districts	59
	B. Proposed Regulatory Structure for Water District Activities	60
	1. Wholesale and Retail Water Regulation	60
	a. Regulatory Agency Structure	61
	b. Alternative Pricing Formulae	61
	c. Risk Allocation between Government and Private Parties	61
	C. Application to Privatization Projects	61
	1. Cebu Bulk Water Supply Project	61
	2. Zamboanga City Water District Privatization	62
X.	PRIVATIZATION OF LGU-OPERATED WATER SUPPLY UTILITIES	63
XI.	COMMERCIALIZATION OF LWUA	64
	A. Background	64
	B. Rationale for Commercialization	65
	C. Subsidies	65
	D. Regulatory and Engineering Functions	65
XII.	PROPOSED LEGISLATIVE, REGULATORY AND POLICY REFORMS	66
	A. Preconditions to Implementation of Regulatory Reform	66
	B. Determination of National Priorities for Water Resources	67
	C. Restructuring of NWRB into a National Water Commission	68
	D. Reform of Regulatory Framework	68
	E. Risk Sharing between Public and Private Sectors	70
	F. Local and Foreign Ownership Mix	71
	G. Price Regulation	71
	H. Sewerage Services Privatization	72
	I. Government Guarantees	73
XIII.	SUMMARY OF RECOMMENDATIONS	74
	A. General Principles and Policies	74
	B. Legislative	77
	C. Implementing Rules and Regulations	78
	D. Practices and Procedures	78

XIV. TRANSITORY ARRANGEMENTS AND TIMETABLE	79
ANNEXES: A. Summary of Potential Water Privatization Projects	81
B. Proposed Structure of NWC Financial Regulatory Office	82
C. Action Plans for Departments and Agencies	83

ACRONYMS

ADB	Asian Development Bank
AWWA	American Waterworks Association
BWSA	Barangay Water and Sanitation Association
BOO	Build-Operate-Own
BOOT	Build-Operate-Own-Transfer
BOT	Build-Operate-Transfer
CA	Commonwealth Act
CCPAP	Coordinating Council of the Philippine Assistance Program
COA	Commission on Audit
COWD	Cagayan de Oro Water District
CPC	Certificate of Public Convenience
CPI	Consumer Price Index
DENR	Department of the Environment and Natural Resources
DILG	Department of the Interior and Local Government
DOF	Department of Finance
DOH	Department of Health
DOJ	Department of Justice
DPWH	Department of Public Works and Highways
DTI	Department of Trade and Industry
EIRR	Economic Internal Rate of Return
EO	Executive Order of the President of the Philippines
ERB	Energy Regulatory Board
FIRR	Financial Internal Rate of Return
GOCC	Government Owned and Controlled Corporations
GDP	Gross Domestic Product
GNP	Gross National Product
IA	Implementing Agency
IBRD	International Bank for Reconstruction and Development (See WB)
ICC	Investment Coordinating Committee of NEDA
INFRACOM	Infrastructure Committee of NEDA
IPP	Independent Power Producer
IRA	Internal Revenue Allocation
IRR	Implementing Rules and Regulations
ISC	Interdepartmental Steering Committee

JIS	Japanese Industrial Standard
LGC	Local Government Code
LGU	Local Government Unit
LOI	Letter of Instruction
LWUA	Local Water Utilities Administration
MCWD	Metropolitan Cebu Water District
MIGA	Multilateral Investment Guarantee Agency
MMDA	Metropolitan Manila Development Authority
MWSS	Metropolitan Waterworks and Sewerage System
NAWASA	National Waterworks and Sewerage Authority
NIA	National Irrigation Authority
NEDA	National Economic and Development Authority
NPC	National power Corporation
NRW	Non-Revenue Water
NWC	National Water Commission
NWRB	National Water Resources Board
OCWD	Olongapo City Water District
PAWD	Philippine Association of Water Districts
PD	Presidential Decree
PDI	Personal Disposable Income
PMS	Presidential Management Staff
PSC	Public Service Commission
PSP	Private Sector Participation
RA	Republic Act of the Philippines
RBA	River Basin Authority
RMO	Risk Management Office
ROR	Rate of Return
RWDC	Rural Waterworks Development Corporation
RWSA	Rural Water and Sanitation Association
SBMA	Subic Bay Metropolitan Authority
TA	Technical Assistance
TOR	Terms of Reference
WB	World Bank (For official title see IBRD)
WCA	Water Crisis Act of 1995
WCALEC	Water Crisis Act Joint Legislative Executive Commission

WSSRS Water Supply Sector Reform Study

WD Water District

ZCWD Zamboanga City Water District

PHILIPPINES

STUDY OF REGULATORY ISSUES FOR WATER SUPPLY AND SEWERAGE SECTOR PRIVATIZATION

EXECUTIVE SUMMARY

1. The current water resources regulatory environment in the Philippines is based upon the premise that water development and distribution is a state-controlled function. The Local Government Code of 1991 assigns to Local Government Units (LGUs) the primary responsibility for the provision of water supply, sewerage and sanitation services, except where special agencies have been established by law to take over this role. Within this framework, responsibility for the provision and management of water supply, sewerage and sanitation services is divided as follows:

- a. The Metropolitan Waterworks and Sewerage System (MWSS), established by special legislation to serve metropolitan Manila;
- b. Water Districts (WDs), established under the provisions of a Presidential Degree to serve municipal urban areas outside metro Manila where LGUs have voluntarily ceded their water supply functions;
- c. Barangay Water and Sanitation Associations (BWSA), established under the provisions of the now defunct Rural Waterworks Development Corporation (RWDC) to serve rural areas that have chosen to form such associations;
- d. Other specialized government agencies (such as the Subic Bay Metropolitan Authority) which, ancillary to their core functions, have control over water supply and sewerage services within their jurisdiction;
- e. LGUs that have elected to retain responsibility for the provision of water supply services; and
- f. The private sector, in those cases where residential subdivisions have provided their own water supply systems.

2. Concerning regulation, MWSS's enabling legislation provides the basic regulatory framework for this agency. WDs are regulated primarily by the Local Water Utilities Administration (LWUA). Public water supply undertaken by LGUs is largely self regulated. The few private water supply systems in subdivisions are regulated by the National Water Resources Board (NWRB).

3. While it has been theoretically and legally possible for Filipino-controlled private sector corporations to own and operate water companies, financial and political realities have prevented such development on a large scale. Thus, because the need has not seemed urgent, existing regulations have not properly addressed the implementation or ongoing operation of privately-owned or managed water enterprises.

4. If existing public institutions privatize ^{1/} water supply and sewerage operations under the current legal structure, conflicts and gaps in jurisdiction over the private enterprises that contract to operate such services will arise. Therefore, the policies of the current regulatory regime must be reoriented to allow for the entry of new players into the sector, while maintaining the State's position as original resource owner and allocator. In order for the Government to realize its objectives for the water sector, enabling legislation must be changed so that the regulatory agencies can effectively supervise the implementation and operation of water supply projects by the private sector. Regulatory agencies must have the technical expertise as well as the political authority to enforce regulations for private and public parties alike. The proposed regulatory agency could be funded by surcharges on water service in addition to any current State appropriations to existing water regulatory agencies.

This Study recommends the following in order to provide a competitive, fair and transparent regulatory environment for both private and public participants in the water supply and sewerage sector:

- a. The NWRB should be strengthened or a new agency, the National Water Commission (NWC), created to absorb the current financial/economic regulatory functions of MWSS and LWUA. This agency would be responsible for regulating virtually all water supply systems: MWSS, WDs and LGU-operated systems;
- b. MWSS should remain as a Government Owned and Controlled Corporation (GOCC) and retain all the rights, privileges and responsibilities given under its charter. However, this Study suggests that MWSS be relieved of its financial and economic regulatory functions and that these be transferred to the NWRB or its potential successor, the NWC. MWSS would subsequently be subject to regulation by either of these agencies, as would any agency with which it contracts for the operation, management, and expansion of water supply and sewerage services;

^{1/} Privatization, as used in this Report, refers to all activities which involve private sector participation in the development, operation, management and financing of what are traditionally public sector services, e.g. through BOTs, concessions and management or service contracts.

- c. WDs should also retain their status as GOCCs and be free to enter into contracts with the private sector. Although NEDA Board Resolution No. 4 calls for the conversion of commercially viable water services into SEC-style private corporations, experience in the Philippines has shown that the Government may not support the sale of government assets. Privatization of operations, however, may technically result in the abolition of a WD as a legal entity, as currently defined by law. In such cases, LWUA may be an appropriate custodian for such public assets. However, the ~~financial/economic regulatory powers~~ that LWUA currently exercises over WDs should be transferred to either the NWRB or the NWC; and
- d. The LGUs that operate their own systems should also transfer their regulatory functions to the NWRB or the NWC.

5. This Study's proposals for regulatory reform are based on the country's political and physical realities. Manila is a major metropolitan area that can successfully implement one or more wholesale and/or retail privatization activities. As a GOCC, MWSS has the clear authority to implement privatization schemes according to its mandate. This political reality allows MWSS the possibility of creating: (i) competition for wholesale water developments (conducive to BOTs); and (ii) multiple retail water delivery entities (conducive to concession or service contract privatizations). The potential for private transactions in metro Manila might lead to competition among private and public wholesale and retail services. If wholesale and retail competition could be successfully stimulated, the regulatory framework for metro Manila could be limited to the above-mentioned reforms.

6. This potential does not necessarily exist in other parts of the country. The areas served by WDs will face more problematic obstacles in implementing privatization. WDs are created by LWUA with the approval of concerned LGUs. Because of their generally small scale, ambiguous legal status and financial incapacity to guarantee performance under long term purchase agreements, they are placed in a relatively weaker position. Thus, legislative remedies could be considered to: (i) establish options about ownership of existing assets; (ii) facilitate foreign ownership and possible control of private water systems; and (iii) allow national financial support of private water projects. With the exception of some lesser metropolitan areas, such as Cebu and Davao, WDs are generally too small to support multiple private retail water delivery systems. For cases in which little competition or comparison is possible, the regulatory regime must address the issue of monopoly profits in addition to improving service at affordable water rates.

7. This Study does not address rural water privatization. Privatization of water services in rural areas must be considered in the context of all social services to the rural poor. One body of opinion asserts that although the privatization of rural water services in the Philippines can be supported, direct financial assistance to the rural population is the best way to address the water needs of the rural poor. Regulatory structures should not

create large scale subsidies or excessive cross-subsidies which exacerbate the inherent distortions in the imperfect market for private water services. Dissolving RWDC and transferring its responsibilities to LWUA introduced a degree of uncertainty regarding assistance to the rural population. However, the devolution of responsibilities from the central Government to LGUs, as described in NEDA Board Resolution No.4 of 1994, clearly places the responsibility for rural water supply on LGUs. A supporting role is delegated to DILG, which is responsible for the institutional development of LGUs. However, this devolution should not necessarily result in large public sector employment at the LGU level. Rather, LGUs should use the expertise and resources of the private sector to accomplish their objectives ^{2/}. Nevertheless, in the immediate future, wholesale or bulk water supply activities in the provinces may affect rural water utilization and in turn affect the future development of rural areas. Therefore, ongoing regulatory activities in the wholesale sector must: (i) take into account the reasonable needs of rural populations; and (ii) provide a forum to discuss priority for and access to water resources. Finally, the market value of water allocated to competing uses must be established.

8. Regulation essentially concerns the allocation of risks in joint public - private partnerships. Therefore, the regulation of public and private operators in the water supply sector requires a thorough understanding of the potential risks--to both local and foreign investors--inherent in investing in predominantly public sector activities.

9. The water regulatory structure in the Philippines is also a result of the political and economic priorities of the nation. Water is a resource that serves all sectors of the economy: agriculture, industry, households, and tourism. For the Water Regulator to have political authority, its decisions must be consistent with the national economic priorities set forth by the legislature and executive branch. Thus, the Water Regulator becomes an implementor of national priorities by: (i) integrating the technical, economic and social characteristics of each water project; and (ii) overseeing the results of private sector operations in order to protect the public interest.

10. The recommendation that a new, robust NWRB, in the form of a National Water Commission, perform both resource and financial/economic regulation for the water sector is not made lightly. Introducing an additional government bureaucracy is rarely the optimal solution, particularly in light of the Government's attempts to reduce the size of the public sector. However, especially when no clear legal and institutional authority exists to implement private sector participation, there is a pressing need for the myriad of financial, environmental, technical, and legal aspects of the water and sewerage sector to be institutionalized and actively managed.

^{2/} The role and methodology for LGU - private sector partnerships is being addressed through a technical assistance grant by the Danish Government for the preparation of a proposed LGU water supply and sanitation project.

11. The implementation of the National Sewerage and Sanitation Strategy Plan is critical to the development of a regulatory structure that can oversee a complete water delivery and waste water disposal system. The treatment and safe disposal of waste water can no longer be delayed, especially in light of its impact on the quality of groundwater and surface water. The Regulator must coordinate the development of water supply and sewerage facilities. The financial, technical and legal aspects of sewerage services are even more complex than those for water supply primarily because of high costs, poor cost recovery mechanisms and the public's low willingness to pay.

12. Because of the Government's recent urgent steps to address the water crisis and the inability to secure funding for this Study earlier, the pilot privatization of selected WDs and the regulatory reforms proposed herein are not properly synchronized. It is crucial that the ongoing privatization proposals proceed without interruption to maintain the momentum established by the Water Crisis Act of 1995 (WCA). This recommendation implies that at least some of the initial BOTs and concessions must be regulated through contracts between the public and private sector. This temporary arrangement will place an additional burden on Government negotiators. Their resources should be supplemented for the purpose of such negotiation by the CCPAP's BOT Center and local and foreign consultants, as needed.

13. Two of the major concerns that affect privatization of the water supply and sewerage sector are: (a) the interpretation of provisions in the Constitution and Water Code that impose a sixty percent nationality requirement for private sector corporations selling water to the public; and (b) the reluctance of the Government to provide comprehensive guarantees to assure private sector operators/investors that government agencies will meet their contractual obligations. Briefly, the nationality requirement can be interpreted to mean that the actual extraction of water from its source (e.g. pumping water from an aquifer and its actual sale to the public) can only be legally undertaken by a corporation meeting the nationality requirement. However, any activities between the extraction and point of sale may fall outside the nationality requirement. Thus, while BOTs for bulk water supply could be managed by companies not meeting the nationality requirement, the actual sale of water may not. As the majority of the funds needed for development must probably come from foreign sources, the question arises whether foreign investors are prepared to provide this financing without having: (a) majority control in any joint venture; and (b) direct control over the cash inflow from water sales. Innovative legal instruments are necessary to accomplish the Government's objectives for privatization within the existing legal framework. Regarding the probable need for Government guarantees, the private sector may conclude that, apart perhaps from the largest metropolitan areas, the WDs which may be considered for privatization are generally too small and local to provide the comfort level needed to assure their ability and willingness to abide by long-term BOT or concession contracts.

14. The risk assessment in this Study discusses several risks which need to be covered, either through generally applicable regulations or individual contracts with the private sector. While the Government is rightly disinclined to provide comprehensive risk coverage to the private sector, the following general principles should be followed: (a) the overall risks in public-private contracts should differentiate between categories of risks, e.g. natural, sovereign and commercial; (b) risks should be allocated to the party most able to manage or mitigate that risk; (c) the costs of any guarantees given by the government should generally be covered by a fee, that is, passed on to the water consumer; (d) guarantees should be structured such that the private sector carries a degree of the risk; (e) any guarantees should be provided in such a manner as to reduce the Government's exposure over time as risks are better understood and quantified; and (f) the Government should maintain a Risk Management Office (RMO) to closely monitor and manage guarantees that may have been issued.

15. The successful privatization of activities in the water supply and sanitation sector requires establishing an environment within which both the public and private sector can prosper equally. As long as the Government subsidizes the water supply sector through equity contributions, below-market loans, extended grace periods, excessive maturities and lax collection efforts, public sector agencies will almost invariably prefer to wait their turn to receive preferential treatment and defer water system development using commercial sources. These economic distortions subvert the Government's development objectives. If the presence of externalities warrants the use of subsidies, such as for poverty alleviation and public health, any such subsidies should be channelled directly to the beneficiaries rather than allocated, often arbitrarily, by central Government authorities.

16. Other measures recommended to improve the regulatory framework are given below under the following groupings: (A) General Principles and Policies, including: (i) Pricing; (ii) Environmental Considerations; and (iii) Risk Assessment; (B) Legislative Matters; (C) Implementing Rules and Regulations; (D) Practices and Procedures; and (E) Transition and Timetable.

(A) GENERAL PRINCIPLES AND POLICIES:

Pricing:

17. To broadly address the efficient utilization of water as a long term goal, the Government should implement the policy it enunciated at the Water Summit of 1994: Allocate water among competing users by pricing it as an economic commodity. Eventually, to achieve the optimum allocation of scarce water resources, the Government could consider a system under which water rights can be traded.

18. The price at which bulk water supply should be provided under any BOT should be set so that private investors earn a market return on investments. For bids

obtained through competitive bidding, the reasonable return shall be that upon which the winning bid is based. For single or unsolicited bids, the reasonable rate of return shall be established by reference to similar projects. Pricing of bulk water supply may be based on a fixed fee to provide a return on the capital invested and a variable rate based on the quantity of water traded. During the validity of the WCA, the Government may conduct negotiations based on the risks that the proponent is willing to assume.

19. The price of retail water supply should be set by that of the winning bid. In cases when only one bid is received or the bid is unsolicited, both parties should agree upon a price that would earn a reasonable rate of return for comparable projects. As with bulk water, the Government should negotiate risk allocation on a case-by-case basis during the validity period of the WCA.

20. The recovery of sewerage sanitation charges is problematic, primarily because of low willingness to pay and an inadequate tax base to support general municipal services. This Study proposes that charges be recovered as follows: 50 percent of annual costs recovered as a surcharge on water rates and the remaining 50 percent by a direct contribution from concerned LGUs. That part of the population that is not directly connected to the sewerage system but which is connected to the water supply system could be assessed an environmental charge levied at ten percent of the water bill, as is the current practice in metro Manila.

21. A potentially significant matter is the management of demand, particularly during periods of under-supply. As is the practice with power, water tariffs should include a peak load pricing factor that differentiates between the monsoon and dry periods. Such a pricing scheme will conserve water in periods of scarcity, thereby deferring the need for additional investment in major bulk water supply works to meet excessive peak demands. Minimal water users could be exempt from such pricing scheme.

22. Tariff structures may be set so as to differentiate between categories of consumers as well as quantities of water consumed. Generally, higher levels of consumption should correspond to higher average water tariffs.

23. Given the possible volatility in the price of inputs in water treatment and distribution as the Philippine economy establishes steady growth and inflation levels, prices for water under BOT and concession contracts should be adjusted annually to take into account price movements in government-mandated wage and energy price hikes. All other costs should be adjusted on the basis of the Consumer Price Index (CPI). Prices should be adjusted every fifth year to also take into account the projected investment plan for the upcoming ten years. Such adjustments should provide the private sector operator the same rate of return on which the initial bid was based. The prospect of regular and fair price adjustments diminishes the need for private sector operators to hedge against the risk of high inflation when making bids.

Environmental:

24. Rapidly deteriorating environmental conditions in the Philippines, especially as they affect surface and groundwater resources, dictate that the development, management and operation of sewerage systems and facilities should be included in any water supply BOT or concession that may be contemplated.
25. The pollution loads on receiving waters that may be tapped for water supply for urban use should be measured, controlled and used as a means to adjust the price charged for bulk water supply under BOT contracts.

Risks:

26. To reduce the risks to potential proponents, the Government should consider taking the following pre-privatization measures:
- a. Increase the price of water to ensure that the entity to be privatized charges a level sufficient to at least break even financially;
 - b. Take necessary prior measures to plan for the retirement and compensation of staff that may become redundant because of privatization;
 - c. Take necessary measures for the relocation of legitimate residents and squatters who may reside in catchment areas and establish rights of way; and
 - d. Reinstate stream and rainfall gauging and collect and store available and future data in a databank accessible to all potential proponents.
27. As a general principle, risks should be allocated to the party—either the public or private sector participant—that has the most effective control over such risks. If neither party can control the risks, they should be carried by the Government. Determinations should be made as to which risks should be insured by public and private water supply and sewerage operators. If insurance coverage can be obtained at a reasonable cost, the parties may agree to include the costs of such insurance as a cost component in the price formula as adjusted from time to time.
28. Both private and public sector participants should investigate whether the World Bank's and ADB's guarantee facilities may be offered to private sector proponents in the Philippines.

(B) LEGISLATIVE CONSIDERATIONS:

29. The NWRB should be reconstituted as a National Water Commission and the National Water Code amended to put this into effect.

30. The regulatory functions now vested in MWSS and LWUA should be transferred to the proposed NWC through amendments to the enabling legislation of MWSS and LWUA.

31. The potential financial/economic self-regulation available to LGUs under the LGC should be placed under the control of the NWC.

32. Approximately ten years ago, the economic rationale and methodology for taxing groundwater extraction were studied for metropolitan Manila and draft legislation for its introduction was prepared. The WCA provides the opportunity to readdress this issue. Legislation should be introduced to protect groundwater resources.

(C) IMPLEMENTING RULES AND REGULATIONS:

33. The IRR for the WCA should be elaborated to clearly outline the procedures to be followed.

(D) PRACTICES AND PROCEDURES:

34. For the privatization of Zamboanga City Water District (ZCWD) and any other pilot privatizations now underway, open-ended proposals should be sought and subsequently evaluated by a team of independent experts.

35. The privatization of ZCWD should proceed as scheduled and as described in the information document prepared by the consultants Deloitte Touche Tohmatsu International.

36. The operations of the proposed NWC should be funded from a levy on any person or corporate body holding or exercising a water right. The amount of such levy should be determined in relation to the volume of water used from a natural resource, regardless of the purpose of such use.

37. Standards should be developed for common accounting methodology and practices to ensure that the accounts of different private sector operators/investors can be compared among firms and over time.

38. Because of the private sector's concerns, the Government should issue a policy statement outlining a transparent process for the allocation of water rights.

39. The privatization of existing water and sewerage services is overseen by the Committee on Privatization. However, the resources of the CCPAP's BOT Center should be tapped to disseminate relevant information to prospective investors and advise implementing agencies on matters regarding BOTs and similar arrangements.

40. A publication should be prepared, in the same format as the BOT Guidelines, setting out the process for privatization by BOT, concession or management contract of any water supply and sewerage project.

(E) TRANSITION AND TIMETABLE:

41. The privatization of water supply and sewerage services should proceed even though all the regulatory issues have not necessarily been addressed and codified.

42. Pending the review of LWUA's operations, as required under the Water Crisis Act: (a) LWUA should maintain responsibility for the financial regulation of Water Districts; and (b) NWRB should retain responsibility for the financial regulation of privately operated water supply subdivisions. If necessary, the NWRB should use the resources of the private sector to undertake any financial regulation that it may be asked to address.

43. Because of the urgency of implementing the proposed reforms to address the water crisis, the above recommendations should be submitted to the Commission established under the WCA. These recommendations should be significantly advanced, if not implemented, within the validity period of the WCA, that is, by June 30, 1996.

