

Chapter

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**FINANCIAL ARRANGEMENTS FOR  
MEDIUM-TERM DEVELOPMENT PLAN**

**11**

## **11. FINANCIAL ARRANGEMENTS**

### **11.1 General**

Financial arrangements to attain medium-term (Phase I) targets are sought taking into account potential funds. However, quantitative study is limited to the use of projected Internal Revenue Allotment (IRA). In this connection, this Chapter addresses to identify financial shortfall with reference to available IRA for this sector and to seek comprehensive logistics in terms of acquisition of various funds, augmentation of current practices in the Government assistance to this sector and effective investments and cost recovery.

Available funds (IRA) during the medium-term development period are projected with the use of computer-based programs that allow for the future application to include additional funds that are available. Figure 11.1.1 shows the sector budget allocation in the different administrative levels to come up with total funds available in the province. Figure 11.1.2 illustrates the manner of sector fund allocation to respective municipalities from the national and provincial governments with a detailed study flow availing IRA. Interfaces between provincial government and municipalities/barangays are also presented in the same figure.

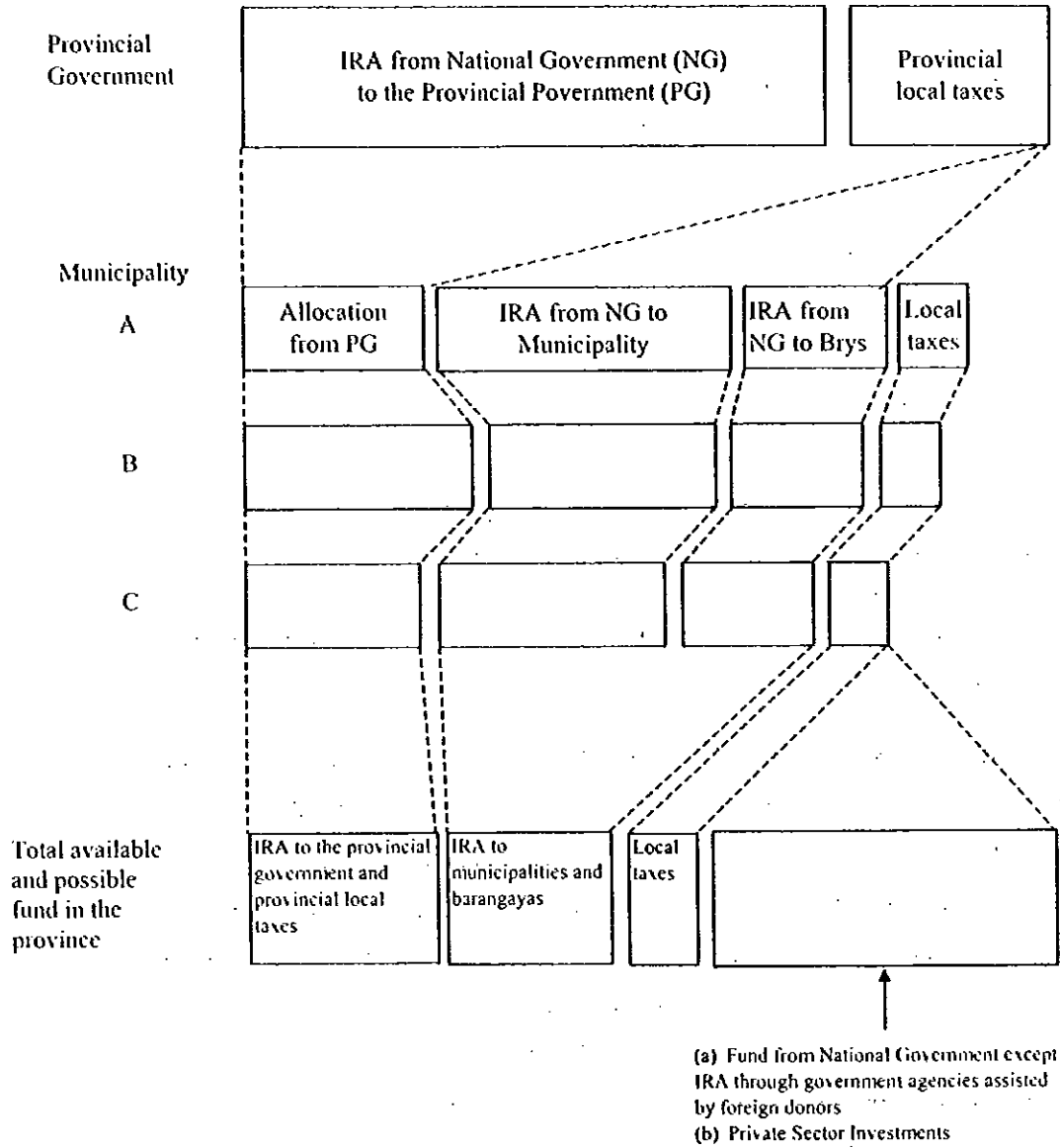
Distribution of IRA to respective municipalities is contemplated in assumption of various factors based on the experiences as of 1998.

The Investment Coordination Committee (ICC) of NEDA adopted a policy "to support the financing of devolved activities with social and/or environmental-objectives" based on three considerations, namely: Equity, Externalities and Economies of Scale. The new cost-sharing arrangement was put into practice in 1998, which clearly limited the national government subsidy for Level I water supply to 5<sup>th</sup> and 6<sup>th</sup> class municipalities up to a maximum of 50% of the total project cost. For sanitation facilities, the national government subsidy for 3<sup>rd</sup> to 6<sup>th</sup> class municipalities shall be from 50% to 70% of the total project cost. In this connection, financial study for Level I water supply and sanitation improvement was additionally conducted for those municipalities meeting the above conditions.

### **11.2 Projection of IRA**

The projection of IRA to the relevant sector for Phase I period is made covering different administrative levels. Current manner of allocation by the national government is directed to

