

11.4.2 Alternative Countermeasures

This sub-section presents the means of financing the shortfall for the investment program.

(1) Acquisition of external funds

Foreign assistance has played a significant role in the development of the relevant sector in the past. Negotiations with the central government agencies (DILG, LWUA, etc.) are requisites to access the foreign funds. Development of new local financial mechanism is also needed for LGUs under current policy shifts to increase the opportunities of LGUs undertaking foreign-assisted projects.

As a matter of fact, Local Government Empowerment Fund (LGEF) was established in 1996 to provide a mechanism for channeling external grants and loans to 19 priority provinces under the Social Reform Agenda and/or those classified as 5th or 6th class LGUs (details are referred to Chapter 11.4.2, Supporting Report).

The foreign loan may be availed of at the maximum financing limit of 75% of the overall project cost. This can be secured by GOP and channeled through the MDF.

(2) Augmentation of sector finance under current arrangements

Increase of the IRA to the Relevant Sector

Increase of IRA from the national government to LGUs is at first needed along with current procedure. LGUs shall also arrange the funds with a priority to the relevant sector.

Local Taxes

More allocation of local taxes to the relevant sector shall be arranged although the share of local taxes in the provincial total budget is small.

Utilization of Other Local Funds

Utilization of other funds, Countryside Development Fund (CDF) in particular, shall be sought for development of the relevant sector.

(3) Introduction of private sector

Privatization of Level III Waterworks System

Privatization of Level III systems helps expedite sector development and sustainability of the system as suggested by NEDA Board Resolution No. 4 (series 1994).

LGU Guarantee Organization

LGU Guarantee Organization as a public-private corporation managed by private sector in the national level shall be studied to encourage private financing for the development of environmental infrastructure, which is introduced in other developing countries. The organization will guarantee local private loans to LGUs in provision of a longer term financing.

(4) Effective and economical investment

Investment Need Ranking of Municipalities

Investment need ranking of municipalities is discussed as a guide for implementation of PW4SP and a measure for effective and economical public investment. Referring to this ranking, the provincial government will arrange its financial resources more effectively.

The ranking for urban water supply is specifically studied considering three factors, while a sole factor of additional requirements is assumed to coincide with the priority of other sub-sectors. Synthetic evaluation of concerned sub-sectors is finally presented in the context of comprehensive improvement of this sector. The result for urban water supply is employed for allocation of provincial IRA to the municipalities in the concerned sub-sector. The synthetic ranking may be availed for the huge investment in use of the funds to be provided by other donors in the future.

For the urban water supply component, the ranking criteria comprise three essential evaluation factors, namely: (a) percentage of underserved and unserved population in the base year; (b) percentage of underserved and unserved population in Phase I; and (c) percentage of population unserved by Level III Systems in the base year. First, these factors are scored by the range of underserved and unserved percentage and totaled by municipality with the application of weighing method. Adopted weight to the factors (a), (b) and (c) are 50%, 35% and 15%, respectively. Table 11.4.1 shows the ranking procedures, overall weighted score and investment need ranking of the municipalities. There are three (3) municipalities identified as top three (3) priority municipalities namely Limasawa, Pintuyan and San Juan (Cabalian).

With reference to the provincial fund allocation, it is assumed that 60% of the fund for urban water supply from provincial government is distributed equally to the top fifth ranking municipalities, while the remaining 40% are equally distributed to the rest of the municipalities. The result of distribution is shown in Table 11.4.2. The available funds

Table 11.4.1 Municipal Investment Need Ranking for Urban Water Supply

Name of Municipality	Evaluation Factor			Scoring by the Factor				Overall Weighted Score	Investment Need Ranking
	% of Underserved and Underserved Population in Base Year	% of Underserved and Underserved Population in Phase I	% of Population Underserved by Level III Systems in Base Year	Underserved and Underserved Population in Base Year	Underserved and Underserved Population in Phase I	Population Underserved by Level III Systems in Base Year			
Anahawan	40	43	47	0.80	0.60	0.60	0.70	6	
Bontoc	33	33	72	0.80	0.60	0.80	0.73	5	
Hinunangan	9	28	22	0.20	0.40	0.40	0.30	15	
Hinundayan	15	32	71	0.40	0.60	0.80	0.53	9	
Libagon	18	18	72	0.40	0.40	0.80	0.46	12	
Liloan	13	16	76	0.40	0.40	0.80	0.46	12	
Limasawa	71	73	100	1.00	1.00	1.00	1.00	1	
Maasin (Capital)	20	43	64	0.40	0.60	0.80	0.53	9	
Macarhon	18	18	68	0.40	0.40	0.80	0.46	12	
Malibog	26	42	57	0.60	0.60	0.60	0.60	7	
Padre Burgos	7	22	19	0.20	0.40	0.20	0.27	18	
Pintuyan	73	75	73	1.00	1.00	0.80	0.97	2	
Saint Bernard	2	25	2	0.20	0.40	0.20	0.27	18	
San Francisco	12	12	17	0.40	0.20	0.20	0.30	15	
San Juan (Cabanatuan)	55	55	100	1.00	0.80	1.00	0.95	3	
San Ricardo	30	30	30	0.60	0.40	0.40	0.50	11	
Silago	6	10	62	0.20	0.20	0.80	0.29	17	
Sogod	35	52	37	0.80	0.80	0.40	0.74	4	
Tomas Oppus	22	22	60	0.60	0.40	1.00	0.59	8	
Provincial Total	23	37	58						

Note: 1. Scoring to Underserved and Underserved Percentage.

