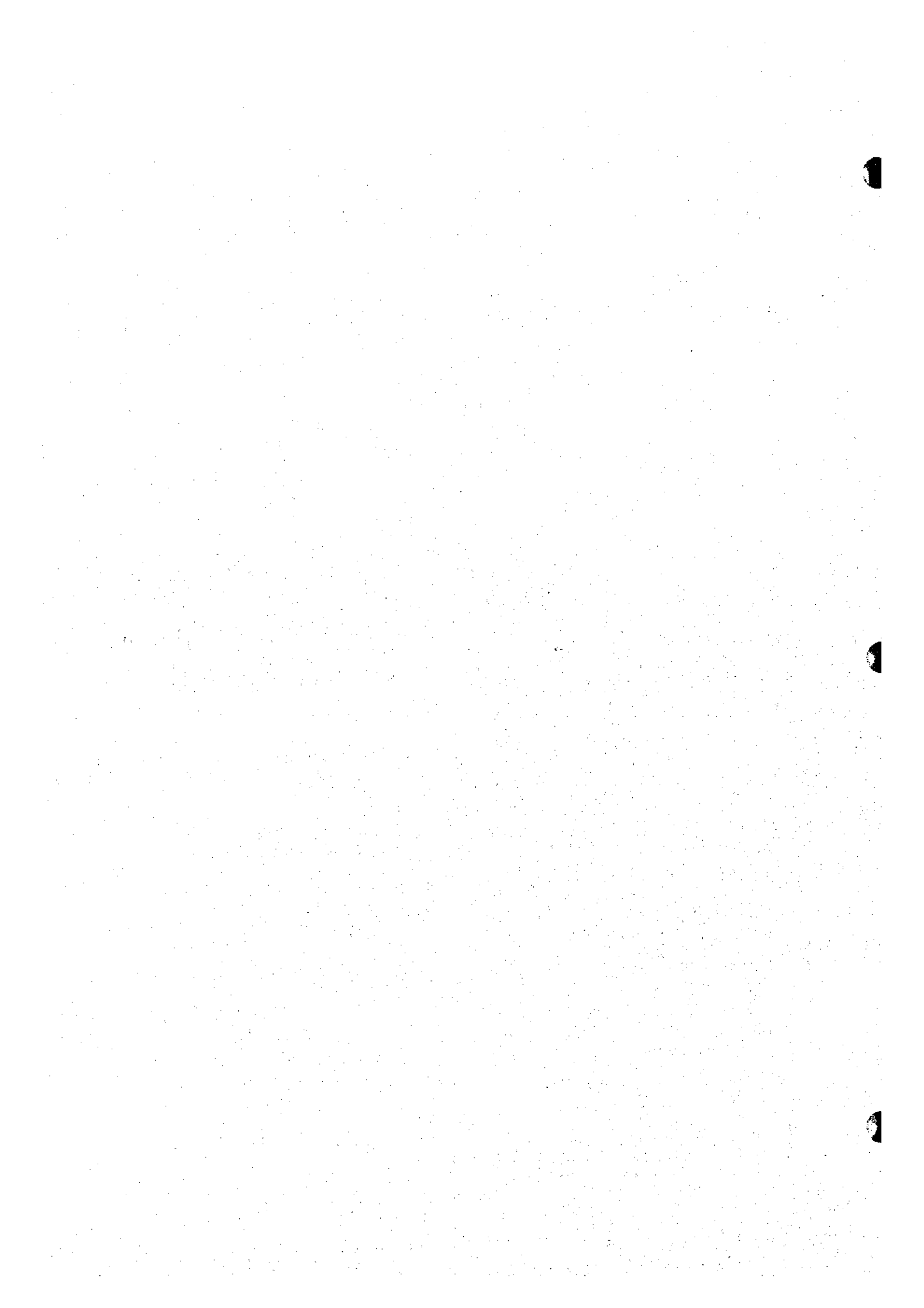


Chapter

4

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**EXISTING FACILITIES AND  
SERVICE COVERAGE**



## **4. EXISTING FACILITIES AND SERVICE COVERAGE**

### **4.1 Water Supply**

#### **4.1.1 General**

Existing water supply facilities and conditions were surveyed by municipality under the category of urban and rural areas (as of April 1998 and regarded as a figure in 1997). Facilities are classified into three service levels, of which Level I facilities are further classified into safe and unsafe for drinking purpose.

The percentages of service coverage by different service level were estimated covering urban and rural areas by municipality. The served population is defined as "population served adequately with access to safe water sources/facilities." The rest of the population with unsafe sources/facilities and without access to water supply facilities was then defined as "underserved population" and "unserved population," respectively. The service coverage was figured out using estimated population in 1997.

Service profile and operating conditions of existing facilities are summarized by service level to come up with problem areas and need of rehabilitation to reflect in the development plan.

As a provincial total, approximately 57% of the present population (of which 42% in urban area and 58% in rural area) is considered as adequately served (refer to 4.1, Supporting Report for the detailed study). Under the area classification, 70% of urban population and 54% of rural population have access to safe water sources/facilities, while the rest is underserved or unserved. About 277,800 persons or 40% of the served population depend on Level I facilities, while about 119,100 persons or 17% are served by Level III and/or Level II systems. Lower service coverage in rural area appears to be the result of a considerable number of unreported Level I facilities or no provision of facilities.

#### **4.1.2 Types of Facilities and Definition of Service Level Standard**

##### **(1) Composition of water supply system/facility**

The NSMP defines service level and system components of the water supply systems/facilities as shown in Table 4.1.1. NEDA Board Resolution No. 12 (s. 1995) also provides the approved definition of terms relative to water supply including levels of service (refer to 4.1.2, Data Report). These terms are to be adopted by all government agencies including LGUs.

Table 4.1.1 Composition of Water Supply System/Facility by Service Level

Description	Level I (Point Source Facility)	Level II (Communal Faucet System)	Level III (Individual House Connection)
1. Water Source	Drilled/driven shallow well Drilled/driven deep well Dug well Spring Rain collector	Drilled shallow/deep well Spring Infiltration gallery	Drilled deep well Spring Infiltration gallery Surface water intake
2. Water Treatment	Generally none. Disinfection of wells is conducted periodically by local health authorities. Iron removal facilities are provided in problem areas.	Generally none.	Disinfection is provided. Systems with surface water source have series of water treatment facilities.
3. Distribution	None	Piped system provided with reservoir/s	Piped system provided with reservoir/s and pumping facilities.
4. Delivery & Service Level	At point (within 250m radius)	Communal faucet (within 25m radius)	Individual house connection/household tap
5. Consumption Rate (Adequately Served)	At least 20 lpcd	At least 60 lpcd	At least 100 lpcd

(2) Safe and unsafe classification of water sources

DOH has classified Level I water source facilities as safe (reliable water source) and unsafe sources/facilities under the drinking water quality standard.

Safe source: Protected deep well, protected shallow well, improved/covered dug well and developed spring

Unsafe source: Unprotected deep well, unprotected shallow well, open dug well, undeveloped/unprotected spring and rainwater collector

Water sources other than the above, such as untreated surface water of rivers, lakes and ponds are also considered unsafe sources. On the other hand, Levels II and III water supply systems are regarded to have safe/reliable sources with provision of adequate treatment.

(3) Service level standard

The NSMP and NEDA Resolution No. 12 define "adequate service level" by different water supply system. Improvement in the number of households per water source/facility may be expected for Level I service in the future. On the contrary, the number of households served by a unit of private/public source is sometimes beyond the standard on a current basis.

