

PURSE PROJECT

Private Participation in Urban Services

TECHNICAL ASSISTANCE FOR WATER EFFICIENCY TEAM (WET)

INTERIM REPORT

PURSE Report No.: IQC-DP/99/29

Submitted by :

**Chemonics International, Inc.
Jakarta, Indonesia**

In association with :

The Institute for Public-Private Partnerships (IP3)

June 1999

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**BAPPENAS
DEPARTEMEN DALAM NEGERI**

**DEPARTEMEN KEUANGAN
DEP. PEKERJAAN UMUM**

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WATER EFFICIENCY TEAM
(WET)**

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INTERIM REPORT EXECUTIVE SUMMARY

As Indonesia's economy spiraled out of control, many of the country's institutions were unable to cope with the heavy burden of escalating costs and increasing interest rates. Most severely effected during this crisis have been agencies that provide services to the urban poor. The urban poor have been faced with job losses and shrinking incomes that have placed families in grave danger. One of those dangers is access to clean drinking water as local water enterprises (PDAM) too, have experienced the effects of the Monetary and Economic Crisis.

As the Monetary Crisis took hold, PDAM in Indonesia have found it increasingly difficult to provide services to their communities. In fact, in almost all cases PDAM with outstanding debt to the Central Government have been unable to meet debt service requirements. In some cases, these PDAM have been forced to sell assets, lay-off staff, reduce chemical dosing, reduce hours of operation and generally reduce all expenses because of static revenues from fixed tariff regimes. The effect of these service reductions on public health and well being can be devastating.

USAID, responding to the concerns of this crisis, has worked closely with the Indonesian Ministry of Home Affairs, Directorate General of Public Administration and Regional Autonomy (PUOD) and the Association of Water Enterprise Executives (Perpamsi) to develop the WET Technical Assistance Project. Designed as a "Rescue Program", WET's mandate is to respond to the need to maintain a minimum acceptable service level during the current crisis. The program aims to identify cost savings, productivity improvements, efficiency gains and overall better management through broad based reforms at targeted PDAM.

Results

During the initial phase, the WET project sought to analyze methods for assisting troubled PDAM and get the water flowing to these communities. The WET team took a two-fold approach. First determine if the PDAM was in financial distress and second recommend remedial action for both the immediate and medium terms that will reverse this course.

The WET Team conducted an efficiency review of the financial condition and technical operations of 16 PDAM from its inception until the final field visit on March 3, 1999. The purpose of the field visit was to confirm the current financial condition of the subject PDAM. In particular, the WET Team needed to confirm that, without substantial immediate cost savings and/or revenue increases the subject PDAM faced imminent insolvency and financial collapse. Second, the WET Team would advise the subject PDAM,

what measures could be taken to avoid the immediate concern of insolvency and medium and long-term measures to ensure its continued survival.

The results of the review are indicated in Tables 1, 2 and 3 of the Report. In all, WET believes that further assistance can be provided to 9 PDAM. A further 3 PDAM need some financial assistance but are not as critical as the initial 9.

The financial assistance is expected to include funding for small projects focused on increased revenues through distribution expansion, new connections and water loss reduction. If all projects were implemented for the subject PDAM the total cost would be approximately Rp. 16.9 billion, would increase connections by 26,235 and provide temporary employment of 154,632 man-days.

Funding for three PDAM have already been identified. The total actual funding already available is approximately Rp. 4.3 billion. This funding should result in 9,000 new connections (serving 54,000 people) and create 56,167 man-days of temporary employment.

Because of the critical need to rescue further PDAM within the Program, the WET team has identified a further 34 possibly critical PDAM. With funds provided through US-AEP and working closely with Perpamsi, PUOD, Cipta Karya and donor agencies, WET plans to develop workout plans for further communities identified. Appendix 2 of this Report outlines the timeline for continuing execution through September 1999.

BANTUAN TEKNIS UNTUK TIM EFISIENSI AIR (WET)

LAPORAN SEMENTARA RINGKASAN EKSEKUTIF

Karena kondisi perekonomian Indonesia memburuk, banyak badan usaha tidak dapat menanggulangi kesulitan dikarenakan melambungnya biaya dan tingkat suku bunga. Yang paling terkena dampak selama krisis berlangsung adalah penyediaan pelayanan terhadap penduduk miskin perkotaan. Penduduk miskin banyak yang kehilangan pekerjaan dan penyusutan pendapatan yang mengakibatkan banyak keluarga mengalami bahaya kemiskinan. Salah satu bahaya kemiskinan ini adalah kesulitan mendapatkan air bersih begitu juga halnya perusahaan air minum (PDAM), telah terpengaruh oleh Krisis Moneter dan Ekonomi.

Karena Krisis Moneter PDAM di Indonesia mengalami banyak kesulitan menyediakan pelayanan kepada masyarakat. Pada kenyataannya, hampir semua PDAM yang memiliki pinjaman menghadapi masalah tidak mempunyai membayar kewajiban kepada Pemerintah Pusat. Untuk beberapa kasus, beberapa PDAM terpaksa menjual aset-asetnya, mengurangi tenaga kerja, menurunkan penggunaan bahan kimia, mengurangi jam operasi dan semua biaya secara umum karena jumlah pendapatan yang tetap dari sistem tarif yang ada. Akibat menurunnya pelayanan ini kesehatan dan keselamatan masyarakat dapat terancam.

Untuk menanggapi permasalahan krisis ini, USAID bekerja sama dengan Departemen Dalam Negeri, Direktorat Jenderal Pemerintahan Umum dan Otonomi Daerah (PUOD) dan Persatuan Perusahaan Air Minum Seluruh Indonesia (Perpamsi) membentuk Proyek Bantuan Teknis WET. Disusun sebagai "Program Penyelamatan", maka tugas WET adalah menentukan kebutuhan yang diperlukan untuk menjaga/mempertahankan agar pelayanan dapat berjalan pada tingkat minimum selama krisis. Tujuan program ini adalah menentukan langkah penghematan biaya, perbaikan produktivitas, efisiensi dan pengelolaan yang lebih baik secara keseluruhan melalui perubahan/perbaikan secara luas pada PDAM.

Hasil

Selama tahap awal, WET project mencoba menganalisa beberapa metode untuk membantu PDAM yang bermasalah agar dapat melayani kebutuhan air kepada masyarakat. Tim WET melakukan dua tahap pendekatan. Pertama menentukan apakah PDAM mengalami masalah keuangan dan kedua menyarankan langkah perbaikan baik jangka pendek maupun jangka panjang agar permasalahan dapat teratasi.

Tim WET melakukan evaluasi efisiensi atas kondisi keuangan dan operasi teknis 16 PDAM dari tahap awal sampai kunjungan terakhir tanggal 3 Maret 1999. Tujuan kunjungan lapangan adalah menentukan kondisi keuangan PDAM saat ini. Pada umumnya, tim WET perlu meyakinkan bahwa tanpa adanya penghematan biaya yang berarti secepatnya dan/atau

peningkatan pendapatan, PDAM menghadapi kesulitan keuangan yang serius. Kemudian, Tim WET akan memberi saran kepada PDAM, langkah-langkah apa saja yang dapat dilakukan untuk menyelesaikan permasalahan secepatnya, baik jangka pendek maupun jangka panjang, untuk menjaga kelangsungan operasi PDAM.