2. Weight Allocation to Score.

Score	Range of Underserved and Underserved Percentage				50	35	15	Allocated Weight
1.0	41 < %	61 < %	81 < %					
0.8	31 < %	46 < %	61 < %	80				
0.6	21 < %	30 < %	45 < %	60				
0.4	11 < %	20 < %	30 < %	40				
0.2	% < 10	% < 15	% < 20					

Table 11.4.2 Distribution of Provincial IRA to Municipalities for Urban Water Supply

Unit: 1,000 pesos

Ranking	Name of Municipality	Fund Distribution		IRA to Municipalities (from National Government) (2)	Available Fund Distributed to Municipalities (1) + (2)	Phase I Requirements	Accomplishment Percentage (%)
		Fund Distribution from Provincial Government (1)	Distribution Percentage (%)				
6	Anahawan	1,756	8.00	1,333	3,089	3,443	89.72
5	Bontoc	2,519	11.47	1,866	4,385	4,433	98.92
15	Ilinunangan			2,325	2,325	2,325	100
9	Ilimundayan	1,756	8.00	1,545	3,301	6,336	52.10
12	Libagon						
12	Liloan						
1	Limasawa	709	3.23	967	1,676	1,694	98.94
9	Maasin (Capital)	1,756	8.00	4,407	6,163	37,773	16.32
12	Macrohon						
7	Malitbog	1,756	8.00	1,967	3,723	4,299	86.61
18	Padre Burgos						
2	Pintuyan	0	0.00	1,322	1,322	1,322	100
18	Saint Bernard	1,756	8.00	2,203	3,960	5,346	74.07
15	San Francisco						
3	San Juan (Cabalian)	3,270	14.89	1,524	4,794	4,846	98.93
11	San Ricardo	0	0.00	817	817	817	100
17	Silago						
4	Sogod	6,675	30.41	2,710	9,386	13,944	67.31
8	Tomas Oppus						
Total		21,954	100	22,988	44,941	86,578	51.91

for about half of municipalities are adequate to meet the Phase I requirements for urban water supply.

To come up with the synthetic ranking of the municipalities, scoring method is also employed for other sub-sectors. The score is derived from the range of underserved and unserved percentage in the base year. Synthetic investment need ranking of municipalities covering four sub-sectors is shown in Table 11.4.3 (refer to ranking procedures in Table 11.4.1, Supporting Report). The top ranking municipalities are Pintuyan, Limasawa, Bontoc and San Juan (Cabalian), which indicate that they are given priority for investments in all sub-sectors. The municipality of Silago is the least priority in terms of investment ranking.

Table 11.4.3 Municipal Investment Need Ranking

Name of Municipality	Weighted Score by Sub-sector					Synthetic Municipal Investment Need Ranking
	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation	Total Weighted Score	
Anahawan	0.18	0.05	0.05	0.05	0.33	12
Bontoc	0.18	0.10	0.25	0.05	0.58	3
Imunangan	0.08	0.05	0.10	0.05	0.28	16
Hinundayan	0.13	0.05	0.10	0.05	0.33	11
Libagon	0.12	0.05	0.05	0.05	0.27	18
Liloan	0.12	0.05	0.10	0.05	0.32	13
Limasawa	0.25	0.25	0.05	0.05	0.60	2
Maasin (Capital)	0.13	0.10	0.20	0.05	0.48	6
Macrohon	0.12	0.05	0.10	0.05	0.32	13
Malibog	0.15	0.15	0.05	0.05	0.40	9
Padre Burgos	0.07	0.05	0.25	0.05	0.42	8
Pintuyan	0.24	0.20	0.20	0.05	0.69	1
Saint Bernard	0.07	0.05	0.10	0.05	0.27	17
San Francisco	0.08	0.15	0.15	0.05	0.43	7
San Juan (Cabalian)	0.23	0.05	0.20	0.10	0.58	3
San Ricardo	0.13	0.05	0.15	0.05	0.38	10
Silago	0.07	0.05	0.05	0.05	0.22	19
Sogod	0.19	0.10	0.15	0.10	0.54	5
Tomas Oppus	0.15	0.05	0.05	0.05	0.30	15

11.5 National Government Assisted Level I Water Supply and Sanitation Project

Of the overall project requirements for the medium-term development, those for Level I water supply and sanitation improvement with possible assistance from the GOP were studied in application of new cost-sharing arrangement. In 1997, the six provinces in the Luzon area (after completion of PW4SP) jointly submitted the project proposal, as a package of 23rd OECF assisted loan, to the NEDA through the DILG for the limited sub-sectors under the above conditions. The loan agreement between the two parties was made on September 1999.

In the same context as proposed by the six provinces, project components with scope of work and financial viability were studied. However, Level I rural water supply component was excluded, since the on-going ADB assisted project will cover the requirements for medium-term development target. While some sanitation components beyond the scope of the said ADB assisted project were studied for limited classes of the municipality to meet the established provincial target in 2004.

For the Project, the DILG is assumed to be the Executing Agency and the province, the Implementing Agency in the meantime. The project may be merged together with those of the

4th batch provinces in the preparation of the PW4SP. The implementation of a packaged project may be realized in the near future.