PHILIPPINES

STUDY OF REGULATORY ISSUES FOR WATER SUPPLY AND SEWERAGE SECTOR PRIVATIZATION

I. OBJECTIVES OF THE STUDY

1. This Study was prepared in response to a request by the Department of Finance (DOF) to supplement legal support for the Water District Pilot Privatization. The DOF sought assistance from the Coordinating Council of the Philippine Assistance Program (CCPAP) for supplemental grant funding for specialized legal support which would involve, among others, an analysis of the regulatory issues to support the Water District Pilot Project, as well as the Philippine Government's longer term privatization program to facilitate Private Sector Participation (PSP). Such PSP initiatives are currently being developed with the support of the World Bank, DOF, MWSS, as well as the Metropolitan Cebu (MCWD) and Zamboanga City Water Districts (ZCWD). In addition, many private sector proponents have approached the Government and sector agencies directly, expressing interest in contributing to the development of the sector.
2. The Terms of Reference for the Study call for addressing the WD privatization process, with respect to both BOT project implementation and general privatization options, with specific analyses of those issues affecting the privatization of ZCWD, the proposed BOT Projects in Cebu, and the potential privatization of MWSS.
3. The objectives of this Study are to:
 - a. Develop recommendations for the Government to strengthen its policy and regulatory framework for the efficient provision of private water supply; and
 - b. Design an appropriate regulatory regime to ensure that a satisfactory level and quality of service can be achieved, presenting options for a regulatory structure considering pricing options, including Consumer Price Index (CPI)-based capping, Rates of Return and Benchmark Regulation and a "Threat of Regulation" model.
4. Accordingly, this Study covers:
 - a. The developments that led to the sector reforms currently being pursued by the Government, particularly the trend towards PSP in the water supply and sewerage sector;

- b. The existing laws affecting the sector;
- c. A description of the current regulatory framework;
- d. A risk assessment for investing in and operating water and sanitation services;
- e. An assessment of the perceptions of the private sector;
- f. An examination of the various projects being considered for PSP; and
- g. Recommends for reforms to legislation, implementing rules and regulations, and policies and practices which may be considered by the Government.

5. Finally, this Study is not intended to be a theoretical treatise on regulation. Our pragmatic approach should provide the Government with concrete steps to achieve its stated objective "to adopt urgent and effective measures to meet the nationwide water crisis which adversely affects the health and well-being of the people, food production and industrialization process."^{3/}

II. BACKGROUND

6. The Government of the Philippines initiated a major review of the water supply sector in 1993. The *Philippines: Water Supply Sector Reform Study (WSSRS)* was undertaken in that year for the purpose of "developing policy for sectoral reform toward improving absorptive capacity, sustainability of implementation and operation, improving institutional and legal arrangements, and formulation of a viable timetable for implementation of the recommendations."

7. The WSSRS made several significant recommendations that were considered by the Government. National Economic and Development Board (NEDA) Resolution No. 4, Series 1994, declared among other reforms, the following policies regarding the privatization of public utilities in the water supply sector:

"Privatization of all existing Water Districts is to be vigorously pursued whenever feasible and large commercially viable water service areas like Metro Manila, Cebu, Zamboanga, Davao should be formed or converted into SEC-style private water corporations."

^{3/} See Implementing Rules and Regulations (IRR) for RA No. 8041, otherwise known as the Water Crisis Act of 1995, Rule 1, General Provisions; Section 1.1: Policy.

8. DOF arranged to implement this policy through the pilot privatization of a number of WDs. The selection process focused on those WDs in which the Boards of Directors openly supported participation in the pilot privatization. After an exhaustive selection process, the Cagayan de Oro City Water District and the Zamboanga City Water District were selected ^{4/}.

9. An assessment of PSP options for the future development of MWSS, which serves most of metropolitan Manila as well as parts of the adjoining Rizal province, is also currently in progress under the guidance of the Department of Public Works and Highways (DPWH). Separately, the Subic Bay Metropolitan Authority (SBMA) and the adjoining Olongapo City Water District (OCWD) are in the process of privatizing their adjoining water supply and sewerage service areas.

10. In June 1995, Congress passed the Water Crisis Act (Republic Act 8041), which provides the President of the Philippines with certain emergency powers for a one-year period to comprehensively address the emerging water crisis.

11. Against the background of these reform efforts, and with the Philippine economy showing promise for sustained growth, local and foreign private sector investors have developed significant interest not only in BOT projects for bulk water supply, but also in potential participation in downstream water distribution activities. This considerable investor interest revealed the pressing need to clarify the regulatory framework and the practices and procedures which may apply to private sector participation in the operation, management and investment in the water supply and sewerage sector. These regulations should balance public interest against the monopoly position of any private sector participant. The regulations should also equitably distribute the efficiency gains associated with the employment of private sector practices and procedures.

12. The most important consideration in regulating public-private partnerships is the inherent risk involved in any long-term investment contract for infrastructure projects. The private sector is averse to assuming substantial risks, especially those over which it has no control. Even when it agrees to assume such risks, the private sector factors such risks heavily into the bid price. Therefore, the better the risks are understood, quantified and mitigated, the lower the expected final price will be for water supply and sewerage services for the public. Accordingly, the proposed regulations should fairly apportion risk in a transparent manner. Generally applicable regulations govern those risks that can be covered by laws, IRRs or policy statements. However, there will usually be certain project-specific risks that cannot be covered by general regulations. In such cases, the risks should be covered under the contract between the public and private parties for the

^{4/} Subsequently, the Cagayan de Oro Water District withdrew as a candidate, after receiving assurances from LWUA that it would be given concessional loans of P650 million to fund COWD's development program over the next decade.

specific project. An example of one of the more complex issues is the politics of water rights. While water is a national resource, local politicians and officials zealously defend local claims and access to water. The resolution of such issues is essential to facilitate public-private partnerships.

13. Finally, both the safe disposal of sewerage and waste water reclamation are intimately linked with water supply. These capital intensive environmental projects can only be financed through the contribution of all beneficiaries--not just those with an ability to pay for sewerage services. Environmental protection is a service enjoyed by the whole community. For this reason, sewerage and sanitation service costs must be borne by the entire community.

III. LEGAL FRAMEWORK AFFECTING PRIVATIZATION

14. Both investment in and the operation and management of the water supply and sewerage sector are governed by a multiplicity of laws, including the Philippine Constitution, Republic Acts, Presidential Degrees, Implementing Rules and Regulations, and Government policy edicts. The most significant of these are described in this Section.

A. Philippine Constitution

15. Section 2, of Article XII of the Philippine Constitution states:

"All lands of the public domain, water,⁵ minerals, coal, petroleum and other mineral oils, all forces of potential energy, fisheries, forests and timber, wildlife, flora and fauna, and other natural resources shall not be alienated.

The exploration, development and utilization of natural resources shall be under the full control and supervision of the State. The State may directly undertake such activities, or it may enter into co-production, joint venture of production sharing agreements with Philippine citizens, or corporations or associations at least 60% of whose capital is owned by such citizens. Such agreements may be for a period not exceeding 25 years, renewable for not more than 25 years, and under such terms and conditions as may be provided by law. In cases of water rights for irrigation, water supply, fisheries or industrial uses other than the development of water power, beneficial use may be the measure and limit of the grant."

⁵/ Certain phrases in direct quotes have been underlined by the author to add emphasis.

16. The interpretation of this Constitutional provision is of vital importance in assessing the feasibility of the privatization of water supply under each of the permissible arrangements. Department of Justice (DOJ) Opinion No. 100, series of 1994, further clarifies its application. The DOJ opinion affirms that the Constitutionally imposed nationality requirement for the exploitation and development of water refers only to the extraction of water from its natural source. The DOJ opinion states:

"It may be observed however, that while the Water Code imposes a nationality requirement for the grant of water permits, the same refers to the privilege to 'appropriate and use water.' We have consistently interpreted this to mean the extraction of water directly from its natural source. However, once removed therefrom, they cease to be part of the natural resources of the country and are the subject of ordinary commerce and may be acquired by foreigners. In view of the peremptory provisions of the Constitution and the Water Code, a company not owned at least 60 percent by Filipino citizens may not be qualified to operate water supply facilities if it will take, divert, and pump water directly from its natural source because of the nationality requirement, but it may legally process or treat the water after it is removed from the source by a qualified person."

B. WATER CODE

17. The Water Code of the Philippines is a consolidation of laws and regulations relating to the development, utilization, exploitation and conservation of water. It stipulates the following basic principles:

- a. All waters belong to the State;
- b. The State may allow the use or development of waters by administrative concession;
- c. The utilization, exploitation, development, conservation and protection of water resources are subject to the control and regulation of the national government through NWRB; and
- d. Preference in the use and development of waters shall consider current usages and be responsive to the changing needs of the country.

18. The Water Code serves to:

- a. Establish the basic principles relating to the appropriation, control and conservation of water resources;

- b. Define the extent of the rights and obligations of water users and owners; and
- c. Provide the basic law governing the ownership, exploitation and development of water resources.

19. Under the Water Code, no person, including government instrumentalities or GOCCs, shall appropriate water without a water right. A water right is evidenced by the issuance of a water permit. A water right is a privilege granted by the government to appropriate, use and develop water. "Appropriation of water" is the acquisition of rights over the use of waters or the taking or diverting of waters from a natural source.

20. Applications for water permits are filed with NWRB. In determining whether to grant the permit, the Board considers any or all the following factors: (a) availability of water; (b) water supply needed for beneficial use; (c) prior permits granted; (d) possible adverse effects; (e) land use economics; (f) any protest filed; and (g) other relevant factors.

21. In accordance with the Philippine Constitution, only the following may apply for a water permit:

- a. Citizens of the Philippines;
- b. Associations, cooperatives, and corporations duly organized and registered under Philippine law with at least 60 percent of its capital owned by Filipino citizens; and
- c. Government entities and instrumentalities including GOCCs.

22. Water Permits may be applied for and granted by the NWRB in the following instances:

- a. Appropriation of water for domestic, municipal, irrigation, power generation, fisheries, livestock raising, industrial, recreational and other purposes;
- b. Changes in the purpose of appropriation;
- c. Amendment of an existing permit, such as change in the nature of diversion, amount of appropriation, and period of use;
- d. Transfer or lease of a water right;
- e. Temporary appropriation and use of water;

- f. Lowering or raising the level of water of a lake, river or march or draining the same; and
- g. Transbasin diversion.

23. Water permits are not necessary when: (a) the owner of the land on which the water is found uses the water only for domestic purposes; or (b) natural bodies of water are used for washing, bathing or are appropriated using hand containers. As used in the Water Code, "water" refers to water under the ground, above the ground, in the atmosphere and of the sea. Generally, water found on private land also belongs to the State.

24. The combined effect of the Constitution and the Water Code appears to be as follows:

- a. The maintenance of water catchment areas must remain a responsibility of the State, for example, through WDs or LGUs;
- b. The actual extraction of water from its natural source, i.e. a river, lake or aquifer, can be undertaken by the private sector provided that the nationality requirement is met;
- c. The subsequent treatment of the water, and presumably its delivery up to an undefined point, may be undertaken by any company without regard to nationality; and
- d. The actual sale of water to the public must be undertaken either by the GOCC or any private company that meets the nationality requirement.

25. All of the PSP options now being considered envision the concerned WDs, as well as MWSS, remaining as legal entities with all rights and responsibilities of GOCCs. These GOCCs would merely be entering into arrangements under which they subcontract with private sector operators to design, construct, finance, operate, maintain, rehabilitate and expand water distribution systems, as well as undertake administrative functions including accounting, billing and collecting water tariffs. Although NEDA Board Resolution No. 4 calls for the conversion of commercially viable water services into SEC-style private corporations, experience in the Philippines has shown that the Government may not support the sale of government assets. Neither the Subic Bay, nor Zamboanga, nor the MWSS privatization envisions selling public assets. Therefore, if WDs, as legal entities, are abolished upon privatization of water district operations, LWUA may be the custodian of such public assets. Such GOCCs could apparently enter into most, if not all, of the activities identified above with any private corporation, regardless of whether these meet the nationality requirement. However, one legal opinion confirms that even if WDs (or

MWSS) were to remain legal entities and enter into contracts with private sector operators who sell water to the public on their behalf, such private operators must meet the nationality requirement.

26. The shortage of sufficient domestic equity capital or long-term credit for infrastructure investment, especially in water supply and sewerage services, indicates that the bulk of such financial resources must be sourced from foreign investors. This constraint would not pose a significant problem for BOTs for bulk water supply or sewerage infrastructure works, as these are not covered by the nationality requirement. For these types of contracts, the private sector would contract with and collect its revenue from a single customer (i.e. the water distributor), regardless of whether the latter is a public or private company. To the extent that the private sector is not prepared to accept the risk of non-performance by the distributor, it would seek performance guarantees from the Government. However, for the distribution of water, it remains to be seen whether foreign investors would be willing to commit such large funds to private water supply distribution ventures in which they may hold a forty percent share at most. This question is of particular concern as the major inefficiencies in the water supply sector exist in distribution, billing, and revenue collection. Therefore, these areas provide the greatest opportunity for efficiency gains. Naturally, any major investor would wish to place a lien over the revenue stream derived from water sales. Foreign investors would doubtless seek performance undertakings to protect their investments.

C. Local Government Code (RA 7160 of 1991)

27. The Local Government Code (LGC) provides the framework for delegating to autonomous and self-reliant LGUs more powers and responsibilities. Consistent with this policy of decentralization, the LGC provides that the delivery of basic services and facilities be devolved from the national Government to provinces, cities, municipalities and barangays.

28. Specifically, under the IRR of the LGC, an LGU shall provide basic services and services devolved to them covering, among others, the construction and maintenance of infrastructure facilities funded by the municipality to serve the needs of residents including, "artesian wells, spring development, rainwater collectors and water supply systems." (Section 25, Rule 5, IRR)

29. Devolution of basic services does not, however, cover public works and infrastructure projects funded by the national Government under the annual General Appropriations Act and other special laws and those wholly or partially funded from foreign sources, except in those cases in which the LGUs are designated as the implementing agencies for such projects and services (Article 26, IRR).

30. Delivery of these basic services shall be funded from the LGU's share in the proceeds of national taxes through the Internal Revenue Allocations (IRA), other local revenues and funding support from the national Government and GOCCs. Furthermore, Section 17 of the LGC on the commercialization and privatization of the LGUs' basic services provides, among others, that:

- a. LGUs may dispose of public economic enterprises owned by them to ensure active participation of the private sector in local governance;
- b. LGUs may tap the resources of the private sector in the delivery of basic services; and
- c. Reasonable costs may be charged by the concerned private sector participant for operation and maintenance of economic enterprises and for the delivery of basic services.

31. DILG Memorandum Circular 90-104 serves as the basis for determining the nature and scope of services the LGU may assign to the private sector. According to this circular, LGUs are encouraged to privatize the delivery of basic services, including water, through contracts between the LGUs and private sector groups. The contract will delineate the role of each party, financial arrangements, duration of the contract, and other relevant information.

32. Other possible modes of privatization include leasing of facilities and/or licensing of a private group to manage and operate the service. The provisions of the BOT Law may be exercised by LGUs.

33. The LGC also makes a special provision regarding the regulation of local WDs. Section 530, provides as follows:

"All powers, functions, and attributes granted by Presidential Decree No. 198, otherwise known as the Provincial Water Utility Act of 1973, to the Local Water Utilities Administration (LWUA) may be devolved *in toto* to the existing local water districts should they opt or choose to exercise, in writing, such powers, functions and attributes: *Provided*, that all obligations of the local water district concerned to LWUA shall first be settled prior to said devolution."

D. Public Service Law (Commonwealth Act No. 146)

34. This law limits the ownership or operation of public utilities to corporations whose capital is at least 60 percent owned by Filipino nationals. The following are considered public utilities under the Public Services Law:

- Railways and Urban Mass Transit
- Distribution (not production) of Electricity and Gas
- Water Distribution and Sewerage Systems
- Telephone Systems
- Wireless Broadcast Stations
- Any Common Carrier, either Freight or Passenger

35. The Public Service Act established the Water Transport Division, which was the regulatory board of the Public Service Commission (PSC). The Division was vested with the power, among others, to issue a Certificate of Public Convenience (CPC) for the operation of water, transportation, utilities and services. Further, public services owned or operated by government entities or GOCCs shall be regulated by the Commission in the same manner as privately-owned public services. However, CPCs shall not be required of such entities or corporations. A CPC constitutes neither a franchise nor a contract, and confers no property rights. It is a mere license or privilege.

36. The following requisites, among others, must be met before a CPC is granted:

- a. The applicant must be a citizen of the Philippines or a corporation, co-partnership, association, or joint-stock company constituted under the laws of the Philippines, at least sixty percent of the stock or capital of which belongs to citizens of the Philippines; and
- b. The applicant must be financially capable of undertaking the proposed service and meeting the responsibilities incident to its operation.

37. The Act also abolished the Board of Power and Waterworks and transferred its functions to the Board of Energy and the National Water Resources Council (NWRC), for power and water, respectively.

E. General Banking Act (RA No. 337)

38. Sections 111 and 112 of the General Banking Act restrict Philippine banks from lending out more than 15 percent of their unimpaired capital to any single borrower. While this rule may appear restrictive, in effect, the lending limit of the top commercial banks for a single borrower is between P500 million and P1 billion per bank. For most LGU-BOT projects, this amount would be more than sufficient.

F. Securities and Exchange Commission (PD No. 902-A)

39. This Act prescribes the qualifications and requirements for a corporation listed with the Securities and Exchange Commission of the Philippines. Any WD that elects

to dissolve and reform as an SEC-style corporation will have to abide by the laws contained herein.

G. Internal Revenue Code (RA 1158)

40. Any corporation formed subsequent to privatization for the operation of and/or investment in the water sector will be subject to this Code. The Omnibus Investment Code and the Foreign Investment Act provide additional tax provisions.

H. Metropolitan Waterworks and Sewerage System (RA 6234 of 1971)

41. This act creates MWSS and dissolves the National Waterworks and Sewerage Authority (NAWASA). It declares the following policy:

"The proper operation and maintenance of waterworks systems to ensure an uninterrupted and adequate supply and distribution of potable water for domestic and other purposes and the proper operation and maintenance of sewerage systems are essential public services because they are vital to public health and safety. It is therefore declared a policy of the State that the establishment, operation and maintenance of such systems be supervised and controlled by the State."

42. The system's authorized capital stock is P8 billion divided into eighty million shares at a par value of one hundred pesos each. The shares shall not be transferred, negotiated, pledged, mortgaged, or otherwise given as security for the payment of any obligation.

43. MWSS shall have the following attributes and powers, among others:

- a. To prescribe its by-laws;
- b. To establish basic policies and goals;
- c. To construct, maintain and operate dams, reservoirs, conduits, aqueducts, tunnels, purification plants, water mains, pipes, fire hydrants, pumping stations, machineries and other waterworks for the purpose of supplying water to the inhabitants of its territory, for domestic and other purposes; and to purify, regulate and control the use, as well as prevent the wastage of water;
- d. To construct, maintain and operate such sanitary sewerage as may be necessary for the proper sanitation and other uses of the cities and towns comprising MWSS;

- e. To fix periodically water rates and sewerage service fees as MWSS may deem just and equitable, as outlined in Section 12 of this Act;
- f. To acquire, purchase hold, transfer, sell, lease, rent, mortgage, encumber, and otherwise dispose of real and personal property, including rights and franchises, consistent with the purpose for which MWSS is created and reasonably required for the transaction of the lawful business of the same;
- g. To obtain right of way;
- h. To contract indebtedness in any currency and issue bonds to finance projects authorized for the National Waterworks and Sewerage Authority under existing laws;
- i. To approve, regulate, and supervise the establishment, operation and maintenance of waterworks and deep wells within its jurisdiction operated for commercial, industrial, and governmental purposes and to fix just and equitable rates or fees that may be charged to customers thereof;
- j. To assist in the establishment, operation and maintenance of waterworks and sewerage systems within its jurisdiction on a cooperative basis;
- k. To approve and regulate the establishment and construction of waterworks and sewerage systems in privately owned subdivisions within its jurisdiction; and
- l. To have exclusive and sole right to test, mount, dismount, and remount water meters within its jurisdiction.

44. MWSS is mandated to issue such rules and regulations as may be necessary for the sanitary protection of watersheds reservoirs, conduits, springs and other water sources, the proper operations of water supply lines and sanitary sewers, the preservation and protection of water and sewerage service as soon as established, and for the proper procedures in applying for approval of, and connection to, water and/or sewerage services.

45. Section 12: The rates and fees fixed by the Board of Trustees for MWSS and by the local government for the local systems shall be of such magnitude that MWSS's rate of net return shall not exceed twelve percent (12%), on a rate base composed of the sum of its assets in operation as revalued from time to time plus two months' operating capital. The PSC has exclusive original jurisdiction over all cases contesting said rates or fees. Any complaint against such rates or fees shall be filed with the PSC. The PSC shall verify the rate base, and the rate of return computed therefrom, in accordance with the standards above outlined.

46. MWSS shall be non-profit and shall devote all its returns from its capital investment as well as excess revenues from its operations for expansion and improvement.

47. Since its adoption in 1971, RA 6234 has been amended by the following legislation:

- a. PD 425, approved March 1974, adding a new section (Sec.2-A), increasing capital stock to P1.0 billion, and amending other sections;
- b. PD 1269, approved December 1977, concerning geographical jurisdiction;
- c. PD 1345, approved April 1978, empowering MWSS to take over, upon request, the centralized water supply systems in residential subdivisions within its territorial jurisdiction;
- d. PD 1406, approved June 1978, concerning MWSS jurisdiction on Sec. 2(c) and (d), increasing capital stock to P3.0 billion, changing total principal indebtedness and imposing ceilings on foreign loans;
- e. EO 796, approved May 1982, amending the composition of the Board of Trustees;
- f. *Batas Pambansa 799*, approved April 1984, giving MWSS jurisdiction over Rizal province;
- g. PD 1940, approved June 1984, concerning personnel;
- h. EO 1036, approved June 1985, changing the institutional structure of MWSS;
- i. EO 1063; approved November 1985, approving MWSS's capital stock of P8 billion;
- j. EO 197, approved June 1987, increasing the Board of Trustees to nine members.

I. Provincial Water Utilities Act (PD 198 of 1973)

48. This act authorizes the formation and operation of independent, locally controlled public WDs in the provincial areas of the Philippines outside Metro Manila. It also provides for the administration and operation of such WDs.

49. Specifically, Section 5 provides that WDs may be formed for the following purposes:

- a. Acquiring and operating a water supply and distribution system for domestic, industrial and agricultural uses for residents of such districts;
- b. Operating wastewater collection, treatment and disposal facilities; and
- c. Conducting such other functions incidental or necessary to the above purposes.

50. PD 198 also established LWUA. LWUA is primarily a specialized lending institution for the development and financing of local water utilities. LWUA shall also establish standards for local water utilities. A local water utility is any district, city, municipality, province, investor-owned public utility or cooperative corporation which owns or operates a water system serving an urban center in the Philippines, except MWSS. LWUA may: (a) furnish technical assistance and personnel training to the local water utility; (b) effect systems integration, district annexation and de-annexation; and (c) lend to qualified local water utilities. While LWUA appears to have the power to lend to all entities defined as "local water utilities," it has provided financial assistance only to WDs.

51. In 1988, LWUA assumed the responsibilities of the former Rural Waterworks Development Corporation (RWDC). LWUA has not addressed the issue of providing service in provincial urban and rural areas formerly serviced by the RWDC. These responsibilities now appear to have been overtaken by the provisions of the LGC of 1991 and NEDA Board Resolution No. 4 of 1994.