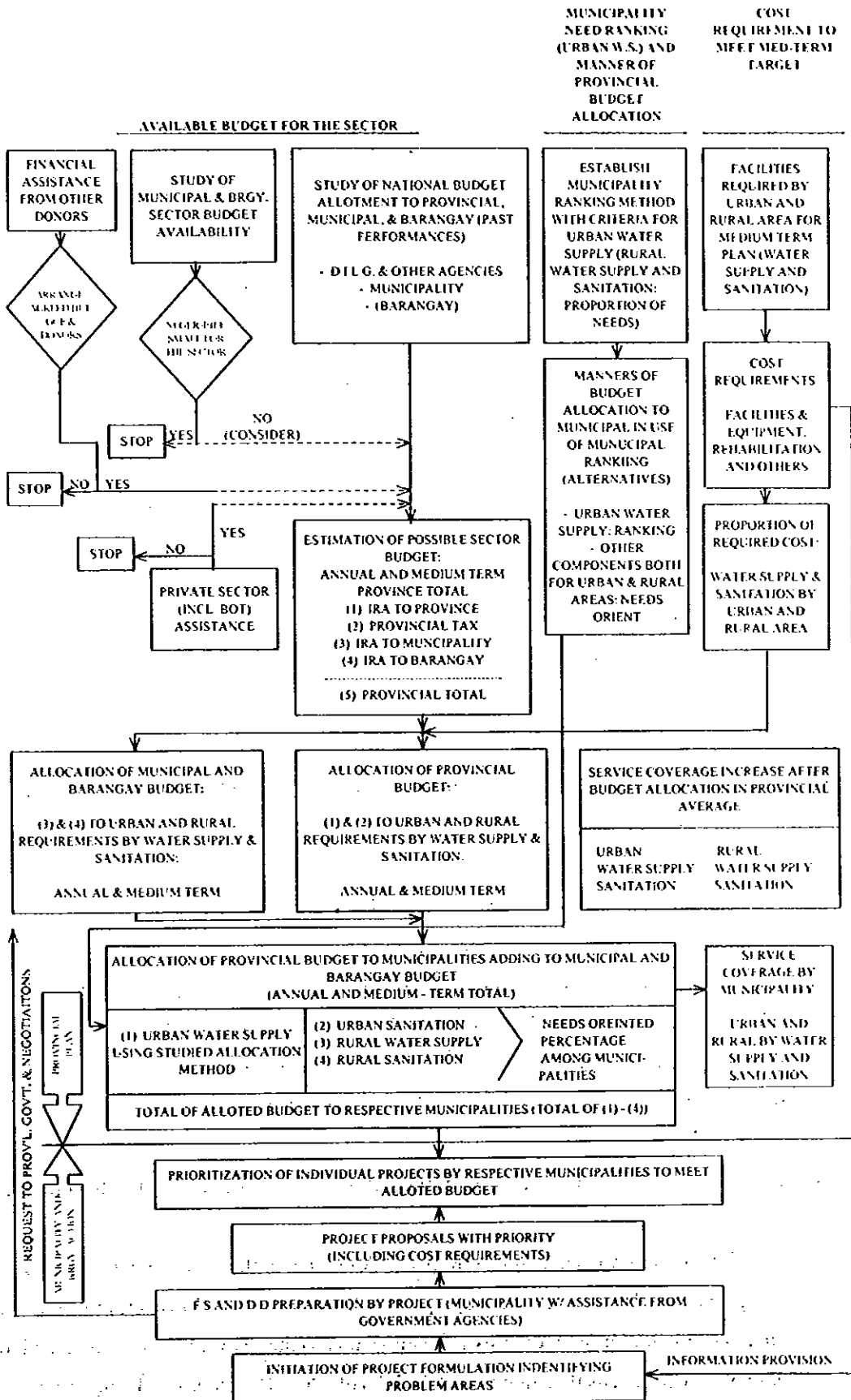
**Figure 11.1.1 Sector Budget Allocation**



Notes: (1) Budget from different sources in the figure above are those shared to water supply and sanitation sector from allotted amount for overall sectors.

(2) Shaded portion above is the potential fund source to be negotiated/arranged to meet target requirements.

**FIGURE 11.1.2**  
**GENERAL FLOW OF FINANCIAL ARRANGEMENTS FOR RELEVANT SECTOR DEVELOPMENT**



three different governmental levels; province, municipality and barangay. Municipal fund available for this sector is calculated as a sum of municipal and provincial allotments. Figure 11.2.1 shows the calculation procedure with assumptions and Tables 11.2.1 and 11.2.2 present the calculation results. Calculation process is further described as follows:

(1) Projection of annual IRA to all LGUs in the Philippines from 2001 to 2005

The IRA projection for the period 2001 to 2002 have been derived as equivalent to 40% of the total revenues of the actual National Internal Revenue Taxes of the 3<sup>rd</sup> Fiscal Year preceding the current year (e.g. 1997 to 1999). This 40% ratio is based on the Local Government Code in 1991. For the years 2003 to 2005, the projected National Internal Revenue Taxes by DOF served as the basis for projecting the IRA. Projected IRA registered an annual average growth rate of 11 percent for the period 2001 to 2005.

(2) Distribution of national total IRA to each administrative unit

Based on the Local Government Code, IRA is distributed by administrative level as follows:

Provinces	23%
Cities	23%
Municipalities	34%
Barangays	20%

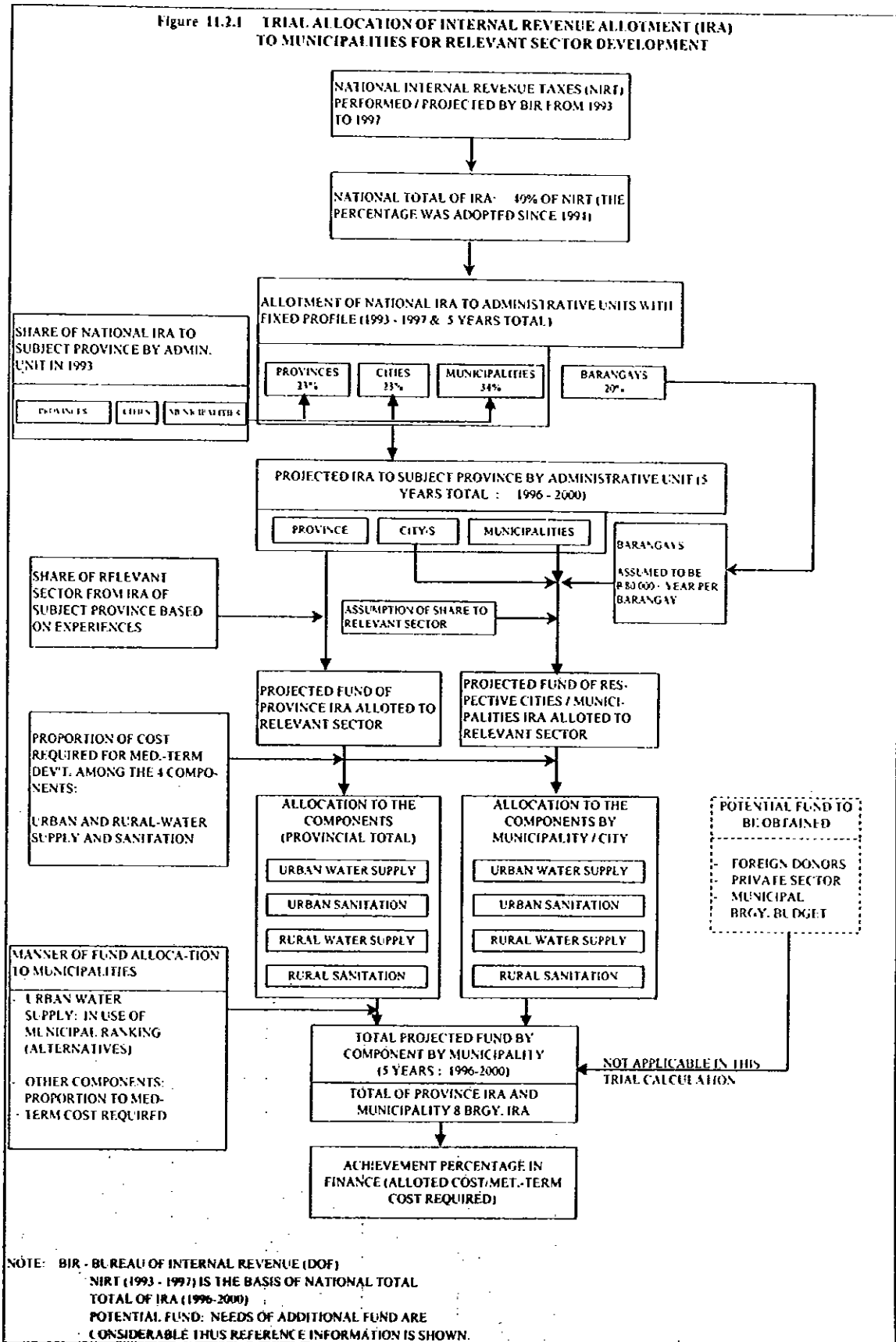
(3) Distribution of national total IRA to the subject province by provincial, municipal and barangay level

With reference to allocation of national IRA by administrative level, provinces and municipalities are based on weighted three (3) factors: population, land area and number of administrative units. In this analysis, however, the distribution percentage experienced in 1999 is simply employed in projecting IRA for the period 2001-2005 (refer to Table 6.2.2, Main Report and Supporting Report). Allotments to barangays are added to the IRAs for municipalities (₱80,000 times the number of barangays).