11.5.1 Project Components

(1) Sanitation Component

There are four (4) eligible municipalities to meet the condition for GOP-assisted projects (limited to 3rd to 6th municipalities) in sanitation sub-sector. The sanitation component comprises and 12 school toilets to the rural communities. Distribution of toilet bowl is one of the components of sanitation sub-sector in the medium-term development plan, however, it shall be excluded from GOP-assisted projects due to the current practice of NEDA. With the integration of sanitation in the water supply projects, equal emphasis shall be given to sanitation component to ensure a greater health impact in the rural communities. School toilet will be constructed for public school in the rural areas (50%: toilet facility/classroom and 50%: standard toilet building). Health consciousness among the rural people will also be bolstered with the provision of health education training and IEC materials.

(2) Equipment/Commodity Assistance

The works for Level I facilities and its supporting vehicle/ equipment will be managed through ADB-assisted project. Thus, such items shall be excluded from the proposed project.

(3) Consultancy Services

Considering the magnitude and complexity of the project, consulting services and technical assistance may be availed to strengthen the executing and implementing agencies' capabilities in undertaking the project. The services will cover technical and institutional/community development aspects of the project.

During the detailed design stage, the services will cover finalization of construction sites based on site selection criteria to be developed, and preparation of bidding documents. Guidelines and training program for strengthening the capability of implementing agencies and NGOs will be prepared and carried out. The construction stage will include assistance to LGUs in the supervision of construction works, community organizing and training works.

(4) Institutional Development

The project entails community development with people's active participation to assure the responsibility for O&M of the facilities and strengthening of existing institution/organization and/or formation of new ones. Thus, various activities will be undertaken from national to beneficiary levels. A sufficient cost for the purpose will be taken into account.

11.5.2 Project Requirements

The province will manifest its willingness to participate in the project entailing timely arrangements to meet NEDA requirements. These requirements are (1) RDC Endorsement, (2) ECC clearance and (3) Letter of Commitment. Water right permit from the National Water Resources Board will be fulfilled after site selection and preparatory works have been undertaken. In addition, Memorandum of Agreement (MOA) on the cost-sharing and other arrangements required for the project will be exchanged between the province and concerned municipalities.

11.5.3 Funding Requirements

(1) New cost Sharing Policy

The project finance was studied in accordance with the 50%-50% cost sharing arrangement (50% is an average municipality's share among concerned municipalities) between the GOP and the LGUs. Financial sharing among the province, municipality and barangay shall then be clarified based on the estimated cost requirements through MOA.

The new policy of the national government grants for devolved activities stated that "this scheme shall be applied to all new ODA-assisted projects that are currently being packaged in support of LGUs". With regard to this, 50% national government share will be applied for Level I water supply and even 70% of NG share for 5th and 6th classes of municipalities for sanitation component (refer to Table 11.5.1).

Table 11.5.1 New Cost-Sharing Arrangement between NG and LGUs

Sector/Activity	LGU Income Class	Devised NG Share	Remarks
Water Supply: Level I only	1 st to 4 th	0	No GOP grants for Level II & III water supply
	5 th to 6 th	50	
Sanitary Support Facility for Public Markets and Slaughter houses	1 st to 2 nd	0	
	3 rd and 4 th	50	
	5 th and 6 th	70	

(2) Financial Viability

1) Conditions and Assumptions for Financial Study

- The cost-sharing between the GOP and LGUs is 50%: 50% of the overall project cost. While, it is assumed that the 50% share of LGU is further allocated to the LGUs and beneficiaries with 47% and 3% to the overall cost, respectively.
- The financial sources of the national government are the loan from foreign donor and GOP counterpart budget, and LGUs from the budget of the province and municipalities. The cost-sharing part by beneficiaries is equity contribution including land, material purchase cost, right of way, labor, etc.
- The O&M cost is managed by the beneficiaries.

2) Project Cost

The cost estimate excluding on-going ADB-assisted project was made based on 1998 price level in Chapter 10. Then, physical and price contingencies as well as value-added tax were added. The project cost for the concerned municipalities in line with above conditions/assumptions is shown in Table 11.5.2. Overall aggregate cost for the implementation period of 2000 - 2004 arrived at about P12.5 million (P9.7 million in 1998 price level) referring to the implementation schedule of the project.

3) Financial Arrangement

The two alternatives for the financial arrangements are studied to prepare required cost to be shared among concerned parties: i) Utilization of IRA only and ii) Utilization of IRA and MDF.

Case I: Utilization of IRA fund only

Currently, there is no projection on drastic increase of LGUs' budget through the future. Under such a condition, the following are considered.

- Potential fund is the IRA annually allotted from the GOP to municipalities and from province to municipalities. Municipal tax is negligible small in the allocation to the sector. The total municipal budget available was projected by sub-sector in Section 11.3.
- Arrangements by the municipalities with MDF and banks are disregarded considering current financial capability of the municipalities.
- 5-year development program (from 2000 to 2004) is applied to increase project fund using available IRA.