52. LWUA's capital stock is authorized at P2.5 billion. It is currently seeking an increase in its authorized capital. LWUA has the legal power to raise additional funds for development from local and foreign sources, including the private sector. In order to effectively carry out its role in developing and financing local water utilities, LWUA should have, as a lending institution, the normal commercial rights and securities associated with its loans (i.e. operate like a development banking institution). It should also have the capacity to sustain its sources of financing and earn a rate of return on the equity provided by the Government. These conditions have not always been met.

53. The formation of a WD is initiated by passing a local legislative resolution: (i) forming the district; and (ii) transferring any and all waterworks and/or sewerage facilities under the present control of such city, municipality or province to the WD. The district is formed upon approval by LWUA.

54. A Water District has the power to:

- a. Purchase or construct water, water rights, land rights and privileges useful or necessary to convey, supply, store, collect, treat, or make use of water for any purpose;
- b. Sell water to any person within the district;
- c. Require, construct, operate and furnish facilities and services for the collection, treatment and disposal of sewerage, waste, and storm water;
- d. Borrow money and issue bonds, promissory notes, or other debt. These obligations may be secured by the property of the WD. The interest on bonds or notes is tax-exempt; and
- e. Sell water under its control under schedules determined by the Board of Directors.

55. WDs have the following privileges:

- a. Exemption from income taxes, except taxes on interest income from deposits and on investments that are not related to water services operations;
- b. Exemption from franchise taxes and real property taxes on all land and other real property that is used for water supply generation and distribution;
- c. Exemption from all duties or imports on important machinery and equipment and materials manufactured locally; and
- d. No franchise shall be granted to any other person for industrial or commercial water service.

56. The law provides that WDs are considered quasi-public corporations performing a public service. Quasi-public corporations are private corporations that render public service or supply public wants. There are other provisions that indicate the private character of WDs. These are:

- a. Section 6 - "A district shall exercise the powers, rights and privileges given to private corporations under existing laws, in addition to the powers granted in, and subject to such restrictions imposed under this Act; and
- b. Section 20 - "Auditing shall be performed by a certified public accountant not in the government service."

57. This interpretation was initially supported by the Supreme Court, which had characterized a WD as a quasi-public corporation. However, in 1991, in the case of *Davao Water District v. Civil Service Commission*, the Supreme Court ruled that WDs are GOCCs. The Supreme Court based its ruling on the grounds that PD 198 is a special law applicable only to WDs. GOCCs with original charters (such as a WD) are corporations created by special law and are not subject to the Corporation Code of the Philippines.

58. The implications of this Supreme Court ruling are:

- a. The hiring and firing of WD personnel will be in accordance with Civil Service Rules. Salaries and wages of WD personnel will also be in accordance with regulations on salary compensation and standardization issued by the Government for regular government employees;
- b. For social insurance and pension purposes, WD personnel will be covered by GSIS instead of SSS; and
- c. Auditing will be performed by the Commission on Audit, contrary to the current provisions of PD 198. Therefore, WDs are now required to follow public sector operating procedures in many activities.

59. Several other matters affect the functioning of WDs:

- a. **Ownership Status:** The ownership of WDs appears uncertain at present. By law, the formation of a WD requires a municipal resolution completely transferring waterworks and/or sewerage facilities under its control to the WD. In turn, the LGU is paid in full for its assets by the WD via a three percent levy on gross revenues. Thus, while the WD is defined as a GOCC, the implication seems to be that it owns itself.

On the other hand, the law states that if a WD were to become insolvent, its remaining assets would be transferred back to the LGU. This provision, coupled with the fact the LGU makes the Board appointments (thus lending a flavor of local political intervention in the management of the WD), suggests that the LGU has some ownership rights over the WD. This ambiguity regarding ownership rights can have significant implications for the performance of WDs and their ability to attract funds from financial institutions.

- b. **Price Increase Constraints:** In order to increase prices, WDs must first hold a public hearing and receive approval from LWUA. The public can address complaints to the courts, which can review the price increase. In addition, price increases are presently constrained to 60 percent of current

charges (as provided for under Letter of Instruction No. 700 series of 1978); and

- c. **Potential Regulatory Vacuum:** As shown above, WDs may assume all the regulatory functions currently exercised by LWUA. When WDs choose to exercise such option, possible only when they repay any obligations to LWUA, they would in fact become self-regulating. These functions would include the setting of water tariffs, design, construction, and operation and maintenance standards. However, to protect the public interest, an independent regulatory agency should perform these functions.

J. National Water Resources Council (PD 424 of 1974)

60. This act established the former National Water Resources Council (NWRC), attached to the Department of Public Works, Transportation and Communications. This body was formerly the Water Resources Committee.

61. The Council was vested with the following duties and powers, among others:

- a. To coordinate and integrate water resources development activities of the country within the context of national plans and policies for social and economic development;
- b. To determine, adjudicate, and grant water rights amending, for this purpose, Act No. 2152, and other laws relating to the appropriation and utilization of surface and ground water;
- c. To formulate criteria, methods, and standards for basic data collection, project investigation, formulation, planning and design, and feasibility evaluation;
- d. To promulgate rules and regulations for the exploitation and optimum utilization of water resources, including the imposition on water appropriators of such fees or charges as may be deemed necessary by the Council for water resources development;
- e. To review and approve individual water resources development plans and programs of any agency within the context of the overall national plans and programs;
- f. To undertake hydrology surveys and establish, operate and maintain observation station networks and centralized water resources data centers;

- g. To conduct and/or promote special studies and research with other government or private agencies on all related aspects of water resources development; and
- h. To recommend to NEDA the adoption of general policies and guidelines and short/long range plans and programs for water resource development.

K. Rural Waterworks Development Corporation (EO 557 of 1980)

62. This Order creates the Rural Waterworks Development Corporation (RWDC) in order to provide water supply service to the rural and urban provincial areas not covered by LWUA or MWSS.

63. Through this Order, the Government states the following policy:

"To attain the objective of water supply service coverage of rural areas, the Government shall encourage self-help and self-reliant water supply projects and promote the organization of non-profit, non-stock rural waterworks associations, or cooperatives hereinafter to be referred to as RWAs.

The heavy financial burden that RWAs must sustain to become effectively established and operationally stable indispensably necessitates every tangible support and assistance by the national Government, its instrumentalities and agencies to the fullest extent possible,

To implement the foregoing policy, there is hereby created a public corporation to be known as the Rural Waterworks Development Corporation . . . which shall be primarily responsible for the formation of RWAs that will construct, operate and maintain water supply systems in the rural areas. It shall likewise provide technical, institutional and financial assistance to the RWAs. The Corporation shall be directly under the Office of the President."

64. The RWDC has the following powers, among others:

- a. To enter into relevant contracts of every nature and to execute all pertinent instruments for their execution and implementation;
- b. To borrow funds from any source, private or public, foreign or domestic, and to issue bonds and other evidence of indebtedness, the payment of which shall be guaranteed by the national Government;
- c. To receive, take, purchase or lease, either absolutely or in trust for any of its purposes, from foreign and domestic sources, any asset, grant or property,

real or personal, subject to such limitations as are provided in existing laws and regulations; and to convey such assets, grants or properties; invest and reinvest the same and deal with and expand its assets and income to best promote its objectives;

- d. To prepare feasibility studies and development plans for water systems development, including the procurement of necessary facilities, devices and accessory equipment;
- e. To make loans to RWAs for the construction and acquisition of facilities, related properties, and equipment for supplying water services and for the restoration, improvement or expansion of such facilities; and
- f. To approve or disapprove any request for permission to acquire loans from other lenders to RWAs which at the time are borrowers of the RWDC.

L. Reorganization Act of the Ministry of Public Works and Highways (EO 124 of 1987)

65. This act, promulgated to rectify the inefficient organization of the MPWH, attempts to implement the following policy:

"The State shall maintain an engineering and construction arm and continuously develop its technology, for the purposes of ensuring the safety of all infrastructure facilities and securing for all public works and highways the highest efficiency and the most appropriate quality in construction. The planning, design, construction and maintenance of infrastructure facilities, especially national highways, flood control and water resource development systems . . . shall be the responsibility of such an engineering and construction arm. However, the exercise of this responsibility shall be decentralized to the fullest extent feasible."

66. The Ministry, in order to carry out its mandate to act as the State's engineering and construction arm, has the following powers and functions, among others:

- a. To develop and implement effective codes, standards, and reasonable guidelines to ensure the safety of all public and private structures in the country and to assure efficiency and proper quality in the construction of public works;
- b. To ascertain that all public works plans and project implementation designs are consistent with current standards and guidelines;

- c. To identify, plan, secure funding for, program, design, construct or undertake prequalification, bidding, and award contracts of public works projects with the exception only of specialized projects undertaken by government corporate entities with established technical capability and as directed by the President of the Philippines, or as provided by law;
- d. To provide integrated planning for highways, flood control and water resource development systems, and other public works;
- e. Formulate long-range, medium-term and annual development plans and programs for infrastructure, especially highways, flood control and water resource development systems, and other public works projects, including phasing of implementation; and
- f. Identify priority packages for infrastructure development, especially highways, flood control and water resource development systems, and other public works projects, and undertake or supervise and evaluate the conduct of feasibility studies and project preparation thereof.

M. Dissolution of RWDC and NWRC and Creation of the NWRB (EO 124-A of 1987)

67. EO 124-A, amends PD 424 and EO 124, which reorganizes the Department of Public Works and Highways. Among others, this act states:

- a. "The Rural Waterworks Development Corporation is hereby abolished and its functions and assets transferred to the Local Water Utilities Administration in accordance with Sections 29 to 31 hereof; and
- b. The National Water Resources Council is hereby renamed and reorganized as the National Water Resources Board and shall continue to be attached to the Department. All of its technical functions are hereby transferred to the Bureau of Research and Standards and other offices as deemed appropriate by the Secretary."

68. The NWRB's principal objective is to achieve orderly development and management of all water resources of the Philippines. Specifically, the NWRB shall, among others:

- a. Coordinate all water resources development;
- b. Grant and/or adjudicate water rights;

- c. Issue rules and regulations for the exploitation and utilization of water resources, including the imposition on water appropriators of such fees as may be necessary;
- d. Review and approve water resources development plans and programs of any agency; and
- e. Undertake river basin surveys, inventory, and appraisal of water and related resources and develop comprehensive basin-wide plans for storage and control.

N. Omnibus Investment Code (EO 226 of 1987)

69. The Omnibus Investment Code of 1987 (EO 226) is divided into six books, only Book One and Book Two of which relate directly to BOT activities. Book One deals with "investments with incentives," which applies to companies investing in those areas of the economy that the Government has classified as priority. These "priority areas" are in turn divided into two groups—pioneer and non-pioneer—that are subject to different restrictions. Book Two discusses "investments without incentives."

70. Private sector proponents may qualify for incentives under the Omnibus Investment Code upon registration with the Board of Investments (BOI). To qualify, the applicant must meet the following conditions:

- a. The project cost must exceed P1.0 billion (as per RA 7718, Section 10);
- b. The financing, construction, operation and maintenance will be undertaken by the proponent (see BOI Guidelines for Infrastructure Projects, 1995);
- c. The final contract must be executed and endorsed by the concerned government agency for the application for incentives; and
- d. Sixty percent of the capital of the bidder must be owned or controlled by Philippine citizens. If the nationality requirement is not met, then the proponent must show that:
 - i. The project is new or uses new technology; and
 - ii. The ownership requirement will be met within 30 years from the time of registration (see EO No. 226, Article 32).

71. The following incentives are available:

- a. Income tax holiday (ITH): The registered enterprise is entitled to either a four-year or six-year ITH. The period of eligibility can be extended by an additional year. The six-year ITH is granted to projects with pioneer status, meaning that the proposed infrastructure project has a minimum cost of P1.0 billion, and is deemed innovative, or will use technology still new to the country; and
- b. Other available incentives allow: (a) an additional deduction for labor expense; (b) simplified Bureau of Customs procedures for importation of equipment and parts; (c) tax and duty reductions on imported capital equipment and spare parts; (d) tax credit on domestic capital equipment; (e) unrestricted use of consigned equipment, provided a re-export bond is posted; and (f) employment of foreign nationals for supervisory, technical and advisory services for a period of five years following registration.

O. Foreign Investments Act (RA 7042 of 1991)

72. The foreign Investments Act repeals Book II (Articles 44 to 56) of the Omnibus Investments Code of 1987. Applications seeking more than 40 percent foreign nationality ownership are covered by the remaining five Books of the Code.

73. The Act promulgates the following policy: "To attract, promote and welcome productive investments from foreign individuals, partnerships, corporations, and governments, including their political subdivisions, in activities which significantly contribute to national industrialization and socioeconomic development to the extent that foreign investment is allowed in such activity by the Constitution and relevant laws."

74. As a general rule, no restrictions on the extent of foreign ownership of export enterprises are imposed. In domestic market enterprises, foreigners can invest as much as one hundred percent equity, except in sectors on the negative list. Foreign-owned firms catering mainly to the domestic market are encouraged to gradually increase Filipino participation in their businesses.

75. The negative list is composed of three parts: A, B, and C. List A includes all activities restricted to foreign-owned companies under the Constitution and specific laws. The Act allows for amendments to lists B and C. However, amendments to List A may be made by NEDA anytime to reflect legal changes regarding the extent of foreign equity participation in any specific area of economic activity. As investment in the water sector is subject to the nationality requirement under the Constitution and the Public Service Act, it would be included in List A.

P. Bases Conversion and Development Act (RA 7227 of 1992)

76. This act declares the policy of the Government to accelerate the sound and balanced conversion of the Clark and Subic military reservations and their extensions into alternative productive uses, to raise funds by the sale of portions of metro Manila military camps and to apply said funds for the development and conversion to productive civilian use of the lands covered under the 1947 Military Bases Agreement between the Philippines and the United States.

77. This act creates a corporate body known as the Bases Conversion and Development Authority that has the attributes of perpetual succession and is vested with the powers of a corporation.

78. The Conversion Authority shall have the following purposes, among others:

- a. To own, hold and/or administer the various former U.S. military reservations;
- b. To encourage the active participation of the private sector in transforming the Clark and Subic military reservations and their extensions into other productive uses;
- c. To serve as the holding company of subsidiary companies and to invest in Special Economic Zones; and
- d. To manage and operate through private sector companies developmental projects outside the jurisdiction of subsidiary companies and Special Economic Zones.

79. The Conversion Authority is vested with the following powers, among others:

- a. To enter, make, perform, and carry out contracts of every class, kind and description that are necessary or incidental to the realization of its purpose with any person, firm or corporation, private or public, and foreign government entities;
- b. To execute any deed of guarantee, mortgage, pledge, trust or assignment of any property for the purpose of financing the programs and projects deemed vital for the early attainment of its goals and objectives;
- c. To construct, own, lease, operate and maintain public utilities as well as infrastructure facilities; and
- d. To promulgate all necessary rules and regulations.

80. As much as possible, major conversion projects shall be undertaken under the complete project turnkey or BOT scheme, as provided for by RA 6957, as amended by RA 7718.

81. Starting the fourth year of the Conversion Authority's full operation, a privatization or divestment program of its projects and subsidiaries shall begin under general guidelines prescribed by the President of the Philippines.

82. The Subic Bay Metropolitan Authority, the corporate operating and implementing arm of the Conversion Authority, has the power, among others:

- a. To accept any local or foreign investment, business or enterprise, subject only to such rules and regulations to be promulgated by the Subic Authority without prejudice to the nationality requirements provided for in the Constitution;
- b. To undertake and regulate the establishment, operation and maintenance of utilities, other services and infrastructure in the Subic Special Economic Zone and to fix just and reasonable rates, fares, charges and other prices therefor; and
- c. To construct, acquire, own, lease, operate and maintain on its own or through contract, franchise, license permits bulk purchase from the private sector and BOT scheme or joint venture the required utilities and infrastructure in coordination with local government units and appropriate government agencies concerned and in conformity with existing applicable laws therefor.

Q. BOT Law (RA 7718 of 1994)

83. This law, amending certain sections of RA 6957, "recognize[s] the indispensable role of the private sector as the main engine for national growth and development and provide[s] the most appropriate incentives to mobilize private resources for the purpose of financing the construction, operation and maintenance of infrastructure and development projects normally financed and undertaken by the Government. Such incentives, aside from financial incentives as provided by law, shall include providing a climate of minimum government regulations and procedures and specific government undertakings in support of the private sector."

84. Virtually any development project may be implemented through the BOT scheme, including, but not limited to, power plants, highways, ports, airports, canals, dams, hydropower projects, water supply, irrigation, telecommunications, railroad and railways, mass transport systems, reclamation projects, industrial estates or townships, government

buildings, tourism, slaughterhouses, warehouses, public markets, solid waste management, information technology networks and data base infrastructure, education and health facilities, sewerage, drainage, dredging, and other infrastructure and development projects as may be authorized by the appropriate agency.

85. Virtually any variant of the contractual arrangement is allowed. The Law cites the following nine variants:

- a. build-operate-transfer (BOT);
- b. build-and-transfer (BT);
- c. build-own-and-operate (BOO);
- d. build-lease-and-transfer (BLT);
- e. build-transfer-and-operate (BTO);
- f. contract-add-and-operate (CAO);
- g. develop-operate-and-transfer (DOT);
- h. rehabilitate-operate-and-transfer (ROT);
- i. rehabilitate-own-and-operate (ROO).

Additionally, a catch-all provision allows other contractual arrangements not specifically cited in the Law provided that these are approved by the President of the Philippines.

86. The Law allows investors to earn a market-based rate of return, as reflected in two provisions:

- a. The ROR is not subject to any legislative ceiling on profits and user fees; and
- b. The sources of revenues may be adjusted annually according to a predetermined parametric formula based on price indices. This provision effectively revises the previous regulation that imposes a 12% cap for public utilities. However, the 12% cap will be retained for projects that are natural monopolies or companies that will operate as public utilities and projects entered into through a negotiated contract.

87. A variety of government undertakings are allowed under carefully prescribed conditions. The Government may not, however, provide direct guarantees, defined as the obligation of the government to assume responsibility for the loans incurred by the proponent in case of default. Allowable undertakings include cost-sharing up to 50 percent of total project cost financed from direct government appropriations or official development assistance or provision of support facilities, such as access roads, and fiscal incentives as may be allowed under the Omnibus Investment Code.

88. For public utilities, a franchise to operate is automatically issued to the winning bidder. This process in effect delegates the issuance of the administrative and legislative franchises to the appropriate regulatory or implementing agencies. The maximum concession period to operate a facility is fifty years.

89. Filipino ownership requirements are imposed on the operator of public utilities for projects contracted under any of the variants except BOT. For the latter, both the project proponent and operator must be Filipino or the BOT company at least 60 percent Filipino-owned.

90. The Law allows flexibility for the private sector to initiate new project ideas by allowing directly negotiated contracts for unsolicited proposals under the following conditions:

- a. The project involves a new concept or technology and/or is not part of the list of priority projects for public bidding;
- b. No direct government guarantee, equity or subsidy is required; and
- c. The IA has invited by publication comparative or competitive proposals and no other proposal is received for a period of sixty working days; however, if another proponent submits a lower priced proposal, the original proponent shall have the right to match that price within thirty working days.

91. Negotiated contracts are allowed for unsolicited proposals and for publicly bid projects when there is only one complying bidder.

92. The proponent is assured that, should the contract be terminated by the GOP unilaterally or by mutual agreement, or by the proponent as it is allowed to do in case the GOP defaults on its obligations, the proponent shall be compensated for its actual expense incurred on the project plus a reasonable rate of return.

R. Water Crisis Act (RA 8041 of 1995)

93. This law was enacted to address the nationwide water crisis. The Act makes the following declaration of policy:

- a. "It is hereby declared the policy of the State to adopt urgent and effective measures to address the nationwide water crisis which adversely affects the health and well-being of the population, food production and industrialization process; and

- b. Pursuant thereto the government shall address the issues relevant to the water crisis including, but not limited to, supply distribution, finance privatization of state-run water facilities, the protection and conservation of watersheds and the waste and pilferage of water, including the serious matter of graft and corruption in all the water agencies."

94. The act authorizes the organization of a joint Executive and Legislative Water Crisis Commission composed of the Executive Secretary, the Secretary of the DPWH, the DENR, and a representative from the Lower House and the Senate.

95. The Commission has the following purposes and objectives:

- a. To undertake nationwide consultations on the water crisis and a study of the entire water supply and distribution structure;
- b. To facilitate coordination between Congress and the Executive Department in formulating and implementing the Government's water crisis management policy and strategy;
- c. To recommend measures to ensure continuous monitoring of entire water supply and distribution systems; and
- d. To conduct studies on policy options and strategies to resolve the water crisis and recommend remedial legislative measures.

96. The President may, for a period of one year from the effectivity of the Act, enter into negotiated contracts (BOT or similar arrangements) for the financing, construction, repair, rehabilitation, improvement and operation of water facilities and projects related to increasing water supply, its treatment and distribution. The Government cannot provide financing or financing guarantees for the contracts, except for the acquisition of right of way.

97. The Act also empowers the President to reorganize MWSS and LWUA, including the privatization of any or all of these agencies' operations or facilities. For this purpose, the President may abolish or create offices, transfer functions, equipment, properties, records and personnel.

98. The IRR for the WCA were issued on October 16, 1995. Among others, the following decisions were announced:

- a. The composition of the Technical Committee, initially comprising MWSS, LWUA, NWRB, appropriate committees of the Senate and the House, and

the certified Workers' Unions, was expanded to include DILG, DPWH, DENR, NEDA and PMS;

- b. For negotiated contracts, a list shall be prepared and published by responsible government agencies, and invitations issued to potential bidders to make proposals for BOT or related schemes. The invitation should indicate the preferred contractual arrangement, the salient features of the project, the qualification requirements of proponents and the deadline for the submission of proposals. IAs may also directly invite proponents to bid;
- c. Each concerned IA shall establish a BOT team headed by a senior official, with the rank of at least Assistant Secretary or Deputy Administrator, and composed of technical, financial, management, environmental and legal officers or experts. A representative of ICC-NEDA shall be invited to participate in the evaluation and negotiation of projects. BOT teams may tap the assistance of the BOT Center established under CCPAP and other government agencies, as well as hire Filipino or foreign consultants;
- d. Proponents need not be prequalified. During the evaluation or at any time prior to the award of the contract, the concerned IA may evaluate the proponent's track record, key personnel, inventory of efficient and reliable equipment and financial capacity;
- e. The evaluation of any proposal shall be completed within ninety days from receipt, based on the following criteria:
 - i. **Technical Soundness:** Defined as the requirement for proposals to conform to minimum design and performance standards and specifications;
 - ii. **Operational Feasibility:** The proposed organization, method and procedures for operating and maintaining the facilities in accordance with prescribed performance standards. The proponent is expected to provide for the transfer of technology;
 - iii. **Financial Viability:** Assessed on the basis of the present value of the proposed tariff, fees and other charges over the fixed term of the project. In evaluating the viability of the project, the proponent shall be allowed to recover its investment plus a market-based rate of return as determined by the implementing agency;
 - iv. **Economic Acceptability:** Determined by demonstrating that the economic benefits of the project exceed its economic costs, and that

its present value and economic internal rate of return (EIRR) is at least equal to the prevailing opportunity cost of capital established by NEDA; and

- v. **Environmental Standard:** Any adverse effects on the environment as a consequence of the project as proposed must be identified together with the proposed corrective measures to be adopted. The proposed design and technology must be in accordance with the environmental standards set by the IA and approved by DENR.
- f. Regarding the reorganization of MWSS and LWUA, the Commission gave these agencies until November 15, 1995 to propose a framework and strategy for their reorganization, including the privatization of any or all segments of these agencies, operations or facilities to increase their effectiveness and efficiency; and
- g. The remainder of the IRR discusses water anti-pilferage measures.