(4) Projection of available IRA to the relevant sector by administrative unit of the province

According to the Provincial Annual Report in 1998, about 0.6% of provincial IRA on the average was availed for the water supply and sanitation sector. However, referring to the experience in other provinces, provincial allocation to the relevant sector is assumed to be about 4%. This means that approximately 20% of "20% Development Fund" from

Figure 11.2.1 TRIAL ALLOCATION OF INTERNAL REVENUE ALLOTMENT (IRA) TO MUNICIPALITIES FOR RELEVANT SECTOR DEVELOPMENT



**Table 11.2.1 Projected Internal Revenue Allotment for Medium-Term Sector Development**

Unit: P 1,000

	2001	2002	2003	2004	2005	Total
1 40% of Actual Projected National Internal Revenue Taxes of the 3rd Fiscal Year preceding the current year	115,801,280	127,449,920	142,317,600	157,972,536	175,349,515	718,890,851
2 Internal Revenue Allotment to all LGUs						
(a) province (23%)	26,634,294	29,313,482	32,733,048	36,333,683	40,330,388	165,344,896
(b) cities (23%)	26,634,294	29,313,482	32,733,048	36,333,683	40,330,388	165,344,896
(c) municipalities (34%)	39,372,435	43,332,973	48,387,984	53,710,662	59,618,835	244,422,889
(d) barangays (20%)	23,160,256	25,489,984	28,463,520	31,594,507	35,069,903	143,778,176
(e) total IRA to all LGUs	115,801,280	127,449,920	142,317,600	157,972,536	175,349,515	718,890,851
3 Projected IRA to Subject Province by Administrative Unit						
(a) province	237,966	261,904	292,456	324,626	360,335	1,477,288
(b) municipalities/city including barangays	363,636	397,583	440,911	486,534	537,175	2,225,839
Altavas	19,681	21,548	23,931	26,411	29,226	120,827
Balete	19,110	20,952	23,303	25,779	28,526	117,671
Banga	24,322	26,527	29,342	32,305	35,595	148,091
Batan	21,474	23,473	26,025	28,711	31,694	131,377
Buruanga	15,441	16,873	18,702	20,627	22,764	94,408
Ibajay	28,605	31,201	34,514	38,002	41,875	174,197
Kalibo (Capital)	34,068	37,366	41,576	46,008	50,928	209,946
Lezo	13,492	14,753	16,362	18,056	19,937	82,600
Libacao	25,039	27,365	30,333	33,459	36,928	153,124
Madalag	23,492	25,654	28,413	31,319	34,544	143,422
Makato	20,510	22,428	24,876	27,454	30,316	125,583
Malay	17,514	19,139	21,213	23,397	25,821	107,085
Malinao	22,826	24,937	27,631	30,468	33,618	139,481
Nabas	19,721	21,544	23,871	26,320	29,040	120,496
New Washington	23,249	25,459	28,280	31,250	34,547	142,785
Numancia	18,307	20,011	22,187	24,478	27,021	112,005
Tangalan	16,784	18,351	20,352	22,459	24,797	102,742
(c) Provincial Total	601,602	659,487	733,367	811,160	897,510	3,703,126
4 Project fund of IRA to Relevant Sector by Administrative Unit						
(a) province	9,519	10,476	11,698	12,985	14,413	59,092
(b) municipalities/city including barangays	14,545	15,903	17,636	19,461	21,487	89,034
Altavas	787	862	957	1,058	1,160	4,833
Balete	764	838	932	1,031	1,141	4,707
Banga	973	1,061	1,174	1,292	1,424	5,924
Batan	859	939	1,041	1,148	1,268	5,255
Buruanga	618	675	748	825	911	3,776
Ibajay	1,144	1,248	1,381	1,520	1,675	6,968
Kalibo (Capital)	1,363	1,495	1,663	1,840	2,037	8,398
Lezo	540	590	654	722	797	3,304
Libacao	1,002	1,095	1,213	1,338	1,477	6,125
Madalag	940	1,026	1,137	1,253	1,382	5,737
Makato	820	897	995	1,098	1,213	5,023
Malay	701	766	849	936	1,033	4,283
Malinao	913	997	1,105	1,219	1,345	5,579
Nabas	789	862	955	1,053	1,162	4,820
New Washington	930	1,018	1,131	1,250	1,382	5,711
Numancia	732	800	887	979	1,081	4,480
Tangalan	671	734	814	898	992	4,110
(c) Provincial Total	24,064	26,379	29,335	32,446	35,900	148,125

**Table 11.2.2 Projected Allotment of IRA to the Relevant Sector by Component, 2001-2005**

Unit: P 1,000

Allocation of IRA to Provincial Units	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation	Total
1. Province	24,886	19,643	7,148	7,414	59,092
2. Municipalities					
Altavas	1,156	2,199	480	999	4,833
Balete	838	2,353	556	960	4,707
Banga	1,229	3,959	615	121	5,924
Batan	597	3,080	457	1,121	5,255
Buruanga	990	677	968	1,142	3,776
Ibajay	1,261	4,349	562	796	6,968
Kalibo (Capital)	7,168		1,230		8,398
Lezo	936	1,588	255	525	3,304
Libacao	2,065	1,321	843	1,896	6,125
Madalag	1,498	1,320	989	1,929	5,737
Makato	1,268	2,383	450	923	5,023
Malay	2,008	994	748	534	4,283
Malinao	800	2,967	592	1,221	5,579
Nabas	1,864	1,591	520	845	4,820
New Washington	1,817	2,726	376	793	5,711
Numancia	1,149	2,206	387	737	4,480
Tangalan	1,593	1,840	570	107	4,110
3. Total	53,122	55,195	17,745	22,063	148,125

national IRA are counted on sector projects. The same percentage is applied for the allocation of municipal IRA to the sector.

(5) Available IRA of municipalities by sub-sector

Available municipal fund for the four components (urban and rural water supply, and urban and rural sanitation) is estimated as a sum of respective components in combination of those allocated from the province and distributed in each municipality. Distribution of sector total fund to sub-components both in the provincial and municipal levels is arranged in proportion to the direct construction cost required for Phase I development.

With regards to the distribution of provincial IRA for urban water supply to respective municipalities, weighing method with ranking is employed, which will be discussed in



detail in Section 11.4. For the other components, provincial IRA is distributed to municipalities in proportion to their required costs in Phase I (refer to Table 11.2.2).

The projected provincial IRA to the sector during the period of 2001-2005 is estimated at ₱148.13 million, which is equivalent to 4% of combined provincial and municipal IRA. With regard to the allocation to sub-sectors, rural water supply has the largest allotment of 37.3% (₱55.2 million out of the total ₱148.13 million) followed by urban water supply (35.9% or ₱53.12 million). Rural sanitation is allotted ₱22.06 million (14.89%) and is larger than that for urban sanitation (₱17.75 million). The proportion of IRA allotment for the sub-sectors differs by municipality and depends on their priority sub-sectors.