Table 11.5.2 GOP-Assisted Level I Water Supply and Sanitation Project Cost

(Unit: Peso)

Category	Qty.	Unit Cost	Amount	GOP		LGU
				Foreign Loan	GOP/CP	
A. Const. & Civil Works						
Water Supply						
1. Deep Well (40m)	0	370,235	0			
2. Deep Well (80m)	0	546,285	0			
3. Deep Well (120m)	0	722,300	0			
4. Shallow Well	0	82,400	0			
5. Spring Development	0	747,000	0			
Sub-total a			0	0		0
Sanitation						
1. School Toilets	12	233,500	2,802,000			
2. Public Toilets	0	368,400	0			
Sub-total b			2,802,000	(989,285)		3,791,285
Land acquisition						
Land acquisition & Right of Way			0			0
Sub-total A			2,802,000	(989,285)		3,791,285
B. Equip./Logistic Support						
1. Support Vehicle	0	590,000	0	0		
2. Well Rehab. Eqt.	0	280,000	0	0		
3. Maintenance Tools	0	10,000	0	0		
4. Water Quality Test Kits	0	15,300	0	0		
Sub-total B			0	0		
C. Consultancy Services						
1. Hydrogeological Survey				0		
2. D/D and Const. Sv.			308,220	308,220		
Sub-total C			308,220	308,220		
D. Institutional Devt.						
1. Capacity Enhanc. Prog.	L.S.		3,200,000	2,650,000	550,000	
2. Commu. Manag. Prog.	5	10,770	53,850	18,094	35,756	
3. Health & Hygiene Educ.	5	1,800	9,000		9,000	
4. Water Quality Surveil.	5	700	3,500		3,500	
5. NGO Assistance	5	1,200	6,000		6,000	
6. Administrative Support	L.S.		1,200,000		1,200,000	
Sub-total D			4,472,350	2,668,094	1,804,256	
E. Physical Contingency			758,257	198,703	180,426	379,129
Total (A+B+C+D+E)			8,340,827	2,185,731	1,984,682	4,170,414
GOP Total					4,170,414	
LGUs						3,920,189
Equity						250,225
LGUs + Equity						4,170,414
F. Others						
1. Price Contingency			2,364,714	625,642	560,756	1,178,316
2. Value Added Tax (VAT)			30,822		30,822	
Sub-total F			2,395,536	625,642	591,578	1,178,316
Grand Total			10,736,363	2,811,373	2,576,260	5,348,730

Note: (1) Equity of users includes land cost, right of way, labor, etc., equivalent to 3% of direct cost (excluding item F).

(2) N.A.: Not applicable

(3) Assumption/Conditions for Cost estimate

1) Direct cost: based on 1998 price level.

2) Physical contingency: 10% of materials procured.

3) Price contingency: Forex 3%; local 7%; compounded annually, base year 1998

4) Value added tax; 10% materials produced.

Applying the cost-sharing arrangement, the IRA available was estimated for the eligible municipalities in provision of national government grant fund based on the following conditions:

- a) The available fund of sub-sectors is a sum of municipal and provincial allotments of IRA
- b) For water supply sub-sector, IRA to municipalities with income classification of 5th and 6th classes is counted. The IRA allotted to the province is divided into two groups; classes 1st to 4th and 5th & 6th in proportion to the construction cost required. The provincial IRA for the eligible municipalities is considered for this project.
- c) For sanitation sub-sector, IRA to the eligible municipalities is regarded as available fund. The manner of allocation of provincial IRA to the eligible municipalities (3rd to 6th) is same as that in water supply sub-sector.

The total IRA of the province available for the eligible municipalities in the subject sector was estimated at P2,619,000 as a total of 5-year development program, consisting of urban and rural sanitation (details are included in Table 11.5.1, 11.5.2 and 11.5.3, Supporting Report). The estimated IRA available is shown below.

<u>Sub-sector</u>	<u>Provincial IRA</u>	<u>Municipal IRA</u>	<u>Total</u>
Rural Sanitation:	949,000	1,291,000	2,240,000
Urban Sanitation:	217,000	162,000	379,000
Total:	1,166,000	1,453,000	2,619,000

Table 11.5.3 shows the cost sharing (1998 price level) for the project among the GOP, LGUs and beneficiaries (BWSAs).

Table 11.5.3 Cost-Sharing for the Project (Case 1): 1998 price level

Financial Source	x 1,000 Peso	Percentage		Remarks
GOP	1,985	23.8	50	GOP counterpart
	2,186	25.2		Foreign Loan
LGUs	3,920	47	50	IRA
	250	3		BWSA equity
Total	8,341	100		

The GOP shall shoulder 50% of the overall project cost, utilizing the foreign assisted loan of 26% or P2.2 million and 24% or P2.0 million of the government counterpart fund. The remaining 50% of the overall cost shall be shared between the LGUs by 47% or P3.9 million and BWSAs (beneficiaries) by 3% or P0.3 million.

The cost comparison was made between the estimated project cost to be shared by the LGUs and available IRA of LGUs in the implementation period. Considering price contingencies and VAT, the IRA to be used by LGUs will increase to P5.0 million from P3.9 million (1998 price level). Finally, it was identified that there is a shortage of about P2.4 million achieving about 50% of the proposed requirements in comparison between available IRA (P2.6 million) and the cost to be shared by LGUs.

Although the percentage of the shortage is 55%, the amount itself is rather small, since the total cost required for the proposed project is also very limited (P12.5 million).

As an option to solve this financial shortage, the provincial government may utilize sector IRA allotted (concerned municipalities and province) to urban water supply or other sub-sectors without limiting to the available IRA for urban and rural sanitation sub-sector, as the possible financial source, to supplement municipal IRA allotted to the eligible municipality.