99. Significantly, the IRR set the stage for the private sector to submit--and the responsible IAs to promptly consider--BOT and similar proposals for investment in the water supply and sewerage sector. However, the IRR does not mention privatization of WDs, despite the fact that the privatization of state-run water utilities is specifically identified as an objective in Section 7 of the WCA.

IV. REGULATORY INSTITUTIONS

100. Regulation of activities in the water supply and sewerage sector, at present, are essentially covered by the following three government institutions:

A. Local Water Utilities Administration (LWUA)

101. General: LWUA is responsible for virtually all aspects of WD regulation: financial, operational, and functional. Local WDs (excluding private subdivisions), which currently number close to 600, are under LWUA's jurisdiction. LWUA does not have jurisdiction over the approximately 1000 LGUs that run their own water systems. As per the LGC, these are self-regulating in all respects.

102. In accordance with NEDA Board resolution No. 4 of 1994, LWUA acts as a financing institution, regulatory body, procurement agency, and consultant for WDs. Performing these diverse roles presents an apparent conflict of interest. Despite the fact that LWUA is only supposed to finance financially viable WDs, it has in fact pledged to serve all that request financing. In practice, LWUA lends to approximately 400 operational

WDs, the 20 largest of which account for 80 percent of LWUA's outstanding loans. Approximately 100 currently non-viable WDs are waiting to receive assistance from LWUA. About 100 are non-operational.

103. PD 198 prescribes that LWUA may establish standards for the local utilities. Such standards include: (a) water quality; (b) design and construction criteria for water supply facilities and equipment; (c) operations and maintenance; (d) personnel; (e) organization; and (f) accounting. LWUA issues certificates of conformance if the water utility has met these requirements. LWUA also reviews the rates charged by the utility. LWUA may provide the water utilities with technical assistance and training programs and may charge fees for these services.

104. Organization: LWUA is governed by a five-member Board of Trustees appointed by the President of the Philippines. At least three of the Trustees must be employees of the National Government. Directly below the Board is The Office of the Administrator. Appointed by the Board, the Administrator directs three offices (Legal, Management Services, and Public Affairs) in addition to four functional areas: Institutional Development, Engineering Services, Investment and Financial Services, and Administrative Services. LWUA serves the entire country from its office in Manila and maintains no regional offices.

105. Performance: LWUA's regulatory activities cover all WDs. Evaluation of performance appears to be relatively decentralized and conducted as resources permit. Within the Office for Institutional Development, Regulatory Divisions for each of the four regional areas are supposed to oversee performance of the WDs. However, LWUA seems to focus on monitoring the functioning of administrative and financial matters and places less emphasis on the actual physical functioning of the water supply facilities. LWUA seems to judge performance on the basis of industrial averages or relative standards. There does not appear to be any enforcement of absolute standards for performance.

106. Up to 80 LWUA staff members reportedly work in a regulatory capacity. Unfortunately, evaluation of operations and maintenance currently suffers due to limited resources. While regular on-site inspection is an ideal, each regulator is responsible for an average of five WDs. Inspectors are dispatched only when problems are reported. Therefore, LWUA must rely on information provided by the WDs themselves, which may or may not be accurate. In this respect, it is not clear that LWUA is actually enforcing the regulations it has established. Consumer grievances can be directed to the WD in question.

107. Water Quality: LWUA prescribes water quality standards in accordance with the Philippine National Drinking Water Standard. It does not perform on-site inspections of water quality. Instead, it depends upon the WDs to independently send monthly samples to its laboratory. This procedure can often prove unreliable and is probably unenforceable.

108. Specifications: Engineers within the Office of Engineering Services establish specification standards for WDs, which are approved by the Board. These specifications are based on professional judgment as well as international engineering standards. This situation may give rise to a serious conflict of interest as these are the same engineers who design, construct, and procure equipment for projects that LWUA funds throughout the country.

109. Tariffs: The Office for Investments and Financial Services is responsible for both analyzing the financial condition of the individual WDs and setting tariffs. Officials within the Department perform both analytical and regulatory functions for the particular WDs to which they are assigned. As a lending institution, LWUA supports water charges at the point that allows the WD to meet its debt service and cash requirements, which includes not only the loan (principal plus interest) itself, but also LWUA's fees for its various other services, such as technical, advisory, and institution-building support. Tariffs are set and evaluated on a case-by-case basis.

110. LWUA intends to evaluate the tariffs and financial standing of individual WDs approximately once a year, or more frequently if a WD has trouble meeting its payments. LWUA will also review the rate if a WD asks for an adjustment or requests a loan. According to Letter of Instruction (LOI) 700, LWUA can only approve a tariff adjustment within 60 percent of the existing rate.

B. Metropolitan Waterworks and Sewerage System (MWSS)

111. General: MWSS is a self-regulating public utility that is to serve approximately eight million people. It produces 2.7 million cubic meters of water per day. Less than half of the water produced is billed. MWSS has no relation to, or control over, private subdivisions within its jurisdiction. MWSS does, however, require that such subdivisions are developed according to MWSS specifications, in the event that it may eventually be requested to take over malfunctioning subdivisions.

112. Organization: MWSS is headed by a Board of Trustees, composed of nine members (Secretary of Public Works or Presidential Appointment as Chairman, Administrator of the System as Vice-Chairman, six members appointed by the President, and the Government Corporate Counsel as *ex-officio* member), which approves tariffs, standards, and other policies. Directly below the Board is the Office of the Administrator, which directs the Corporate Planning Group and the MIS Group, as well as six functional areas: Engineering, Construction Management, Operations, Customer Service, Finance and Administration. The Corporate Planning Group develops strategies for meeting growth, advances policy goals such as the reduction of non-revenue water, and evaluates tariffs. The MIS Group is responsible for performance monitoring and evaluation, system development, and houses a computer service center.

113. Performance: MWSS suffers from a lack of accountability in monitoring and evaluating performance. As with many agencies, the problem lies in the fact that those who are responsible for evaluating performance are either exceptionally close to—or actually are—the people responsible for the operations that are being monitored. This subjectivity leads to an inability to judge performance, and ultimately to a regulatory vacuum.

114. While theoretically the MIS Group is responsible for evaluating performance, reality dictates that in practice, this task falls to the Deputy Administrator for each of the individual functional areas. Deputy Administrators are loathe to report unsatisfactory performance for which they would be held personally responsible. Despite the relatively large size of the Performance Monitoring and Evaluation Department, it has been characterized as weak and ineffective.

115. Water Quality: Although the Department of Health is ultimately responsible for ensuring that MWSS's water meets national standards, MWSS also tests its water samples daily. However, as mentioned above, as the inspectors are or work closely with the engineers who are responsible for operations, the validity of the inspection may be questionable. There is no official forum available for lodging complaints regarding water quality. The Philippine media offers the only channel through which consumers can express dissatisfaction.

116. Specifications: The Engineering Department establishes the specifications for all materials used by MWSS. Traditionally, MWSS has relied on American standards set by the American Waterworks Association (AWWA) and Japanese Industrial Standards (JIS). However, the Engineering Department is currently developing Philippine National Standards that call for modern yet appropriate technology to fit local conditions.

117. The Deputy Administrator of the Engineering Department is responsible for overseeing the approval of specifications for materials. Larger problems with the process might necessitate intervention by the Administrator of the Board. Protests by manufacturers and contractors can be aired at public hearings.

118. Tariffs: As stipulated in RA 6234, MWSS may charge rates at which the ROR does not exceed 12 percent per annum. Loan conditions of multilateral agencies set a lower limit for MWSS's ROR at 8 percent. By law, the rate base is defined as "the sum of . . . assets in operation as revalued from time to time plus two months' operating capital." RORs are calculated every month, providing the basis for tariff adjustments if the ROR falls below the floor or exceeds the ceiling. Further, according to an internal MWSS policy, water charges should not exceed 3 percent of a family's total income.

119. According to MWSS's charter, any complaint contesting MWSS's rates may be filed with the PSC. The PSC, through the NWRB (which assumed these

responsibilities), has exclusive original jurisdiction over all such cases. The NWRB shall verify the rate base, and the rate of return computed therefrom, in accordance with the standards outlined in RA 6234. MWSS has the right to continue charging the contested rate while a judgment is pending. It should be noted that no complaint against MWSS's rates has ever been filed.

C. National Water Resources Board (NWRB)

120. General: The NWRB is the regulating and coordinating agency for water resources and their development. It formulates policies and regulates the allocation and use of water, as well as the financial aspects of utilities outside the jurisdiction of MWSS and LWUA. Upon issuing a CPC, the NWRB assumes regulatory powers over the water utility in question, either a private subdivision or LGU-operated system. Currently, only approximately 100 private subdivisions and LGUs hold CPCs, thereby falling under NWRB's jurisdiction. The circumstances surrounding the water crisis that erupted during the previous Administration can account for this small number. At that time, the Government faced intense pressure to provide increasing amounts of water to the public. As this emergency coincided with the LGC's promulgation, the Administration instructed water systems to immediately develop as much water as possible, regardless of whether they held CPCs. Legal procedures were to be deferred and given attention as time permits. As a result, there are still thousands of LGUs that have not yet applied to NWRB for a CPC.

121. Organization: The Board is composed of the heads of the departments and line agencies concerned with water resources. Its ten members are from the Department of Public Works and Highways (DPWH), the Department of Agriculture (DA), National Economic and Development Authority (NEDA), the Department of Health (DOH), the Department of Environment and Natural Resources (DENR), the Department of Trade and Industry (DTI), MWSS, National Irrigation Administration (NIA), LWUA, and the National Power Corporation (NPC). The Secretary of the DPWH presides over the Board.

122. The NWRB is divided into five divisions: the Policy and Program Division, which formulates policies (30 staff); the Water Rights Division, which grants water permits and regulates the allocation and use of water (30 staff); the Water Utilities Division, which performs rate analysis and issues CPCs (20 staff); the Monitoring and Enforcement Division, which is responsible for performance (30 staff); and the Administrative and Financial Division.

123. Performance: As the subdivisions are effectively self-regulating, the NWRB does not actively enforce standards. The agency is short-staffed and not capable of conducting on-site inspections outside metro Manila. Therefore, it must rely on field deputies, district engineers and provincial irrigation engineers employed by the DPWH and NIA.

124. The most common problem with the performance of subdivisions within metro Manila is the lack of accountability on the part of the developer. After most of the lots on private subdivisions have been sold, the developer has little incentive to maintain the water system properly. Residents can elect to form a home owners association and assume responsibility for the management of the water system themselves. However, as private water supply is much more costly than MWSS's service, private systems are often left to deteriorate. Inevitably, most private subdivisions request connections to public water supply.

125. Water Quality: Water quality standards are established in coordination with the DOH and monitored in coordination with the DENR. Water utility operators are required to submit monthly reports to the DOH or an accredited laboratory. However, on-site inspections are not performed or systematically enforced. Consumer complaints can be directed to the NWRB.

126. Specifications: The NWRB establishes regulations for specifications based on standards set by the National Building Code and MWSS. Such regulation seems to be a coordinated effort of several agencies, including the DPWH, the Housing and Urban Development Coordinating Council (HUDCC), and MWSS. MWSS requires that all new private subdivisions within its jurisdiction be built according to MWSS's standards in order to avoid complications in the case that the subdivision requests to be taken over by MWSS. Therefore, such subdivisions can only receive a CPC with the approval of MWSS. The NWRB will hear complaints from manufacturers and suppliers.

127. Tariffs: Tariff setting is based on the principle of full cost recovery. For a newly developed subdivision, the cost of the water facility is incorporated into the sales price of the lot and house. Therefore, the initial tariff structure only covers recurring costs (O&M). However, after the subdivision is almost fully occupied, the rate structure may change to reflect the return on investment, for which the objective is not only recovery of O&M costs, but also rehabilitation and expansion expenses and a return on investment not greater than 12 percent, in accordance with the Public Service Law.

128. A subdivision within MWSS's jurisdiction must receive prior approval for its tariff structure from MWSS before the NWRB can issue a CPC. This requirement is to ensure that the subdivision's rates are equal to or higher than that of MWSS in the case that MWSS is requested to take over the subdivision.

129. NWRB reviews tariffs for private subdivisions if the utility operator finds it necessary to change rates, for example, to meet costs for expansion. The NWRB will hear rates appeals by consumers in any WD, barangay, or other water system that holds a CPC.

V. RISK ASSESSMENT

130. Regulations are primarily intended to define and allocate certain risks. These risks can be segregated into the following categories: (a) Natural Risks; (b) Sovereign Risks; and (c) Commercial Risks. Each of these risks is briefly described in the following paragraphs to provide the foundation for the assessment of risk in PSP investment activities. It should be noted that risks cannot necessarily be sharply delineated into the categories used below.

A. NATURAL RISKS

131. This section discusses those risks that are largely but not necessarily exclusively, caused by naturally occurring events, normally covered under the general description of *force majeure*. These risks are almost totally outside the control of the contracting parties. However, as will be shown, some risks are exacerbated by human intervention or could be mitigated through protective measures. Insurance coverage may be possible for some such risks.

132. **Natural disasters:** The Philippines receives more than its share of natural disasters, such as earthquakes, volcanic eruptions, typhoons, floods, and landslides. The eruption of Mount Pinatubo, the continuing threat of Taal and Mayon volcanoes, the earthquake that devastated Baguio, lahars, landslides, tsunamis and the flooding of metro Manila and other areas are all risks that have to be assessed, quantified and allocated. In most cases, these risks are impossible or difficult to mitigate. Contracts are expected to include provisions to assign these risks. Such risks should probably be carried by the Government (i.e. the population at large) instead of a single private sector investor.

133. **Water Catchment Protection:** Authorized and illegal logging, uncontrolled human settlement and commercial development in water catchment areas all severely affect surface and ground water as well as the safety of water in storage dams. One particular concern is deforestation leading to the siltation of dams and waters stored in inland lakes, such as Laguna de Bay. The uncontrolled extension of fish ponds and the management of Laguna de Bay (particularly as regards water levels and prevention of backwash from the Pasig River) require the strongest legal protection and enforcement. Such measures will affect the economic life and thus the lifetime costs of these capital-intensive projects.

134. **Pollution of intake waters:** Closely related to protecting water catchment is containing and reducing pollution of water sources for downstream users. For example, approximately 1,000 industrial establishments discharge industrial and potentially hazardous waste into Laguna de Bay. Studies of river basins in the Philippines show that many are under serious environmental threat. Even if the water can still be treated to meet minimum standards for human consumption, the cost may be excessively high. Where

heavy metals or poisonous plastics are present, adequate treatment of the water may be impossible. Raw water sources may have to be abandoned in this case. Contracts between the public and private sectors will invariably contain clauses stipulating the maximum level of pollution that will be tolerated before price escalation for water treatment takes effect.

135. **Hydrology:** Not only does rainfall vary between monsoon and dry seasons, but there may also be marked cycles of rainfall over longer periods of time. Natural phenomena, such as the El Nino, can seriously affect rainfall patterns and the safe withdrawal of groundwater. One particularly serious problem is the inadequate stream and rainfall gauging in potential watersheds (e.g. the Kaliwa River or the Cebu Lasuran Dam site), which may adversely affect calculations of safe and reliable yields. Therefore, bids for proposed projects that are subject to severe hydrology risks may carry a high cost for water when this risk is borne by the private sector.

B. SOVEREIGN RISKS

136. This category of risk covers those that are largely, but not necessarily entirely, under the control of the government. Private sector operators have little or no control over the items in this category. For some selected risks, insurance coverage may be obtainable.

137. **War and Insurrection:** The threat of external aggression or internal rebellion or terrorism can significantly deter both local and foreign private sector investors. While probably not considered serious, territorial conflicts such as that with Malaysia over parts of Borneo and with China over the Spratley Islands, as well as the continuing local insurgency in Mindanao, may be risks factored into PSP proposals.

138. **Political Stability:** Investors try to avoid countries characterized by frequent and abrupt changes in Government, the reversal of government policies and changes in both elected and administrative officials. The Philippines, after a series of attempted military coups during the previous Administration, may have concerned potential investors. However, this risk appears to diminish as democratic principles become more firmly established in the Philippines.

139. **Nationalization and Expropriation:** The risk that the government confiscates private property for its own use is not considered significant in the Philippines.

140. **Law, Order and Public Safety:** The Philippines has been plagued by a reported increase in violent crime, including kidnapping of local and foreign business people. Whereas the expatriate community was fairly isolated from physical attack in the past, this risk can no longer be excluded. However, the Government is making concerted efforts to improve public security.

141. **Enforcement and the Administration of Laws:** The Philippines has a comprehensive body of law governing all aspects of business. However, the standards set by law are considered in many cases to be excessive or not adequately enforced. This problem applies in particular to the industrial pollution of water sources, such as Laguna de Bay. Further, law enforcement and the court system are often haphazard and slow. The Government has already taken steps to improve these areas.

142. **Penalties for Water Theft:** Theft of water through illegal connections or the unauthorized opening of fire hydrants is rampant and contributes significantly to the deteriorating situation in the water sector. Congress, through the enactment of the WCA, has addressed this problem in a meaningful and forceful way. The court may now inflict large penalties for water theft, particularly when staff of water utilities are involved.

143. **Convertibility of Currencies and Expatriation of Profits:** The private sector—local and foreign alike—may wish to transfer large amounts of currency internationally, particularly for the purpose of repatriating profits. The private sector would expect such movement to be unimpeded and that currencies may be freely converted at the prevailing free market exchange rates. Recently, the GOP has liberalized policies to allow increasingly higher degrees of capital mobility. Therefore, investors generally face only exchange rate risks when transferring funds.

144. **Entry and Exit of Personnel:** To be productive, public-private partnerships may require the frequent exit from and entry into the country of both foreign and local personnel. Immigration and tax clearance procedures should allow for the unimpeded entry and exit of personnel, their families and personal belongings.

145. **Import and Export of Goods and Equipment:** The construction of capital intensive projects invariably requires importing goods and equipment. Such imports and exports should be handled expeditiously, taking into account any national duties or export taxes.

146. **Labor Costs and Other Regulated Prices:** The Government is expected to maintain a balance between labor rates and productivity through collective bargaining or arbitration. If wage rates are controlled by the Government, private sector investors may seek to have adjustment provisions built into any contracts by which the tariffs charged are automatically adjusted if and when the Government allows increases in the cost of vital inputs, such as labor and energy.

147. **Renegotiation of Tariffs or Rates of Return:** BOT or concession contracts typically control the price charged or the upper rate of return which may be earned by both public and private providers of monopoly services, such as water supply. Regulations or contracts with private sector investors must clearly specify the frequency, manner and magnitude of any tariff adjustments which may need to be approved by the Government.

The private sector investor will probably seek assurances that the Government guarantee that its agencies honor BOT, concession and management contracts.

148. **Land Acquisition and Rights of Way:** Water supply and sewerage infrastructure projects often require large areas of land for the location of major water storage dams, service reservoirs and treatment plants as well as the laying of major trunk mains and distribution networks. For construction to proceed efficiently, land must be promptly acquired at agreed-upon compensation levels. Further, access must be provided to construct works, and lay, replace and maintain pipes.

149. **Payment by Government Departments and Agencies:** An endemic problem for utility providers is the non-payment of water and power bills by government departments, hospitals, army and police barracks and official residences. The Government is expected to provide assurances that it and its instrumentalities will promptly pay all water and related charges when due.

150. **Tax Holidays and other Investment Incentives:** In the case that existing laws, regulations or contracts provide certain tax incentives to private sector investors, the private sector will seek assurances that such advantages will not be unduly withdrawn.

C. COMMERCIAL RISKS

151. Commercial risks are those risks that are largely under the control of or can be reasonably managed by the private sector operator or investor. They are summarized below.

152. **Joint Venture Risk:** Potential BOTs and concessions for the operation and maintenance of water supply utilities will almost certainly involve local and foreign partnerships, particularly for water retail activities. Respective parties can bring different skills and financial resources to the joint venture. Also, the parties carry different risk profiles that may affect their behavior and commitment to the joint venture. Both parties need to have a clear understanding of their rights and responsibilities. Ultimately, however, the requirement to form joint ventures creates an additional commercial risk which must be fully carried by the private sector.

153. **Project Cost Estimates:** Project cost estimates in the water supply and sewerage sector are notably unreliable because of physical contingencies such as excess rock in areas to be excavated or difficulties establishing rock bottom foundations for dams. Tunnelling, the laying of major distribution mains and delays in land acquisition or rights of way may also escalate project costs. Furthermore, exchange rate variations and inflation of inputs can significantly alter project costs. However, advanced project management techniques may allow the private sector to reduce costs. Accordingly, the private sector should carry the risk of project cost variation.

154. **Construction Period:** The construction of major headworks may require five or more years to complete. A delay of months, or in severe cases years, would seriously affect the delivery of outputs. For example, a delay in the provision of treated bulk water would in turn seriously affect the distributor of the treated water. Likewise, bulk headworks may be on stream promptly while the downstream distribution works may be delayed. Such lack of synchronization is more likely to occur when the construction of headworks and the construction of the distribution system are in the hands of different private sector operators. This problem may exist when there is a BOT for bulk water supply and a concession for the operation and maintenance of a water utility. Nevertheless, these risks are of a commercial nature and should be covered by the private sector.

155. **Financing Costs:** PSP allows the government to benefit from the private sector's expertise in mobilizing financial resources. The private sector therefore bears the risk as well as gains the full benefits of securing funds from the most cost-effective sources. Accordingly, the private sector would normally carry all financial risks, unless the Government cofinances the investment from its own, multilateral or bilateral sources. In that event, the private sector would seek assurances that the financing or facilities to be constructed are provided in a timely manner. Normally, each party would carry its own risks; however, because of the complementary nature of the investments, joint risks should be assessed and hedged in a manner acceptable to both parties.

156. **Operating Costs:** The management and operation of a completed project also carries certain risks in terms of the cost of inputs. Typically, the major inputs are labor, energy and chemicals. To the extent that the private sector cannot control these costs because of Government regulation of minimum wage or power costs, the private sector may seek to have such inflationary cost components included in the formula for the periodic adjustment of water tariffs or minimum rates of return.

157. **Operating Revenues and Demand:** Risks associated with the realization of operating revenues may vary depending on the type of contract. For example, a BOT for the bulk supply of water would typically have a fixed charge comprised of a return on the capital invested and a variable or commodity charge, depending on the quantity of water taken from the bulk supply scheme. For a BOT, the private sector would generally not be prepared to absorb losses when the distribution system operator cannot or will not buy a sufficient quantity of water to return a profit to the private sector BOT investor. In this respect, the water sector differs from the power sector, in which a number of independent power producers (IPP) and distributors each manage small subcomponents, thereby creating competition. Therefore, a BOT bulk water supply operator would seek to negotiate a "Take or Pay" contract under which the distributor pays an agreed minimum amount, regardless of the quantity of water demanded by the distributor. However, in respect to the distribution of water, the distributor's revenue is a factor of: (a) the increase in demand; (b) the efficiency of the billing and collection system; and (c) the amount of non-revenue water.