In the allocation of municipal IRA, Kalibo (capital) has the largest allotment with ₱8.40 million (5.67%) followed by the municipality of Ibaday with ₱6.97 million (4.71%).

### 11.3 Additional Funding Requirements

Annual cost required for the whole province during the medium-term development is summarized in Table 11.3.1 referring to the study results in Chapter 10. The total cost required covers physical contingency; 10% of the direct cost and price contingency; 7% per year covering the direct cost and physical contingency, and value added tax. Details of implementation arrangements for annual investment are shown in Table 11.3.1, Supporting Report. The required cost excluding price contingency was also shown in the Table to compare with available IRA on a current price level.

Table 11.3.2 presents additional funding requirements of the province on the current price level (or shortfall in funding), which are figured out comparing with available fund for the relevant sector (IRA) in the province over the Phase I requirements. Other funds such as those provided by foreign assistance and local tax portions are kept blank to supplement upon confirmation of additional funds available. Out of ₱223.61 million required on 1998 price level for Phase I (2001-2005), IRA can fund only ₱148.13 million or 66.24% of the requirements. Hence, there is a shortfall of ₱91.3 million in funding in consideration of contingencies, price escalation and value added tax.

Table 11.3.1 Financing Requirement by Sector Component for the Province

Unit: P 1,000

Sector Components	2001	2002	2003	2004	2005	Total 2001-2005	Total 2006-2010
<b>Direct Cost</b>							
<i>1. Direct Construction Cost</i>							
<i>Urban Water Supply</i>							
Level III System	0	12,886	19,329	19,329	12,886	64,431	530,286
<i>Rural Water Supply</i>							
Level II System	8,628	8,628	0	0	0	17,255	0
Level I Facilities	0	6,721	10,081	10,081	6,721	33,603	329,436
<i>Urban Sanitation</i>							
Household toilet	0	92	138	138	92	458	1,714
Public school toilet	0	934	1,401	1,401	934	4,670	6,305
Public toilet	0	2,676	4,014	4,014	2,676	13,379	13,018
Disinfection of Level I Deep Well and Shallow	28	51	51	51	51	230	0
<i>Rural Sanitation</i>							
Household toilet	0	477	715	715	477	2,384	6,699
Public school toilet	0	3,362	5,044	5,044	3,362	16,812	93,634
Disinfection of Level I Deep Well and Shallow	104	190	190	190	190	865	179
<i>Urban Sewerage</i>	N/A	N/A	N/A	N/A	N/A	N/A	356,517
Sub-total	8,759	36,016	40,962	40,962	27,389	154,089	1,137,780
<i>2. Procurement of Vehicle/Equipment/Maintenance tools</i>							
Well drilling rig and service truck with crane	0	0	0	0	0	0	26,782
Support vehicle	0	590	0	0	0	590	0
Well rehabilitation equipment	0	280	0	0	0	280	0
Maintenance tools	0	34	51	51	34	170	0
Water quality testing kit	0	3	5	5	3	15	0
Sub-total	0	907	56	56	37	1,055	26,782
<i>3. Water Quality Laboratory</i>	478	0	0	0	0	478	0
<i>4. Sector Management Cost</i>							
<i>Engineering Studies</i>							
Feasibility study and detail design	9,102	4,412	0	0	0	13,514	69,711
Construction supervision	345	1,408	1,595	1,595	1,063	6,068	30,983
<i>Institutional Development</i>	4,080	3,887	2,030	1,208	1,015	12,219	69,711
Sub-total	13,527	9,706	3,624	2,803	2,078	31,801	170,404
<b>Total Direct Cost</b>	<b>22,764</b>	<b>46,630</b>	<b>44,642</b>	<b>43,821</b>	<b>29,504</b>	<b>187,423</b>	<b>1,334,966</b>
<b>Contingencies</b>							
<i>1. Physical Contingency</i>	2,276	4,663	4,464	4,382	2,950	18,736	133,497
<i>2. Price Contingency</i>	3,628	11,543	15,262	19,404	16,251	66,088	N/A
<i>3. Value-Added Tax (VAT)</i>	1,868	4,274	4,261	4,261	2,849	17,514	N/A
<b>Total Investment Cost</b>	<b>30,537</b>	<b>67,110</b>	<b>68,630</b>	<b>71,868</b>	<b>51,554</b>	<b>289,761</b>	<b>1,468,463</b>
<b>Total Investment Cost (excluding Price Contingency)</b>	<b>26,909</b>	<b>55,567</b>	<b>53,368</b>	<b>52,464</b>	<b>35,303</b>	<b>223,611</b>	<b>1,468,463</b>

Note: Institutional development includes:  
 1. Capacity enhancement programs,  
 2. Community management program,  
 3. Health and hygiene educations,  
 4. Water quality surveillance, and  
 5. Administrative support.

**Table 11.3.2 Additional Fund Requirement for the Medium-Term Plan**

Unit: P 1,000

	2001	2002	2003	2004	2005	Total 2001-2005
Financing Requirement	26,909	55,567	53,368	52,464	35,303	223,611
Expected available fund						
National						
Local (IRA)	24,064	26,379	29,335	32,446	35,900	148,125
Others						
Total	24,064	26,379	29,335	32,446	35,900	148,125
Shortfall in funding	2,845	29,187	24,033	20,018	-597	75,486
(Additional Fund Requirements)	3,044	33,417	29,442	26,239	-838	91,304

Note: Shortfall in funding.

above - current year price level.

below - current year price escalated at 7% per year.

Municipal achievement percentages in finance (1998 price level) are shown in Table 11.3.3 in provision of available fund originated by IRA against Phase I financial requirements. The percentages of Buruanga, Libacao, and Madalag (100%) are the highest among municipalities. Majority is in the range between 74% and 90% to the respective requirements, but the provincial average is only 66%. This is due to a projected low achievement rate (22%) for Kalibo.

#### 11.4 Medium-Term Implementation Arrangements

The financial requirements to meet Phase I target coverage are substantial. However, projected funding available (IRA) in application of past trend revealed that considerable amount of additional fund must be arranged. Under this situation, reference scenarios are discussed with the assumption of different levels of funding availability with reference to service coverage. Alternative countermeasures are also discussed in view of (1) acquisition of external funds, (2) augmentation of sector finance under current arrangements (IRA and others), (3) introduction of private sector participation to mitigate public investment needs, and (4) effective and economical investments.