Case 2 Utilization of IRA and MDF

The utilization of the MDF is considered in case that the LGUs will fail to furnish IRA for the cost to be shared (even if estimated IRA available meets the required cost to be shared by the LGUs). The foreign loan may be availed of at the maximum financing limit of 75% of the overall project cost.

Thus, the GOP shall possibly support the LGUs through the MDF in case that manageable IRA will not be able to fill up the cost requirement of the project. Table 11.5.4 shows the cost sharing scheme for the project (1998 price level) between the GOP and the LGUs.

GOP is possibly to finance up to P6.3 million or 75% of the total project cost in the portion of loan. Out of GOP finance through the loan, P2.2 million or 26% of the total project cost shall be granted to the LGUs, aside from 24% GOP counterpart fund.

Table 11.5.4 Cost Sharing for the Project (Case 2): 1998 price level

Financial Source	x 1,000 Peso	Percentage			Remarks
GOP	1,985	24	24	50	GOP counterpart
	2,186	26	75		Foreign Loan
	(4,070)	(49)			Foreign Loan for MDF
LGUs	-	0	49	50	IRA
	4,070	49			MDF through Foreign Loan
	100	1	1		BWSA Equity
Total	8,341	100			

The remaining P4.1 million or 49% of the total project cost shall be utilized for financing the LGUs to secure their budgetary capacity through MDF.

Under this case, the total required cost for the proposed project will be covered without financing from the available IRA.

4) Project Implementation Schedule

The proposed implementation of the project is scheduled for five years after hiring the consultants. Figure 11.5.1 presents the proposed schedule.

Figure 11.5.1 Proposed Project Implementation Schedule

Activities	2000				2001				2002				2003				2004			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Project Implementation																				
1. Detailed Design																				
2. Community Development/ BWSA Formation																				
3. PQ, Bidding and Contractor Selection																				
4. Procurement and Delivery of Materials and Equipment																				
5. Construction of Water Supply and Sanitation Facilities (Construction supervisory services)																				
Project Monitoring																				

11.6 Cost Recovery

Cost recovery and cost sharing are essential to attain the planned targets. The PW4SP advocates the imposition of tariffs for the recovery of capital and operating cost based on the principle that adequate water, sewerage and sanitation facilities should be paid for.

(1) Level I water supply systems

For Level I systems, cost sharing between the LGUs and beneficiaries is required for the capital costs, even the portion of the beneficiaries is limited according to the current national policy. Currently, the percentage shared by the beneficiaries seems to be 3 to 5% of total requirements based on the experience.

Beneficiaries are also responsible for all recurrent costs. Monthly recurrent cost is estimated at about 8 Pesos per household in the base year price level (refer to recurrent cost in Chapter 10). The figure will be increased up to about 12 Pesos per household in the year 2004, assuming an annual inflation rate of 7%. This monthly fee seems to be affordable to the users considering the current income level (refer to affordability in Chapter 6), but willingness to pay shall be promoted.

Depending on the users' income level, water charges shall be determined and agreed upon among the water users. The estimated water charge for O&M cost is P8 per household per month, which is less than 1% of the median monthly household income of P3,245 in 1998. However, the users will have to pay water charge of up to 2% of their monthly income or P98 /household/month in 2004 to manage not only for repair of hand-pump, but also rehabilitation and reconstruction of deep well, assuming that well life is 20 years.

(2) Level II water supply systems

Full cost recovery is required for all capital costs for Level II systems. Based on the standard design of Level II system under PW4SP, population to be served is 600 people. The average capital cost to be paid is estimated P11,565 per household (refer to Chapter 10). Applying the capital recovery factor to the capital costs with conditions of 7% interest rate and 20 years repayment period, monthly payment amount to P91 per household.

The annual recurrent cost per household is estimated to be P180 (P15/household/month) in the base year (refer to Chapter 10). It will reach to P22.50/HH/ month in the year

2004 at an annual inflation rate of 7%. Thus, the total amount of recurrent cost in the year 2004 is P114, which is 2.3% of the family income as shown below.

(a) Estimated water rate (flat rate; Pesos)	:	114
(b) Percentage of (a) to monthly median household income in 2004 ¹⁾	:	2.3

Note:

- 1) Provincial average monthly median income in 2004 (P4,869 per household) is derived from 1994 Family Income and Expenditure Survey considering annual inflation rate of 7%. The monthly median income in 1998 is P3,245.

(3) Level III water supply systems

A full recovery of capital and operation & maintenance cost is required for Level III systems. To test the affordability, a comparative study was made between estimated water rate (based on standard monthly consumption; 15m³ per household) and projected income in year 2004. Total capital cost of Level III water supply system is P62.35 million for 3,170 households to be served. Assuming an annual inflation rate of 7% and 20 years repayment period, the annual capital cost to be paid is P1,857 per household. The monthly capital cost to be paid by each household is P155.

The monthly recurrent cost per household is estimated to be P34 (P402./ year; refer to recurrent cost in Chapter 10 where operating cost is P10.87 million in base year for 64,700 households). Using an annual inflation rate of 7%, this recurrent cost is projected to be P50 per household in the year 2004.

The combined amount of capital repayment and recurrent cost in the year 2004 is P205/ household/month, 4.2% of monthly income. The cost shall be recovered as a monthly water charge to be paid by users. The percentage of the water rate against income with more or less 5% is commonly affordable. In this regard, monthly water rate seems to be affordable.