158. The water distribution concessionaire can earn substantial returns from improvements in the operation and management of the distribution system. Accordingly, the concessionaire may be expected to carry the demand risk. However, the parties may agree upon a price escalation formula that periodically adjusts tariffs in accordance with cost escalations of certain significant inputs, notably those related to rehabilitation and expansion. Another dimension of collection efficiency is the community's willingness and ability to pay. More often than not, problems in the water supply sector can be traced not only to the inherent inefficiencies of publicly managed operations, but also to the lack of political will to charge tariffs to cover the cost of production and distribution. Therefore, the public sector is advised to adjust the tariffs to the required level before the actual implementation of privatization. When clearly warranted, increasing tariffs prior to privatization significantly reduces the private sector's risks and hence may result in proportionately lower bid prices for BOTs and concessions alike.

159. **Labor Relations:** Publicly operated water utilities are normally over-staffed not only because of inefficiencies, but also because of patronage. The public sector can mitigate risks to the potential private sector bidders by arranging prior to privatization the retirement of surplus staff under the normal procedures which apply to the termination of redundant staff. The Government's action in this regard would reduce the burden on potential bidders.

160. **Disconnection for Non-payment:** Profits depend on the private sector's ability to enforce collection by legally disconnecting services to all customers: households, industry and Government departments and agencies. Private sector operators will seek Government assurances that disconnections are lawful and can be expected to be promptly enforced by the Courts in disputed cases.

161. **Other risks:** Additional risks include fire and theft, business interruption and third party liabilities. The private sector would be expected to assume the full risk of the contingencies covered under this heading.

D. RISK MITIGATION

162. Apart from the apportionment of risks between the parties to any contract, it is also possible in some cases to obtain insurance to mitigate agreed-upon risks. Potential insurers are the multilateral development banks, bilateral agencies and commercial insurance companies.

163. The Asian Development Bank offers a new guarantee policy that can strengthen the credibility of government contractual undertakings. The ADB's guarantee is meant to be a catalyst. Hence, only partial guarantees are offered, and risks are clearly shared between the ADB and private lenders. There are two basic types of guarantees: partial credit guarantees and partial risk guarantees. Partial credit guarantees are

designed to cover a portion of the financing provided by private financiers. This mode is generally used for public and private sector projects that need long-term funds to be financially viable. It typically extends maturities of loans and covers all events of nonpayment for a designated part of the debt service. Partial risk guarantees are provided for BOT projects and its variants. These guarantees typically cover risks arising from government actions, nondelivery of inputs and/or nonpayment for output by state-owned entities, changes in the agreed upon regulatory framework, and political *force majeure*. Transfer risk in projects that do not generate foreign exchange earnings may also be covered. A government counter-guarantee may also be provided to reaffirm the Government's acceptance of the obligations backed by the ADB.

164. The World Bank, through its Multilateral Investment Guarantee Agency (MIGA), offers political risk insurance to equity holders and, to a limited extent, debt holders. MIGA has country limits of \$175 million and project limits of \$50 million. The World Bank's Guarantee Facility, currently being developed, focuses on political and regulatory risks that most lenders and sponsors are unable to evaluate or bear. A counter-guarantee from the host government acts to reinforce compliance with the Government's contractual agreements.

165. The World Bank also offers both partial credit and partial risk guarantees. The partial risk guarantee covers specified risks arising from nonperformance of sovereign contractual obligations or certain political *force majeure* events. The partial credit guarantee typically extends maturities beyond what private creditors could otherwise provide for example, by guaranteeing late-dated repayments or providing incentives for lenders to roll over short-term loans.

F. International Arbitration

166. When negotiations break down between the parties to a BOT, concession or other contract, the private sector investor and operator should have access to international arbitration to settle any investment-related dispute. Contracts between the Government and private sector operators are generally expected to allow for international arbitration and honor the terms of any settlement reached. Reliance on international arbitration, rather than local or foreign courts, may give potential investors additional comfort to enter into contracts for investment in traditionally public sector activities such as water supply and sewerage services.

VI. PERCEPTIONS BY THE PRIVATE SECTOR

167. This Study would have little value without taking into account the practical concerns of potential private sector operators/investors. Accordingly, discussions with private sector operators and investors helped to bring out a number of concerns which

could impede their active participation in the development of the water supply and sanitation sector. The major issues identified are described below.

168. **Legal System:** The private sector perceives the functioning of the legal system in the Philippines to be problematic. First, it takes extraordinarily long periods of time for disputes to be settled through normal judicial procedures. Second, the opposing party allegedly uses its ability to move cases to different jurisdictions in disputes, thus prolonging the time to receive a judgment. For this reason, potential investors and operators expressed a strong interest in seeking agreement on the settlement of any major disputes, with joint venture partners or other parties, through international arbitration.

169. **Government Guarantees:** The viability of both BOTs for bulk water supply schemes and concessions for water distribution depends on the ability of private sector operators to charge consumers the full cost of providing water. Traditionally, the supply of water to consumers is underpriced, primarily because of the reluctance of elected officials to support increases in water tariffs. In many cases, tariff increases are deferred for several years and are only periodically adjusted when multilateral lenders make adjustments a condition for granting loans. Therefore, private sector operators and investors seriously question the political will to increase water charges to realistic levels before privatization or to adjust water tariffs over time in accordance with contracts. For this reason, potential investors normally seek government guarantees to mitigate such risks.

170. **Environmental Control:** Potential private sector operators/investors have expressed a concern about the deterioration of the quality of intake waters for water treatment plants. Resolution of this issue is considered of paramount importance, not only for public health but also to ensure the safe catchment, storage, treatment and distribution of water. Many of the major water resources are known to be heavily polluted. Unless the Government is prepared to enforce existing anti-pollution legislation or at least give guarantees that the quality of water in rivers and lakes used as water sources will be protected from further degradation, private sector operators can not necessarily guarantee that the contracted water quality standard can be consistently met.

171. **Water Rights:** Many, if not all, of the potential private sector investors or operators are seriously concerned about practices regarding the establishment of water rights and water allocation, particularly to the extent that local politics are involved. While water is deemed to be an asset of the State, local politicians have a great interest in, and possibly control over, the allocation of water between competing uses, especially across municipal or provincial boundaries. For example, a local government has actually refused the transfer of water to metropolitan Cebu by disallowing power connections to well pumps. Additionally, the potential transfer of water from Bohol to Cebu is apparently facing local political opposition. Private sector investors would like the Government to issue a policy statement on this issue.

172. **Mix of Local and Foreign Participation:** For most water distribution concessions, foreign investors would be expected to inject large amounts of equity and loans into joint ventures. However, a narrow interpretation of the Constitution and the Water Code appears to require that local shareholders hold at least a 60 percent equity interest in, and thereby control the board of, any joint venture. This arrangement would put the foreign partner at a disadvantage. Potential private sector investors are interested in seeking legal arrangements or guarantees for the purpose of providing controlling interests, at least in proportion with financial resources provided. Possible avenues for balancing requirements of the existing legal framework and the minimum level of securitization required by bankers are still unclear. For example, MWSS or a WD could remain the service provider and merely enter into a contract with the private sector to manage part or all of its activities. This arrangement is identical to present ones whereby public utilities enter into contracts for the design and construction of works or for certain operational activities, including operations, maintenance, billing and collection. Resolution of this issue is necessary to encourage PSP in water distribution activities.

173. **Transaction Costs:** The private sector perceives the cost of entering into a BOT or other PSP arrangements with the public sector to be unduly high. Major factors for this high cost are: (a) the lack of adequate information upon which to base proposals; and (b) delays in processing proposals. For example, BOT projects which have been proposed to the Government (Cavite Bulk Water Supply for MWSS and the Mananga Bulk Water Supply for metro Cebu), have been awaiting a decision by the Government for about one year. Despite the fact that the WCA encourages unsolicited proposals and stipulates that evaluations must be completed within 90 days, the Government has not indicated when it might reach a decision on these projects. Moreover, the cost of developing such proposals would be significantly reduced if these were based on prefeasibility studies and reliable information prepared by the IAs. A number of costs are further implied in Section 3.3 of the IRR, which requires proponents to submit a preliminary design and economic and environmental evaluations. High transaction costs, combined with award through negotiation, may deter many small but reputable private sector operators/investors from preparing proposals.

174. **Contractual Counterpart:** Potential private sector proponents are uncertain at this stage as to which governmental body is authorized to be the signatory for any BOT or concession contract for WDs. Many believe that MWSS and individual WDs may be authorized to enter into BOT and concession agreements; however, as WDs are GOCCs, both MWSS and the WDs may require approval from higher levels of government before entering into any such contracts. In any case, any contract proposed under the WCA requires Presidential approval. Furthermore, potential private sector investors find it difficult to identify which government departments or agencies need to be consulted and can approve the various aspects of PSP activities. The establishment of a "One-Stop-Shop," such as CCPAP's BOT Center, would significantly expedite development of the sector.

175. **Summary of Regulatory Concerns:** A review of the potential risks and of the specific concerns expressed by the private sector explains the areas which should be covered by generally applicable regulations ^{6/}. The privatization of each specific entity or project described in the remainder of this Study (with the exception of those discussed in VII, Financial Regulation) is made against the concerns expressed by the private sector, as covered in the foregoing paragraphs.

VII. FINANCIAL AND SOCIAL CONSIDERATIONS

176. It is essential to reconcile the communities' willingness and ability to pay for water supply and sewerage services with the tariffs that must be charged--by public and private water supply operators alike--to cover the full economic cost of such services. Contrary to popular belief, the cost of water to end users does not necessarily have to increase as a result of privatization. For example, the two most favorable bids for the privatization of the Greater Buenos Aires water supply and sewerage system came in at prices 27 percent below those that had been charged by the public sector. However, the possible need to increase water tariffs in some instances should not come as a surprise. Traditionally, the supply of water has been underpriced primarily because politicians, fearing unpopularity at the polls, have not been willing to increase prices or insist on increased efficiency for water supply delivery. The failure to charge water tariffs necessary to achieve financial viability and the often inefficient operation of public utilities frequently lead many countries to experience water crises.

177. Many people fear that the provision of water supply--a monopoly service--in the hands of the private sector would allow it to seek monopoly rents and extract the maximum possible price from consumers. However, monopoly pricing is not conducive to achieving efficiency or serving the largest possible number of consumers. In the Philippines, such monopoly control has had these perverse effects in the past. In the case of telecommunications, for example, the problem was solved relatively easily by opening the market to competition. A similar approach is being followed in the power sector, in which the establishment of IPPs, through BOTs, introduced a degree of competition in power generation. If the power distribution network were made into a common carrier, independent power producers and independent power suppliers could provide competitive service to industry, commercial establishments and domestic consumers.

178. In the water sector, independent sources of supply and, even less so, independent distribution are generally not feasible. Therefore, contracts or generally applicable regulations must provide for minimum service levels and maximum prices which

^{6/} This Paper does not discuss the subject of generally applicable bidding and award procedures which are covered under the Government's standard operating procedures, or those specialized procedures which may be applied in accordance with the IRR for the WCA.

may be charged. As each party has a reasonably good understanding of how the current operating environment affects service level targets, costs and revenues, an initial contract price could probably be established relatively easily. However, these variables cannot be expected to remain constant throughout the lifetime of a long term contract. Input prices, risks and markets will all change over time. Accordingly, a BOT, concession or other contract must provide for the periodic adjustment of water tariffs or control prices to place an upper limit on the project's ROR. The method of such adjustments can be in various forms: (a) adjustments based on movements of general prices as reflected by the CPI-- which could be further modified to allow for increases at a rate different from that of CPI movements; (b) adjustments based on movements of prices of specific major inputs used in water production and distribution, e.g. the cost of labor, energy and chemicals. (A further price variation could be based on the quality of the intake waters. For example, if the Government tolerates additional pollution of raw water sources, such as Laguna de Bay, a franchisee responsible for treating the water should be expected to receive additional compensation for the increased cost of water treatment); (c) the ROR method of price control places a cap on the ROR which may be earned; and (d) in some countries, notably New Zealand, self regulation is allowed. Under this method, the threat of government-imposed regulations acts to deter the private sector from exploiting its monopoly position. Each of these alternatives is described in more detail in the following paragraphs.

A. CPI-based Price Adjustments

179. CPI-based periodic adjustments are considered the most pragmatic, that is, assuming that a country maintains a reliable and frequently updated Consumer Price Index. Under this method, the price that may be charged is a function of movements in the weighted average of the prices of consumer goods included in the price basket. If this basket reflects reasonably closely the price movements of the major inputs in the production and distribution of water, this method is expected to work reasonably well. Depending on the initial level of water tariffs that the private sector participant may charge and the expected investment requirements, the formula may be modified by a positive or negative multiplier to increase water tariffs either faster or slower than movements in the CPI.

180. This method usually provides the greatest incentive for encouraging efficiency gains, as any such gain would be fully realized by the private sector operator working within the constraints of a given sales price. However, one issue to be resolved is the frequency of the adjustments. In high inflation countries, the private sector would wish to see water tariffs updated at least annually. Where prices can be expected to remain reasonably constant, the private sector may be prepared to accept longer intervals between price adjustments. To account for major economic fluctuations, such as future construction costs, provisions for a more detailed review of the applicability of the agreed upon formula are normally included in the contract. Such evaluations provide a mechanism

for the private operator to earn a reasonable profit, while protecting the public against excessive profits.

B. Specific Input-based Price Adjustments

181. Periodic price adjustments based on the movements of major input prices (such as labor costs, electric power, other forms of energy and chemicals) is more sophisticated than the CPI method. While using the specific input-based price adjustment method may appear to be equitable, it reduces the incentive for the private sector operator to seek the most cost-effective inputs. Although this price control method could be more difficult to apply, it would provide a workable formula—assuming that realistic price indices for input costs are maintained in a timely manner. Pricing on the basis of a CPI only, whether general or specific, does not directly address the future cost of providing the additional investments needed to rehabilitate and expand distribution systems. The cost variations of construction and financing are influenced by the costs of the inputs in construction, as well as the cost of financing.

C. Rate of Return Price Adjustments

182. The Rate of Return (ROR) method of price control, or its close equivalent of setting caps on the dividends which may be paid to shareholders, allows for variations in water tariffs based on capital invested. This method is frequently employed in the US. ROR Regulation is not considered the most efficient manner in which to balance public and private interests, even though superficially it may appear to be so. This is primarily because the ROR method: (a) encourages over-investment as the return is earned on total investment; and (b) discourages operational efficiency as the same ROR would be earned regardless of actual performance.

D. Benchmark Regulation

183. This form of regulation attempts to control water tariffs on the basis of benchmarks provided by comparable entities providing identical service in similar settings. This method is only partially applicable in the water sector for a number of reasons. First, regarding bulk water supply, there are at most only a few sources from which raw water can be drawn. These are likely to be in substantially distinct settings and the intake quality of water significantly different so as to render a comparison of production costs meaningless. Second, regarding water distribution, except for the largest urban conglomerations, splitting up the distribution network into separate comparable zones is generally not feasible. Finally, regarding individual urban water utilities located in different parts of the country, methods of supply, treatment and distribution differ such that comparison would provide only the broadest benchmark. One variation of benchmark competition entails a single entity using its own historical performance as the benchmark

against which future improvements in performance are sought. Such a form of regulation requires a clear measure of performance improvements and an equitable division between the public and private sector of the rewards of improved efficiency.

E. Threat of Regulation

184. In isolated cases, such as New Zealand, privatized public services are self-regulated. The government allows operators to conduct business as they see fit, as long as they provide good service to the public. The Government intervenes with regulatory measures only if the industry is deemed to be abusing the system. Industries are assumed to prefer voluntary regulation rather than potentially heavy-handed regulation imposed by central government. Such self-regulation may work for periods of time in very homogeneous societies which have achieved high levels of economic development. This model is not recommended when such conditions cannot be met.

F. Willingness and Ability to Pay

185. Ultimately, the level of service provided must be based on the communities' ability and willingness to pay. Traditionally, water has been underpriced. Hence, communities are often unaccustomed to paying the economic price for its production and delivery. This is true despite the fact that water is by far the least expensive commodity that can be delivered to individual households ^{7/}. Consumers also realize that they can exert particularly strong political pressure to oppose price increases, even though water is an essential commodity that is often used excessively and wasted. Still, poorer members of the community generally pay disproportionately high prices for water, as they are often forced to purchase from vendors. More affluent consumers buy bottled water at a price approximately 1,000 times higher than that of quality water supplied by piped systems to the home. Substantial price increases are inevitable in the long run as increasingly distant sources need to be tapped to supply growing urban populations and higher treatment costs result from the increasing pollution of intake water.

186. Because of underpricing and the reluctance of politicians to increase water tariffs to proper economic levels, privatization is often feared to lead to water price increases. Traditionally, households in the second decile of income distribution are willing to pay up to about 3.5 per cent of personal disposable income (PDI) for water. Hard-line economists argue that up to five percent of PDI would be reasonable. Often the plight of the poor is used as an argument to resist privatization, despite the fact that the poor already pay disproportionately high prices without privatization. Despite the rhetoric, both households and industry are prepared to pay for reliable, uninterrupted potable water.

^{7/} Water, at a weight of 1 metric ton per cubic meter, or 1000 liters, and a cost of between P10 and P20 per cubic meter (with typical household use between 20 to 30 cubic meters per month), is by far the cheapest home-delivered commodity.

Despite periodic increases in water tariffs and a possible initial reduction in consumption, consumption levels have been found to return to accustomed levels within a relatively short period of time. With few exceptions, the input cost of water to industry and commerce is only a small component of overall costs. Indeed, industry has often gone to great expense, including desalination, to meet its demand for water. Therefore, it would seem reasonable to conclude that: (a) prices for water may be gradually increased to economic levels; and (b) cross subsidies to low-income families can be designed to minimize the impact on the poor.

187. The Government must address one paramount principle to establish an environment that encourages the private sector to significantly contribute to the development of the water supply sector. As indicated above, there is virtually no rationale to subsidize water supply. The Philippines Water Summit of December 1994 accepted the principle that water is and should be priced as an economic commodity. It further confirmed that people should receive the level of service for which they are able and willing to pay. However, as long as the Government subsidizes water supply by providing equity, below-market interest rate loans, mismatched maturities or direct subsidies, there is a strong disincentive for any public water utility to turn to local or foreign private sector funding sources, even though access to subsidized funds is very limited or might take many years to obtain. No public official would like to carry the stigma of having failed to avail of subsidized funds. Therefore, the tendency to sit idle and wait for subsidized funds—rather than take part in the development process of the country—is strong. The availability of subsidized funds, regardless of their inadequacy, will also press the water utility to be a captive client to the provider of subsidized funds. Although subsidies may be warranted for very small and poor communities, these should only be channelled by the central Government directly to the concerned LGU rather than via central Government intermediaries.

VIII. PRIVATIZATION OF THE METROPOLITAN WATERWORKS AND SEWERAGE SYSTEM

188. **Background:** The public sector environment within which MWSS must operate, because of its legal status as a GOCC, is such that even the most experienced management and staff cannot achieve optimal performance. As a result, metropolitan Manila is suffering from serious undersupply of water, particularly during the dry season. This crisis is exacerbated by the high Non-Revenue Water (NRW) estimated to be between 50 and 60 percent of total production. To date, considerable investments in NRW reduction have been financed by major loans from multilateral lenders, without a noticeable reduction of waste. The effects of these large water losses are that:

- a. Additional large investments in the construction of expensive headworks, that are required to meet demand, create additional bulk water supply, which in

itself leads to further increases in NRW, especially if water pressure is increased; and

- b. The tariffs levied on consumers who actually pay for their water are substantially higher than those which would be necessary if NRW were minimized.

189. By international standards, MWSS is also over-staffed in relation to the number of customers it serves and the service connections it maintains. Maintenance of works and facilities is also said to be below standard, leading to premature breakdown of works and equipment, thus requiring early and costly replacement or rehabilitation. While MWSS certainly has made progress over the last two decades, it has not been able to adopt more efficient technologies and operating procedures.

190. It should also be noted that even though MWSS is responsible for the provision of sewerage services for metropolitan Manila, at best only rudimentary collection systems and no treatment facilities exist. Sewage and industrial waste are discharged in rivers and streams which has led to serious pollution of groundwater resources, estuaries, Manila Bay and Laguna de Bay. Water from the Pasig River, even after treatment, is reportedly not even safe to be used for cooling water for industrial plants. Finally, the considerable over-pumping of ground water has led to serious destruction of aquifers, particularly through the intrusion of saline water from Manila Bay.

191. It is estimated that MWSS would require over the next 10 to 15 years about \$800 million, and possibly as much as \$2.0 billion, for the rehabilitation of its distribution network for the provision of additional water supply headworks, including storage dams, tunnels, transmission mains and treatment plants. These estimates do not include improvements in sewerage collection, treatment and disposal facilities. At least twice as much would be needed to address environmental pollution in a meaningful way ^{8/}.

192. **Rationale for Privatization:** Privatization, by means of either BOT or concession, would have the following immediate advantages in addition to the eventual improvement in service:

- a. Management and staff would be allowed to operate using private sector practices and procedures;

^{8/} See *Philippines: Urban Sewerage and Sanitation Strategy Plan, 1993* and NEDA Board Resolution No. 5 (Series 1994) for a discussion of the strategy for addressing deficiencies in the sewerage and sanitation environmental sector.

- b. The most advanced and economic technologies can be imported through a strategic partner skilled in the management and operation of large water utilities;
- c. Management and staff would have the opportunity for improved working conditions and compensation through increased efficiency in operations and participation in skills-enhancement; and
- d. The provision of investment capital by the private sector would relieve the Government from the burden of borrowing funds on public account.

193. **Legal Issues:** Under existing Philippine law, MWSS would apparently be able to enter into BOT contracts for the bulk supply and treatment of water. Such contracts are feasible under MWSS's enabling legislation and could carry the benefits provided for under the BOT Law. To expedite matters, such BOT arrangements could be settled through direct negotiation with potential operators and financiers under the provisions of the Water Crisis Act, until June 1996.

194. However, unless the nationality requirements are met, it may not be possible for MWSS to enter into specific contracts which cover the simple extraction of water from a natural source at one end (e.g. the pumping of water from an aquifer), and the sale of treated water directly to consumers at the other end. Potential operators will probably be unwilling to provide large amounts of equity capital to extract water from aquifers or rehabilitate and expand water distribution systems without having a majority control of any exploitation or operating company. The exact boundaries of activities which may be managed by foreign-controlled companies are unclear. Such companies may certainly treat and possibly distribute water in bulk. Stretching the treatment and delivery role could possibly entail bringing water to the boundary of residential and commercial properties. However, under existing laws, only a nationally qualified company or individual may actually sell the water to the consumer and collect the fees for such sales at that point. This constraint may be a significant impediment to privatization, as actual control over the cashflow of water revenues provides the security sought by lenders.

195. A further legal issue is the prequalification and bidding process. In respect of the prequalification of potential operators/investors, it will be necessary to require them to submit evidence, depending on the activities to be undertaken, to satisfy the evaluators that the proponent has: (a) experience in the construction of physical water infrastructure, preferably of the same type and scale to be constructed; (b) experience in operating and maintaining such systems; (c) qualified and experienced personnel to operate and maintain the systems; and (d) the financial capacity to provide the required investment funds and working capital.