Level III: 1 household/connection

Level II: 5 (4 to 6) households/communal faucet

Level I: 15 households/point source  
1 household/private well

#### 4.1.3 Level III Systems

Level III (individual house connection) systems at municipal level are usually established and operated by WD under the technical and financial assistance of LWUA. Some LGUs also implement and operate Level III systems commonly at barangay level.

There are 16 Level III systems in the province operated under WDs and other operating bodies as shown in Table 4.1.2 together with their service coverage in 1997. These are:

- 4 Water Districts in the municipalities of Bansalan, Digos, Hagony and Kiblawan;
- 2 Municipal waterworks in Malalag, and Sta. Cruz; and
- 10 Barangay waterworks in the municipalities of Hagony, Magsaysay (2 systems), Malita, Matanao (2 systems), Padada (2 system), Sta. Maria and Sulop.

The largest system in the province is Digos WD covering one urban barangay and 6 rural barangays in the municipality of Digos, the provincial capital, with served population of 34,200 in provision of 3 deep wells (details are referred to Supporting Report).

The Bansalan WD, which is the second largest system, covers one urban barangay and 10 rural barangays in the municipality of Bansalan with served population of 13,800 in provision of deep well and spring sources.

Santa Cruz MWW being operated by the municipal government covers 2 urban barangays and one rural barangay with served population of 9,500. Water source is spring.

Malita waterworks being operated by RWSA and adopting the combined system with communal faucets covers one urban and one rural barangay in the municipality of Malita with served population of 8,600.

Padada Water Supply Corporation being operated by the cooperative covers one urban barangay and 4 rural barangays with served population of 7,400.

The other waterworks mostly utilizing deep well sources are rather small-scale systems with served population ranging from 100 to 2,100.

Average collection efficiency at the above systems is calculated at 74% (highest at 92% in Kiblawan WD and lowest at 41% in Padada WSC) based on the questionnaire.

**Table 4.1.2 Information on Existing Level III System**

Name of Municipality	Name of System (Operating Body)	Water Consumption			Service Coverage								
		Type of Water Source <sup>1</sup>	Water Consumption (cu.m/day)	Domestic Supply (%)	No. of Brgys. Served			No. of Household Served			No. of Population Served		
					Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Bansalan	Bansalan WD	DW/SP	1,829	99	1	10	11	1,307	1,527	2,834	6,247	7,513	13,760
Digos (Capital)	Digos WD	DW	4,116	98	1	6	7	6,224	750	6,974	30,498	3,735	34,233
Hagonoy	Hagonoy WD	DW	267	99	1		1	346		346	1,370		1,370
	Hagonoy RWSA	DW	173	100	1		1	376		376	1,869		1,869
	<b>Municipal Total</b>		440	100	4	16	20	8,253	2,277	10,530	39,984	11,248	51,232
Kiblawan	Kiblawan WD	DW	210	100	1		1	426		426	2,049		2,049
Magsaysay	Magsaysay RWSA	DW	158	100	1		1	304		304	1,578		1,578
	Tacul WWA	SP	97	100		1	1		190	190		967	967
	<b>Municipal Total</b>		255	100	1	1	2	304	190	494	1,578	967	2,545
Malalag	Malalag WWS	DW	200	100	1	2	3	159	225	384	918	1,150	2,068
Malita	Malita RWSA	DW	649	98	1	1	2	1,100	450	1,550	5,623	2,342	7,965
Matanao	Manga WWA	DW	10	100		1	1		18	18		94	94
	Matanao RWSA	DW	132	100	1		1	430		430	2,141		2,141
	<b>Municipal Total</b>		142	100	1	1	2	430	18	448	2,141	94	2,235
Padada	Padada WSC	DW	740	100	1	4	5	1,273	127	1,400	6,492	899	7,391
	Piape RWSA	DW	127	100		3	3		90	90		671	671
	<b>Municipal Total</b>		867	100	1	7	8	1,273	217	1,490	6,492	1,570	8,062
Santa Cruz	Sta. Cruz MWW	SP	950	100	2	1	3	1,665	204	1,869	8,475	1,026	9,501
Santa Maria	Sta. Maria RWSA	DW	213	100	1		1	370		370	1,883		1,883
Sulop	Sulop RWSA	DW/SP	191	100	1	4	5	150	200	350	900	1,000	1,900
<b>PV4SP Study Area</b>			<b>10,061</b>	<b>99</b>	<b>14</b>	<b>33</b>	<b>47</b>	<b>14,130</b>	<b>3,781</b>	<b>17,911</b>	<b>70,043</b>	<b>19,597</b>	<b>89,440</b>

Note: 1. Type of Water Source: DW - Deep Well, Surf. - Surface Water (River), SP - Spring, IG - Infiltration Gallery.

Under the Local Government Support Program, the Malalag Bay Alliance Water Supply Project has just concluded its feasibility study. The project aims at supplying water to coastal areas in the municipalities of Bansalan, Digos, Guihing, Hagonoy, Kiblawan, Magsaysay, Malalag, Malinao, Padada, Sta. Maria and Sulop.

**Table 4.1.3 Information on Water District**

Name of Water District	Number of Connections						Production (cu. m/mon)	Accounted for Water (cu. m/mon)
	Domestic	Institutional	Commercial	Industrial	Total	Metered		
Bansalan WD	2,684		150		2,834	2,834	86,310	54,870
Digos WD	6,269	50	655		6,974	6,974	155,100	123,480
Hagonoy WD	473		15		488	482	8,400	8,010
Kiblawan WD	426				426	426	27,990	6,300

#### 4.1.4 Level II Systems

Level II (communal faucet) systems are designed to cater for barangay level water supply with a limited service coverage and supply capacity. These systems have been implemented

by different agencies (DPWH, LWUA, DILG, LGUs) encouraging the use of spring sources and are operated by LGUs, RWSAs or NGOs.

There are 34 Level II systems in the province. Among them, 5 systems are utilizing deep well sources, while the remaining systems are utilizing spring sources. The municipalities of Magsaysay and Santa Cruz have the largest number, 9 systems each or 26% of the total as shown in Table 4.1.4 together with service coverage in 1997 (details are referred to in Table 4.1.2, Supporting Report).

The systems in the municipalities of Hagonoy and Matanao are utilizing deep wells. One of the problems being encountered by the systems is supply interruption caused by power failure with an average frequency of twice a month.

The Astorga RWSA in Santa Cruz located along the coastal area is also utilizing deep well but is encountering salty water problem.

Problem areas, both in managerial and technical aspects, identified on existing Level II systems and necessary countermeasures for the improvement are discussed hereunder.

**(1) Management practice**

Most of the Level II systems are presently operational due to some extent of its current management practices. However, the prevailing practice of flat rate water bill with an average of 15 Pesos/HH/month which is considered at the minimum level, will ultimately lead to any one of these systems to become non-operational sooner or later. This is because the financial savings to cope with future repair and depreciation of existing facilities are not duly considered under the current management practice, while cost recovery by the operating bodies is a prerequisite in sector management.

To attain financial and managerial sustainability, reinforcement of the RWSA or other operating body shall be promoted with reference to institutional development.