Table 11.3.3 Internal Revenue Allotment for Water Supply and Sanitation Sector by Municipality  
(Medium-term Development, 2001-2005)

Unit: P 1,000

Name of Municipality	IRA Allocation to Municipalities										Phase I Investment Cost Requirement (b)	Achievement Percentage (%) in Finance (a)/(b)			
	Urban Water Supply			Rural Water Supply			Urban Sanitation			Rural Sanitation			Available Fund of Municipality (a)		
	Allotted from Provincial Government	Allotted from Provincial Government	Total	Allotted from Provincial Government	Allotted from Provincial Government	Total	Allotted from Provincial Government	Allotted from Provincial Government	Total	Allotted from Provincial Government				Allotted from Provincial Government	Total
Atavas	1,393	1,156	2,549	1,286	2,199	3,485	313	480	792	676	999	1,675	8,501	10,654	80
Balate	757	838	1,595	1,188	2,353	3,541	313	556	868	577	960	1,537	7,542	8,955	84
Banga	888	1,229	2,117	1,808	3,959	5,767	313	615	928	149	121	270	9,082	10,205	89
Batan	784	597	1,381	1,888	3,080	4,967	313	457	770	780	1,121	1,901	9,019	12,153	74
Buruanga	91	990	1,081	201	677	878	56	968	1,024	1,142	1,142	1,142	4,124	4,124	100
Ibajay	1,109	1,261	2,370	2,166	4,349	6,515	313	562	875	490	796	1,286	11,047	13,101	84
Kalibo (Capital)	1,804	7,168	8,972				2,225	1,230	3,455				12,427	56,639	22
Lezo	1,001	936	1,937	874	1,588	2,462	173	255	429	382	525	907	5,734	6,840	84
Libacao	525	2,065	2,590	443	1,321	1,764	313	843	1,156	276	1,896	2,172	7,682	7,682	100
Madalay	103	1,498	1,601	289	1,320	1,610	0	989	989	989	989	1,929	6,129	6,129	100
Makato	1,713	1,268	2,981	1,486	2,383	3,869	313	450	762	668	923	1,591	9,203	11,810	78
Malay	7,198	2,008	9,206	1,209	994	2,203	939	748	1,687	741	534	1,275	14,371	19,635	73
Malinao	629	800	1,429	1,407	2,967	4,374	313	592	904	671	1,221	1,891	8,599	9,969	86
Nabas	1,923	1,864	3,787	860	1,591	2,451	313	520	333	548	845	1,393	8,463	9,792	86
New Washington	1,804	1,817	3,621	2,032	2,726	4,758	313	376	689	684	793	1,477	10,545	16,071	66
Numancia	1,804	1,140	2,953	1,598	2,206	3,804	313	387	700	627	737	1,364	8,822	12,237	72
Panaylan	1,359	1,593	2,952	907	1,840	2,747	313	570	883	147	107	253	6,835	7,617	90
<b>Total</b>	<b>24,886</b>	<b>28,237</b>	<b>53,122</b>	<b>19,643</b>	<b>35,552</b>	<b>55,193</b>	<b>7,148</b>	<b>10,596</b>	<b>17,745</b>	<b>7,414</b>	<b>14,648</b>	<b>22,063</b>	<b>148,125</b>	<b>223,613</b>	<b>60</b>

#### 11.4.1 Reference Scenarios in Different Funding Levels

Achievement levels of service coverage in the target year are examined in assumption of five funding levels. It is regarded that the service coverage is increased in proportion to the investment during Phase I period. The relationships between funding levels and corresponding percentages of service coverage are illustrated in Figure 11.4.1 and Figure 11.4.2 for water supply and sanitation sectors, respectively.

Three reference scenarios are discussed with respect to different levels of funding. These scenarios will be referred to in combination with alternative countermeasures discussed in Section 11.4.2. Using computer-based programs, these scenarios may be modified by policy makers according to updated information and policy on the available fund and sector targets.

##### (1) The First Reference Scenario

No funding constraints are considered in this scenario to realize Phase I development as planned. This scenario is too optimistic based on the past experience of the province.

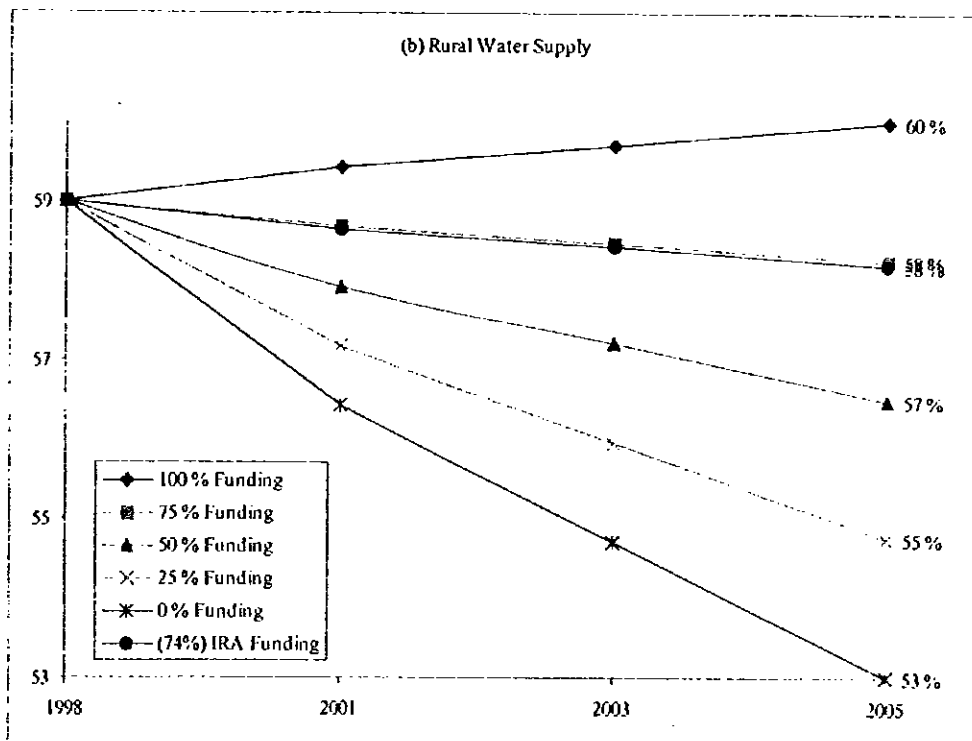
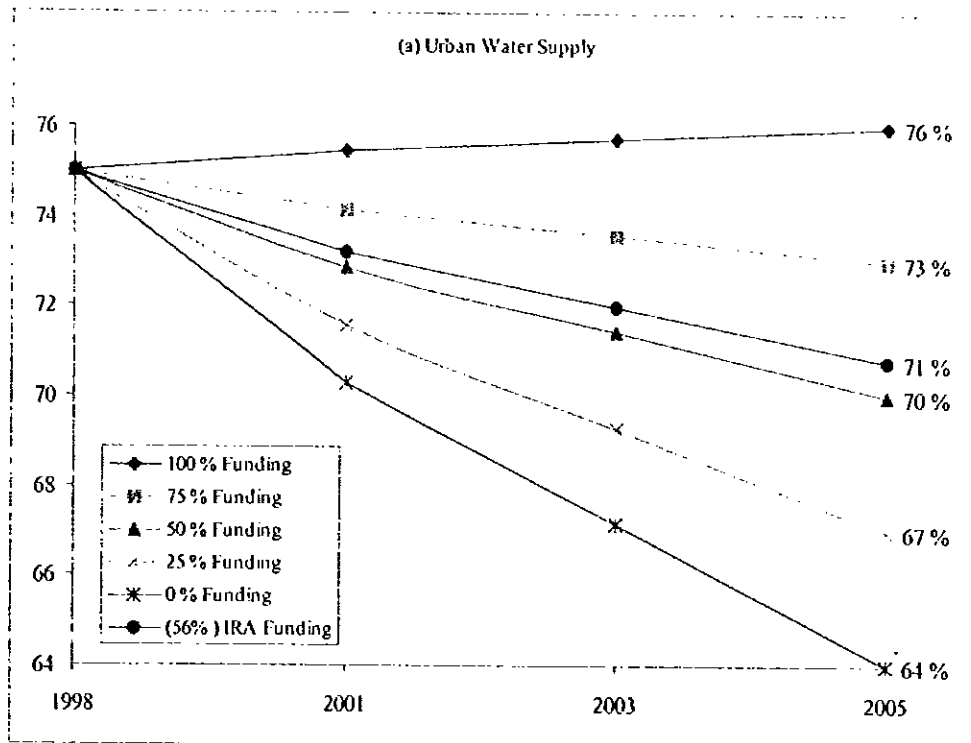
##### (2) The Second Reference Scenario

An intermediate scenario with 50-75 % funding ranges are considered. Urban and rural water supply coverage in the year 2005 is attained between 70-73% and between 57-58%, respectively. For urban and rural sanitation (household toilets), coverage will reach 82-86% and 69-73%, respectively based on the assumption that required private investments are followed.