Hasil yang didapat dari evaluasi dicantumkan pada Tabel 1, 2 and 3 Laporan ini. Secara umum WET yakin bahwa bantuan dapat diberikan kepada 9 PDAM. 3 PDAM berikutnya memerlukan bantuan keuangan namun tidak seketitis seperti ke-9 PDAM yang pertama.

Bantuan keuangan diharapkan termasuk pembiayaan untuk proyek-proyek kecil yang difokuskan pada peningkatan pendapatan melalui pengembangan distribusi, sambungan baru dan penurunan kehilangan air. Jika semua proyek dilaksanakan oleh PDAM tersebut, total biaya yang diperlukan berkisar Rp. 16,9 milyar, dan akan meningkatkan jumlah sambungan sebesar 26.235 serta menyediakan tenaga kerja tidak tetap sebanyak 154.632 orang - hari.

Bantuan keuangan kepada tiga PDAM telah dilakukan. Total dana yang tersedia berjumlah sekitar Rp. 4,3 milyar. Dana ini akan menghasilkan 9.000 sambungan baru (untuk melayani 54.000 orang) dan menciptakan pekerjaan sebanyak 56.167 orang - hari.

Karena kebutuhan yang mendesak untuk menyelamatkan PDAM lainnya dalam kerangka Program, tim WET telah mengidentifikasi masih terdapat 34 PDAM lagi yang mengalami kesulitan. Melalui bantuan keuangan US-AEP dan kerjasama Perpamsi, PUOD, Cipta Karya dan lembaga donor, WET akan membuat rencana kerja untuk daerah PDAM yang telah teridentifikasi pelayanan kepada masyarakat yang lebih luas. Lampiran 2 pada Laporan ini memberikan garis besar jangka waktu pelaksanaan lanjutan sampai dengan bulan September 1999.

**TECHNICAL ASSISTANCE FOR
WATER EFFICIENCY TEAM
(WET)**

OUTLINE OF INTERIM REPORT

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TECHNICAL ASSISTANCE FOR WATER EFFICIENCY TEAM (WET)

INTERIM REPORT

1.0 INTRODUCTION

1.1 Background and Objectives

As Indonesia's economy spiraled out of control, many of the country's institutions were unable to cope with the heavy burden of escalating costs and increasing interest rates. Most severely effected during this crisis have been agencies that provide services to the urban poor. The urban poor have been faced with job losses and shrinking incomes that have placed families in grave danger. One of those dangers is access to clean drinking water as local water enterprises (PDAM) too, have experienced the effects of the Monetary and Economic Crisis.

As the Monetary Crisis took hold, PDAM in Indonesia have found it increasingly difficult to provide services to their communities. In fact, in almost all cases PDAM with outstanding debt to the Central Government have been unable to meet debt service requirements. In some cases, these PDAM have been forced to sell assets, lay-off staff, reduce chemical dosing, reduce hours of operation and generally reduce all expenses because of static revenues from fixed tariff regimes. The effect of these service reductions on public health and well being can be devastating.

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1.2 Selection Criteria

The methodology chosen to assist the troubled PDAM focused on providing advisory services in conjunction with identifying short-term and medium-term remedial actions to return these PDAM to financial health. The short-term program establishes actions that will provide social safety net services to the community through highly targeted subsidies to offset the effects of inflation and the tariff setting regime, debt rescheduling coupled with implementing compliance mechanisms for future debt servicing, suspending royalty payments to PEMDA, travel restrictions, water quality standards reduction, limiting services,

non-revenue water reduction, improved operations and maintenance and minor short-term investments that increase revenues and reduce costs.

Information presently available to POUD and Perpamsi concerning the financial condition of most PDAM is suspect. As a result, selection of PDAM with the highest probability of need has been difficult. In order to be most effective WET identified those selection criteria displayed by PDAM that may have the highest need of WET services. As articulated in the WET Inception Report, four criteria were used to select PDAM for assistance.

1. PDAM experiencing negative cash flow.
2. Communities with limited or no alternative water sources.
3. Communities with higher urban concentrations
4. PDAM with river water sources and conventional water treatment.

The selection of PDAM to be examined was prepared in consultation with both PUOD and Perpamsi keeping in mind the four criteria. The Inception Report detailed the PDAM and alternates for initial examination.

1.3 Methodology

To prosecute the program, WET prepared a number of standard documents to act as guidelines for work execution. The principal documents were the **Water Efficiency Questionnaire** and the **Administrative and Technical Audit Program**.

The Water Efficiency Questionnaire was designed as a checklist to probe PDAM accounting and technical controls for suspected areas of efficiency improvements. The execution of this document allowed the WET Team to have a substantive format for initial meetings with Senior Management at each PDAM. It allowed Senior Management to gauge the areas that WET intended to probe and the level of detail that their staff needed to provide.

The Administrative and Technical Audit Program articulated the step by step set of procedures employed by the WET staff to examine each PDAM. The Audit Program detailed the activities and responsibilities of each staff member in executing the review.

The areas for examination included detailed review of financial and technical procedures. During the financial review, WET staff detailed the PDAM's cash flow, collection efficiency and procedures, asset accounting, debt and equity structures, tariff regime, revenue, costs and administration. Further emphasis was placed on the organization, staff utilization and efficiency and reserves required for debt repayment.

In conducting the technical review, emphasis was placed on rising costs of electricity and chemicals. WET tried to determine what measures, if any could be recommended to trim these costs during the current economic crisis. Further examination of production efficiency, potential for new connections, Non-revenue Water, inventories, production methods and water source potential was conducted.

The results of our examination reflect the detailed set of procedures employed which ensured the satisfactory execution of the reviews.

1.4 Cities Chosen

PUOD and Perpamsi guided the choice of PDAM for the initial visits. The most important criteria aside from suspected negative cash flows was the communities access to alternative water sources. With multiple alternatives, PDAM may not be in a position to raise tariffs to satisfactory levels to return to profitability. If tariffs are raised, customers will likely use easily available cheaper alternatives. In this circumstance, it is difficult to justify the continuing need for the PDAM water supplies.

The WET review is intended to look only at an individual PDAM and comment on that PDAM's financial condition and Workout Plan. Clearly some PDAM or combination of PDAM might benefit from conglomeration or consolidation. While WET observed instances where mergers of organizations or activities might make sense, suggestions regarding merger and consolidation is beyond the WET Scope of Work and hence, no comments in this regard is included in our Reports.

Table 1 of our Inception Report detailed the list of PDAM WET intended to assist. There were two changes from the original list. The two changes occurred in West and East Java. Replacements for those PDAM came from the same Province.

In West Java, PDAM Serang replaced PDAM Lebak and in East Java PDAM Pacitan replaced PDAM Probolinggo. PDAM Lebak was replaced because the President Director felt that they would receive only limited benefit from WET assistance. PDAM Probolinggo was replaced to accommodate PDAM Pacitan, which appeared to be in greater need of assistance. Assistance to PDAM Probolinggo will be addressed as WET activities continue.

In all 16 PDAM were visited. For each a preliminary visit took place. For each, a Field Trip Report was prepared which discussed the financial condition of the subject PDAM and their need for continuing Technical Assistance.

2.0 INTERIM RESULTS

2.1 Field Visit Results

The WET Team conducted an efficiency review of the financial condition and technical operations of 16 PDAM from its inception until the final field visit on March 3, 1999. The purpose of the field visit was two-fold. First the WET Team needed to confirm the current financial condition of the subject PDAM. In particular, the WET Team needed to confirm that, without substantial immediate cost savings and/or revenue increases the subject PDAM faced imminent insolvency and financial collapse. Second, the WET Team would advise the subject PDAM, what measures could be taken to avoid the immediate concern of insolvency and medium and long-term measures to ensure its continued survival.