**(2) Technical skill for O&M of facilities**

Utilization of spring source usually leads to less attention to the daily O&M practice, owing to the gravity flow of water to the service area. However, inappropriate care of spring box and pipeline leads to various problems, e.g. turbid water, less water flow by clogging at spring box and pipeline, etc. Physical damage may also happen to transmission line

Table 4.1.4 Information on Existing Level II System

Name of Municipality	Name of System (Operating Body)	Service Coverage								
		No. of Brgys. Served			No. of Household Served			No. of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Bansalan	Alegre/Bitaug RWSA		2	2		135	135		810	810
	Alenuwasa		2	2		190	190		1,140	1,140
	Dawusa		1	1		170	170		1,015	1,015
	<b>Municipal Total</b>		5	5		495	495		2,965	2,965
Digos (Capital)	Kapatagan RWSA		1	1		294	294		1,470	1,470
	Tres de Mayo		1	1		272	272		1,360	1,360
	<b>Municipal Total</b>		2	2		566	566		2,830	2,830
Don Marcelino	Brgy. Council	1	5	6	180	250	430	934	1,318	2,252
Hagonoy	Aplaya RWSA	1		1	50		50	250		250
	Sinayawan RWSA		1	1		30	30		150	150
	<b>Municipal Total</b>	1	1	2	50	30	80	250	150	400
Kiblawan	Brgy. Council, Kiblawan		4	4		466	466		2,423	2,423
Magsaysay	Acacia RWSA		1	1		67	67		347	347
	Bacungan RWSA		1	1		80	80		400	400
	Balnate RWSA		1	1		20	20		103	103
	Glanang RWSA		1	1		80	80		398	398
	Malawanit RWSA		1	1		80	80		400	400
	New Opon RWSA		1	1		72	72		366	366
	San Miguel RWSA		1	1		120	120		610	610
	Simon RWSA		1	1		45	45		233	233
	Upper Bala RWSA		1			102	102		519	519
	<b>Municipal Total</b>		9	8		666	666		3,376	3,376
Malalag	Ibo RWSA		1	1		69	69		353	353
Malita	Belita RWSA		1	1		145	145		783	783
	Brgy. Council, Malita		4	4		350	350		1,750	1,750
	Ticulon RWSA		1	1		80	80		403	403
	<b>Municipal Total</b>		6	6		575	575		2,936	2,936
Matanao	Bangkal RWSA		1	1		434	434		2,252	2,252
	Cabligan WWA		1	1		48	48		249	249
	Saboy WWA		1	1		54	54		280	280
	<b>Municipal Total</b>		3	3		536	536		2,781	2,781
Santa Cruz	Astorga RWSA		1	1		143	143		720	720
	Bato RWSA		1	1		137	137		690	690
	Brgy. Council, Santa Cruz		1	1		98	98		494	494
	Darong RWSA		1	1		130	130		655	655
	Idong RWSA		1	1		128	128		645	645
	Melilia RWSA		1	1		44	44		222	222
	Rizal RWSA		1	1		60	60		302	302
	Saliducon RWSA		1	1		37	37		186	186
	Sinuron RWSA		1	1		30	30		151	151
	<b>Municipal Total</b>		9	9		807	807		4,065	4,065
Santa Maria	Pongpong RWSA		1	1		180	180		938	938
Sarangani	Sarangani RWSA	1		1	260		260	1,300		1,300
<b>Provincial Total</b>		3	46	48	490	4,640	5,130	2,434	24,135	26,619



exposed on the ground in the mountainous area due to landslide, etc. associated with heavy rainfall, when proper protection of pipeline is not taken up.

Expansion of distribution line and installation of additional public faucets are usually undertaken without appropriate technical study on the capacities of water sources and distribution facilities, resulting to decrease of supply pressure and quantity.

To attain technical sustainability of existing facilities, an appropriate technical guidance and skills training for operating bodies shall be arranged by concerned agencies/LGUs.

#### **4.1.5 Level I Facilities**

Level I facilities (point source) are common in rural barangays, mostly implemented by DPWH. Major facilities are different types of wells equipped with handpumps or developed spring with transmission line and one communal faucet.

Level I facilities are classified in terms of safe and unsafe sources referring to the water quality examination results conducted by PHO as presented in Table 4.1.5 (details are referred to in Supporting Report). Served population in 1997 is also estimated as shown in the same table.

Of the 5,238 operational Level I facilities, about 40% is shallow wells. From the PHO, 46% of the Level I facilities is determined to be unsafe based on the result of water quality surveillance. All deep wells were regarded as safe water sources. Applying the unsafe percentage to shallow wells for each municipality, 3,394 Level I facilities are classified as safe sources, while 1,844 facilities are under unsafe category. The proportion of public and private Level I facilities for rural water supply is 89% and 11%, respectively. Developed springs share in public facilities is 15% (details are referred to in Supporting Report).

Problem areas observed on Level I facilities and necessary countermeasures for the improvement are summarized in terms of potable condition and functioning status.

##### **(1) Unsafe water sources**

Most of the cases declared as unsafe sources are driven shallow wells which are unprotected against seepage of surface water and usually located in nearby potential pollution sources, such as septic tank and piggery. (The Code on Sanitation of DOH requires a minimum distance of 25m between water source and pollution sources.)

Table 4.1.5 Information on Existing Level I Facilities

Name of Municipality	Number of Safe Water Sources						Number of Unsafe Water Sources						Served by Safe Source			
	Deep Well	Shallow Well	Covered/Improved Dug Well	Developed Spring	Total	Shallow Well	Open Dug Well	Undeveloped Spring	Rain Water Collector	Total	Number of Household			Number of Population		
											Urban	Rural	Total	Urban	Rural	Total
Bansalan	47	4	-	7	58	9	14	-	16	39	-	3,080	-	-	3,080	15,184
Digos (Capital)	374	238	-	30	642	112	14	-	-	126	1,378	9,413	6,778	-	10,791	47,067
Don Marcelino	13	31	-	99	143	41	78	-	-	119	861	167	4,469	-	1,028	879
Hagonoy	301	48	-	-	349	33	-	-	4	37	339	6,745	1,684	-	7,084	33,793
Jose Abad Santos (Trinidad)	83	8	-	5	96	82	55	-	-	137	185	1,708	1,893	963	2,701	8,795
Kiblawan	98	92	-	5	195	56	125	-	-	181	60	2,054	2,114	290	2,404	10,681
Magsaysay	270	24	5	8	307	21	27	-	-	48	646	4,224	4,871	3,355	8,226	21,502
Malabag	127	35	-	9	171	95	13	-	-	108	358	2,777	3,135	1,735	4,872	14,190
Malita	148	33	-	148	329	53	192	-	-	245	29	3,969	3,999	150	4,149	20,006
Matanao	145	94	-	8	247	94	31	-	-	125	90	4,725	4,815	451	5,276	24,974
Padada	88	47	-	-	135	60	-	-	-	60	364	863	1,227	1,860	2,123	6,061
Santa Cruz	76	23	-	29	128	44	67	-	-	111	1,092	3,300	4,391	5,568	8,959	22,198
Santa Maria	184	101	-	32	317	215	48	-	-	263	301	2,708	3,010	1,554	4,564	14,111
Sarangani	23	-	5	12	40	-	106	-	-	106	-	785	785	-	785	4,213
Sulop	96	141	-	-	237	94	46	-	-	140	465	2,193	2,658	2,289	4,947	13,144
PVA&SP Study Area	2,073	919	10	392	3,394	1,008	816	-	20	1,844	6,168	43,711	54,879	31,145	86,024	277,775

These shallow wells shall be provided with concrete apron on the ground surface and proper drainage facility at the surrounding area. Relocation of wells or pollution sources may be another countermeasure. For new construction of shallow wells, proper site selection and appropriate construction method shall be applied together with periodic monitoring of water quality.

(2) Non-functioning/abandoned wells

There are a lot of non-functioning public wells in the province as shown in Table 4.1.6. On the other hand, almost all private wells are functioning.