(a) Estimated water rate for 15 m ³ (Pesos) ¹⁾	:	205
(b) Estimated minimum water rate (1-10 m ³) (Pesos) ²⁾	:	176
(c) Percentage of (a) to monthly median household income in 2004	:	4.2%

Notes:

- 1) Water rate for the HH with monthly consumption rate of 10m³ is estimated under the same assumption of a).
- 2) Monthly median household income is P4,869 in the year of 2004.

(4) Sanitation

The provision of sanitary toilet facilities for public markets and schools is under LGUs in coordination with parent-teacher association. However, recurrent cost for the public markets shall be collected from the users including stakeholders of the market.

Household toilet shall be managed by individual household. However, the facility is costly with reference to the current income level, especially in the rural area (flush-type toilet; ₱23,000 and pour-flush toilet; ₱14,800). Governmental support is also limited to the provision of toilet bowl for pour-flush toilets as an incentive to increase the distribution of water-sealed toilets. Thus, cost recovery in application of loan shall be considered.

Applying the capital recovery factor to the construction cost with assumptions of 7% interest rate and 5 years repayment period, monthly repayment amounts to ₱467 for a flush type and ₱301 for a pour-flush type, respectively (details of unit cost are referred to in Chapter 10, Supporting Report). The percentages of repayment to household income in the year 2004 are calculated in the same manner as the study for Level III water systems and are shown below.

(a) Repayment for Flush Type (Pesos)	:	468
(b) Repayment for Pour Flush Type (Pesos)	:	301
(c) Percentage of (a) to monthly median household income in 2004 ¹⁾	:	9.6%

1) Monthly median household income: is ₱4,869 in the year of 2004.

To expedite the sanitation sector improvement, introduction of specific loans that are revolving in character with low interest rates and longer repayment period may be an effective solution. For urban sanitation, the linkage with existing housing loan shall be established to cover construction of sanitary toilets.

Chapter
MONITORING FOR
MEDIUM-TERM DEVELOPMENT PLAN

12

12. MONITORING FOR MEDIUM-TERM DEVELOPMENT PLAN

12.1 General

Many of the systems constructed earlier have operated in a limited way because of insufficient monitoring and post-construction technical support, aside from the problems in promotion of self-reliance and local community management. This Chapter seeks to recommend a focused, practical, viable, creative approach to strengthen sector and project monitoring. The development of a coordinated monitoring system is one of the key components of an effective management system.

12.2 Sector Monitoring

Sector monitoring refers to the overall water and sanitation situation in the province. One may readily use a demand-supply model for sector monitoring. Demand would be indicated by such indicators as gaps in coverage, health conditions, and standards for water consumption. Supply would be indicated by the water resources situation, actual coverage of existing facilities, output volume, types and condition of facilities, by the available funding, and by water/sanitation associations organized to undertake sector activities.

(1) The monitoring system must support a well-defined and accepted sector development process-model. There are four general aspects of sector monitoring which will be addressed:

- 1) Establishing the database: This involves identifying the types, level, and form of the information to be extracted regarding the performance of the sector's service development, service delivery, and service maintenance systems.
- 2) Data collection and transmittal system: This defines the methods and assigns responsibilities for the recording and relaying of the data from source to the concerned recipients, from raw data to consolidations and reports at the various levels of the hierarchy of sector management.
- 3) Data analysis: This prescribes how and by whom the data will be processed, and the purpose of the outputs of the various analysis and reports. The purpose or uses of the data will determine when or how frequently a report will be generated, as well as the parties who should receive the report.

- 4) Response system: This defines the responsibility, authority and discretion of the recipients of the data flow to take actions, make decisions, alter plans, or take such measures as are appropriate given the performances indicated by the data. This system feeds into and is essential to the management and regulatory structures of the sector.
- (2) Sector performance deficiencies demand that serious thought be given to innovations to reduce costs in achieving the provincial sector plan. With the monitoring system, the sector should be able to take an objective view of the way to meet current strategies. For example, does community management of systems really work? Do low-cost technologies make sense? Under what conditions and how? How can the target be achieved for low-income communities? A sector monitoring system should be flexible to support planning and research studies on such specific policy and operational issues.
- (3) In putting together a relevant sector monitoring system, the following should be seriously looked into:
- 1) It should reinforce the linkage between water, sanitation and health. This implies that coverage should be measured for availability of both water and sanitation for a household. Thus, a household can be categorized as having both water and sanitation, water only, sanitation only or none of either. At later stages, health practices can be included in the monitoring.
 - 2) It should be reliable and involve the beneficiaries. This mechanism could provide the data quality control, which is missing in existing systems. Distortion of information may occur when implementors are the monitors. The barangay will be the basic data capture level.
 - 3) Monitoring will succeed only with interagency support, particularly in the initial stages. It should be accepted by all sector agencies. A unified set of figures and indicators will greatly help in planning.
 - 4) It should be practical and implementable. It should start with the current monitoring capacity situation and move up with a clear vision of what the monitoring system should be. This implies phasing and gradual expansion and strengthening of the system and training of staff.

- 5) The system should be followed through with effective feedback. It should develop creative ways of providing feedback to the field. The current way in which data is processed is by consolidation. The field sources' only feedback is, for example, national coverage figures. In the course of consolidation, opportunities for specific feedback useful to project implementors on performance are lost.