The results of our review are indicated in the three tables presented below. The WET Team presented its results as those PDAM that were in need of continuing assistance, PDAM that were borderline (in need of further assistance but not facing imminent financial collapse) and those that did not need further assistance

TABLE 1
PDAM - FURTHER ASSISTANCE NEEDED

NO.	PDAM	REASON FOR ASSISTANCE
1.	Majalengka	Negative cash flows, high staff per connection, excess capacity.
2.	Batang	Negative operating ratio, high NRW, excess capacity, high staff/connection
3.	Blora	Negative operating ratio, high investment costs, high staff/connection, system improvements needed.
4.	Jember	Negative operating ratio, need new water sources, can't add new connections, effected by Krismon.
5.	Kulon Progo	Negative operating ratio, Idle capacity, high staff/connection. New meters/connections needed
6.	Lamongan	Negative operating ratio, effected by Krismon, high staff/connections, system improvements needed, meters and new connections, receivable collection poor.
7.	Pacitan	Negative operating ratio, high staff per connection, system improvements needed, receivable collection poor, High NRW.
8.	Tuban	Negative operating ratio, high NRW, excess capacity
9.	Nganjuk	Negative operation ratio, excess capacity, effected by Krismon,

TABLE 2
PDAM - BORDERLINE

NO.	PDAM	DISCUSSION OF ASSISTANCE
1.	Tegal	Needs new water source, Positive operating ratio, others have higher needs.
2.	Jepara	Negative operating ratio, cash flow from new connections, loans not yet due, others in more immediate need.
3.	Gresik	Negative operating ratio; cash on hand from default on debt repayments, others in more immediate need.
4.	Pasuruan	Negative operating ratio, strong expansion possibilities, cash from default on debt repayments, others in more immediate need.

TABLE 3
PDAM - NO FURTHER HELP NEEDED

NO.	PDAM	REASONS FOR REJECTING
1.	Serang	Positive operating ratio, strong cash flows, income from private sector concession.
2.	Pandeglang	Positive operating ratios, direct assistance being provided by ADB.
3.	Garut	Positive operating ratio, strong cash flows.

2.2 Statistical Results

Financial and technical information has been assembled in a matrix for comparison of PDAM performance. This matrix was prepared to review and analyze common characteristics, should they exist, of PDAM in financial difficulty. These common characteristics may shed light on benchmarks which might be keys in determining when PDAM are approaching financial difficulty. Clearly benchmarks are not the only key to this determination but are helpful.

The statistics presented in Table 4 below are arranged in three categories; technical information, income statement statistics and balance sheet statistics. At the top we include the month ending from which the information was extracted and the total population served by the PDAM.

As one might imagine, PDAM that are most vulnerable are those with negative operating ratios. The operating ratio is defined as operating costs divided by operating revenues. Clearly, if this statistic is negative either tariffs are too low to support operations or connections are insufficient to support investments in assets or both. To determine the reason that a PDAM has a negative operating ratio, one must first look at idle capacity, then operating costs and finally tariffs.

The results of the WET review clearly demonstrate that the first cause of operating difficulties was idle capacity. While not true in every case, a pattern developed where, PDAM who had recently built new supply were unable to sell much of this supply principally because new connections did not keep pace with the water to be supplied.

We further examined the reasons for this anomaly. In the first instance we tried to determine if the new supply was built but demand failed to materialize. However, in almost every case coverage was very low and many of the existing and potential customers had limited if any alternative to water supplied by PDAM. Second we looked at waiting lists held by the PDAM. In almost every case, substantial waiting lists existed. Through inquiry and observation, we determined that two factors contributed to the failure to connect new consumers. First, PDAM did not have funds to purchase the pipe and new meters to connect these new customers. Second, PDAM did not have funds to pay the cost of external factors such as rights of way.

The largest cost factor in most PDAM Income Statements was staffing. While some PDAM operate at fairly efficient staff per connection levels, many PDAM were grossly overstaffed. For example, one PDAM had a staff per connection ratio of 20 per 1,000. Contributing factors to overstaffing were the number of branches that proliferated in most PDAM. Some PDAM staffed these branches with similar organizations without regard to the number of customers or size of the area. To address this problem, managers at the PDAM need to rationalize their operations to ensure their operations are most efficient.

From the statistics WET compiled, we noted another very troubling cost category: Administration. We do note that interest payments and directors salaries are included in administration cost which have a significant effect on the total cost. However, office and travel expenses make up a large percentage of many administrative budgets. These costs need to be rationalized and justified.

In preparing our analysis of operating ratios we eliminated depreciation as a non-cash item. However, prudent accounting and cost recovery measures must include depreciation. Depreciation is the reserve for capital costs that have been incurred and will be incurred in the future to replace the assets used in operations. In almost every instance PDAM ignored depreciation cost because it did not require an immediate outlay of cash. To ignore the need to provide for full cost recovery including depreciation is a serious error. WET strongly

TABLE 4
STATISTICAL INFORMATION FROM PDAM VISITS

WET Project
Statistics for PDAM Visited

Statistic	PDAM Kabupaten Dati II										Total Project (1 - 10)
	Majalengka 1	Serang 2	Pandeglang 3	Tegal 4	Batang 5	Jepara 6	Blora 7	Jember 8	Garut 9	Kln Progo 10	
Month	Sept. 98	Sept. 98	Sep. 98	Sep. 98	Oct.98	Nov.98	Sep.98	Des. 98	Nov.98	Nov.98	
Population	209,645	NA	194,198	1,281,000	116,850	NA	154,812	276,012	232,000	175,484	
Technical Information											
Water Source	Deep Well	Deep Well	River	Spring	Spring	Deep Well	River	Deep Well	Spring	Spring	
Flow System	Pumping	Pumping	Pumping	Gravity	Gravity	Pumping	Pumping	Pumping	Gravity	Gravity/Pump	
Coverage	14%	34%	34%	8%	13%	11%	18%	8%	9%	31%	
Connection	6,227	15,207	5,558	5,810	7,466	7,327	7,331	18,632	10,022	7,344	
Capacity (LPS)	117	291	82	90	174	122	153	226	183	149	
Idle Capacity [%]	25%	0%	23%	22%	50%	0%	18%	0%	NA	34%	
NRW	25%	30%	43%	32%	50%	24%	35%	20%	50%	29%	
Income Statement											
Operating Ratio	95%	114%	124%	111%	85%	79%	79%	74%	125%	97%	
Staff/Connec. (1.000)	20	14	18	13	12	9	12	7	13	10	
Average Tariff	645	602	780	686	323	592	586	444	605	410	
Average Cost/m3	894	595	755	293	378	728	740	670	602	423	
Oper cost/Total cost	42%	15%	48%	50%	59%	39%	62%	63%	41%	59%	
Admin cost/Total Cost	58%	85%	52%	50%	41%	61%	38%	37%	59%	41%	
Non-Sales/Total Rev.	2%	34%	15%	18%	41%	42%	22%	11%	4%	8%	
Balance Sheet											
Acc. Receivable/Days	43	NA	61	67	58	63	61	64	82	52	
Current Ratio	1.21	NA	3.01	7.36	19.00	NA	1.10	0.27	2.29	3.24	
Debt to Equity	4%	NA	1%	3%	58%	NA	20%	85%	2.29%	0%	
Debt Coverage	0.00	NA	0	0	0	NA	1.01	0.94	0	0	
Project Information											
Project Cost	Rp. 2.25 Bn	NA	NA	Rp. 2.76 Bn	Rp. 1.75 Bn	NA	Rp. 3.13 Bn	Rp. 0.35 Bn	NA	Rp. 0.41 Bn	Rp. 10.64 Bn
Man-days work	24,340	NA	NA	20,117	14,587	NA	21,029	7,750	NA	4,443	92,26
New Connections	4,710	NA	NA	3,560	1,500	NA	2,915	1,500	NA	864	15,04
Coverage Increase	11%	NA	NA	6%	6%	NA	7%	1%	NA	4%	