**Table 4.1.6 Operating Status of Existing Wells in the Province**

Operating Status	Unit	Public Facility		Private Facility		Total
		Deep Well	Shallow Well	Deep Well	Shallow Well	
Functioning	No.	2,073	1,116		811	4,000
	Percent	72%	73%		95%	76%
Non-Functioning	No.	824	422		47	1,293
	Percent	28%	29%		5%	24%
<b>Total Number</b>		<b>2,897</b>	<b>1,538</b>		<b>858</b>	<b>5,293</b>

Note: Number of non-functioning wells includes abandoned wells, but details in number and reasons are not available.

For Level I facilities, BWSAs or beneficiaries have responsibility on O&M, however, it is almost negligible. This can be gleaned from the presence of numerous non-functioning/abandoned wells constructed by DPWH. These conditions arise from lack of spare parts, drying up of water source and water quality problems such as colored water.

Among others, deep wells usually necessitate repair/replacement of mechanical parts and redevelopment of the well itself. Aside from the same problems as deep wells, shallow wells have primary disadvantages such as the use of shallow aquifer which are easily affected by the surrounding environmental conditions and the simple construction method applied (driving well point) that makes rehabilitation works difficult. Also, saltwater intrusion problem in Sta. Cruz is prevalent.

To prolong the service life of public deep wells, periodic check-up entailing preventive maintenance and redevelopment of wells are to be performed. Meanwhile, proper site selection and protection of well sources are requisites for shallow wells.

#### 4.1.6 Water Supply Service Coverage

According to the definition of DOH in terms of safe and unsafe sources, service coverage was studied under "served", "underserved" and "unserved" categories.

The present population of the municipalities as of 1997, base year for planning purpose, was estimated referring to NSO's projection method. The population distribution in 1995 census by urban and rural barangay prepared by NSO was adopted in the 1997 classification of barangays. Details are referred to section 8.3 I Population Projection.

Water supply service coverage by service level is estimated for urban and rural areas covering all municipalities under the following conditions and assumptions:

- Service percentage/population by Level III and Level II systems was estimated based on the questionnaire survey results.
- Unserved population was estimated using the percentages of unserved households to the total number of households by urban and rural area based on the 1990 population census data; "Households by Main Source of Drinking Water and City/Municipality."
- The rest of the population was considered served by Level I facilities assuming that 50% of private facilities was shared by neighbors to supplement insufficiency of public facilities.

Average number of households sharing at each Level I public/private facility was calculated at an average of 17 households/facility under the above assumptions (details are referred to in Supporting Report).

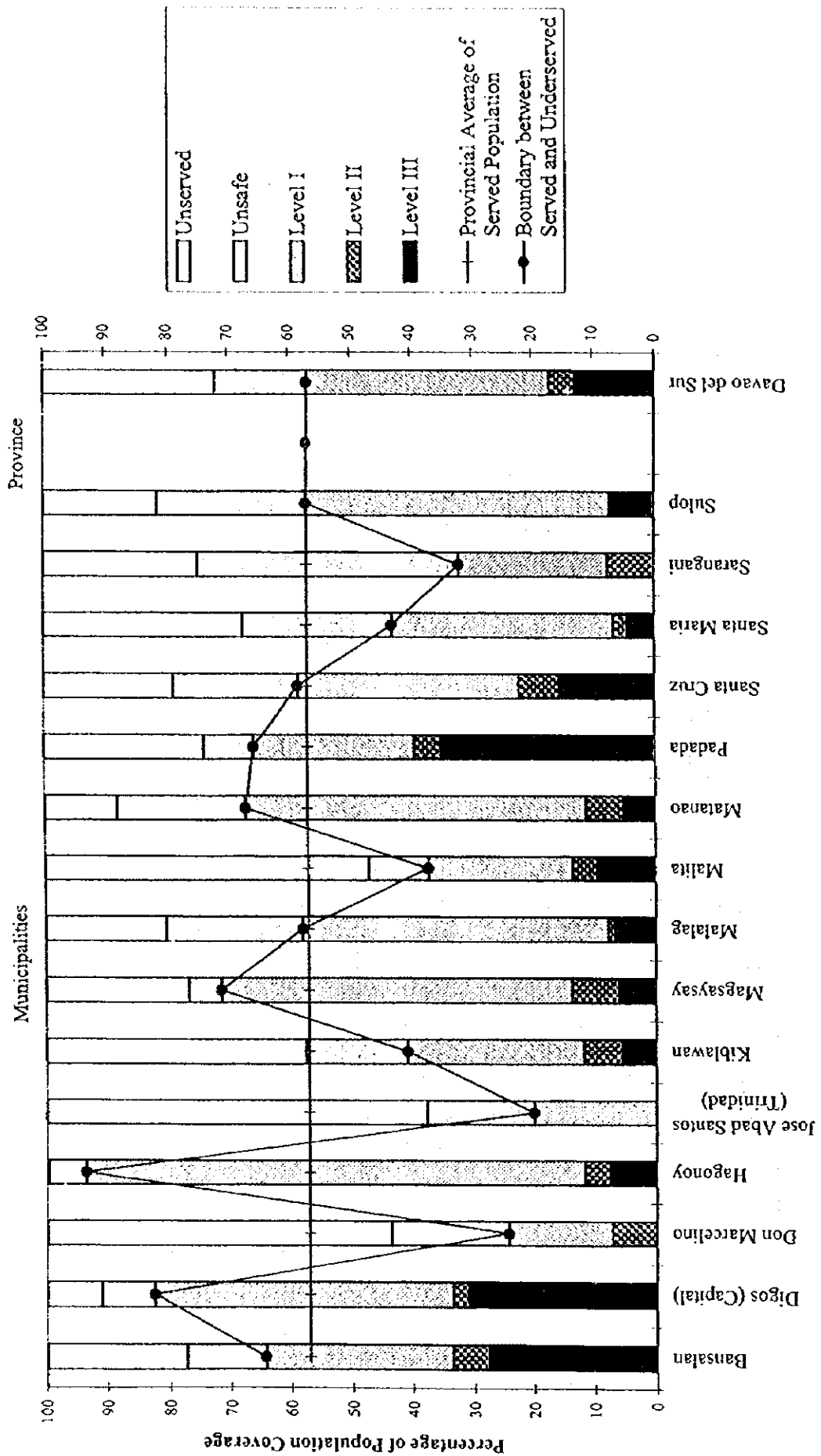
The proportion of population coverage by Level I public and private facilities in rural water supply is estimated at 94% and 6%, respectively (details are referred to in Supporting Report).

Table 4.1.7 presents the profile of the service coverage in terms of served, underserved and unserved. As a provincial total, 57% of the population is adequately served (70% of urban population and 54% of rural population). The low percentage of service coverage in rural area is affected by a large number of unsafe shallow/open dug wells (575 public and 1,267 private facilities used by about 105,500 persons) and/or no provision of facilities. Among the unserved population, considerable number of population that depends on non-reported and/or unidentified Level I sources are included. The provincial service coverage at present is exhibited in Figure 4.1.1 (details are referred to Supporting Report).