It would be useful to have a series of workshops among the different levels of the sector's management structure, to achieve the following:

- 1) Training on project monitoring and data use in the water sector.
- 2) Development of initial database (identification of the type of data and reports that the participant-managers need in their respective areas of concern.)

After the database is established, a team will draft the Management Information System (MIS), which will be an input to the next series for workshops.

- 3) Review of MIS draft, revisions, and commitments to test.
- 4) Sharing / reviewing of experiences with MIS draft system. Recommendation on adjustments to MIS for 2nd field testing period.
- 5) Sharing / review of experiences.

Final recommendations to be incorporated into Final Draft of MIS system by the MIS Team.

- 6) Review of Final Draft System to be presented by MIS Team of adoption.

- (4) Regarding sector development indicators, some important indicators will be more difficult to collect than the others because the sector is not ready to gather them. The LGUs will group indicators into phases based on availability of data and/or ease with which such information can be collected with improved systems. A review of the objectives set for the sector almost exclusively shows a focus on coverage. It is important to get sector objectives stated beyond coverage terms in order to encourage use of additional indicators. Based on past experience, requiring too much information leads to start-up difficulties. A three-phase build-up meeting sector requirements is outlined in the following sections:

- 1) Phase I Indicators

- Access to both adequate water and sanitation
- Water and sanitation associations duly organized to undertake sector activities
- Water and sanitation facilities in schools
- Capital development costs

- Sources of capital development funds
- Incidence of diarrhea
- Water availability and water quality maps
- Unit cost (per capita or per facility)

2) Phase 2 Indicators

- Household hygiene habits and practices
- Water stored in house covered? food covered? grounds free of faeces, garbage, wastewater cesspools? animals in the house? mother's and children's hands clean?
- Existence of barangay spot maps and facilities ledger cards
- Existence of O&M arrangements
- Current costs to households and willingness to pay for improved service

3) Phase 3 Indicators

- O&M Costs
- Financial efficiency and stability indicators
- Institutional development indicators
- Low-income groups benefiting from improvements

(5) NEDA has issued a Board Resolution in 1995 providing a practical definition of terms for planning and monitoring. The definitions were arrived at after exhaustive discussions and consensus with the implementing agencies.

(6) Recommended institutional responsibilities for sector monitoring: Monitoring is best left to parties not directly involved in delivery of the services. The best monitors are the community members themselves since accurate monitoring reports is in their best interest. At the data capture level, the PHO structure, with its midwives and BHW volunteers, is in the best position to take the lead in data gathering.

1) Provincial Level: The PPDOs, through its Research and Evaluation Division, will play the lead role in organizing the field data collection effort in coordination with the field offices of national agencies, NGOs and the water districts. The Monitoring Specialist, with the PST/PWSU, will assist the PPDO.

2) Municipal Level: The Municipal Development Coordinator has the mandate of monitoring all development activities in the municipality. The municipal sector

liaison will therefore coordinate the preparation of the reports with the MPDO, supported by PHO and NGOs, as needed.

- 3) **Barangay Level:** There are several institutional options for leading the monitoring at the barangay level, such as the barangay health stations, the barangay council, etc. The municipal liaison will take the lead in establishing the barangay monitoring responsibilities.
- (7) Computerization of the system can come at later stages. This should be gradually phased in as the sector agencies strengthen their monitoring mode. This will also discourage a ground swell of requests for computer hardware. Computer facilities are available at the provincial level.
- (8) A new sector database program was designed and is currently under review. A Sector Database Center was established within the DILG-PMO. The system was successfully piloted in three provinces and replication in other priority provinces will begin shortly. (Note: This database does not go down to the project level. It was primarily set up to determine supply/demand and financial capabilities of LGUs to absorb costs.)

12.3 Project Monitoring

Sector monitoring refers to the overall water and sanitation situation in the province, on the other hand, project monitoring looks at progress of specific activities or projects. Indicators would thus include; disbursements, percent completion, cost overruns/underruns, etc.

- (1) At the provincial level, project monitoring shall include projects classified under any of the following:
 - foreign and nationally-funded projects which are implemented or located in two or several municipalities in the province or implemented or located in the province;
 - other projects implemented and managed at the provincial level with funding generated from provincial sources.
- (2) Project Monitoring Committees (PMCs) at the provincial and municipal levels are to be tasked with the monitoring of local government projects funded from national and local government funds, and composed of representatives from different organizations, from NGOs, the administration, the ruling party and the opposition. From these representatives, the Provincial Governor selects the chairman and the others as members.

The PPDO can be delegated to serve as the secretariat and the PMC manages with the assistance of the non-government organizations in the monitoring and validation of project implementation.

- (3) The specific roles and responsibilities of the various units in the implementation of the monitoring system are as follows:

The Project Monitoring Committee:

- Provides the list and schedule of all projects to be monitored to the NGOs involved in monitoring;
- Collects and processes reports of implementors; NGOs monitor the status of project implementation for the information of the development council and next higher level project monitoring committee;
- Pinpoints problems and verifies information to be submitted for analysis and action of the development council;
- Provides feedback on the remedial actions of the development council and follows-up their implementation;
- Prepares and disseminates periodic project monitoring report on the status of project implementation; and
- Elevates to higher level bodies problems/issues which are not resolved at their level.

The PMC Secretariat:

- Prepares the monitoring program to be undertaken by the PMC during any given fiscal year, which will include, among others, the lists of projects and schedule of implementation based on submission of implementing agencies;
- Provides chief executives with information on the projects to be monitored by the local PMC's;
- Facilitates inter-agency, inter-governmental and field headquarters coordination whenever necessary.