Notes :

NA = Not Available
 NYA = Not Yet Available
 NRW = Non Revenue Water

* = Urban

TABLE 4
STATISTICAL INFORMATION FROM PDAM VISITS

WET Project
Statistics for PDAM Visited

Statistic	PDAM Kabupaten Dati II						Total Project (11 - 16)	Grand Total Project
	Lamongan	Gresik	Pasuruan	Pacitan	Tuban	Nganjuk		
	11	12	13	14	15	16		
Month	Decem. 98	Decem. 98	Decem. 98	Decem. 98	Decem. 98	Decem. 98		
Population	160,854	919,515	412,813	531,991	1,003,289	999,726		
Technical Information								
Water Source	River	River	spring	Spring, River	spring/deep well	River		
Flow System	Pumping	Pumping	pumping	Gravity , Pumping	grav./pumping	Gravity		
Coverage	49%	13%	10%	26%	50 % *	34 % *		
Connection	9,542	24,349	10,289	5,853	15,500	11,230		
Capacity [LPS]	78	410	422	165	260	297		
Idle Capacity [%]	0%	26%	71%	42%	23%	33%		
NRW	28%	33%	18%	41%	43%	34%		
Income Statement								
Operating Ratio	57%	61%	63%	42%	83%	47%		
Staff/Connec. (1.000)	10	9	14	15	7	7		
Average Tariff	1,047	1,526	626	569	579	552		
Average Cost/m3	1,850	2,488	986	1,340	697	1,164		
Oper cost/Total cost	66.38%	57.57%	43.00%	73.24%	66%	45%		
Admin cost/Total Cost	33.62%	42.43%	57.00%	26.76%	34%	55%		
Non-Sales/Total Rev.	24.00%	23%	19%	8.47%	19%	20%		
Balance Sheet								
Acc. Receivable/Days	173	34	52	90	45	57		
Current Ratio	405%	88%	80.80%	32%	713%	7%		
Debt to Equity	167%	87.68%	117.00%	27%	7%	77%		
Debt Coverage	-	0.60	-	-	-	-		
Project Information								
Project Cost	Rp. 3.40 Bn	NA	NA	Rp. 0.65 Bn	NA	Rp. 2.22 Bn	Rp. 6.27 Bn..	Rp. 16.91 Bn
Man-days work	33,830	NA	NA	4,736	NA	23,800	62,366	154,632
New Connections	6,000	NA	NA	1,186	NA	4,000	11,186	26,235
Coverage Increase	19%	NA	NA	4%	NA	12%	NYA	-

Notes :

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suggests that all future budgets, tariff analyses and financial projections include depreciation as a vital component in full cost recovery analysis and return on investment.

At the bottom of our statistical analysis we include the estimated cost, man-days of temporary employment generated and number of new connections that will be realized if projects proposed by WET are implemented. In most cases, WET proposed that investments be made in new pipe and meters to increase the number of connections. In some cases, new supply is needed along with these new connections. Of course, to make most of these projects succeed PDAM must implement tariff increases. Surprisingly, however, immediate tariff increases are generally modest. They range from as low as 20% to as high as 50% in an environment where Indonesia's inflation rate in 1998 was almost 80%.

2.3 Follow-on Visits

WET reports were circulated to all PDAM visited as well as Central Government sponsors. In each report WET assessed the financial capacity of the PDAM visited. For those deemed to be in distress, WET prepared a workout plan. The workout plan was aimed at developing a financial recovery action plan for the PDAM. This financial recovery action plan included new supply as needed, new connections and remedial works. Further a pro-forma financial projection was prepared with the needed investment, debt funding and tariff increases.

To verify our analysis and to confirm the willingness of the subject PDAM to participate, WET made follow-on visits to PDAM for which workout plans were devised. In most cases, the information from our original visit was confirmed. In some cases, such as in Kulonprogo, the financial condition of the PDAM deteriorated at a faster rate than originally projected. In other cases, such as Batang and Jember, both PDAM was able to obtain approval for tariff increases and use of IMPRES funds through local government to advance the project. Batang will execute their project in full using Rp. 1.2 billion IMPRES grant and Jember will develop all their needed spring sources from a Rp. 1.1 billion IMPRES grant. In places such as Lamongan, PDAM was able to obtain approval for the use of unused debt reserves and local government programs to advance the workout plan advised by WET. In all, Lamongan will mobilize approximately Rp. 2 billion. This will amount to almost 50% of the funding needed for their system remedial works and distribution expansion.

Each of these funding vehicles was accompanied by agreements on tariff increases, hiring freezes and other measures to agree with the WET program. To this writing the total funds already mobilized by the PDAM is Rp. 4.3 billion (US \$ 505,000).

2.4 Common Issues

In this section we explore problems common to each PDAM that WET has encountered. There were 9 items that we considered crucial and essential to be addressed by all the PDAM we examined

2.4.1 Overbuilt Supply

In most instances PDAM have concentrated on building supply rather than on servicing customers. It may have been thought that if you build it people will find a

way to connect. As a result, significant idle capacity exists above and beyond that which the PDAM can sell. In one case idle capacity was almost 70%. It is evident that PDAM must match supply with demand as most businesses do. Meeting consumer needs requires planning and continuous dialogue in the community. PDAM must focus on listening to their customers, providing better service and matching their connections with obtaining supply.

2.4.2 Overstaffing

Staff per connection ratios in developed countries are normally at levels below 4 per 1,000. In a developing country context, these ratios are somewhat higher as staff salaries are lower and there is less focus on technological solutions. However, WET feels that PDAM for the most part are grossly overstaffed. Ratios as high as 20 per 1,000 connections were noted. The reason for this excessive staff were both political and management. Political issues entail using the PDAM as an employment machine to reduce area unemployment. It can also be a source of political cronyism.

Management issues entail poor rationalization of branches. Branches are often staffed with full administrations. Further smaller branches need to be run at optimal utilization. Many of the branches were set up as small systems or IKK. These small systems are best administered through the PDAM main office with minimal administration costs.

2.4.3 Travel and Office Costs

At most of the PDAM we visited, travel and office expenditures were the highest cost category for the PDAM. These costs included trips to attend conferences, meetings in Jakarta, office entertainment and other activities not necessarily associated with income generation. While WET did not review these costs in great detail, it is understood that parties tangentially associated with the PDAM incurred some of these expenses.

WET believes that PDAM must control these expenses. Unnecessary travel must be restricted to actual business needs. Finally, travel by parties not involved with the day to day management of PDAM must be eliminated.

2.4.4 PAD

PAD is a term associated with local government revenue. It literally means locally derived revenue. PAD is the equivalent of dividend payment to local government equity. Ministry of Home Affairs rules allow PDAM to defer any payment until service coverage exceeds 75% of the population. None of the PDAM that WET visited exceeded this figure.