##### (3) The Third Reference Scenario

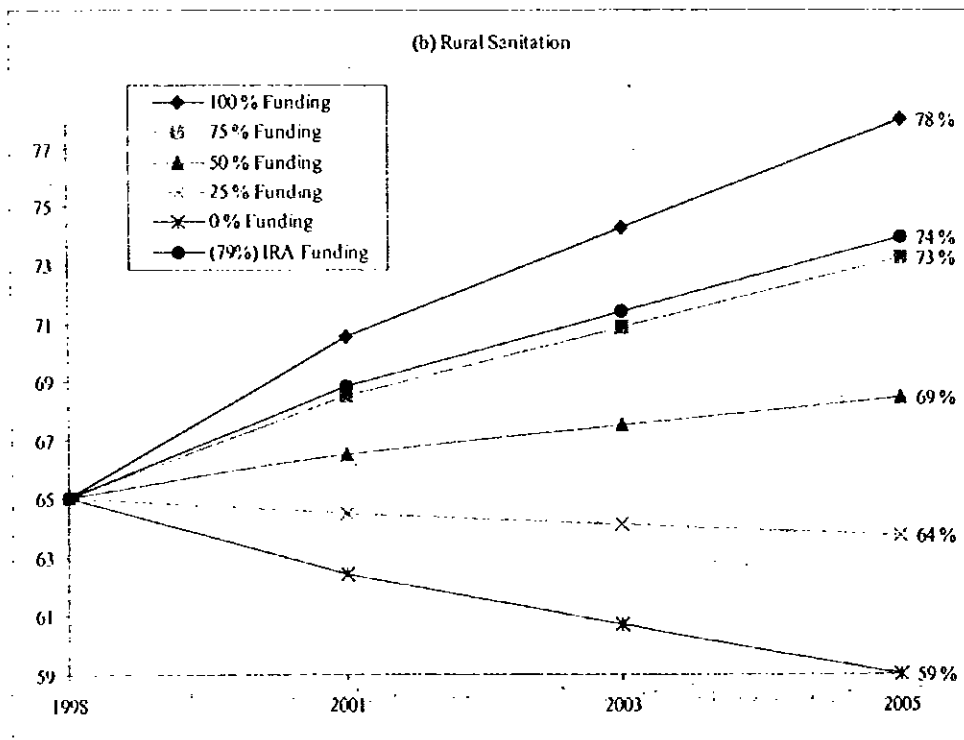
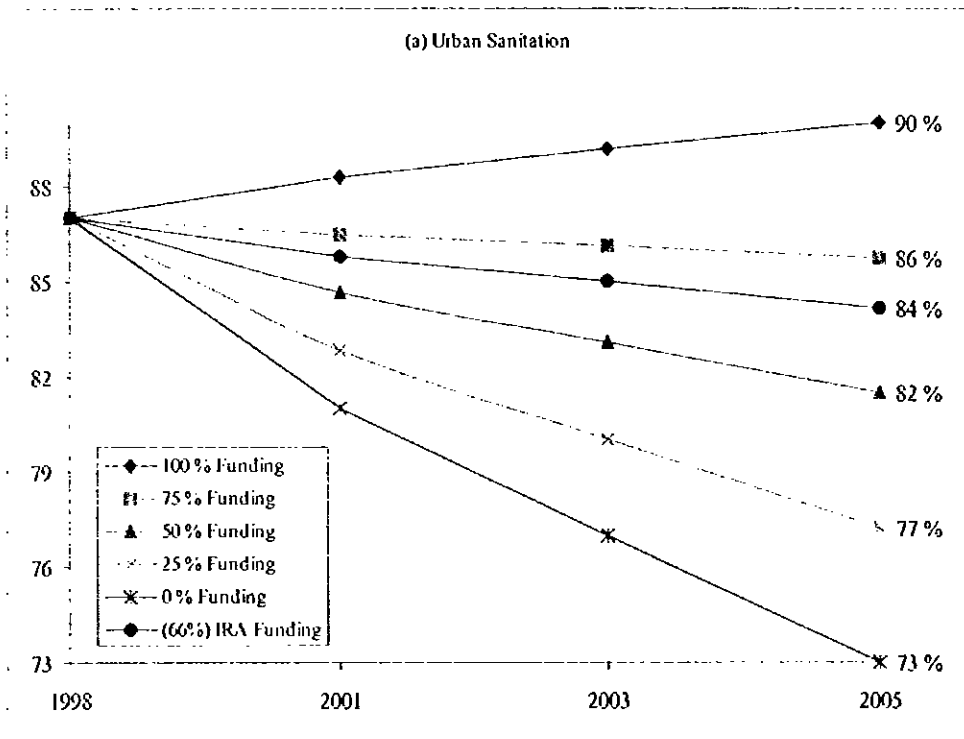
In the scenario of 25% funding against the total requirements of Phase I, urban and rural water supply coverage in the year 2005 will be attained at 67% and 55%, respectively, while urban and rural sanitation coverage will be at 77% and 64%. All sub-sectors will not be able to keep current service levels.

Figure 11.4.1 Relation Between Funding Levels and Percent of Coverage for Water Supply Sector



Note: Percentages of the coverage between 1998 and 2005 are simple prorated as the reference

**Figure 11.4.2 Relation Between Funding Levels and Percent of Coverage for Sanitation Sector**



Note: Percentages of the coverage between 1998 and 2005 are simply prorated as the reference

The allocated IRA funding of urban and rural water supply in the year 2005 will be 56% and 74% which will cover 71% and 58% of the population. In order to attain the Phase I development target of 76% and 60% service coverage, it needs an additional IRA funding of 44% and 26%, respectively.

For urban and rural sanitation, 100% funding shall have coverage percentage of 90% and 78%, respectively. However, at IRA funding of 66% and 79%, service coverage will only be at 84% and 74%. Thus, to meet the Phase I development targets of 80% and 75% of the population, an additional IRA funding of 34% and 21%, respectively, is required.

#### 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 the 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 ranking procedures, overall weighted score and investment need ranking of the municipalities. The top priority municipalities are Malay, Tangalan, and Balete.

With reference to the provincial fund allocation, it is assumed that 60% of the fund for urban water supply from provincial government is prioritized to the top five ranking municipalities, while the remaining 40% are equally distributed to the rest of the municipalities. In this case, the top five municipalities would only require 51.5% of the provincial funds. 48.5% of the funds were thus distributed to the rest of the municipalities.

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 Madalag, Balete, and Kalibo, which indicate that they are given priority for investments in all sub-sectors. The municipalities of Malinao and Lezo are the least priority in terms of investment ranking.