The Project Implementors:

- Submit periodic reports to the monitoring committee on the status of project implementation base on suggested reporting forms;
- Provide authorized monitors assistance in getting access to more detailed information on project implementation (e.g. detailed work program);
- Submit to next higher level office of line agency reports on status of implementation;

- Implement/institute remedial measures on problems/issues identified as suggested by the development council.

(4) The following is the process flow of project monitoring.

- 1) The PMC secretariat provides the NGOs with the monitoring plan, containing information on projects to be implemented at the provincial level;
- 2) PMC prepares its monitoring program for the calendar year;
- 3) Project implementors undertake projects, prepare and submit status reports on project implementation to the PMC;
- 4) NGOs submit project exception reports to the PMC, with copy furnished the project implementors;
- 5) PMC assesses reports of implementors and NGOs and conducts project visits of projects identified in the monitoring work program;
- 6) PMC processes reports of various implementors and provides the provincial development council with a consolidated report on status of project implementation in the province;
- 7) PMC evaluates problems, recommends solutions during its regular or special meetings, and refers same to the Provincial Development Council for appropriate action;
- 8) PDC assesses reports and takes proper action (problem solving, referral to appropriate agencies/council);
- 9) Implementors take remedial action on problems/issues encountered in project implementation. (If after a reasonable period of time, no remedial measures/appropriate action have been taken on the problems referred to the concerned agency/local development council, the PMC forward the issue to that RDC.);
- 10) PMC provides feedback to concerned implementors, LGUs, NGOs, and other concerned agencies and follow-up implementation of remedial measures; and
- 11) PMC forwards consolidated status report on project implementation in the province to the Regional Project Monitoring Committee (RPMC).

(5) The PMC determines the schedules for the submission of reports. Reports are submitted to the PMC who will forward the consolidated reports to the Provincial Development Council (PDC). Submission of the consolidated report from the provincial PMC to the regional PMC is usually undertaken on a quarterly basis. The PMC furnishes the Provincial Governor with a copy of the reports for his reference and action.

12.4 Evaluation of Plan Implementation and Updating the PW4SP

- (1) This PW4SP should be updated at least every five years. This will be the responsibility of the PWSU in close coordination with the PPDO. Based on the sector monitoring reports, the PWSC will review the progress of the sector compared with objectives and the efficiency with which these objectives were achieved. This will be followed by a reformulation of objectives, strategies, new policies and policy revisions and an updated sector investment program.
- (2) To initiate the implementation of this sector monitoring system, the Phase I indicators (See 12.2) shall be used. Formats have been drafted for this purpose (See Table 12.4.1, Supporting Report). Specifically, the information to be collected are as follows:
 - 1) Access to both adequate water and sanitation as a measure of demand: This indicator can be taken from the Field Health Service Information System (FHSIS) Annual Environmental Sanitation Survey reports, which are prepared by the PHO midwives. These annual surveys are summarized by municipality by the sanitary inspectors. NSO population projections will be utilized.
 - 2) Water and sanitation associations (RWSAs/ BWSAs/ other community-based associations) organized: This indicator can be collected from the Cooperative Development Authority (Municipal or Provincial Chapters) in as much as all water cooperatives and/or associations are required to register with the CDA.
 - 3) Water and sanitation facilities in schools: This indicator can be collected from the various school district offices; consolidated at the division (provincial level). Although a system is in place for regular inventory of facilities by DECS, actual inventories are seldom implemented and the LGUs may have to institute a supporting data gathering activity.
 - 4) Capital development costs: The LGUs may have to gather information from the local DEO of DPWH, the various municipalities and the water districts.
 - 5) Sources of capital development funds: Data sources are the same as those of item 4).
 - 6) Incidence of diarrhea: This information can be taken from Form M-2 of the FHSIS. (Collection and processing of the data form is similar to that of item 1).

- 7) Water availability and water quality maps: These maps should be continually updated based on field reports on water quality and quantity as they are received from operations reports studies. Areas where, for example, salinity is increasing should be indicated. Areas suitable for shallow wells, for deep wells and for possible spring sources can be indicated.
 - 8) At the conclusion of every project, the monitoring specialist prepares a report on actual unit costs incurred. This would include, for example, the cost of drilling for shallow or deep wells per meter depth; the cost of pipeline per linear meter, etc.
- (3) Municipal level consolidation: For every reporting period, the municipal sector liaison gathers all the barangay level data including those reports of the municipal health officer (and sanitary inspectors), the DECS division offices. A municipal sector report will be thus prepared. Further refinements of this report may be needed in view of future development initiated at the national level.

The municipal sector report is reviewed by the Mayor and then submitted to the Governor for further consolidation. Salient sections of this report would be furnished to DILG, which is tasked with coordinating a national sector performance report for NEDA and for the President.

- (4) Feedback: Based on these reports, the PST/PWSU will draft a consolidated report on the performance of the sector during the period including the opportunities and constraints met and a set of recommendations for policy revision. Municipalities which have made outstanding progress and associations, which have introduced creative innovations in their operations would be cited.

Annual reviews shall be organized to analyze not only the attainment on the physical project targets, but more significantly, whether the vision is being attained. These reviews could also provide the opportunity to sharpen or revise the vision and the mission statement and distill lessons learned from the implementation experiences.



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