WET also observed PAD being paid even though the PDAM was not profitable. This was in the form of an advance. While the PAD advance is carried as a prepaid item on PDAM books, local government is draining needed cash from the PDAM. WET recognizes that payment of an investor dividend is a normal activity.

However, an advance payment is unusual to say the least. Furthermore, PDAM performs an essential service to the community. It is questionable whether PDAM should be forced to pay any form of dividend.

2.4.5 Operations and Maintenance

During this crisis period, PDAM have been reducing expenditure on operations and maintenance. While in the short-run this may be their only option for survival, we fear that it may have negative long-term consequences. Reduced maintenance expenses, while prudent during the economic crisis, can lead to problems if the low maintenance regime continues for an extended period of time.

2.4.6 Electricity Costs

PDAM are classified industrial customers by PLN. Electricity costs have risen significantly in the past year. As an industrial customer, PDAM are forced to pay the highest possible rate for electricity. This high cost translates into higher tariffs to consumers. To alleviate this burden on consumers, at the very least during the economic crisis, PLN should be encouraged to charge a reduced rate to PDAM. WET suggests that PDAM pay a government rate of tariff rather than the full industrial rate.

2.4.7 Chemicals

Chemicals used in the purification process are mostly imported. Consequently, chemical costs have increased dramatically. To save money, WET noted that some PDAM have reduced chemical dosages in the purification process. Reviews of recent laboratory test show that in some cases dangerously high levels of contaminants exist. This alarming development has given WET cause for concern. The Indonesian Government must intervene to avoid serious erosion of water treatment standards. Failure to do so may have serious implications to public health.

2.4.8 Planning

Virtually every PDAM examined has had continuing and sustained losses since prior to the Monetary Crisis. Their current cash flow deficits cannot be attributed to the Monetary Crisis alone, since it is evident that significant losses existed long before the current economic downturn. Instead losses can be attributed to relatively high investment costs, the absence of tariff increases for a number of years, high staff per connection ratios, not emphasizing new connections and revenue increases and many other issues. WET has observed that the incentive system for PDAM must encourage planning mechanisms that create targets and rewards for achieving those targets. To do so, requires a greater emphasis on medium- and long-range planning.

Currently, most PDAM have a planning function that reviews new water supply sources and distribution system expansion. This planning is relatively short-range in nature and does not normally encompass financial issues such as payback or returns

on investment. WET encourages the development of medium and long-range planning activities in all PDAM and a strong emphasis on financing returns.

2.4.9 Training

With the multiplicity of concerns articulated in the WET analysis, it is evident that certain management weaknesses at many PDAM have led to these problems. WET encourages the Ministry of Home Affairs and the Department of Public Works, Directorate General of Human Settlements (Cipta Karya) to review development training needs at all PDAM. The evidence that WET has gathered shows that not only technical training is needed but financial training.

With the assistance of donor organizations such as USAID, training programs in technical areas such as operation and maintenance and chemical dosing is vital. Further management training such as long-range planning, financial forecasting and financial management for non-financial managers would provide PDAM with necessary skills for new incentive systems.

2.5 Other Donor Activities

While the USAID sponsored WET program is the first and currently the only project to provide direct technical assistance to PDAM, the World Bank and the Asian Development Bank (ADB) are currently providing their own crisis assistance program. These programs are geared to providing loans and grants that will aid in the recovery of PDAM to financial stability. WET has worked closely with the World Bank and the GOI executing agency, the Department of Public Works, Directorate General of Human Settlements in the development of their program. While WET has worked closely with these agencies the structure that is evolving has caused WET some concerns. Those concerns are:

- The loan terms from the World Bank are for ten years with a three-year grace period. WET projections use five-year terms with only a one-year grace period. The shorter term suggested by WET was intended to encourage higher tariffs, match debt terms with asset lives and exact greater financial discipline at the PDAM.
- PDAM must prepare their own funding requests. WET is concerned that these funding requests might emphasize extraneous needs rather than the vital funding requirements. Further, because the forms prepared by the World Bank consultants are somewhat complex, the PDAM might not have the expertise to properly prepare requests.
- Approvals for loan disbursement require agreement from a committee of top-level central government officials. Because of the great number of duties of these top-level officials, WET is concerned that this approval mechanism could operate very slowly putting further strain on the already limited cash reserves at most PDAM.
- The forms prepared by World Bank consultants include projections of annual repayment of debt over the 10-year life of the loan. We have not seen

evidence of a workout plan such as WET has prepared. Workout plans are generally very short term, track monthly activity and are guides for monitoring implementation. Annual projections are not satisfactory for this type of analysis.

- In numerous meetings that included Ministry of Finance (MOF) officials, statements have been made that the MOF is unwilling to lend further funds to delinquent PDAM. Taken in the context of the absence of workout plans and monitoring mechanisms, WET agrees with the MOF. However, with properly prepared plans, continuous monitoring and enforcement mechanisms, as advocated in the WET approach, the MOF stands the best chance of repayment.
- Monitoring implementation of the PDAM action plans is essential to the recovery program. From WET's review of the Terms of Reference for the World Bank consultants for this loan it is unclear how and how often monitoring of the PDAM activities and progress against their action plan will occur.

WET encourages the World Bank and ADB to review and address the issues indicated above. WET has agreed to work closely with as many PDAM as possible to assist in preparation of workout plans and monitoring execution. WET will continue to provide copies of all reports and suggest funding arrangements for PDAM.

3.0 CONTINUING ACTIVITIES

3.1 Additional PDAM

The WET Technical Assistance has been successful in identifying issues and preparing workout plans for 16 PDAM in Java. Working closely with Perpamsi, PUOD and Cipta Karya, WET has been encouraged to expand its coverage. Using similar criteria detailed in the WET Inception Report, 34 additional PDAM have been chosen for analysis. WET worked very closely with the staff of Perpamsi to choose the additional PDAM. Following in Table 5 are the list of additional PDAM that WET will assist.

WET is aware of the presence of donor sponsored consultants in some of the cities chosen. This includes consultants from German GTZ and Danish Danida. To the extent possible, WET will work closely with these consultants to facilitate analyses of the additional PDAM.

3.2 Continuing Activities

WET has noted the need for further activities to enhance the recovery and rescue program for PDAM. While the highest priority will be focused on identifying PDAM that need to be incorporated in the Rescue Program, these continuing activities are vital to the long term survival of Indonesia's PDAM. These continuing activities include assisting PDAM develop business plans, monitoring implementation of the workout program and training in long-range planning and financial management.