196. There are two schools of thought regarding the bidding process. One is to call for open-ended proposals to assess the extent to which the private sector is willing to assume risks and subsequently evaluate such proposals on a subjective basis in an attempt to identify the bid most advantageous to the Government. The other is to follow the traditional method under which the required construction and other performance levels are precisely specified, any risk guarantees offered by the Government described in terms of scope, scale and duration, and bidding proceeds on the basis of price alone. Given the paramount need for transparency and competition in the bidding process, it is essential that for any publicly bid BOT or concession, the bidding process is clearly defined and followed. The private sector's willingness to assume certain risks could be explored during the validity of the WCA, which gives the President the authority to enter into negotiated contracts.

197. **Proposed Regulatory Structure for Metro Manila Water Sector:** The regulatory issues affecting MWSS's privatization, which apply equally to WDs, are described below.

a. **Wholesale Water Regulation:** Given that: (a) MWSS does appear to have the legal authority to enter into contracts for the bulk supply and treatment of water; and (b) implementation of desirable generally applicable regulatory measures might take time, any required apportionment of risk and related matters need to be covered in contracts between MWSS and private sector operators/investors. These contracts should include any guarantees which may be given by the Government, as well as provide for international arbitration of disputes. For example, as hydrology risk for bulk water supply is a project-specific issue, it should be covered in individual contract negotiations and therefore should not be part of a body of generally applicable regulatory procedures. Accordingly, it appears that MWSS will be self-regulating, at least until the reorganized NWRB or its possible successor, the NWC, has been established.

i. **Regulatory Agency Structure:** As the privatization of MWSS may involve relatively few contracts in the foreseeable future, there does not appear to be a pressing need to establish a formal regulatory agency specifically for metro Manila. Regulatory control, at least in terms of physical water resources matters, can continue to be handled by the NWRB. However, the structure required to regulate financial matters, such as the periodic adjustments of water tariffs, in contracts between MWSS and private sector operator/investors is a potentially controversial issue. At present this role rests with MWSS itself. Under the current framework, MWSS would presumably retain the power to regulate concession and BOT contracts into which it enters as well. However, the regulation of water supply for private entities holding CPCs, such as small private water distribution systems in private subdivisions, rests with NWRB. The NWRB does not have, at present, the skills to undertake the financial/economic regulation of a large number of private water utilities that may be established over the next ten years or so. One school of thought argues that economic regulation should be divorced from the regulation of

national water resources. While this ideal may be accepted, its actual application may be difficult in the short run. Some believe that the current economic regulatory functions of NWRB and LWUA should be transferred to a special Economic Regulatory Agency to be established for the water sector or assigned to an expanded Energy Regulatory Board (ERB). Balancing these differing views, the creation of an additional government agency is not advised. Therefore, initially, the financial/economic regulation of private water supply (including any MWSS or WD privatization), should be handled by the NWRB. To the extent that its experience or staff resources are inadequate at present, it should be supported by consultants as needed, while preserving options as the volume of work increases.

ii. **Alternative Pricing Formulae:** The private sector will almost certainly wish to enter into major BOTs on a "take-or-pay" basis. Regardless of the quantity of water supplied or withdrawn, periodic lump sum payments will be made by MWSS, or a future concessionaire, at agreed-upon levels which will adequately meet the private operators/investors fixed costs: debt service, maintenance and standby costs. Such payments would be augmented by a variable, or commodity cost, linked to the quantity of water actually drawn by the operator. The formula may be based on the original bid and periodic reassessments based on the operators/investors financial projections as approved by the Regulator. These formulae may be modified to the extent that the public sector has cofinanced the particular development itself or with credit provided by official external donor agencies. The rationale for the take-or-pay arrangement is that the bulk supplier: (a) has no control over performance by the distributor; and (b) may not be confident that economic growth and demand projections will actually be achieved. While it would be theoretically possible to ask the private sector to carry such risks, their level of uncertainty as would be reflected in bid prices, might be too high to be in the best interest of the Government.

iii. **Risk Allocation between Government and Private Parties:** At this stage, the allocation of risks between the public and the private sector is open to negotiation. However, to the greatest extent possible, the risk allocation should be predetermined and specified in the bid documents. Other things being equal, the Government should not be worse off under privatization than it is now under public sector management. Therefore, the Government should at least continue to carry *force majeure* as well as all sovereign risks. The bid documents may, however, require that the bidder take out insurance for any or all of such risks to the extent that they are insurable. It must be repeated, however, that insurance will impose a cost on the water consumer.

b. **Retail Water Regulation:** The regulation of retail operations is essentially no different from that of bulk water supply, except in that: (a) retail pricing is politically more sensitive as it affects consumers directly; (b) prices probably may need to be significantly increased because of historic under-pricing; and (c) joint ventures for the retailing of water are necessary in order to meet the nationality requirement. As advocated above, the financial / economic regulation of both bulk water supply and retail water operations should

be undertaken by an independent economic regulator. This recommendation implies that all price regulation now under the control of MWSS, LWUA, LGUs and NWRB be vested in a single agency, either a reconstituted NWRB, or the NWC.

i. **Regulatory Agency Structure:** Regardless of whether the water retailer is public or private, the regulation of tariff levels must be the same for all. For WDs, such levels are determined by the WDs after public hearings and are implemented only after formal approval by LWUA. Water tariffs for privately operated systems are currently reviewed by the NWRB. Water tariffs set by MWSS are currently subject to appeal to the NWRB. LGUs are self-regulated in terms of its water tariffs. No higher level approval or appeals process appears to be available. On balance, the most expedient arrangement would be to place all regulatory functions with a reorganized NWRB and eventually, with a NWC.

ii. **Alternative Pricing Formulae:** The pricing of water to the public can be based on a number of criteria, each with different equity considerations. The major variations differ in the use of economic or financial criteria in the setting of prices.

(1) An economic approach to pricing states that consumers should pay for water on the basis of the current average economic cost of water supply. This method does not make use of historical investment and financing costs, but is based on calculations of the current replacement cost of the facilities in use together with current operating costs. This method adjusts the prices paid by consumers on the basis of frequent updates of the economic cost of water. While this method is economically sound and equitable, its level of sophistication discourages its widespread use;

(2) The same qualification applies to water tariffs set under price level or inflation accounting methods that closely approximate pricing water on the basis of economic criteria. While this method of accounting is advocated by many of the leading accounting institutions, it is not as yet a generally accepted procedure;

(3) A next best alternative is pricing on the basis of a periodic revaluation of net fixed assets in operation. This mimics economic pricing in that at least periodically, the effects of inflation in construction and other equipment costs are taken into account in setting retail prices for water. This process is used by MWSS, which has the professional capabilities to operate such an advanced methodology. A crucial question here is the frequency and reliability of the revaluation of assets. WDs base retail water pricing on historical accounting-based pricing methods determined through commercial accounting procedures. LGUs, in the usual absence of separate accounting records for water supply, generally set prices on a more arbitrary basis, with great attention paid to avoiding political backlash; and

(4) The more common and accepted method of pricing is based on historical financial accounting and historical financing. Using this method, the price for water is greatly influenced by the historical cost, hence the depreciated value of, water supply facilities, as well as the terms attached to any current loans raised to finance these fixed assets. This method leads to significant price distortions. Prices charged to the public may be based on the historical cost of assets, whose replacement costs are grossly understated because of significant inflation over time. The result is the under-pricing of water supply. On the other hand, this method of pricing may also significantly burden consumers. For example, if a loan for a major water supply facility that has an expected economic life of 50 years must be repaid over a 15-year period, prices are based on recovering the cost from the community over the shorter period rather than the more equitable recovery period of 50 years. Present consumers are forced to bear part of the cost for future water supply users. While this formula can grossly distort temporal equity for consumers, it is generally applied in the pricing of public utility services such as water supply by WDs ^{9/}. Depending on the net result of under-pricing due to historical costs and over-pricing due to loan repayment periods significantly shorter than economic lives of assets, this method might either subsidize or be a mechanism for forced savings. Despite its deficiencies, this formula would be best to use at this stage of development, as it may provide opportunities to significantly mobilize resources.

Against this background, the private sector will probably seek prices for water which both: (a) provide a reasonable return on equity; and (b) repay loans over their maturity periods, which would be shorter than both the BOT or concession period and the economic life of the assets that may be created. Obviously, the shorter the term of the BOT or concession period, the higher the cost of water to the consumer, as total costs must be recovered in fewer years. Therefore, before calling for private sector proposals for BOTs or concessions, the Government needs to decide the pricing philosophy which it wishes to impose on water consumers, that is, prices based on: (a) a poorly understood economic rationale that is difficult to administer; or (b) rather easily computed but distorted historical accounting and financing practices. Given the status of public accounting in the Philippines, the latter method should probably prevail.

Apart from the absolute level of water tariffs, another dimension of pricing concerns the tariff structure, i.e. the difference between: (a) categories of water consumers; and (b) quantities of water consumed within a period by consumers within a category. Another tool to constrain demand is to introduce a system of peak demand pricing, which may result in some demand management advantages and alleviate concern for low-income consumers. Curtailment of water consumption during periods of scarcity will induce

^{9/} A further complication has been introduced into the accounting requirements of WDs, in that they are now required to carry the foreign exchange risks attached to loans from multilateral and bilateral sources. WDs can not, at this stage, adequately cope with this accounting requirement, let alone absorb the cost of any major unfavorable foreign exchange depreciation.

conservation of water and thus defer the need for the early construction of expensive headworks for the bulk supply of water. Economic purists would argue that the water tariff should be the same rate for all consumers. They would further argue that any subsidies which may have to be extended to the poor should be handled through the social security system and not through the pricing of water. A more pragmatic and generally accepted approach is to allow a degree of cross-subsidization among different categories of water consumers, by charging more to non-domestic consumers, as well as those who use large quantities of water. The regulatory formulae could therefore require price differentiation in order to subsidize the poor, who could be exempt from any peak load pricing scheme. Before the Government calls for BOT or concession proposals, it should express the pricing policy, in terms of cross-subsidization and demand management, that it plans to pursue. MWSS's current tariff structure may continue to be acceptable following privatization. Surcharges during the dry season could be seriously considered.

iii. **Risk Allocation between Government and Private Parties:**

The major risk of pricing water to consumers is the involvement of local politicians in the setting of water tariffs, either by inciting public opinion or seeking to influence the process through the financial/economic Regulator. Potential operators/investors fear that the public sector may not be able or willing to abide by BOT or concession agreements. The weaker and less stable a government, the greater the risk of default. As the future adjustment of water tariffs is a purely sovereign risk, private sector operators/investors would be expected to seek government, bilateral or multilateral guarantees.

c. **Application to Privatization Projects**

i. **Laiban Dam Project:** This project would be one of the largest BOT projects in the water supply sector for at least the next decade. It would be subject to virtually all of the risks identified earlier in this Study, plus some others which are unique to this particular project. Of particular concern is the water demand forecast. The major variables in assessing the cost and demand for water from Laiban Dam are: (a) the net gain which may be achieved by the full commissioning of the Angat Dam Optimization Project; (b) the supplementary water supply which might be forthcoming from the Umeray Transbasin Bulk Water Supply Project; (c) the proposed Laguna de Bay Bulk Water Supply projects; and (d) the effect of an aggressive water loss reduction program to be pursued by a potential private sector developer. Another issue is the relocation of settlers in the catchment area. When this project was under preparation in the early 1980s, MWSS was actively attempting to manage the resettlement process. However, this work came to a halt. One can assume that additional people have since moved into the catchment area, especially in light of the potential financial gains to be made by future resettlement.

ii. **MWSS Retail Privatization:** The actual retailing of water to consumers apparently must be undertaken by a company which has at least 60 percent local ownership. Local investors are probably not able or willing to commit the

approximately US\$500 million over the next ten years needed to meet about 60 percent of the cost of the rehabilitation and expansion of the MWSS distribution network. Accordingly, it may be necessary to obtain these funds from foreign sources. Therefore, innovative contracting and guarantee arrangements will be necessary to provide potential private sector operators/investors with the confidence to make such large financial commitments, unless they are allowed a controlling interest over those areas of water supply operations in which the largest gains and largest losses can be made: distribution, billing and collection.

iii. Potential PSP arrangements involving major foreign participation are as follows:

(1) The BOT operator/investor, in addition to treating water and bringing it to the urban area, also controls the operation and management of the distribution system right up to the boundary of the private property to be served. The actual sale to the ultimate consumer could then take place precisely at this point by a company meeting the nationality requirement;

(2) A separate private sector operator/investor enters into a contract for the operation and management and augmentation of the water distribution between the delivery point of the bulk water supply and the boundary of private properties. In this case, actual sale, billing and collection would also be placed under the control of a company meeting the nationality requirement. To motivate the private operator to achieve maximum efficiency in improving the water distribution system, a contract could be devised under which the private sector operator receives a bonus, over and above the management fee, which is computed on the basis of reductions in water losses; or

(3) An arrangement under which all distribution between the point of bulk supply and the actual sale to the consumer is undertaken by a company meeting the nationality requirement. In that case, the minority foreign participant, who would bring the bulk of the financing, would expect guarantees that his financing is adequately secured. By obtaining a prior charge over all revenues earned from the sale of water by the joint venture, the foreign partner can thereby ensure that debt service requirements can be met.

None of the above alternatives would optimize efficiency, primarily because of: (a) the separation of bulk supply from water retail, billing and collection activities; and/or (b) the risk inherent in any joint venture in which imbalances between financial commitments and control can lead to conflict.

iv. **MWSS Sewerage Privatization:** Conflicting views about the privatization of sewerage services exist. One view is that this service should be separated from MWSS's water supply functions as the latter is already sufficiently demanding. Under this scenario, the provision of sewerage service would revert to LGUs. The other view is

that waste water is directly related to water supply and should therefore be undertaken by a single entity. It seems highly improbable that metro Manila, with its many separate LGUs, would be able to agree on, coordinate and finance the construction of sewerage systems. On these grounds, there appears to be a *prima facie* case for including the privatization of sewerage services for metro Manila within any future concession which may be offered to the private sector.

It should be noted that the provision of sewerage services is not subject to any of the restrictive nationality requirements which are attached to water supply. In designing an approach for involving the private sector in sewerage services (proposed targets, investments and cost recovery methods), it is absolutely essential that fairly modest improvements be pursued at this stage. The recently completed *Philippines National Urban Sewerage and Sanitation Strategy Plan* should provide guidance in this respect. It is necessary for the Government to agree upon a long term program spanning several decades to achieve gradual improvements in environmental conditions. Even so, immediate improvements should be effected through any concession or other arrangement which might currently be considered for the privatization of metro Manila's water supply.

IX. PRIVATIZATION OF WATER DISTRICTS

198. **Background:** The establishment, under initial guidance through a USAID-financed TA, of the Water District concept in the early 1970s, has made a significant contribution to the development of water supply capabilities in hundreds of WDs across the country. However, despite the development of this expertise, the WDs have generally not been able to keep pace with the growing demand for water because of inadequate funds available both through LWUA and local financiers, including banks.

199. Furthermore, in its zeal to advance the development of the water supply sector outside metropolitan Manila, LWUA has pursued an aggressive program to establish an increasing number of WDs. However, in doing so, it has reached out to successively smaller urban areas which, in isolation, are not and cannot be financially viable in the foreseeable future. LWUA has now established approximately 600 WDs, of which about 100, at most, have a prospect of becoming financially viable in the medium term. Apart from the general shortage of investment funds, under the provisions of NEDA Board Resolution No. 4 of 1994, LWUA is not authorized to invest in non-financially viable WDs which would be unable to repay their loans to LWUA.

200. Another serious deficiency is that LWUA provides funds to WDs at below-market rates. The adverse effects of this subsidization policy are the following:

- a. LWUA provides subsidies for a service which, especially in the larger WDs, should pay for itself, given the Government's policies that water is an economic good and service should be provided on the basis of the communities' willingness and ability to pay;
- b. WDs are reluctant to turn to normal financial markets as some may find it difficult to explain--to local politicians and consumers alike--why it did not wait for subsidized funding by LWUA. This has the effect of seriously retarding development in the water supply sector; and
- c. Finally, in cases in which subsidies can be justified on the basis of externalities (e.g. in areas plagued by severe water-borne diseases), such subsidies should preferably be allocated directly to the concerned communities.

The general discussion of sewerage services, as given under the proposed MWSS privatization, holds equally for WDs. However, because of the smaller scale of operations and the closer linkages to local government, any arrangements for the privatization of sewerage service should be developed in close coordination and cooperation with concerned LGUs. This is particularly important in respect of cost recovery arrangements, which at least in part should be managed by concerned LGUs. Therefore, privatization of sewerage services should preferably be linked to the privatization of water supply, but would need to have the support of concerned LGUs.

201. **Rationale for Privatization:** The formation of strategic partnerships between WDs and the private sector is expected to have a number of important beneficial effects. Privatization can:

- a. Enhance local expertise and introduce the latest technologies which are available to the strategic partner;
- b. Give local personnel access to advanced local and overseas training in operations and management and the administration of water and sewerage utilities;
- c. Provide access to additional local and/or foreign funding for system rehabilitation and expansion; and
- d. Improve water supply and, if included, sewerage services, thus contributing to the improvement of public health and economic development.

202. **Legal Issues of WDs:** The legal status of WDs raises a number of unresolved issues. While the status of WDs as GOCCs was firmly established through the Supreme Court Decision in 1991, the following issues still need resolution:

- a. **Appointment of Directors:** Under PD 198, the Board of Directors is appointed by the concerned LGU ^{10/}. However, even though board members are appointed by the local government, they are not accountable to the mayor or a governor in a formal legal sense. Neither are they apparently accountable to LWUA or any other higher level of government. The dichotomy between the power of appointment and the accountability of board members has created a vacuum, making it difficult for board members to be held accountable for their actions or inaction. Therefore, there is a good case for the election of board members directly by the consumers of WDs, using the same qualification criteria for eligibility as now applies under PD 198. Such elections should be supervised and approved by the Regulatory Agency.
- b. **Responsibility of Directors:** Board members are currently responsible for policy formulation. However, it is often the case that Chairmen of Boards assume a semi-executive management role, thus undermining the role of the General Managers. Therefore, the Regulator should ensure that boards restrict their role to policy formulation and approving budgets. Especially since boards are not clearly accountable for their performance to any authority, regulations for the water sector should provide for the legal accountability of Directors. Such an arrangement would parallel the boards of private sector-managed water supply utilities.
- c. **Responsible Parent Agency:** WDs are GOCCs and are accountable, in certain respects, to LWUA. While LWUA currently oversees all WD regulation, the new Regulator should protect the public by overseeing public and private sector operators alike. This principle also applies to LGU-operated water supply utilities.
- d. **Right to enter into BOT or Concession Contracts:** There is a great deal of uncertainty as to which government agency can approve proposed WD privatizations. One legal opinion states that MWSS, WDs and LGUs have the authority to enter into any BOT or concession contract; however, private

^{10/} Where the WD covers all or a part of a municipality or a city, the Mayor appoints the Board, following certain representational requirements as specified under PD 198. However, where the WD covers more than one municipality or city, the Provincial Governor appoints the Board. This appears to hinder the amalgamation of non-financial viable WDs into larger viable units along provincial boundaries or river basin topography.

sector operators would doubtless seek assurances that any such contracts have the approval of higher authorities of government and that the performance of the public contracting authority be guaranteed.

- e. **Indebtedness to LWUA:** One issue that has not yet been addressed is LWUA's attitude regarding any of its outstanding loans to WDs in the case the latter choose to enter into privatization arrangements. At the Second Water Summit in September 1995, LWUA expressed a neutral position on the privatization of WDs. However, it has also stated that it would seek repayment in full by any WD entering into privatization arrangements. More recently, the LWUA Board passed Resolution N. 229, Series of 1995, dated August 28, 1995, stating that: "It is LWUA's stand to support all government efforts toward privatization in the domestic water supply sector, specifically towards Water Districts." It further states that "to achieve success towards privatization, efforts must be exerted to secure the agreement by all parties concerned and the required regulatory framework and agencies must be in place." Finally, "for practical reasons, privatization should concentrate first on partial privatization. . . ." Thus, while LWUA appears to support privatization, it believes that it should not proceed until the regulatory framework and agencies are in place, and only then with the full agreement of all parties concerned. The Board Resolution is silent on the issue of whether a WD contemplating a privatization scheme would be required to repay its loans to LWUA in full. In cases in which the WD entering into a PSP option continues to exist as a legal entity and can assure LWUA that its debt servicing commitment will be met, there is no apparent reason why LWUA should recall debts. This issue needs to be addressed in the formulation of the regulatory measures.

203. **Proposed Regulatory Structure for Water District Activities:** The following paragraphs cover the regulatory issues affecting WD privatization; however, as referred to above, the issues are not substantially different from those that apply to MWSS.

- a. **Wholesale and Retail Water Regulation:** One of the major considerations is the strong trend towards the development of bulk water supply schemes to serve many individual WDs and other water supply providers in separate urban areas within provinces or river basins. The depletion of groundwater supplies in many areas will eventually lead to much greater reliance on surface water resources. Examples include the proposed bulk water supply for Bulacan Province and the growing Calabarzon area. Similarly, the water supply for the combined Subic Bay Freeport - Olongapo City area will potentially be provided by a common source in the San Marcelino/Castillajos river basin.

The regulation of water resources should be performed by NWRB or, as suggested at the Water Summit of December 1994, regionalized through future River Basin

Authorities (RBA). This arrangement would address specific local hydrological misgivings, including allocation of water resources and qualitative concerns. However, it seems appropriate that the economic regulation of water be managed by a centralized economic regulatory agency, which could either be part of NWRB, as reconstituted in a NWC, or an expanded ERB or sector-specific regulatory agency. It is important that the regulations include the management and control of bulk water supply arrangements, including BOTs, serving more than one service provider.

b. **Regulatory Agency Structure:** This Study does not propose that there should be different regulatory structures for MWSS, WDs and LGUs. The resource allocation regulatory concerns of NWRB are being addressed through a separate TA. Accordingly, this Study addresses the financial/economic regulatory agency structure only. This Study recommends that as part of the proposed new NWC, there should be a self-contained department composed of a Deputy Commissioner and a small qualified staff with financial and economic skills and specific technical experience in water supply and sewerage operations. This staff would maximize the experience available in the private sector to undertake water tariff reviews of proposed BOTs and concessions and the periodic review of such water tariffs. Before doing so, there must be general agreement and a procedural manual which sets out the methodology to be followed to ensure that all proposals are evaluated using the same criteria.

c. **Alternative Pricing Formulae:** The pricing formulae which would apply to water sales both within Manila and in the provincial areas, other than rural water supply, are identical to those reviewed under the MWSS section above. However, both for MWSS and the WDs, distinctions must be made between bulk water supply and the retailing of water. For bulk water supply, there would be a single bulk rate, with perhaps differentiated prices applied during the dry season, from which minimal water users could be exempt.

d. **Risk Allocation between Government and Private Parties:** As described earlier in this Study, risk allocation in part may be addressed by generally applicable regulations; however, there will always be project-specific risks which must be allocated through negotiation.

Application to Privatization Projects:

204. **Cebu Bulk Water Supply Project:** For the potential privatization of metro Cebu, the economic Regulator must look at the following criteria:

a. The scheme selected must be demonstrated to be the most economic option for implementation. For Cebu, there are a number of different options which are not directly comparable. A Malaysian-led consortium has put forward a proposal for the Mananga bulk water supply project. Additional proposals are expected to be received

shortly for tapping other potential river systems on Cebu island. In addition, a submarine water transfer pipeline project from Bohol to Cebu has been proposed.

b. Not only does the viability of the proposed bulk water supply scheme need to be tested in isolation, but also the water distribution system must be improved to ensure that the additional bulk water to be provided can actually be distributed and raise the revenue necessary to meet the cost of the bulk supply. In other words, the economic Regulator must evaluate the overall bulk water supply or distribution system. Preliminary estimates for metro Cebu indicate that no bulk water supply scheme can be viable without about \$30 million simultaneously invested in the rehabilitation and expansion of the water distribution system.