Table 4.1.7 Water Supply Service Coverage by Municipality

Name of Municipality	Area	Population (1997)	Population Coverage						Percentage of Population Coverage							
			Served by Safe Source			Underserved/Unserved			Served by Safe Source			Underserved/Unserved				
			Level III	Level II	Level I	Total	Unsafe Source	Unserved	Total	Level III	Level II	Level I	Total	Unsafe Source	Unserved	Total
Davao	Urban	6,697	6,247	-	-	6,247	-	450	93	-	-	93	-	-	-	7
	Rural	42,918	7,513	2,965	15,184	6,459	10,797	17,256	18	7	35	60	15	25	40	
	Total	49,615	13,760	2,965	15,184	6,459	11,247	17,706	28	6	31	64	13	23	36	
Digos (Capital)	Urban	41,886	30,498	-	1,784	37,276	3,107	1,503	89	7	4	11	7	4	11	
	Rural	68,436	3,735	2,830	47,067	6,275	8,532	14,804	5	4	69	78	9	12	22	
	Total	110,322	34,233	2,830	84,343	9,379	10,035	19,415	31	3	40	82	9	9	18	
Don Marcelino	Urban	11,181	-	934	4,469	5,403	5,778	-	48	8	40	48	52	9	52	
	Rural	20,227	-	1,318	879	7,600	6,042	17,727	19	7	17	24	19	18	89	
	Total	31,408	-	2,252	5,348	13,003	11,820	23,505	33	7	17	38	38	37	76	
Hagonoy	Urban	6,251	3,219	1,672	1,664	6,595	147	9	48	25	25	98	2	0	2	
	Rural	36,395	150	33,793	33,943	2,516	136	2,652	93	0	92	93	7	0	7	
	Total	42,646	3,369	1,822	35,477	40,538	2,663	145	7	4	82	94	6	0	6	
Jose Abad Santos (Trinidad)	Urban	5,167	-	963	963	1,028	3,176	4,204	19	19	19	19	20	61	81	
	Rural	43,642	-	8,795	8,795	7,575	27,271	34,847	20	20	20	20	17	62	80	
	Total	48,809	-	9,758	9,758	8,603	30,447	39,050	20	20	20	20	18	62	80	
Kiblawan	Urban	5,923	2,049	290	2,339	261	3,255	4	39	5	5	39	4	56	61	
	Rural	32,006	2,049	2,423	10,681	13,104	6,082	18,902	41	8	33	41	19	40	59	
	Total	37,931	4,098	2,423	10,971	15,445	16,145	22,488	5	6	29	41	17	43	59	
Maguysay	Urban	36,391	903	3,376	3,355	4,933	246	1,558	73	4	56	73	4	23	27	
	Rural	43,130	2,545	3,376	24,857	30,778	2,277	10,074	21	9	59	71	6	23	29	
	Total	79,521	5,448	6,752	28,212	35,716	2,724	20,832	42	13	58	82	10	46	56	
Malabag	Urban	27,126	1,150	353	14,190	15,693	6,103	5,329	4	1	52	58	22	20	42	
	Rural	31,723	2,068	353	15,925	18,346	7,142	6,736	7	1	50	58	23	20	42	
	Total	58,849	3,218	706	30,115	33,989	13,245	12,065	11	2	51	59	24	40	84	
Malita	Urban	12,897	5,623	-	150	7,048	76	7,048	44	1	1	45	1	55	55	
	Rural	72,123	2,342	3,536	20,006	23,884	8,318	37,921	3	5	28	36	12	53	64	
	Total	85,020	7,965	3,536	20,156	31,657	8,394	44,969	9	4	24	37	10	53	63	
Malinao	Urban	4,010	2,141	-	451	2,992	225	1,193	65	11	11	65	6	30	35	
	Rural	40,613	2,235	2,781	24,523	27,298	9,090	4,127	67	7	60	67	22	10	33	
	Total	44,623	4,376	2,781	24,974	29,990	9,315	5,320	14,655	5	6	67	22	10	33	
Paldan	Urban	9,297	6,492	1,860	8,352	8,352	945	945	90	20	20	90	14	10	10	
	Rural	13,704	1,370	1,025	4,202	6,797	1,894	5,014	11	7	31	50	14	37	50	
	Total	23,001	7,862	2,885	12,554	15,149	10,246	10,246	22	14	51	70	28	47	60	
Santa Cruz	Urban	20,787	8,475	-	5,668	14,043	4,151	2,592	68	27	27	68	20	12	32	
	Rural	40,326	1,026	4,065	16,650	21,721	8,196	10,210	18,605	3	10	54	21	25	46	
	Total	61,113	9,501	4,065	22,198	35,764	12,347	20,810	37,210	6	17	59	21	21	41	
Santa Maria	Urban	6,734	1,883	-	1,554	3,437	1,053	2,248	51	23	23	51	16	33	49	
	Rural	36,264	70,043	938	14,111	15,049	9,504	11,711	41	3	39	41	26	32	59	
	Total	43,002	1,883	938	15,665	18,486	10,558	13,959	24,316	4	2	36	35	32	57	
Sarangani	Urban	2,746	1,300	-	1,300	1,446	47	1,446	47	47	47	47	53	53	53	
	Rural	14,447	-	4,213	4,213	5,923	4,213	4,213	29	8	29	29	41	30	71	
	Total	17,193	-	4,213	4,213	7,369	4,213	4,213	29	8	29	29	41	30	71	
Sulop	Urban	5,792	900	-	2,389	3,189	4,151	740	16	40	40	55	32	13	45	
	Rural	20,365	1,000	-	10,856	11,856	4,538	4,151	8,709	5	53	58	22	20	42	
	Total	26,157	1,900	-	13,145	15,044	6,622	4,891	11,313	7	50	57	24	19	47	
P-WASP Study Area	Urban	151,210	70,043	3,906	311,483	105,094	20,421	25,695	46	3	21	14	14	17	30	
	Rural	545,385	19,397	246,630	291,787	85,025	168,373	253,998	4	5	45	54	16	31	46	
	Total	696,595	89,440	29,666	277,275	190,881	105,446	194,268	13	4	40	57	15	28	43	

Figure 4.1.1 Water Supply Coverage of the Province



Among different service levels, Level I facilities have a dominant role in service coverage on 10 municipalities out of the 15 municipalities in the province. As a whole, 40% of the total population (21% of urban population and 45% of rural population) relies on Level I facilities.

Level III systems predominate at limited municipalities, namely; at urban areas of Bansalan (93%), Digos (73%) and Padada (70%). As a provincial total, only 13% of the total population (46% of urban population and 4% of rural population) are served by Level III systems.

Conversely, Level II systems do not play major role of drinking water supply in the province at present. As a provincial total, only 4% of the population are served by Level II systems

Taking into account the municipal service coverage, Hagonoy has the highest at 94% (98% of urban population and 93% of rural population). Following Hagonoy are Digos at 82% (89% of urban population and 78% of rural population) and Magsaysay at 71%.

In contrast to the above, 6 municipalities are below the provincial average. The lowest is Jose Abad Santos at 20%, followed by Don Marcelino (24%), Sarangani (32%), Malita (37%), Kiblawan (41%) and Santa Maria (43%).

## **4.2 Sanitation and Sewerage**

### **4.2.1 General**

The national strategy for sanitation and sewerage is demand-oriented. It aims to stimulate sustainable improvements in sanitation service coverage, public health, and environmental pollution abatement. To achieve this goal, the Government has made investment choices based on demand and the extent to which choices contribute to efficiency and cost-effectiveness.

This sub-sector focuses on household toilets, school toilets and public toilets (public markets, bus/jEEPney terminals and parks/playgrounds). The latest data from the PHO on household and public toilets as well as from DECS on school toilets were gathered by municipality. In case of household toilets, data were consolidated by urban and rural area. These facilities were classified into sanitary and unsanitary in terms of structure rather than the surrounding conditions.

The Code on Sanitation of the Philippines provides the minimum standards for services dealing with public health. Specifically, Chapter XVII on Sewage Collection and Disposal, Excreta Disposal and Drainage defines alternatives for on-site sanitation and sewage collection and disposal. At present, the development of sewerage systems, even in the urban centers of the province is not given priority because of the huge investment cost it entails.