#### **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.

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 Unserviced Population in Base Year	% of Underserved and Unserviced Population in Phase I	% of Population Unserviced by Level III Systems in Base Year	Underserved and Unserviced Population in Base Year	Underserved and Unserviced Population in Phase I	Population Unserviced by Level III Systems in Base Year			
Altavas	40	43	93	0.80	0.60	1.00	0.76	5	
Balete	46	47	100	1.00	0.80	1.00	0.93	2	
Banga	5	12	100	0.20	0.20	1.00	0.32	16	
Batan	22	25	22	0.60	0.40	0.40	0.50	13	
Bunanga	33	34	100	0.80	0.60	1.00	0.76	5	
Ibajay	22	23	100	0.60	0.40	1.00	0.59	11	
Kahbo (Capital)	22	35	52	0.60	0.60	0.60	0.60	8	
Lezo	16	28	34	0.40	0.40	0.40	0.40	15	
Libacao	21	27	100	0.60	0.40	1.00	0.59	11	
Madalag	38	46	58	0.80	0.80	0.60	0.77	4	
Makato	21	35	49	0.60	0.60	0.60	0.60	8	
Malay	55	71	100	1.00	1.00	1.00	1.00	1	
Malinao		9	3	0.20	0.20	0.20	0.20	17	
Nabas	40	44	100	0.80	0.60	1.00	0.76	5	
New Washington	7	15	100	0.20	1.00	1.00	0.60	8	
Numancia	17	30	75	0.40	0.40	0.80	0.46	14	
Tangalan	41	49	100	1.00	0.80	1.00	0.93	2	
<b>Provincial Total</b>	<b>25</b>	<b>36</b>	<b>65</b>						

Note: 1. Scoring to Underserved and Unserviced Percentage.

2. Weight Allocation to Score.

Score	Range of Underserved and Unserviced Percentage				Allocated Weight
1.0	41 < % < 41	61 < % < 61	81 < % < 81	50	15
0.8	31 < % < 40	46 < % < 60	61 < % < 80		
0.6	21 < % < 30	31 < % < 45	41 < % < 60		
0.4	11 < % < 20	16 < % < 30	21 < % < 40		
0.2	% < 10	% < 15	% < 20		

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

Unit: P 1,000

Ranking	Name of Municipalities	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 (%)				
5	Altavas	1,393	5.60	1,156	2,549	2,549	100
2	Balete	757	3.04	838	1,595	1,595	100
16	Banga	888	3.57	1,229	2,117	2,117	100
13	Batan	784	3.15	597	1,381	1,381	100
5	Buruanga	91	0.37	990	1,081	1,081	100
11	Ibajay	1,109	4.46	1,261	2,370	2,370	100
8	Kalibo (Capital)	1,804	7.25	7,168	8,972	48,344	18.56
15	Lezo	1,001	4.02	936	1,937	1,937	100
11	Libacao	525	2.11	2,065	2,590	2,590	100
4	Madalag	103	0.41	1,498	1,601	1,601	100
8	Makato	1,713	6.88	1,268	2,981	2,981	100
1	Malay	7,198	28.92	2,008	9,206	9,206	100
17	Malinao	629	2.53	800	1,429	1,429	100
5	Nabas	1,923	7.73	1,864	3,787	3,787	100
8	New Washington	1,804	7.25	1,817	3,621	5,113	70.82
14	Numancia	1,804	7.25	1,149	2,953	3,139	94.08
2	Tangalan	1,359	5.46	1,593	2,952	2,952	100
Total		24,886	100	28,237	53,122	94,172	56.41

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	
Altavas	0.19	0.20	0.15	0.15	0.69	4
Balete	0.23	0.25	0.05	0.25	0.78	2
Banga	0.08	0.15	0.05	0.05	0.33	15
Batan	0.13	0.25	0.05	0.15	0.58	7
Buruanga	0.19	0.10	0.05	0.25	0.59	6
Ibajay	0.15	0.05	0.20	0.10	0.50	9
Kalibo (Capital)	0.15	0.25	0.10	0.25	0.75	3
Lezo	0.10	0.10	0.05	0.05	0.30	16
Libacao	0.15	0.10	0.10	0.15	0.50	9
Madalag	0.19	0.25	0.15	0.20	0.79	1
Makato	0.15	0.10	0.05	0.05	0.35	13
Malay	0.25	0.20	0.05	0.10	0.60	5
Malinao	0.05	0.10	0.10	0.05	0.30	16
Nabas	0.19	0.05	0.05	0.05	0.34	14
New Washington	0.15	0.05	0.10	0.05	0.35	12
Numancia	0.12	0.05	0.10	0.10	0.37	11
Tangalan	0.23	0.10	0.15	0.10	0.58	7

In the same context as proposed by the six provinces, project components with scope of work and financial viability were studied. The project is a part of medium-term development plan for Level I water supply and sanitation for limited classes of the municipality. The DILG is assumed to be Executing Agency and the province Implementing Agency in the meantime.

The project may be merged together with those of the 3rd batch provinces in preparation of the PW4SP. The implementation of a packaged project may be realized in the near future.

### 11.5.1 Project Components

#### (1) Water Supply and sanitation Component

There are eight (8) eligible municipalities in terms of 5<sup>th</sup> and 6<sup>th</sup> municipalities for GOP-assisted Level I rural water supply in the province. The Level I facilities for the municipalities consist of 36 deep wells and 26 shallow wells.

While, there are seventeen (17) municipalities to meet the condition for GOP-assisted projects (limited to 3rd to 6<sup>th</sup> municipalities) in sanitation sub-sector. The sanitation component comprises 25 public toilets and 92 school toilets to the rural communities. Distribution of toilet bowl (pour flush only) is one of the component of sanitation sub-sector in 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), while public toilets will be constructed at public markets and bus terminals in urban areas. Health consciousness among the rural people will also be bolstered with the provision of health education training and IEC materials.

#### (2) Equipment/Commodity Assistance

Due to budgetary constraint and cost-sharing arrangement required (heavy burden to the LGUs), the provision of drilling machine and its service truck is excluded in the medium-term plan (to be considered for long-term plan). While each one unit of service vehicle and well rehabilitation equipment is considered. In addition, maintenance tool and water quality testing kits are to be procured and one unit will be provided to each municipality to maintain the facilities.

#### (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 hydrogeological survey, finalization of well/spring 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 5<sup>th</sup> and 6<sup>th</sup> 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	I.GU	Income	Devised	NG	Remarks
Water Supply: Level I only	1 <sup>st</sup> to 4 <sup>th</sup>		0		No GOP grants for Level II & III
	5 <sup>th</sup> to 6 <sup>th</sup>		50		
Sanitary Support Faci. for Public Markets and Slaughterhouses	1 <sup>st</sup> to 2 <sup>nd</sup>		0		
	3 <sup>rd</sup> and 4 <sup>th</sup>		50		
	5 <sup>th</sup> and 6 <sup>th</sup>		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 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 2001 - 2005 arrived at about ₱89.2 million (₱65.0 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.