Each of these variables identified above would result in profoundly different costs for customers. Therefore, the most economic options should be identified to protect domestic and industrial customers alike.

205. **Zamboanga City Water District Privatization:** This pilot privatization, managed by DOF, is intended to test existing legislation and private sector interest, while still protecting the interests of consumers, management and staff of the utility ^{11/}. The ZCWD privatization should consist of the following two arrangements:

- a. A BOT for the construction and operation of a water intake structure, water treatment facilities, and bulk water distribution main at an estimated cost of \$60 million; and
- b. A concession or management contract for the operation, management, rehabilitation and expansion of the water distribution network at an estimated cost of \$30 million.

206. Legal opinions confirm that the proposed BOT may be undertaken by any professional and financially qualified firm, without regard to nationality. The proposed distribution system concession, however, must be undertaken by a company meeting the 60 percent local ownership provision.

207. The recommendations summarized in Section XIV of this Study and the legal advice received suggest that the privatization of ZCWD should proceed without delay in accordance with the information document prepared by the consultants Deloitte Touche Tohmatsu International.

^{11/} The need for this Report arose directly from the proposed privatization of the ZCWD but will have general application for successive privatization activities in the water supply and sewerage sector, including that proposed for MWSS.

X. PRIVATIZATION OF LGU-OPERATED WATER SUPPLY UTILITIES

208. Of the 1,600 LGUs in the Philippines, approximately 1,000 operate their own water supply systems. While most of these system are very small individually, they are estimated to serve about 40 million people in both small urban and rural communities. The remaining 600 LGUs have established WDs, only 100 of which are estimated to be financially viable. The delivery of water supply at both the WD and LGU level suffers from excessive fragmentation ^{12/}. Over time, these approximately 500 non-viable WDs would benefit from either amalgamating into larger viable units or reverting to the control of LGUs. The water crisis outside metropolitan Manila cannot be solved without rationalizing the excessive number of utilities operating in the provinces. Therefore, consolidation could be encouraged through voluntary and budgetary measures, i.e. favoring financially viable utilities in accordance with NEDA Board Resolution No. 4 of 1994, which requires LWUA to fund only financially viable water utilities.

209. NEDA Board Resolution No.4 declared the following policy regarding the role of LGUs:

"With respect to the delineation of responsibilities in the sector, NEDA Board Resolution No. 5 (of 1989) is proposed to be amended to allow Local Government Units (LGUs) to implement all levels of water supply projects consistent with Government's decentralization and devolution process, mandating LWUA to implement only financially viable projects, and further defining the roles of the agencies in the sector. The proposed amendment is as follows:

Level I (point source system), Level II (Communal faucet) and Level III (water supply projects) may be implemented by the concerned LGUs within their jurisdiction. DILG's participation will consist of general administration and institution building, such as assistance to the LGUs in the formation of Rural and/or Barangay Waterworks and Sanitation Associations (RWASAs/BWSAs) as well as in the identification of water supply systems. MWSS will be responsible for Level III water systems in Metro Manila and adjacent areas. DPWH, together with DILG and DOH, will provide technical assistance (with a period of about 2 years) to LGUs in the planning, implementation and operation and maintenance of water supply utilities."

210. Accordingly, both NEDA Board Resolution No.4 of 1994, and the Local Government Code envision a more significant role for LGUs in water supply, sewerage and

^{12/} Compared to Malaysia, which has a successful privatization program in the water supply and sanitation sector, the Philippines should probably have no more than 100 WDs, organized along provincial and city boundaries or river basins, to achieve efficiencies of scale.

sanitation development. IRRs and a Concept Paper have been prepared to provide the guidelines for the implementation of government policy in this regard. DILG has submitted the draft IRR to NEDA for consideration. It appears that little progress has been made in advancing this matter. However, the devolution of water supply development from central government to LGUs should preferably not lead to substantial growth in public sector employment. Rather, LGUs, either separately or collectively, should turn to the private sector for technical and financial support. Assistance is being provided to DILG for the preparation of a proposed *LGU Water Supply and Sanitation Project*. The TOR for this work requires addressing the role of the private sector in assisting LGUs. Despite the small average size, opportunities for PSP should be pursued at the LGU level.

XI. COMMERCIALIZATION OF THE LOCAL WATER UTILITIES ADMINISTRATION

211. **Background:** NEDA Board Resolution No. 4 of 1994 makes the following recommendations regarding the commercialization of LWUA and the privatization of WDs:

- a. "Reorientation of the Local Water Utilities Administration (LWUA) to its original corporate mission as a "specialized lending institution" financing only viable water supply projects with tariff levels formulated towards full cost recovery. LWUA shall therefore upgrade its banking and finance expertise and immediately complete its financial restructuring. Further, it should radically improve its collection efficiency as well as its database and accounting systems;
- b. Privatization of all existing Water Districts (WDs) should be vigorously pursued whenever feasible and large commercially viable water services areas like Metro Manila, Cebu, Zamboanga, and Davao should be formed or converted into SEC-style private water corporations, independent of LWUA and other government funding institutions but subject to regulation by NWRB;
- c. Procurement needs of the WDs should be provided based on a competitive basis and not centrally imposed on them; and
- d. LWUA shall submit an action plan to INFRACOM to effect the recommended reforms for review and endorsement."

212. These policy decisions were reinforced during the Water Summits of December 1994 and September 1995 and are explicitly covered under the provisions of the WCA. LWUA is expected to play a lead role in marshalling financial resources for the sector, including those that may be secured from the private sector through PSP initiatives. LWUA, under its enabling legislation, has always had the authority to raise funds from the

private sector, but has not as yet exercised this power. LWUA, in turn, could onlend these funds to WDs, and possibly to LGUs, for water supply and sewerage developments.

213. **Rationale for Commercialization:** Consistent with the Government's focus on privatization and decentralization, increasing attention should be placed on competition and contestability to allow market forces to achieve optimal efficiency. LWUA was not intended to be a normal administrative or engineering department, such as DPWH, but a commercially-oriented entity. Therefore, it should behave in accordance with commercial principles. This supposition implies the need for adequate financial and cost accounting systems, strict adherence to billing and collection systems, periodic audit and reconciliation of loan balances between LWUA and individual WDs ^{13/}, and the use of technical and financial appraisal techniques to assess the viability of proposed WD developments. The reorientation of LWUA's operations towards business practices implies the need to change its organizational culture and develop a highly qualified technical and financial core of professionals at the board, management and staff level in order to perform its development banking role. This may be accomplished by recruiting new staff and training existing staff.

214. **Subsidies:** In accordance with NEDA Board Resolution No. 4, LWUA should support only financially viable projects. As a development bank, it should not and can not subsidize water supply development. Furthermore, the strong evidence of willingness to pay for reliable water supply seems to obviate the need for subsidies. To the extent that the Government may find it justifiable to provide subsidies to small non-viable systems because of externalities, any such subsidies should be channelled directly to the intended beneficiaries rather than through a central government agency.

215. **Regulatory functions:** LWUA holds several regulatory functions. To the extent that these relate to the formation of WDs which would borrow from LWUA, the latter should have the regulatory responsibilities to ensure that such WDs are properly established and operated. However, some matters, such as the adjustment of tariff levels, could present a conflict of interest. That is, LWUA has both financial interest in the WD to the extent that it provides loans and also regulatory control over the level of tariffs which may be charged. As proposed in the WSSRS, regulatory functions should generally be vested in the NWRB.

216. **Engineering functions:** An additional concern relates to LWUA's role as: (a) an engineering and construction agency; (b) the Government's lending agency; and (c) the financial and technical regulator. Historically, LWUA concentrated on engineering and construction. As a result, its banking functions suffered, leading to the financial distress which spurred the current reform initiatives. Although many WDs have matured over the last twenty years, a large number still need technical support. One effect of NEDA Board

^{13/} The Commission on Audit (COA), some years ago, attempted unsuccessfully to reconcile loan balances recorded in the books of LWUA and the WDs which received such loans from LWUA.

Resolution No. 4 is that WDs in need of help must now turn to the private sector or to LWUA for technical support and pay for these services. Providing such services to WDs would not adversely affect LWUA's financial viability. However, LGUs also need considerable institutional development. Fortunately, the local consulting industry in the Philippines has also developed considerably over the last twenty years. As a result, many of the technical support functions needed by WDs and LGUs can now be satisfactorily handled by the private sector.

217. While the commercialization of LWUA would not provide the private sector with direct opportunities for BOT or concession arrangements, restructuring LWUA as a development bank that can borrow funds from local and foreign private sources may nevertheless provide PSP opportunities. Assuming also that LWUA will become an active participant, if not the lead agency, in the Government's privatization efforts, it will require significant merchant banking support for the evaluation and funding of investment proposals. Thus, with the support of the private sector and the proper guidelines, LWUA could continue to be a major player in the development of the water supply and sewerage sector.

XII. PROPOSED LEGISLATIVE, REGULATORY AND POLICY REFORMS

A. Preconditions to Implementation of Regulatory Reforms:

218. Preconditions for the successful implementation of regulatory reforms conducive to privatization in the water supply and sewerage sector are as follows:

- a. An in-depth understanding of the deficiencies in the water supply and sewerage sector;
- b. A clear definition of the objectives for improving performance in the sector;
- c. A legal, political and popular mandate for the implementation of the reforms;
- d. The political will to take the necessary measures to implement the needed reforms, and subsequently abide by and enforce the regulations;
- e. An assessment of the various options available to achieve the objectives;
and
- f. A potential action plan and timetable for the implementation of the reforms.

219. All necessary preconditions for the implementation of the regulatory reforms appear to have been met. The rationale for the proposed legislative, regulatory and policy reforms which are needed to support privatization are covered in this section.

B. Determination of National Priorities for Water Resources:

220. The regulatory measures necessary to govern the allocation of national water resources have been covered by a separate TA to strengthen NWRB. It focuses on water rights as they relate to qualitative and quantitative considerations. Up to 85 percent of all nationally available water resources are normally used for irrigation. This water is generally available at highly subsidized prices under which not even regular operation and maintenance costs are covered, let alone the capital cost of the irrigation works. Therefore, the allocation and pricing of national water resources needs to be urgently addressed. However, considering the disproportionately large contribution that urban areas make to GDP, their access to water should have priority over water used for irrigation.

221. A proportionately small reallocation of water from irrigation would solve the water shortages in the urban areas. However, such redirection of scarce national water resources has proven to be difficult. For example, the Angat Dam Optimization Project, cofinanced by the Government, ADB and the World Bank, concerns the reallocation of water between hydropower, irrigation and urban water supply for metro Manila. An agreement between the concerned Government parties to regulate the allocation of water from the Angat dam was one condition of the multilateral loans. However, the agreement apparently has yet to be formalized. Neither have measures been taken to tap additional groundwater resources to increase supply for irrigation farmers. As a result, the NWRB had to take special measures to make additional water from the Angat Dam available for metro Manila during the dry period. Even in this case, the reallocation of water was approved only for a few months.

222. Economic theory dictates that fresh water, as a scarce national resource, be utilized for those economic activities which maximize the economic return to the country as a whole. The economic value of water can be determined by a bidding process under which water rights can be marketed and sold to the highest bidder, i.e. the concept of tradeable water rights. However, the actual application of this economic principle is difficult for two reasons. First, many nations are preoccupied with achieving self-sufficiency in the production of food. Second, irrigation farmers represent a large and powerful voting block. They are unlikely to support rational economic policies regarding the allocation of water rights. Nevertheless, this Study recommends that the Government price water as an economic commodity and that such pricing be regulated by NWRB or its successor.

C. Restructuring NWRB into a National Water Commission

223. NWRB's principle objective is to achieve the scientific and orderly development and management of all water resources to optimize utility, conserve, protect and meet present and future needs. The current composition of the NWRB Board consists of five Departmental Secretaries, the Director General of NEDA, and the heads of four national government agencies. The high level of the board members makes regular meetings difficult to schedule. Furthermore, NWRB is under-staffed and under-funded. Finally, being centrally located in Manila, the NWRB cannot logistically manage its nationwide functions adequately.¹⁴ As a result of all of these considerations, the NWRB is largely ineffective.

224. The WSSRS proposes that the NWRB be reconstituted as a National Water Commission (NWC). The Commission would be composed of a Commissioner appointed by the President for a set period of time, subject to approval by the Commission of Appointments, under a revised Water Code. The Commissioner would be a professionally qualified and experienced administrator of national water resources. The NWC would be expected to base its decisions about the allocation of water resources on national interests, such as economic criteria and other Government policies, rather than narrow sectoral or political interests. The Commission may be advised by a National Water Resources Advisory Committee, representing various water resource users. However, as its title implies, such committee would have an advisory role only. Ultimate decisions regarding the allocation of water resources would rest with the Commissioner. The NWC would report directly to Congress through the responsible Departmental Secretary.

225. The Commissioner would be assisted by Associate Commissioners, each specializing in specific areas: (a) Resource Regulation and Water Rights; (b) Financial/Economic Regulation; (c) Enforcement; (d) Information and Research; and (e) Administration and Finance. The Commission would be financed by levies on MWSS, WDs, private corporations and individuals holding water rights or permits. In order to implement these recommendations, the National Water Code must be amended to effect the creation of the NWC.

D. Regulatory Framework

226. Selecting the appropriate agency to undertake the financial regulation of private operators in the water supply sector is a hotly debated topic. WDs that subcontract with the private sector to perform all or part of its services would, under present arrangements, continue to be regulated by LWUA. This holds true regardless of whether

¹⁴For example, NEDA Board Resolution No. 4 of 1994 requires NWRB to establish a database of all public and private wells nationwide. Implementation of this task is clearly beyond NWRB's capabilities.

the WD has any outstanding loans from LWUA. If water distribution is undertaken by a private company that holds a CPC, such as a private subdivision, the NWRB would be responsible for such related financial regulation. However, it is not entirely clear which agency would regulate private companies that enter into BOT or concession contracts with WDs. Although officials from both LWUA and NWRB have stated that LWUA would be the responsible agency, one legal opinion states that the financial/economic regulation of these would fall under NWRB's jurisdiction. Another study examining the NWRB and its role in national water resources management suggests that the regulation of the use of water resources in its quantitative and qualitative dimensions should be separate from financial regulation. Hence, it suggests that the financial regulation exercised by both the NWRB and LWUA should be vested in an agency like or attached to the ERB.

227. In reviewing the options for the framework concerning financial regulation, four options appear to be available. Each has advantages and disadvantages:

- a. **NWRB.** The disadvantage of expanding NWRB's role as the financial regulator of private companies holding CPCs (e.g. private subdivisions) is that the NWRB allegedly does not have the expertise to act as the financial regulator of a large number of companies. The increasing demands which might be placed on NWRB as a result of privatization may hinder its ability to perform its primary role of managing national waterworks;
- b. **LWUA.** As an experienced financial regulator of WDs, LWUA has the skill to manage the financial regulation of private sector water supply utilities as well as that of the WDs. However, to make LWUA legally responsible for private sector activities within WDs may require amendments both to the Water Code as well as LWUA's enabling legislation. Furthermore, as the financier of WD development, LWUA should not be the financial regulator of either private or public sector activities in WDs as this situation would create a conflict of interest;
- c. **ERB.** The ERB reportedly has a vast body of knowledge of the financial regulation of the energy sector. Therefore, it has the skills to expand this role to private, and possibly to WD, financial operations. However, to legalize its role in the water supply sector, amendments would be necessary to ERB's enabling legislation, the Water Code, and possibly PD 198; and finally
- d. **Sector-specific Regulator:** As with telecommunications and toll roads, which have specific regulatory boards, the water supply sector could have a separate regulatory office as well, at least for financial regulation. However, the creation of an additional government body, in a period when

the Government is trying to reduce public service employment, is an alternative which should not be advocated lightly.

228. In light of the World Bank-assisted review of NWRB's role and the WCA assessment of LWUA's role, this Study can make three recommendations: (1) pending review of LWUA's operations, it should continue to be responsible for the financial regulation of WDs; (2) NWRB should remain responsible for the financial regulation of privately operated water supply systems and, to the extent necessary, utilize the resources of the private sector to undertake any financial regulatory issues which it may be asked to address; and (3) legislation should be introduced to bring all financial/economic regulatory functions together in one central government agency and that this be the NWRB or, its possible successor, the NWC.

E. Risk Sharing between the Government and the Private Sector

229. Ultimately, regulation is about allocating risks. The allocation of risk should be based on negotiation, within guidelines set by regulations. At this early stage, the extent to and price at which these risks can be passed on to the private sector are unclear. However, two general recommendations can be made about risk allocation.

230. First, as long as water supply is a public function, the public sector carries any and all of the risks associated with this activity: natural, sovereign and commercial. The latter includes the risk associated with graft, corruption (referred to in the WCA), and NRW. As discussed, the public sector is generally incapable of controlling these forces within their operating environment. In particular, potential interference from local political interests is such that cost recovery and the collection of revenues are extremely difficult. There is no apparent reason why the private sector should be expected to carry risks over which it has no control. Such demands are associated with high risk margins which would be built into the price of the private proponent's bid. If the Government considers the need for such insurance important, it should legislate and enforce protective measures (e.g. against pollution or deforestation) or take out insurance (e.g. against foreign exchange rate fluctuations).

231. Second, as risk sharing in water supply and sewerage sector projects is new in the Philippines, the risks that the private sector is prepared to carry and the prices associated with these risks should be assessed. This test of the market can be performed under the provisions of the WCA, which allows for negotiation of non-competitive bids. The several unsolicited bids that have already been received may provide the basis for the assessment of private sector attitudes. Nevertheless, this approach can only be a rough guide as many of the more significant risks are project-specific and conditions may markedly change over time. In any event, the evaluation of unsolicited or loosely specified bids will require detailed scrutiny by highly qualified experts in risk assessment, arbitration, operation, maintenance, and investment in water supply and sewerage infrastructure. The

foregoing, however, must be tempered by the Government's recently expressed policy to minimize Government guarantees. Yet the Government would apparently support risk mitigation through such schemes as the World Bank's proposed Guarantee Facility. For the privatization of ZCWD, and any other WD included in pilot privatizations, open-ended proposals should be sought. These would then be evaluated by independent experts with regard to risk sharing.

232. However, as soon as reasonable benchmarks have been established, the bidding process should be based on predetermined specification and performance standards under which prequalified bidders may be evaluated and negotiate on the sole basis of bid price. The transparent and competitive nature of the bidding process thus defined would significantly contribute to the development of the water supply and sewerage sector in the Philippines.

F. Local and Foreign Ownership Mix

233. Article XII, Section 2 of the Constitution seeks to maintain Philippine control over the exploitation of natural resources through a 60 percent local ownership requirement. The interpretation of both this constitutional provision and the Water Code leaves doubt as to the boundaries of activities that a foreign-controlled company may undertake. While the bulk of the anticipated investments are needed for treatment activity, the most significant efficiency gains could be made in those activities which may not be open to foreign-controlled companies. The Government must clearly define the exact demarcation point between extraction, treatment, delivery and sale.

G. Price Regulation

234. The bid price will determine the initial price at which private sector operators will sell bulk water under BOTs and retail water through concession contracts. However, concerning periodic reassessments, a number of alternatives were presented earlier in this Study. Future price adjustments must be transparent and equitably share returns between the public and private sector. In particular, efficiency gains must be shared fairly.

235. In reviewing the various options, the following appear most appropriate:

- a. **CPI:** A consumer price index-related formula under which the price for water is periodically adjusted based on general consumer price movements. Assuming that the CPI is well maintained and timely, this formula is relatively easy to apply. It may need to have a modifier included depending on the level of initial tariffs. When the specification of the performance indicators require a substantial increase in the standard of service (for example, requiring house connections where previously there were only standpipes), a positive multiplier may be incorporated in the formula, resulting in price

increases over time that are either faster or slower than the inflation rate. The disadvantage with this index is that the CPI may not closely resemble price movements for the major inputs in water supply operations and maintenance and financial costs;

- b. **Specific Input Price Index:** This formula is based on specific input price indices, e.g. labor, energy, chemicals and financing costs. This formula is more complicated as it relies on precise and reliable information of movements of input prices. Its advantage is that it can closely maintain the parity of the initially agreed-upon tariff level; and
- c. **Blend Price Indices:** A method that covers a blend of CPI and specific price movements might better maintain equity between the public and private sectors. It has the same advantages and disadvantages of the other indices identified above.

236. Another important variable is the frequency of the price adjustments. Obviously the more volatile the movement in prices, the more frequent the price adjustment needs to be. While the Philippine economy is becoming stronger, underlying weaknesses may affect inflation and exchange rates. Therefore, price adjustments, especially in respect of the prices of those inputs which are affected by government policy (e.g. labor and energy costs), should occur at least annually. However, those cost movements which are a function of the periodic update of major investment programs (hence based on longer term estimates and moving averages) should perhaps be adjusted every fifth year. Based on the foregoing, this Study recommends that: (1) A price formula be agreed upon under which price adjustments are reviewed annually based on movements of specific physical input prices, with all other costs updated on the basis of the CPI; (2) there be an overall review every fifth year on the basis of these criteria, as well as the projected investment program, including financing costs for the succeeding ten-year period; and (3) these reviews be undertaken by the Economic Regulator in such a manner as to provide the private sector operator the same rate of return on which the initial bid was based.

H. Sewerage Services Privatization

237. The focus on environmental matters is of particular importance for water supply and waste water. The current practice in the Philippines is to discharge untreated sewage in rivers, streams and inland lakes. The immediate effect is to pollute both surface and ground water, which then requires treatment at a high cost. If left untreated, this water will spread water-borne diseases, including cholera. In fact, the Philippines is reportedly the only country in South East Asia experiencing increasing morbidity. More often than not, this is caused by unsafe water sources.

238. The Government, through the National Urban Sewerage and Sanitation Strategy Plan and the proposed LGU Sewerage, Sanitation and Drainage Project, is seeking to address the above environmental concerns on a pilot basis. In the process of preparing the proposed project, the role of WDs in the development, operation and management of sewerage systems is invariably addressed because: (a) wastewater is produced from the supply of water; (b) WDs have more technical experience than LGUs do in this respect; and (c) cost recovery for sewerage services is problematic and such costs may be recovered by a surcharge on water bills.

239. In the context of the public-private partnerships now being pursued, the question arises as to whether sewerage service should be included in BOTs and concessions for water supply. LGUs clearly have the primary responsibility for providing sewerage and sanitation services. However, by establishing a WD, the LGU may in effect pass over the authority and responsibility for water supply - as well as for the provision of sewerage services - to WDs. Apparently, this question has not been addressed earlier, presumably because neither LGUs nor WDs have considered their respective roles in the provision of sewerage services.

240. However, regardless of whether the LGU or the WD is responsible for sewerage services, PSP in the development, operation and management of sewerage service should be considered. Accordingly, this Study recommends that: (1) as a matter of principle, the development, management and operation of sewerage systems and their facilities should be included in any water supply BOT or concession; and (2) the cost of such environmental improvements be recovered as follows: 50 percent of annual operation, maintenance and debt servicing costs as a surcharge on water bills and the remaining 50 percent as an annual contribution by the concerned LGU.