In the NEDA Board Resolution No. 12 (series of 1995), definitions of approved types of sanitary toilets were outlined (refer to 4.1.2, Data Report). There were 4 approved types of sanitary toilets including the sanitary pit privy where water is not used but provided with cover to minimize the emission of foul odor and also to keep away flies and rodents. These definitions were applied in this Master Plan.

#### **4.2.2 Types of Facilities and Definition of Service Level Standard**

As set forth in the above-mentioned Resolution, the types of household toilet facilities commonly used are categorized into: 1) sanitary toilets - approved types of toilet facilities include water-sealed pour flush or flush-type toilets either with receiving pit or septic tanks/vaults, and ventilated improved pit latrines and sanitary pit privy (dry type) considering its low construction cost especially in rural areas and in areas where water is scarce; and 2) unsanitary facilities - include the types of facilities used for receiving and disposing human waste which do not fall under the category of approved types of toilet facilities such as open pit privy and over-hung latrines (refer to Figure 4.2.1 DOH standard structure of a household toilet that meets the minimum requirements of a sanitary facility, Supporting Report).

In terms of service level, households are classified into: 1) served households - households with at least one (1) sanitary toilet; 2) underserved households - households with unsanitary toilets; and 3) unserved households - households without toilet. Coverage of adequately served households (with sanitary toilets) was estimated by urban and rural area of municipalities. The remaining households were considered as underserved or unserved. The service coverage was determined using the estimated number of households in 1997.

Service level standard for both elementary and secondary school toilets is translated in terms of: 1) served students - students who are adequately covered by the DECS standard ratio of one (1) unit per 40 students with access to sanitary toilets (number of sanitary toilet units multiplied by 40); and (2) underserved or unserved students - those with unsanitary and without toilet facilities, and students unserved (based on the standard ratio) even though they have access to sanitary toilets. Service coverage of adequately served students was estimated



both for public and private schools by municipality. Figure 4.2.2, Supporting Report shows a standard structure of a school toilet facility adopted by the DOH through the JICA-DPWII and DOH Rural Environmental Sanitation Project.

For public toilets, the service level is classified into: 1) served - utilities that have at least one (1) sanitary toilet, and 2) underserved and/or unserved - utilities that have unsanitary or without toilet facilities. Service coverage of public utilities was estimated as a percentage of sanitary facilities to the total number of utilities.

### **4.2.3 Sanitation Facilities and Service Coverage**

#### **(1) Household Toilets**

The service coverage of sanitary toilets in the province (excluding Davao City) is 80% of the total number of households. The rest is underserved or unserved. Of this, 10% are without toilet facilities (refer to Table 4.2.1, Supporting Report and 4.2.3 Sanitation Facilities and Service Coverage, Data Report).

Municipalities that have higher or equal service coverage than the provincial average of 80% are Malalag (96%), Digos (93%), Bansalan (87%), Malita (83%), Hagonoy and Santa Maria (81%) and Kiblawan (80%). On the other hand, the first 3 municipalities that registered the lowest service coverage are Sarangani (54%), Sulop (62%) and Don Marcelino (63%). It was observed that in municipalities that have high water supply service coverage (Digos, Hagonoy), high sanitation coverage occurs and correspondingly, in low water supply service coverage (Sarangani, Don Marcelino), low sanitation coverage also occurs. This can be attributed to the fact that the development of water supply almost always follows the upgrading of the household sanitation facilities because of access to water.

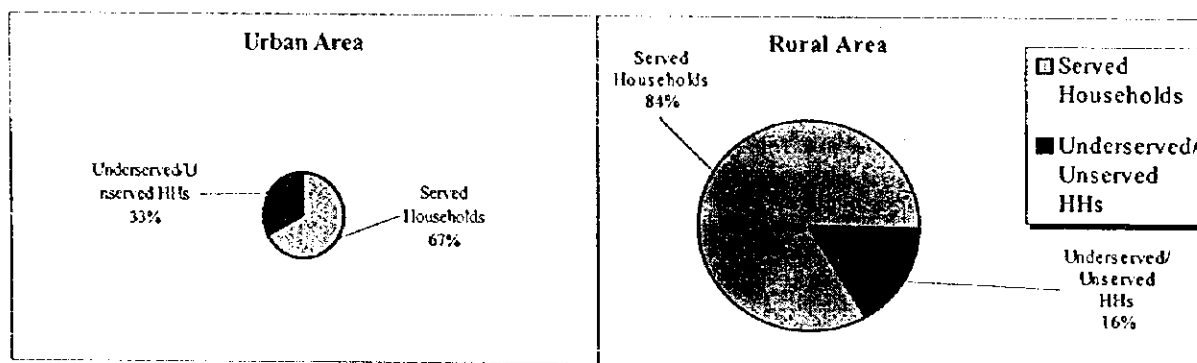
In urban areas, approximately 67% of the total households are served. A much higher served households of 84% exist in rural areas. This is due to the concentration in the distribution of toilet bowls in rural areas by the DOH. Table 4.2.1 shows the municipal breakdown in the number of urban and rural household toilets by category, and service coverage. Figure 4.2.1 reflects the provincial service coverage of household toilet facilities for urban and rural areas.

Even if high percentages of sanitary toilets are revealed in the urban areas, problems arise from the unsatisfactory disposal of the effluent from the septic tanks or the direct

**Table 4.2.1 Sanitation Facilities and Service Coverage of Household Toilets, Urban and Rural, 1997**

Name of Municipality	Households, 1997			Household Toilets Facilities and Service Coverage											
	Urban	Rural	Total	Urban				Rural				Municipal Total			
				HHs Served by Sanitary Toilets		Underserved/Unservd HHs		HHs Served by Sanitary Toilets		Underserved/Unservd HHs		HHs Served by Sanitary Toilets		Underserved/Unservd HHs	
				Number	% of HHs	Number	% of HHs	Number	% of HHs	Number	% of HHs	Number	% of HHs	Number	% of HHs
Bansalan	1,395	8,705	10,100	996	71	399	29	7,771	89	934	11	8,767	87	1,333	13
Digos (Capital)	8,513	13,687	22,200	7,288	86	1,225	14	13,443	93	244	2	20,731	93	1,469	7
Don Marcelino	2,154	3,838	5,992	838	39	1,316	61	2,935	76	903	24	3,773	63	2,219	37
Hagonoy	1,358	7,304	8,662	806	59	552	41	6,169	84	1,135	16	6,975	81	1,687	19
Jose Abad Santos	592	8,474	9,466	694	70	298	30	5,861	69	2,613	31	6,555	69	2,911	31
Kiblawan	1,232	6,155	7,387	781	63	451	37	5,151	84	1,004	16	5,932	80	1,455	20
Magsaysay	1,298	7,150	8,448	758	58	540	42	5,663	79	1,487	21	6,421	76	2,027	24
Malabag	948	5,308	6,256	833	88	115	12	5,174	97	134	3	6,007	96	249	4
Malita	2,499	14,310	16,809	1,716	69	783	31	12,214	85	2,096	15	13,930	83	2,879	17
Matanao	804	7,826	8,630	592	74	212	26	6,065	77	1,761	23	6,657	77	1,973	23
Padada	1,819	2,814	4,633	746	41	1,073	59	2,680	95	134	5	3,426	74	1,207	26
Santa Cruz	4,076	8,001	12,077	2,129	52	1,947	48	7,057	88	944	12	9,186	76	2,891	24
Santa Maria	1,306	6,960	8,266	869	67	437	33	5,846	84	1,114	16	6,715	81	1,551	19
Sarangani	519	2,690	3,209	425	82	94	18	1,323	49	1,367	51	1,748	54	1,461	46
Sulop	1,177	4,155	5,332	727	62	450	38	2,591	62	1,564	38	3,318	62	2,014	38
<b>PWJSP Study Area</b>	<b>30,090</b>	<b>107,377</b>	<b>137,467</b>	<b>20,198</b>	<b>67</b>	<b>9,892</b>	<b>33</b>	<b>89,943</b>	<b>84</b>	<b>17,434</b>	<b>16</b>	<b>110,141</b>	<b>80</b>	<b>27,326</b>	<b>20</b>

**Figure 4.2.1 Provincial Service Coverage of Household Toilet Facilities, 1997**



discharge of wastewater to the local drains. Generally, there is little concern about the unsatisfactory disposal of wastes once it is outside their dwelling units. Practically, almost all the households dispose their wastes in the manner that poses risks to public health. Sullage waste management is unheard of.