No.	PDAM/City	Technical Information							Revenue/Costs Ratio
		Urban population	Coverage (%)	Customer	Water Losses (%)	Source Raw Water	Production Capacity LPS	Flow System	
I	DI Aceh								
1	PDAM Aceh Besar	274,384	4.5	2,469	NA	River	90	Pumping	NA
2	PDAM Darau Aceh	201,762	58	17,066	38	River	300	Pumping	1.59
II	North Sumatera								
1	PDAM Kab. Asahan	903,072	7	12,755	27	River	212	Pumping	NA
2	PDAM Tanjung Balai	101,796	50	9,290	27	River	120	Pumping	NA
III	Riau								
2	PDAM Indragiri Hilir	53,244	45	3,322	55	River	60	Pumping	NA
IV	West Sumatera								
1	PDAM Kab. Solok	47,325	56	4,346	49	Spring, River	73	Pumping, Gravity	NA
2	PDAM Kodya Padang Panjang	40,664	73	4,230	26	Spring	58	Pumping	0.92
V	Bengkulu								
1	PDAM Kodya Bengkulu	236,647	28	11,318	25	River	200	Pumping	0.8
2	PDAM Kab. Bengkulu Selatan	219,701	18	4,080	38	River	115	Pumping	0.78
VI	Jambi								
1	PDAM Kab. Bungo Tebo	427,582	26	5,190	35	Deep Well	53	Pumping	NA
2	PDAM Kab. Kerinci	288,822	28	12,451	26	River	148	Pumping	NA
VII	Lampung								
1	PDAM Kab. Lampung Utara	174,044	14	4,994	40	River, Spring, Deep Well	103	Gravity, Pumping	0.73
2	PDAM Kab. Lampung Tengah	159,776	21	10,299	21	Spring, River	NA	Pumping	0.81
VIII	South Sumatera								
1	PDAM Kab. Bangka	81,325	19	9,098	10	Lake, River	138	Pumping	0.96
2	PDAM Kab. Belitung	68,509	23	3,059	82	River	75	Pumping	0.5
3	PDAM Kab. Musi Rawas	112,843	30	9,254	NA	Spring, River	160	Gravity, Pumping	0.9
4	PDAM Muara Enim	201,551	70	9,241	23	River	120	Pumping	NA
IX	West Java								
1	PDAM Kab. Purwakarta	167,706	40	12,971	26	Spring, River	147	Gravity	0.85

No.	PDAM/City	Technical Information						Revenue/Costs Ratio	
		Urban population	Coverage (%)	Customer	Water Losses (%)	Source Raw Water	Production Capacity LPS		Flow System
X	Central Java								
1	PDAM Kab. Purbalingga	52,712	31	12,463	37	Spring	208	Gravity, Pumping	0.97
XI	East Java								
1	PDAM Kadya Probolinggo	179,923	45	7,967	16	Spring	78	Pumping	0.73
2	PDAM Kab. Situbondo	573,679	13	15,271	23	Deep Well, Spring	180	Gravity, Pumping	0.94
3	PDAM Kab. Pamekasan	75,741	15	6,445	49	Deep Well	147	Pumping	0.89
4	PDAM Kdya Blitar	121,580	49	8,033	32	Deep Well	53	NA	0.68
5	PDAM Kab. Sampang	706,886	16	7,483	NA	NA	NA	NA	0.87
XII	South Kalimantan								
1	PDAM Hulu Sungai Utara	51,456	75	5,272	25	River	60	Pumping	NA
2	PDAM Hulu Sungai Tengah	64,206	44	3,803	37	River	60	Pumping	NA
XIII	East Kalimantan								
1	PDAM Kab. Pasir	55,845	52	3,528	28	River, Spring	45	Pumping, Gravity	NA
XIV	Central Kalimantan								
1	PDAM Kapuas	47,802	73	8,940					0.93
2	PDAM Barito Utara	55,800	58	4,728	22	River, Spring	86	Gravity, Pumping	1.75
3	PDAM Barito Selatan	54,812	69	5,617	12	River	88	Pumping	NA
XVI	West Kalimantan								
1	PDAM Kab. Kapuas Hulu	14,885	46	3,996	22	River	48	Pumping	0.95
XVII	Central Sulawesi								
1	PDAM Kab. Banggai	146,264	53	8,299	37	River	100	Pumping	0.8
XVIII	South Sulawesi								
1	PDAM Wajo	97,614	42	3,043	29	River	50	Pumping	2.6
XIX	South East Sulawesi								
1	PDAM Kodya Kendari	110,400	5	1,915	65	Spring, Deep Well, River	63	Pumping, Gravity	NA
2	PDAM Kab. Kendari	NA	NA	6,338	NA	River	200	Pumping	NA
	TOTAL	6,170,358		258,574			3,638		

NA : No information currently available

WET has already begun its development of business planning tools. In Appendix I to this report is an outline for a business plan. Business plans incorporate all aspects of the PDAM's operations. The final product is a five-year plan to develop new sources, transmission and distribution systems, storage, human resources, service, tariffs and financing. WET hopes that regular preparation of this planning tool will allow PDAM to become more self reliant and financially stronger.

Monitoring activities for the PDAM that WET has and will assist is intended to ensure compliance with the program of assistance. WET feels that a Report Card on PDAM's achievements will be a valuable method of reinforcing the program. Also, the MOF will benefit from the information that WET gathers on PDAM's ability to repay its debt. Clearly, if a workout plan is put into effect for an insolvent debtor, the creditor must monitor progress toward meeting the goals of the workout plan. WET believes that it has a vital role to play in this activity.

Finally, to ensure an effective Rescue Program, the results must have sustainability. WET believes that sustainability can be achieved through adequate training of PDAM staff. The training activities described above in paragraph 2.4.9 detail the types of training needs that WET recognized. Training programs of this nature need to be carefully devised and properly delivered. While the purpose of this paper is to propose and articulate on-going activities, WET feels that these activities should include a training program to develop the institutional capacity of as many PDAMs as possible. The training program envisioned includes help in planning, business plan development, financial management and financing alternatives.

For all these programs, WET stresses the need for commitment on the part of the management and staff of PDAM. In this era of reform in Indonesia, citizens and the government can seize the day. They should encourage greater accountability and professionalism on the part of Public Employees. WET encourages USAID, Perpamsi and the Government of Indonesia to identify those communities and public servants that will play a vital part in the future of Indonesia in water supply.

3.3 Funding

Through US-AEP additional funding is available to WET of \$300,000. We project these funds will be exhausted by September 1999. Recognizing the essential role WET is playing in the Rescue and Recovery Programs for PDAM, USAID is considering additional funding. The additional activities described above anticipate further funding. If this funding does not materialize, the project will end once the funds are exhausted. If funds can be realized, achievement of the programs and training indicated above will offer great benefits for the survival of all PDAMs in Indonesia. Furthermore, WET expects that Indonesia will see more professional, better-managed and more profitable PDAMs in the future.

4.0 REPORTING

In our Inception Report we described our reporting regime to include Trip Reports and a Final Report. This Interim Report replaces the Final Report described in the Inception Report.

WET will continue to report its activities after each field visit in the form of a Field Trip Report. Future Reports will include Business Plans, training programs and a Final Report. The nature and timing of each will depend on funding as it becomes available.

For the purpose of this Interim Report, WET will prepare the Field Trip Reports and the Final Report at the end of September 1999. Revisions to the timing and nature of reports will be advised if new funds are provided along with further scopes of work.

5.0 IMPLEMENTATION

Attached Appendix 2 is a detailed GANNT chart of intended activities until 30 September 1999. During this period, WET will make initial identification visits to as many PDAM as possible. The plan is to visit 18 PDAM between 1 May 1999 and 30 September 1999.

The effort during the month of May and early June will be curtailed significantly. Management of the project is concerned that during the period preceding the election period campaign violence might prevail. To guarantee the safety and well being of the staff of the WET project, and in concurrence with Perpamsi, only limited travel will be scheduled. This time will be set aside for preparation of business plans for PDAM identified during the first phase of the project and planning for the prosecution of the further phases.

Following experience from the initial phase of the project, WET will try to increase its efficiency by visiting two sites in one field visit. The GANNT chart presented in Appendix 2 details the schedule of visits. After visiting two PDAM the WET team will return to Jakarta to prepare reports on activities and remedial actions of the PDAM visited. Time permitting follow on visits to the subject PDAM will be scheduled.