I. Government Guarantees

241. As indicated earlier in this Study, potential investors may seek and expect certain government guarantees, in particular, for the enforcement of certain laws, such as those relating to the protection of water catchment areas and purity of fresh surface and groundwater resources. Furthermore, the Government may offer guarantees to the extent that private sector operators cannot control the performance of the retail companies or obtain a prior charge over water tariff revenues, and to assure that periodic price adjustments will actually be processed as agreed. Deferrals such as those experienced with the implementation of recommendations by ERB will color the attitude of the private sector regarding investment in the water supply sector.

242. The Government should therefore seriously and promptly consider which guarantees, if any, it is prepared to assume. As stated earlier, the private sector's attitude may initially be tested through the pilot privatizations for SBMA/OCWD and ZCWD.

Nevertheless, to create momentum and comply with the intention of the WCA, the Government should give this urgent consideration.

243. Initially, the Government should not assume any risk that it does not currently carry. Given the considerations discussed concerning risk, this study recommends that: (1) as a general principle, risks be apportioned to the party--whether public or private--that has the most effective control over such risks; (2) if neither party can control the risks (e.g. of *force majeure*), they should be carried by the Government; and (3) if insurance cover can be obtained at a reasonable cost, the parties may agree to include the costs of such insurance as a cost component in the price formula as adjusted from time to time.

244. The following section summarizes the recommendations. An attempt will also be made to define a possible timetable for the implementation of any regulatory reforms.

XIII. SUMMARY OF RECOMMENDATIONS

GENERAL

245. This section brings together the various recommendations developed in this Study. First, some general principles and proposed policy reforms are offered. Second, legislative and other actions are presented according to the time needed for their implementation.

a. GENERAL PRINCIPLES AND POLICIES:

Pricing:

- i. As a long term goal, the Government should implement the policy, as expressed at the Water Summit of 1994, that water be allocated between competing users by being priced as an economic commodity. Such pricing should be regulated by NWRB or its successor;
- ii. The price at which bulk water supply should be provided under any BOT should be set so that private investors earn a market return on investments. For bids obtained through competitive bidding, the reasonable return shall be that upon which the winning bid is based. For single or unsolicited bids, the reasonable rate of return shall be established by reference to similar projects. Pricing of bulk water supply may be based on a fixed fee to provide a return on the capital invested and a variable rate based on the quantity of water traded.

During the validity of the Water Crisis Act, the Government may conduct negotiations based on the risks that the proponent is willing to assume;

- iii. The retail water supply price should be set on the basis of that established by the winning bid. In the case that only one bid is received or the bid is unsolicited, both parties should agree upon a price that would earn a reasonable rate of return for comparable projects. During the validity period of the WCA, the Government may conduct negotiations based on the risks that the proponent is willing to assume;
- iv. Sewerage charges should be recovered as follows: 50 percent of annual costs recovered as a surcharge on water rates and the remaining 50 percent by a direct contribution from concerned LGUs. People who are not directly connected to the sewerage system but who are connected to the water supply system should be charged an environmental fee equal to ten percent of the water bill;
- v. Water tariffs should include a peak load pricing factor which differentiates between the monsoon and dry period, in order to conserve water in periods of scarcity. Minimal water users could be exempt from such pricing scheme;
- vi. In principle, water supply should not be subsidized by direct or indirect equity contributions or below market interest rates to WDs or other large LGU-operated water utilities. For rural water supply, such as areas covered under the Social Reform Agenda (SRA), any subsidy should be channelled directly to intended beneficiaries rather than through construction agencies;
- vii. Tariff structures should be set in such a manner so as to differentiate between categories of consumers as well as quantities of water consumed. Generally, higher levels of consumption should correspond to higher average water tariffs;
- viii. Standards should be developed for common accounting practices to ensure that the accounts of different private sector operators/investors can be compared among firms and over time;
- ix. The economic rationale and methodology for the taxing of groundwater extraction should be studied and, if feasible, legislation should be introduced to protect groundwater resources;

Environmental:

- x. In principle, the development, management and operation of sewerage systems should be included in any water supply BOT or concession which may be contemplated;
- xi. Pollution loads on receiving waters which may be tapped for urban water supply use should be measured, controlled and used as a means to adjust the price charged for bulk water supply under BOT contracts;

Risks:

- xii. To reduce the risks to potential proponents, the Government should take the following pre-privatization measures:
 - (1) Adjust the price of water upwards to ensure that the entity to be privatized charges a level that allows it at least to break even financially;
 - (2) Take such prior measures as may be necessary to plan for the retirement and compensation of staff which may have become redundant because of privatization;
 - (3) Take necessary measures to relocate legitimate residents and squatters who may reside in catchment areas and establish rights of way; and
 - (4) Reinstate stream and rainfall gauging and collect and store available and future data in a databank accessible to all potential proponents.
- xiii. As a general principle, risks should be allocated to the party—public or private—that has the most effective control over such risks. If neither party can control the risks, they should be carried by the Government. If insurance coverage can be obtained at a reasonable cost, the parties may agree to include the costs of such insurance as a component in the price formula, to be adjusted from time to time;
- xiv. Determinations should be made as to which risks should be insured by public and private water supply and sewerage operators;

- xv. Arrangements should be finalized to determine whether the World Bank's and ADB's Guarantee facilities may be offered to private sector proponents in the Philippines;

Water Rights:

- xvi. The Government should issue a policy statement describing a transparent process for the allocation of water rights;

Regulatory Agency:

- xvii. Pending the review of LWUA's operations, (a) LWUA should continue to be responsible for the financial regulation of WDs; and (b) NWRB should remain responsible for the financial regulation of privately operated water supply schemes. To the extent necessary, the NWRB should utilize the resources of the private sector to undertake any financial regulatory issues which it may be asked to address;

One-Stop-Shop:

- xviii. The resources of the CCPAP BOT Center should be tapped to disseminate information to prospective investors and advise implementing agencies on matters regarding BOTs and similar arrangements;
- xix. A publication, in the same format as the BOT Guidelines, should be distributed setting out the process for privatization by BOT, concession or management contract of water supply and sewerage projects;

b. LEGISLATIVE:

- i. The NWRB should be reconstituted as a National Water Commission. The National Water Code should be amended to put this change into effect;
- ii. The regulatory functions now vested in MWSS and LWUA should be transferred to the proposed NWC, through amendments to the enabling legislation of MWSS and LWUA;
- iii. The potential financial/economic self-regulation available to LGUs under the LGC should be placed under the control of the NWC;

c. IMPLEMENTING RULES AND REGULATIONS:

- i. A price formula should be agreed upon under which annual price adjustments are reviewed and, if found appropriate, approved by the financial Regulator. The adjustments will take into account price movements in government-mandated wage increases and energy prices, with all other costs adjusted on the basis of the CPI. Every fifth year a comprehensive review should be undertaken by the economic Regulator, taking into account the long term investment program and adjusting prices in such a manner as to provide the private sector operator the same rate of return on which the initial bid was based;
- ii. The IRR for the WCA should be elaborated to clearly outline the procedures to be followed and prolong the response period for considering PSP proposals;

d. PRACTICES AND PROCEDURES:

- i. For the privatization of ZCWD, and any other pilot privatization now underway, open-ended proposals should be sought. These would then be evaluated by a team of independent experts (see paras. 181);
- ii. Based on the recommendations in Section XIV of this Study and legal advice received, the privatization of ZCWD may proceed as scheduled, as described in the information document prepared by the consulting firm of Deloitte Touche Tohmatsu International;
- iii. The operations of the proposed NWC should be funded from a levy on any person or corporate body holding or exercising a water right. The amount of such levy should be determined in relation to the volume of water used from a natural resource, irrespective of whether such use is for irrigation, urban, or other purposes; and
- iv. The majority of the 1,000 public utilities that currently supply water to consumers cannot be technically or financially viable in the foreseeable future. Based on international comparison, one utility per province or river basin should suffice. Therefore, the approximately 600 WDs and 1,000 LGU-operated water utilities should be encouraged to voluntarily consolidate into about 100 province-wide or river basin-wide water supply and sewerage utilities.

XIV. TRANSITORY ARRANGEMENTS AND TIMETABLE

246. Implementation of the recommended legislative actions, revision of IRRs, and policy reformulations with a view to establish regulations for the water supply and sewerage sector will take some time. In the meantime, the Government has a number of privatization activities both for BOTs and other schemes in progress, such as possible concessions for metropolitan Manila and the ZCWD privatization. The Water Crisis Act has a very short period of validity. The Government must maintain momentum for the reform of the water supply and sewerage sector. A detailed summary of Actions Plans for individual government departments and agencies is given in Annex C.

247. To achieve the above, many of the points which should be ideally covered by nationally applicable regulations may need to be accounted for through individual contracts for BOTs, concessions or other PSP activities. Pending implementation of the regulations, any such proposed contracts should be reviewed by a specialized office, such as the CCPAP's BOT Center. Accordingly, this Study recommends that the privatization of water supply and sewerage services should proceed despite the fact that all the regulatory issues may not have been addressed or codified.

248. The proposed regulatory reforms must be implemented within a feasible time frame. Obviously, measures which require changes to legislation, IRRs, policy or regulatory practices will take successively shorter periods for implementation. Tentative views on timing are as follows:

- a. **Legislative Action:** The Philippine Congress has proven that it can move fast and decisively when it feels that the national interest is at stake. Yet introducing new laws is normally easier than amending existing laws. Accordingly, introducing legislation requiring significant amendments to existing laws (for example, the Water Code and PD 198), can be addressed during the current Congress. Nevertheless, a one to two year period should be allowed before such new or amended laws can become effective;
- b. **Amendments to IRR:** To the extent that the concerned legislation permits, changes to existing rules and regulations can be processed relatively quickly. This is particularly true when such changes are managed by Interdepartmental Steering Committees, at which all concerned government parties are represented. Comprehensive reviews and amendments to IRRs can be processed within a period of between 6 and 12 months;
- c. **Policy reform:** Well-argued policy reforms allowed within existing legislation can be expected to be implemented within a period of six months. The current climate within Government is such that policy reforms which are

considered to significantly contribute to the economic and social development of the country will receive urgent attention; and

- d. **Administrative Practices and Procedures:** Practices that are under the control of a single government agency can be readily amended by the secretary of a government department or the board of directors of a GOCC. The shortage or inexperience of staff can be a constraining factor. In that case, the concerned agency should be encouraged to utilize private sector resources.

Annex A: Summary of Private Sector Participation Proposals

- a. MWSS: Concession for the Operation of the whole or parts of the water distribution system
- b. Laiban Dam BOT
 - i. Trafalgar House and associates
 - ii. Bechtel Corporation
- c. Cavite Bulk Water Supply BOT
 - iii. Johan Kent and associates
- d. Laguna de Bay Bulk Water Supply Project BOT
 - iv. Trafalgar House and associates
- e. Zamboanga Bulk Water Supply BOT
- f. Zamboanga Water District Distribution Concession
- g. Dasmariñas City Water District Concession
- h. Bulacan Bulk Water Supply BOT
- i. Subic Bay/Olongapo City Water District Concession
 - i. Biwater
 - ii. Thames Water
- j. Bohol to Cebu Water Transfer Project BOT
 - i. Anglo Philippine & Brown and Roots
- k. Cebu Mananga Bulk Water Supply BOT
 - i. Malaysian consortium
- l. Puerto Princesa Concession
- m. Lake Taal Bulk Water Supply for Batangas
- n. Davao Bulk Water Supply
- o. Baguio water supply
- p. Cagayan de Oro Concession

Annex B: Structure of Financial/Economic Regulatory Office

Head: Deputy Commissioner for Regulation

Directors: (1) Financial/Economic Regulation
(2) General Support Services

Managers: (1) Water Supply/Sanitary Engineer
(2) Regulatory Specialist - Attorney
(3) Utility Accounting Specialist
(4) Administrative/Financial Manager

Support: Accountant(s)
Economist(s)
Tariff Specialist(s)
MIS and Database Manager
Consultant Recruitment
Trainer
Auditor
Drivers/Messengers
Secretaries

Annex C: Action Plans for Government Departments and Agencies

1. This annex designates the government agencies that may take the initiative in pursuing the implementation of the recommendations contained in this Report. In reviewing the individual actions to be taken, it is apparent that several recommendations affect more than one agency. In such cases, resolving the issues through the coordinating bodies that already exist (e.g., Cabinet Cluster G, the Commission established under the Water Crisis Act, or the separate Interdepartmental Steering Committees (ISCs) established for the privatization of MWSS and the pilot Water Districts), is appropriate.

2. **Office of the President:** Many of the proposed recommendations would, if accepted by the Government, require legislative action. Given the pivotal role of the Office of the President, proposals for legislative reform should emanate from the President's Office. As the Coordinating Council of the Philippine Assistance Program (CCPAP) is attached to the Office of the President, matters pertaining to CCPAP are also covered under this heading. Legislative and other actions that may require consideration are the following:

- a. The NWRB should be reconstituted as a National Water Commission. The **National Water Code (PD 1067)** should be amended to put this change into effect;
- b. The regulatory functions now vested in MWSS and LWUA should be transferred to the proposed NWC, through amendments to the enabling legislation of MWSS and LWUA, i.e. **PD 6234 for MWSS** and **PD 198 for LWUA**;
- c. The potential financial/economic self-regulation available to independent Water Districts and LGUs operating water utilities, under the Local Government Code, should also be placed under the control of the NWC. This recommendation would require an amendment to the **Local Government Code (RA 7160)**;
- d. The **CCPAP BOT Center** should provide information to prospective investors and support Implementing Agencies with the privatization of water and sewerage services involving BOT and similar arrangements; and
- e. A publication, in the same format as the **BOT Guidelines**, should be prepared and distributed setting out the process for privatization by BOT, concession or management contract of water supply and sewerage projects and operations;

3. **WCA Legislative/Executive Commission (WCALEC):** WCALEC has a special interest in considering those findings and recommendations of this Study that directly affect the implementation of the Water Crisis Act as spelled out in the Implementing Rules and Regulations (IRR). This includes the following:

- a. The Water Crisis Act provides the facility to "fast track" privatization proposals, including BOTs, and possibly concessions. This will require an urgent resolution in respect of:
 - i. Allowable Rates of Return and the pricing of water;
 - ii. Risk Allocation and Risk Mitigation; and
 - iii. Issue of Government Guarantees.

It is therefore in the interest of the joint Legislative/Executive Commission to urgently address these issues in close consultation with NEDA, DOF and NWRB; and

- b. The IRR for the WCA should be elaborated to clearly outline the procedures to be followed.

4. **National Economic and Development Authority (NEDA):** NEDA's INFRACOM, jointly with the Department of Finance, has taken the main lead in managing the reform of the Philippines Water Supply, Sewerage and Sanitation Sector. NEDA Board Resolution No. 4 of 1994 required sector agencies to propose certain Action Plans. The following findings and recommendations of this Study are of particular interest to NEDA, especially in light of its role as the Secretariat serving Cabinet Cluster G (established at the Water Summit of December 1994):

- a. The requirement for the submission of Action Plans by NWRB and LWUA, in compliance with NEDA Board Resolution No. 4 of 1994, will be partially met as soon as the National Water Resources Management Study for NWRB is completed. LWUA was more recently requested to submit an Action Plan by November 15, 1995 to WCALEC;
- b. As a long-term goal, the Government should implement the policy, as enunciated at the Water Summit of 1994, that raw water be allocated between competing users by pricing it as an economic commodity. Such pricing should be regulated by NWRB or its successor;

- c. The operations of the proposed NWC should be funded from a levy on any person or corporate body holding or exercising a water right. The amount of such levy should be determined in relation to the volume of water used from a natural resource, irrespective of whether such use is for irrigation, urban, or other purposes; and
- d. The economic rationale and methodology for the taxing of groundwater extraction should be studied and, if found politically acceptable, legislation should be introduced to protect and charge for the utilization of groundwater resources;

5. **Department of Finance (DOF):** DOF, through its Corporate Affairs Group, has taken the lead in pioneering the privatization, by way of pilot projects, of selected Water Districts. This Study was prepared at the request of DOF to provide a direct input into the pilot privatizations now underway. As such, several of the findings and recommendations of this Study will need to be pursued by DOF to complete the pilot privatizations. In addition, it is likely that DOF will play a major role in reviewing privatization proposals, especially regarding any guarantees and risk allocations that may be sought by the private sector. The main recommendations that affect the pilot privatizations are summarized below:

Pricing

- a. The price at which bulk water supply should be provided under any BOT should be set so that private investors earn a market rate of return on investments, with consideration for the risks that must be carried. For bids obtained through competitive bidding, the reasonable return shall be that upon which the winning bid is based. For single or unsolicited bids, the reasonable rate of return shall be established by reference to similar projects. Pricing of bulk water supply may be based on a fixed fee to provide a return on the capital invested and a variable rate based on the quantity of water traded. During the validity of the Water Crisis Act, the Government may conduct negotiations based on the risks that proponents are willing to assume;
- b. The retail water supply price should be set on the basis of that established by the winning bid. In the case that only one bid is received or the bid is unsolicited, both parties should agree upon a price that would earn a reasonable rate of return for comparable projects. During the validity period of the WCA, the Government may conduct negotiations based on the risks that the proponent is willing to assume;

- c. Sewerage charges are proposed to be recovered as follows: 50 percent of annual costs recovered as a surcharge on water tariffs and the remaining 50 percent by a direct contribution from concerned LGUs. People who are not directly connected to the sewerage system but who are connected to the water supply system should be charged an environmental fee equal to ten percent of the water bill;
- d. Water tariffs should include a peak load pricing factor which differentiates between the monsoon and dry periods, in order to conserve water in periods of scarcity; however, minimal water users could be exempt from such demand management pricing scheme;
- e. In principle, water supply should not be subsidized by direct or indirect equity contributions or below market interest rates to WDs or other large LGU-operated water utilities. For rural water supply, such as areas covered under the Social Reform Agenda (SRA), any subsidy should be channelled directly to intended beneficiaries rather than through construction agencies;
- f. Tariff structures should be set in such a manner so as to differentiate between categories of consumers as well as quantities of water consumed. Generally, higher levels of consumption should correspond to higher average water tariffs; and
- g. Standards should be developed for common accounting practices to ensure that the accounts of different private sector operators/investors can be compared among firms and over time;

Price adjustments:

- h. A price formula should be agreed upon under which annual price adjustments are reviewed and, if found appropriate, approved by the Regulator. The adjustments will take into account price movements in government-mandated wage and energy price hikes, with all other costs adjusted on the basis of the Consumer Price Index (CPI). Every fifth year a comprehensive review should be undertaken by the Regulator, which will take into account the long term investment program, with the objective of adjusting prices in such a manner as to provide the private sector operator a rate of return which is not lower than that on which the initial bid was based;

Risk Mitigation:

- i. To reduce the risks to potential proponents, the Government should take the following pre-privatization measures:
 - i. Adjust the price of water upwards, as necessary, to ensure that the entity to be privatized charges a tariff level that ensures that it at least breaks even financially;
 - ii. Take such prior measures as may be necessary to plan for the retirement and compensation of staff which may become redundant because of privatization;
 - iii. Take such necessary measures as may be necessary to relocate legitimate residents and squatters who may reside in catchment areas and established rights of way; and
 - iv. Reinstate stream and rainfall gauging and collect and store available and future data in a databank accessible to all potential proponents.
- j. As a general principle, risks should be allocated to the party--public or private--that has the most effective control over such risks. If neither party can control the risks, these should be carried by the Government. If insurance coverage can be obtained at a reasonable cost, the parties may agree to include the costs of such insurance as a component in the price formula, to be adjusted from time to time;
- k. Determinations should be made as to which risks should be insured by public and private water supply and sewerage operators;

Guarantees:

- l. Arrangements should be finalized to determine whether the World Bank's and ADB's Guarantee facilities may be offered to private sector proponents in the Philippines;

Ongoing Privatizations

- m. For the privatization of ZCWD, and any other pilot privatization now underway, open-ended proposals should be sought. These would then be evaluated by a team of independent experts; and

- n. Based on the recommendations in Section XIV of this Study and legal advice received, the privatization of ZCWD may proceed as scheduled, as described in the information document prepared by the consulting firm of Deloitte Touche Tohmatsu International.

6. **National Water Resources Board (NWRB):** The NWRB has been given the opportunity to propose to NEDA's INFRACOM an Action Plan for its institutional strengthening. Matters pertaining to the management of national water resources from a quantitative and qualitative perspective are covered by a separate study; however, the following financial and economic regulatory issues raised in this Study are of special interest to NWRB, or its possible successor, a National Water Commission:

- a. Pending the completion of the ongoing studies, NWRB should remain responsible for the financial regulation of privately operated water supply schemes. To the extent necessary, the NWRB should utilize the resources of the private sector to undertake any additional financial regulatory issues which it may be asked to address because of the ongoing privatization efforts;
- b. In principle, the development, management and operation of sewerage systems should be included in any water supply BOT or concession that may be contemplated;
- c. Pollution loads on receiving waters which may be tapped for urban water supply use should be measured, controlled and used as a means to adjust the price charged for bulk water supply under BOT contracts; and

Water Rights:

- d. The Government should issue a policy statement describing a transparent process for the allocation of water rights.

7. **Department of Public Works and Highways (DPWH):** DPWH, as the oversight agency of MWSS and as Chair of the special committee to oversee the privatization of MWSS, has a special interest in several of the findings and recommendations of this Study. These should be examined by DPWH, in conjunction with the International Finance Corporation (IFC) and its consultants, which has been appointed to manage the privatization of MWSS. The following issues may be of special interest to MWSS:

- a. Under the privatization of MWSS as currently envisaged, MWSS will remain as a GOCC and be the contracting party to any BOT or concession that may be granted for the MWSS service area and bulk

supply operations. Issues concerning pricing, risk allocation and guarantees, summarized under the DOF section above, will all be of importance to MWSS in the preparation of BOT and/or concession contracts.

8. **Local Water Utilities Administration (LWUA):** NEDA Board Resolution No. 4 of 1994 attempts to strengthen LWUA's banking role; subsequently, the Water Crisis Act provided LWUA the opportunity to place before the joint Legislative/ Executive Commission its plans helping to achieve the Government's privatization objectives. The following findings and recommendations of this Study are relevant to LWUA:

- a. Pending the review of LWUA's operations, it should continue to be responsible for the financial regulation of WDs;
- b. The other issues raised in this Report that may affect LWUA will become clearer subsequent to WCALEC's consideration of LWUA's future role; and
- c. LWUA should give serious consideration to supporting the Government's privatization initiatives by encouraging the consolidation of the approximately 600 Water Districts into about 100 province-wide or river basin-wide water supply and sewerage utilities.

9. **Department of the Interior and Local Government (DILG):** DILG is responsible for the institutional development of LGUs. In respect of privatization, DILG is pursuing two initiatives. First, it is managing a Technical Assistance (TA) for the preparation of a proposed LGU Water Supply and Sanitation Project. A main objective of this proposed project is to maximize the involvement of the private sector. Second, it is embarking on a broader TA that will address other privatization options at the LGU level. Accordingly, the following findings and recommendations are pertinent to DILG:

- a. DILG has an interest in addressing the proposed amendment to the Local Government Code which would delete Section 530 under which, at present, Water Districts may become self-regulating;
- b. It should also consider the desirability of regulation of the many LGU-operated water utilities to protect the public interest; and
- c. DILG should consider cooperating with LWUA and supporting the Government's privatization initiatives by encouraging the consolidation of the approximately 1,000 LGU-operated water utilities into about 100 province-wide or river basin-wide water supply and sewerage utilities.