**(2) School and Public Toilets**

Toilet facilities in elementary and secondary schools for both public and private schools were investigated. The province has a total of 3,054 toilet units found in 430 schools. Sanitary toilets adequately serve only 42% of the students. The rest, 58% is underserved

or unserved. Table 4.2.2 provides the number and service coverage of school toilet facilities.

The number of sanitary school toilets is quite low to meet the service level standard of 40 students per sanitary facility. At present, the average ratio is 54 students per sanitary toilet, a little over than the standard level. A number of school toilets constructed under FW4SP are not being used due to lack of water supply, destroyed plumbing fixtures and water tank seepage. In some areas, this problem is compounded when access to the sanitary facility is limited to only the teachers and guests.

DECS is currently promoting the practice of having one toilet within the classroom. This practice should be thoroughly reviewed with respect to maintaining sanitary condition, provision of water faucet/supply in every toilet/unit, proper design of depository to avoid groundwater pollution, and provision of regular sludge collection and disposal.

There are 26 public markets, bus/jeepney terminals and parks/playgrounds in the province. About 69% of these public utilities is served, while the rest, 31% is underserved or unserved. Table 4.2.3 shows the number and service coverage of public utilities.

Public toilets at markets, bus/jeepney terminals and parks/playgrounds, although culturally acceptable, are improperly used and maintained resulting to unsanitary conditions. In most cases, no specific arrangements are made for the operation and maintenance and for the collection of fees to cover such costs. Although considered as sanitary because of the structure, most of the facilities have unsanitary conditions due to inadequate/lack of water supply and destroyed appurtenances because of vandalism.

#### **4.2.4 Sewerage Facilities**

There are no existing sewerage facilities in the province. Most of the wastewater from the dwelling units with acceptable facilities finds its way to open drains and eventually to water-courses. These deficiencies are the major contributing factors to the poor condition of the water environment in some areas of the province.

Table 4.2.2 School Toilet Service Coverage by Municipality

Name of Municipality	Number of School	Total No. of Student	Number of Toilets		No. of Student Served by Sanitary Toilets		Underserved/ Unserved		
			Sanitary	Unsanitary	Number	%	Number	%	
Bansalan	Public	27	10,287	90	72	3,600	35	6,687	65
	Private	4	2,158	18	6	720	33	1,438	67
	Total	31	12,445	108	78	4,320	35	8,125	65
Digos (Capital)	Public	37	26,738	156	96	6,240	23	20,498	77
	Private	7	2,936	48	12	1,920	65	1,016	35
	Total	44	29,674	204	108	8,160	27	21,514	73
Don Marcelino	Public	21	5,561	66	84	2,640	47	2,921	53
	Private	-	-	-	-	-	-	-	-
	Total	21	5,561	66	84	2,640	47	2,921	53
Hagonoy	Public	22	9,066	84	78	3,360	37	5,706	63
	Private	1	516	6	6	240	47	276	53
	Total	23	9,582	90	84	3,600	38	5,982	62
Jose Abad Santos (Trinidad)	Public	22	6,339	72	66	2,880	45	3,459	55
	Private	1	221	6	6	240	100	-	-
	Total	23	6,560	78	72	3,120	48	3,459	53
Kiblawan	Public	27	6,650	60	102	2,400	36	4,250	64
	Private	3	1,194	12	12	480	40	714	60
	Total	30	7,844	72	114	2,880	37	4,964	63
Magsaysay	Public	24	9,749	84	72	3,360	34	6,389	66
	Private	3	1,224	18	12	720	59	504	41
	Total	27	10,973	102	84	4,080	37	6,893	63
Malabag	Public	16	6,766	66	54	2,640	39	4,126	61
	Private	1	225	6	6	240	100	-	-
	Total	17	6,991	72	60	2,880	41	4,126	59
Malita	Public	52	16,878	228	132	9,120	54	7,758	46
	Private	2	834	24	6	960	100	-	-
	Total	54	17,712	252	138	10,080	57	7,758	44
Maranao	Public	34	10,270	108	120	4,320	42	5,950	58
	Private	3	835	24	12	960	100	-	-
	Total	37	11,105	132	132	5,280	48	5,950	54
Padada	Public	9	4,236	48	24	1,920	45	2,316	55
	Private	3	953	24	6	960	100	-	-
	Total	12	5,189	72	30	2,880	56	2,316	45
Santa Cruz	Public	32	15,498	156	84	6,240	40	9,258	60
	Private	1	518	6	6	240	46	278	54
	Total	33	16,016	162	90	6,480	40	9,536	60
Santa Maria	Public	31	9,744	132	90	5,280	54	4,464	46
	Private	4	866	36	12	1,440	100	-	-
	Total	35	10,610	168	102	6,720	63	4,464	42
Sarangani	Public	23	7,290	78	72	3,120	43	4,170	57
	Private	-	-	-	-	-	-	-	-
	Total	23	7,290	78	72	3,120	43	4,170	57
Solep	Public	19	6,515	66	72	2,640	41	3,875	59
	Private	1	375	6	6	240	64	135	36
	Total	20	6,890	72	78	2,880	42	4,010	58
PW4SP Study Area	Public	396	151,583	1,494	1,218	59,760	39	91,823	61
	Private	34	12,855	234	108	9,360	73	4,361	34
	Total	430	164,442	1,728	1,326	69,120	42	96,188	58

**Table 4.2.3 Public Toilets Facilities and Service Coverage**

Name of Municipality	Number of Sanitary Toilets			Number of Unsanitary Toilets			Total Number of PU Toilets	Served		Underserved	
	Public Markets	Bus/Jeepney Terminals	Parks/Playground	Public Markets	Bus/Jeepney Terminals	Parks/Playgrounds		Number of Sanitary Toilets	%	Number of Unsanitary Toilets	%
Bansalan	1		1				2	2	100		
Digos (Capital)	2						2	2	100		
Don Marcelino	1						1	1	100		
Hagonoy	1						1	1	100		
Jose Abad Santos	1						1	1	100		
Kiblawan	1						1	1	100		
Magsaysay	1						1	1	100		
Malalag	1						1	1	100		
Molita	1			2			3	1	33	2	67
Matanao	1			4			5	1	20	4	80
Padada	1						1	1	100		
Santa Cruz	1			1			2	1	50	1	50
Santa Maria	1			1			2	1	50	1	50
Sarangani	1						1	1	100		
Sulop	1		1				2	2	100		
<b>PW4SP Study Area</b>	<b>16</b>		<b>2</b>	<b>8</b>			<b>26</b>	<b>18</b>	<b>69</b>	<b>8</b>	<b>31</b>