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	
<b>A. Const. &amp; Civil Works</b>						
<b>Water Supply</b>						
1. Deep Well (40m)	36	367,000	13,212,000			
2. Deep Well (80m)	0	543,000	0			
3. Deep Well (120m)	0	710,000	0			
4. Shallow Well	28	84,300	2,360,400			
5. Spring Development	0	737,600	0			
Sub-total a			15,572,400	5,703,085		9,869,315
<b>Sanitation</b>						
1. School Toilets	92	233,500	21,482,000			
2. Public Toilets	25	361,600	9,040,000			
Sub-total b			30,522,000	11,178,083		19,343,917
<b>Land acquisition</b>						
Land acquisition & Right of Way						
			320,000			320,000
Sub-total A			46,414,400	16,881,168		29,533,232
<b>B. Equip./Logistic Support</b>						
1. Support Vehicle	1	590,000	590,000	590,000		
2. Well Rehab. Eq.	1	280,000	280,000	280,000		
3. Maintenance Tools	8	10,000	80,000	80,000		
4. Water Quality Test Kits	8	15,300	122,400	122,400		
Sub-total B			1,072,400	1,072,400		
<b>C. Consultancy Services</b>						
1. Hydrogeological Survey			1,148,000	1,148,000		
2. D/D and Const. Sv.			5,105,584	5,105,584		
Sub-total C			6,253,584	6,253,584		
<b>D. Institutional Devt.</b>						
1. Capacity Enhanc. Prog.	L.S.		3,200,000	2,650,000	550,000	
2. Commu. Manag. Prog.	64	10,770	689,280	231,598	457,682	
3. Health & Hygiene Educ.	64	1,800	115,200		115,200	
4. Water Quality Surveil.	64	700	44,800		44,800	
5. NGO Assistance	64	1,200	76,800		76,800	
6. Administrative Support	L.S.		1,200,000		1,200,000	
Sub-total D			5,326,080	2,881,598	2,444,482	
<b>E. Physical Contingency</b>						
			5,906,646	2,708,875	244,448	2,953,323
<b>Total (A+B+C+D+E)</b>			64,973,110	29,797,625	2,658,930	32,486,555
<b>GOP Total</b>					32,486,555	
<b>LGUs</b>						30,537,362
<b>Equity</b>						1,949,193
<b>LGUs + Equity</b>						32,486,555
<b>F. Others</b>						
1. Price Contingency			21,781,959	11,619,118	934,030	9,178,811
2. Value Added Tax (VAT)			2,420,715		2,420,715	
Sub-total F			24,202,674	11,619,118	3,404,746	9,178,811
<b>Grand Total</b>			89,175,785	41,416,743	6,093,676	41,665,366

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.



Case 1: 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 2001 to 2005) is applied to increase project fund using available IRA.

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 5<sup>th</sup> and 6<sup>th</sup> classes is counted. The IRA allotted to the province is divided into two groups; classes 1<sup>st</sup> to 4<sup>th</sup> and 5<sup>th</sup> & 6<sup>th</sup> 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 (3<sup>rd</sup> to 6<sup>th</sup>) 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 ₱59,948,000 as a total of 5-year development program, consisting of water supply; ₱20,663,000 and sanitation, ₱39,285,000 (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 Water Supply:	6,973,000	13,691,000	20,663,000
Rural Sanitation:	7,118,000	14,421,000	21,540,000
Urban Sanitation:	7,148,000	10,596,000	17,745,000
<b>Total:</b>	<b>21,239,000</b>	<b>38,708,000</b>	<b>59,948,000</b>

The cost comparison was made between the estimated project cost (1998 price level) to be shared by the LGUs and available IRA of LGUs. Table 11.5.3 shows the cost sharing for the project among the GOP, LGUs and beneficiaries (BWSAs).

The GOP shall shoulder 50% of the overall project cost, utilizing the foreign assisted loan of 46% or ₱29.8 million and 4% or ₱2.7 million of the government counterpart fund. The remaining 50% of the overall cost shall be shared between the LGUs by 47% or ₱30.5 million and BWSAs (beneficiaries) by 3% or ₱1.9 million.

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

<b>Financial Source</b>	<b>x 1,000 Peso</b>	<b>Percentage</b>		<b>Remarks</b>
GOP	2,689	4	50	GOP counterpart
	29,798	46		Foreign Loan
LGUs	30,537	47	50	IRA
	1,949	3		BWSA equity
<b>Total</b>	<b>64,973</b>	<b>100</b>		

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 contingencies and VAT, the IRA to be used by LGUs will increase to ₱39.2 million from ₱30.5 million (1998 price level). The required cost is covered by about 65% of available IRA (₱59.9 million).

#### 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 cost sharing scheme for the project between the GOP and the LGUs.

GOP is possibly to finance up to P48.7 million or 75% of the total project cost in the portion of loan. Out of GOP finance through the loan, P29.8 million or 46% of the total project cost shall be granted to the LGUs, aside from 4% GOP counterpart fund.

The remaining P18.9 million or 29% of the total project cost shall be utilized for financing the LGUs to secure their budgetary capacity through MDF.

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

Financial Source	x 1,000 Peso	Percentage			Remarks
GOP	2,689	4	2	50	GOP counterpart
	29,798	46	75		Foreign Loan
	(18,932)	(29)			Foreign Loan for MDF
LGUs	11,605	18	47	50	IRA
	18,932	29			MDF through Foreign Loan
	1,949	3			BWSA Equity
<b>Total</b>	<b>64,973</b>	<b>100</b>			

Under this case, the IRA to be used by the LGU will increase to P13.7 million from P11.6 million (1998 price level), considering price contingency and VAT, which is 23% of available IRA estimated in the previous study (P59.9 million).

#### 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	2001				2002				2003				2004				2005				
	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 12.9 Pesos per household in the year 2005, 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 ₱8 per household per month, which is less than 1% of the median monthly household income of ₱4,716 in 1998. However, the users will have to pay water charge of up to 2% of their monthly income or ₱94/household/month 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. The number of households to be covered is 1,452 to meet the target (refer to Table 8.5.1: population to be served of 7,535 people and household size of 5.19 persons). The average capital cost to be paid is estimated at ₱11,500 per household (refer to Chapter 10 Main Report and Supporting Report). Applying the capital recovery factor to the capital costs with conditions of 7% interest rate and 20 years repayment period, monthly payment amounts to ₱90 per household.

The annual recurrent cost per household is estimated to be ₱180 (₱15/household/month) in the base year (refer to Chapter 10). It will reach to ₱24.10 in the year 2005 at an annual inflation rate of 7%. Thus, the total amount of repayment and recurrent cost in the year 2005 is ₱114, which is 1.5% 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 2005 <sup>1)</sup>	:	1.5%

Notes:

- 1) Provincial average monthly median income in 2005 (₱7,572 per household) is derived from 1994 Family Income and Expenditure Survey considering annual inflation rate of 7%. The monthly median income in 1998 is ₱4,716.

### (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; 15m<sup>3</sup> per household) and projected income in year 2005. Total capital cost of Level III water supply system is ₱64.4 million for 2,999 households to be served. Assuming an annual inflation rate of 7% and 20 years repayment period, the annual capital cost to be paid is ₱2,028 per household. The monthly capital cost to be paid by each household is ₱169.

The monthly recurrent cost per household is estimated to be ₱60.7 (₱728.3/year; refer to recurrent cost in Chapter 10 where operating cost is ₱8.03 million in base year for 11,026 households). Using an annual inflation rate of 7%, this recurrent cost is projected to be ₱97.5 per household in the year 2005.

The combined amount of capital repayment and recurrent cost in the year 2005 is ₱266.5/household/month. 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 (3.5% of the household income) seems to be affordable.

(a) Estimated water rate for 15 m <sup>3</sup> (Pesos)	:	266.5
(b) Percentage of (a) to monthly median household income in 2005	:	3.5%

Notes:

- 1) Monthly median household income is ₱7,572 in the year of 2005.

#### (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; ₱14,100). 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 ₱468 for a flush type and ₱287 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 2005 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)	:	287
(c) Percentage of (a) to monthly median household income in 2005 <sup>1)</sup>	:	6.18%

Note: Monthly median household income is ₱7,572 in the year 2005

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

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**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 based 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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