APPENDIX I
INTERIM REPORT

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APPENDIX II
INTERIM REPORT

WET-2 PROGRAM

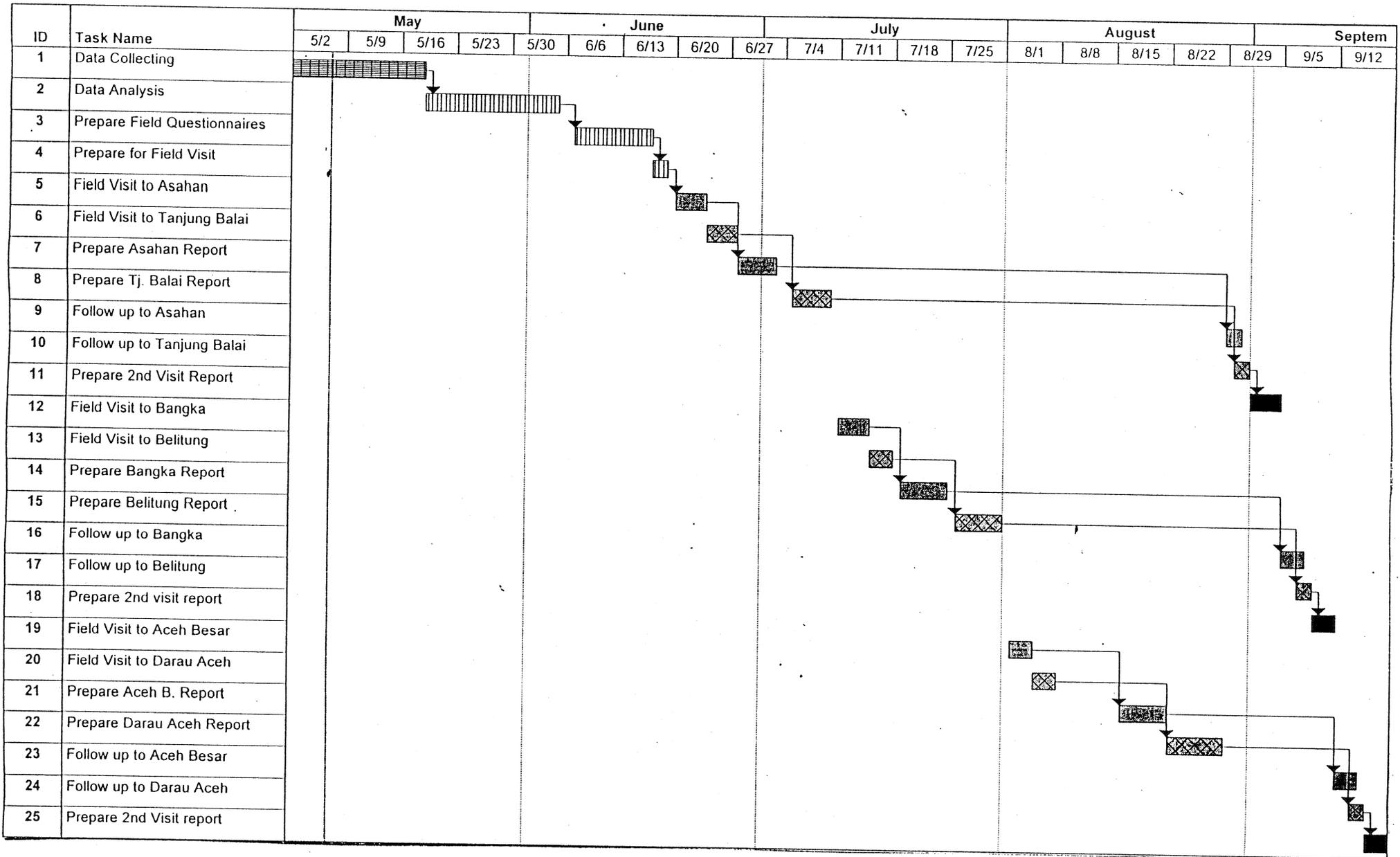
	ISLAND	PROVINCE		PDAM	FIELD TEAM
A.	SUMATERA				
		Aceh	1.	Aceh Besar	G1
			2.	Darau Aceh	G1
		Sumut	3.	Kab. Asahan	G1
			4.	Tanjung Balai	G1
		Jambi	5.	Musi Rawas	G2
			6.	Muara Enim	G2
		Sumsel	7.	Kab. Bangka	G1
			8.	Kab. Belitung	G1
		Sumsel	9.	Kab. Bungo Tebo	G2
			10.	Kab. Kerinci	G2
		Lampung	11.	Kab. Lampung Utara	G3
			12.	Kab. Lampung Tengah	G3
B.	SULAWESI				
		Sulteng			
			13.	Kodya Kendari	G2
			14.	Kab. Kendari	G2
C.	JAWA				
		Jatim	15.	Kab. Pamekasan	G3
			16.	Kab. Sampang	G3
		Jatim	17.	Kodya Probolinggo	G3
			18.	Kodya Blitar	G3

LEGEND:

- G1 - Bennett P, A. Rosyid, Enjang H.
- G2 - Edward M., Agus H., Firly KJ
- G3 - Purwoko H., Jeffry F. , Benny D.

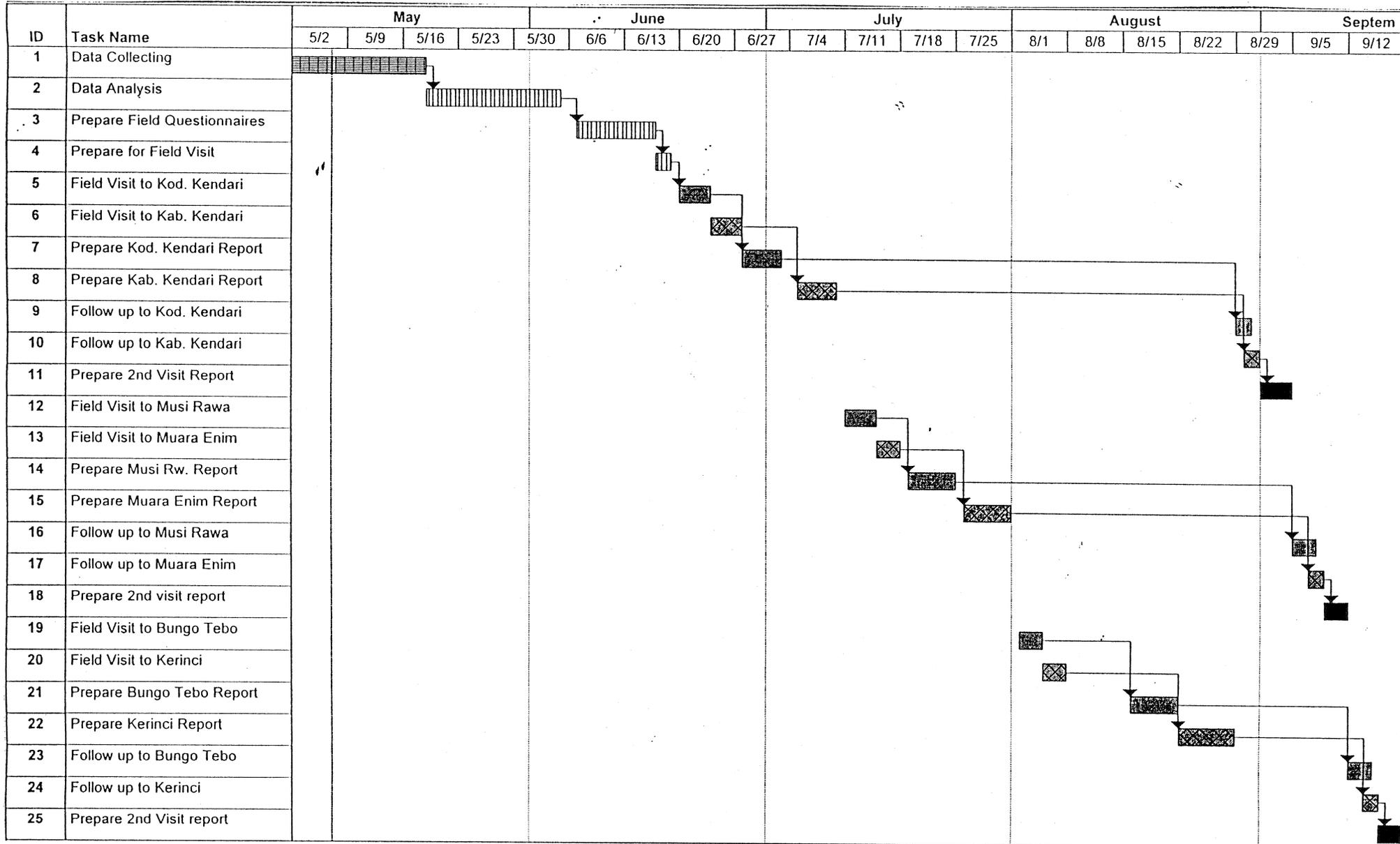
WET-2 PROGRAM (1)

[G1 -- BHP,AR,EH]



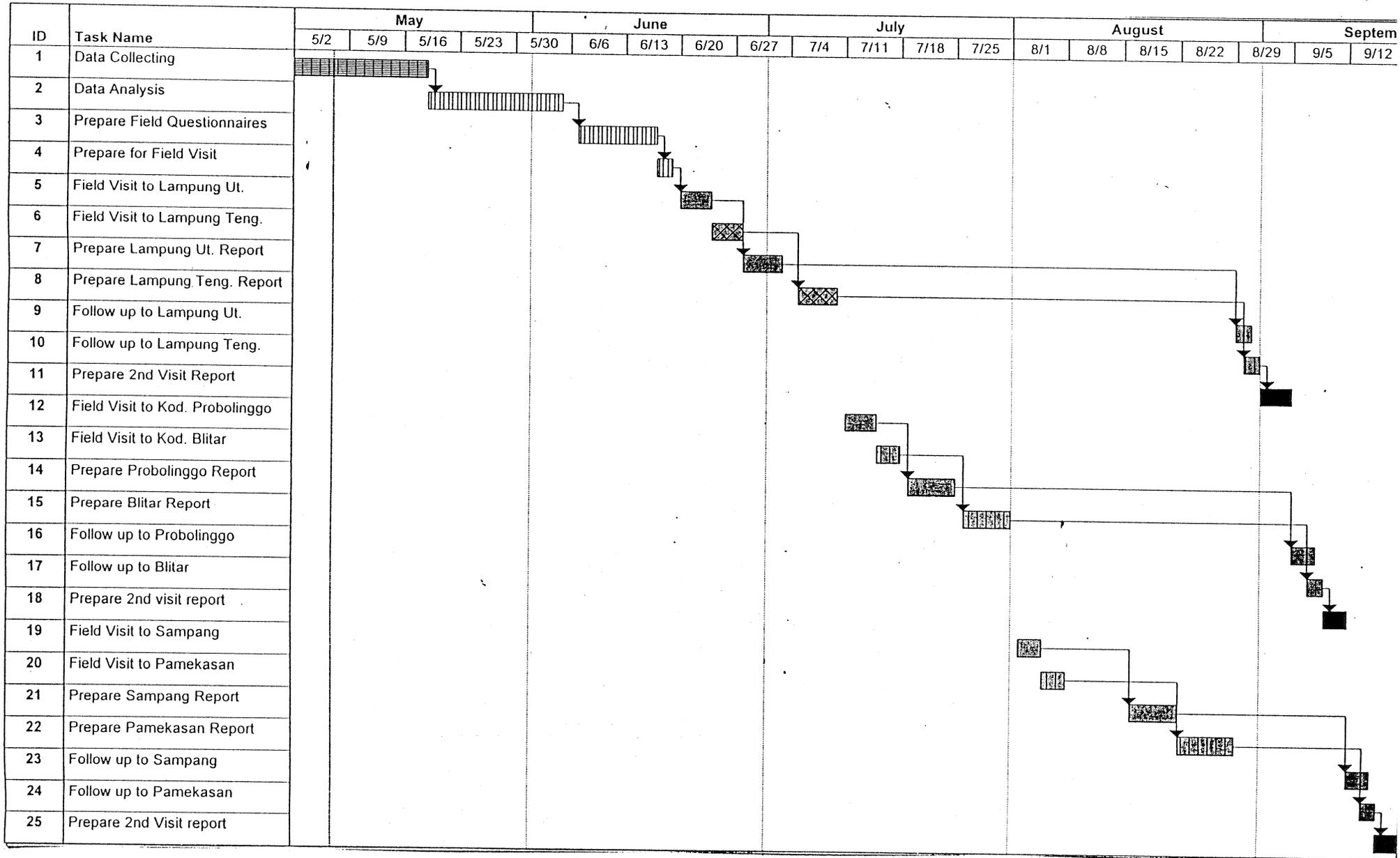
WET-2 PROGRAM (2)

[G2 -- EM, AH, FKJ]



WET-2 PROGRAM (3)

[G3 -- PH, JF, BD]



The PURSE Project Office
Wisma Kodel, 8th Floor
Jl. H.R. Rasuna Said, Kav. B4
Jakarta 12920 INDONESIA
Tel: (62-21) 522-1461
Fax: (62-21) 522-1460
Email: chemonic@rad.net.id

Chemonics International, Inc.
1133 20th Street, NW, Suite 600
Washington, DC 20036 USA
Tel: (202) 955-3300
Fax: (202) 955-3400

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**Cooperative Housing Foundation (CHF)
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Innovative International Development, Inc. (IID)
Institute for Public Private Partnerships (IP3)
University of Missouri, Center for Waste Management**

THE PURSE PROJECT

In December 1991 the U.S. and Indonesian governments signed an agreement to encourage private investment in the provision of public water supply, wastewater treatment and solid waste management services in urban areas throughout the archipelago. In recognizing that its capacity to finance the needed projects is severely strained, and that insufficient urban infrastructure will adversely affect public health and welfare and inhibit future economic growth, the Government has been looking increasingly to the private sector to participate in the provision of these essential services.

PURSE is working with USAID/Indonesia's Office of Urban Environmental Management and several agencies of the Government of Indonesia through a combination of technical assistance and capacity building interventions to:

- develop policy consensus and a legal framework that clarifies current rules and formulates new or revised regulations pertaining to private investment in all aspects of municipal infrastructure development and/or provision of urban services,
- demonstrate the technical and contractual feasibility of various forms of Public-Private Partnerships through demonstration projects, and
- transfer knowledge and expertise to public sector officials in relevant technical, financial and managerial aspects of environmental infrastructure.

For more information on the PURSE Project, please contact Chemonics International or the PURSE Project at the addresses listed above.