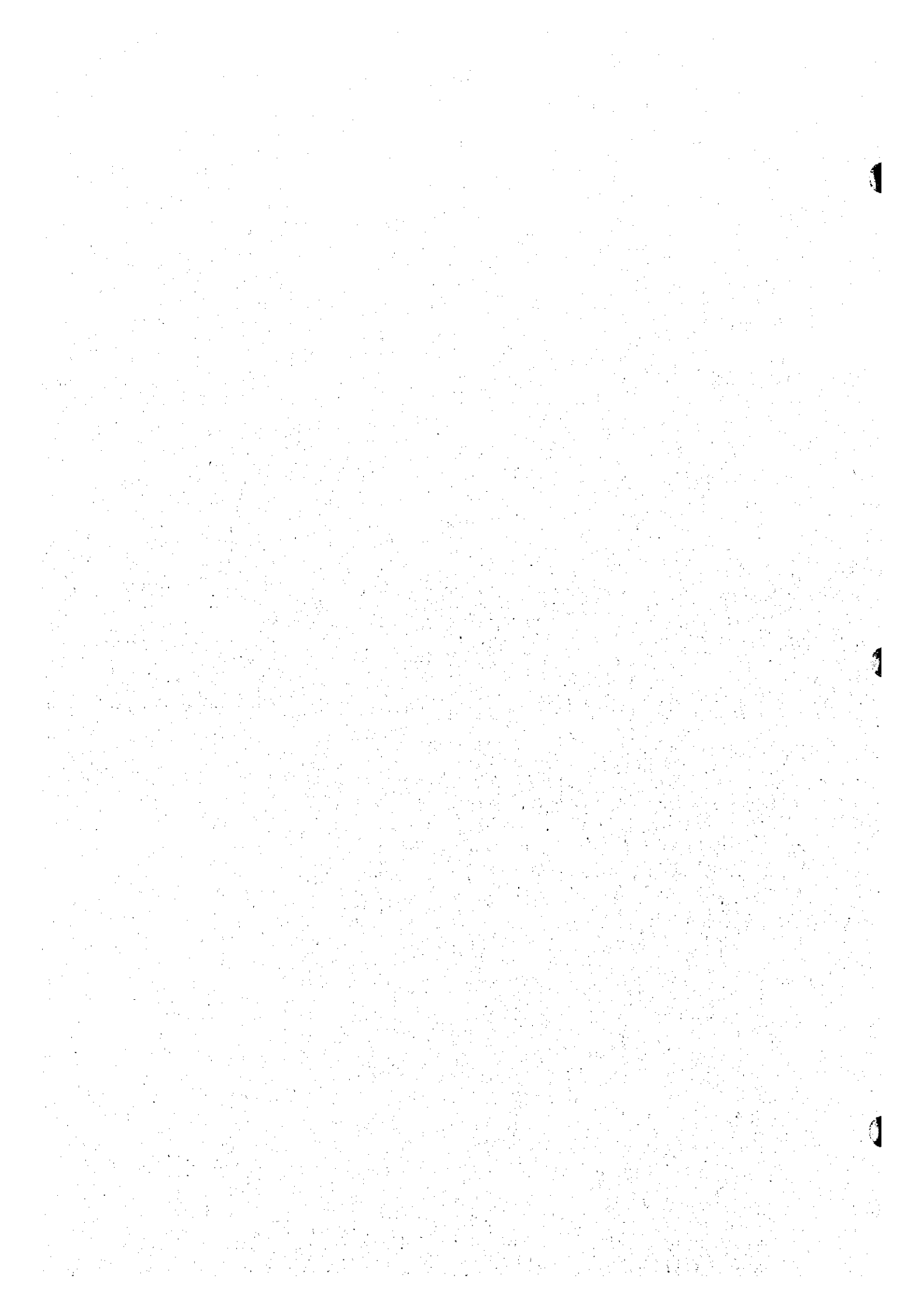


Chapter

**5**

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**EXISTING SECTOR ARRANGEMENT  
AND INSTITUTIONAL CAPACITY**





## **5. EXISTING SECTOR ARRANGEMENT AND INSTITUTIONAL CAPACITY**

### **5.1 General**

Much has happened in the sector since 1987 when the national master plan for the sector was initially prepared. Its development targets to be attained for the medium term was renewed in 1996 through the Updated Medium term Development Plan. The water supply, sewerage and sanitation sector today is still in a transition stage. As a recent development, a national level comprehensive plan, 'the Philippine National Development Plan', directions to 21st century, was published in 1998 by the NEDA.

As for the institutional aspect, the Local Government Code (1991) has essentially re-defined the role, relationship and linkages of central, provincial, municipal and barangay institutions in the provision of social basic services, including water and sanitation. Before the issuance of the Code, the responsibilities for water supply and sanitation functions were lodged with various national agencies. The new direction mandates the Local Government Units (LGUs) to play a larger role in planning and implementing water supply and sanitation projects, however, this has raised serious institutional capacity and resource reallocation issues.

Chapter Five provides an overview of existing sector policies and arrangements as a basis for formulating modifications and improvements. It identifies current capacity building issues which need to be addressed in the early stages of master plan implementation. Most importantly, it assesses the impact of the present devolved delivery system at the local levels.

### **5.2 Sector Reforms**

The GOP has set the future agenda for sector reform. These initiatives followed the completion of the Water Supply Sector Reform Study and the National Urban Sewerage and Sanitation Strategy Study. The GOP has endorsed the major recommendations of these studies through the following NEDA resolutions. Furthermore, these resolutions are reflected in the above mentioned National Development Plan.

#### **(1) NEDA Resolution No.4 (series of 1994)**

LGUs, in the context of the LGC and related decentralization efforts, now play a lead role in service delivery. The resolution, NEDA Resolution No.4, allows LGUs to implement all levels of water supply projects and redefines the roles of other sector agencies.

With the purpose of ensuring common interpretation of the Clause (g) of NEDA Board Resolution No.4 (series of 1994), the Implementing Rules and Regulations (IRR) (refer to 5.2, Data Report) for the relevant sector was prepared by the DILG and has been approved by the NEDA in 1998. It delineates the responsibilities of government agencies involved in the sector, and defines the role of local government units in the provision of water supply and sanitation services including O&M of the facilities. The new direction mandates the LGUs to play a larger role with an emphasis on institutional strengthening needs to adequately perform their devolved functions in the sector.

- (2) NEDA resolution No.5 (s. 1994) reaffirms the principle of provision of sewerage and sanitation services on the basis of willingness-to-pay. The resolution mandates the establishment of a Central Project Support Office (CPSO) at LWUA to assist LGUs in the formulation, preparation and implementation of sewerage/sanitation projects (refer to 5.2, Data Report).

### 5.3 Sector Institutions

#### (1) Existing Institutional Arrangements

Although the LGC mandates the LGUs major changes on sector structure and performance, the sector is still in transition. However, the new sector role and respective responsibilities of the LGUs and national agencies are defined in the IRR.

At the national government level, there are three line agencies (DPWH, DILG and DOH) and two government-owned and controlled corporations (MWSS and LWUA), responsible for sector project implementation as shown in Figure 5.3.1. A regulatory board, the National Water Resource Board (NWRB) coordinates the overall policy framework for water resources development and management. Other government agencies are concerned with macro-planning, natural resources allocation decisions and environmental protection and management.

At the local level, there are national government agency field offices working for the sector. Water Districts, RWSAs and BWSAs, on the other hand, deal with the actual delivery of water in different service levels. Some LGUs continue to operate provincial and municipal water supply systems. The private sector, non-government organizations and community-based organizations also undertake water supply and sanitation activities in the rural communities.

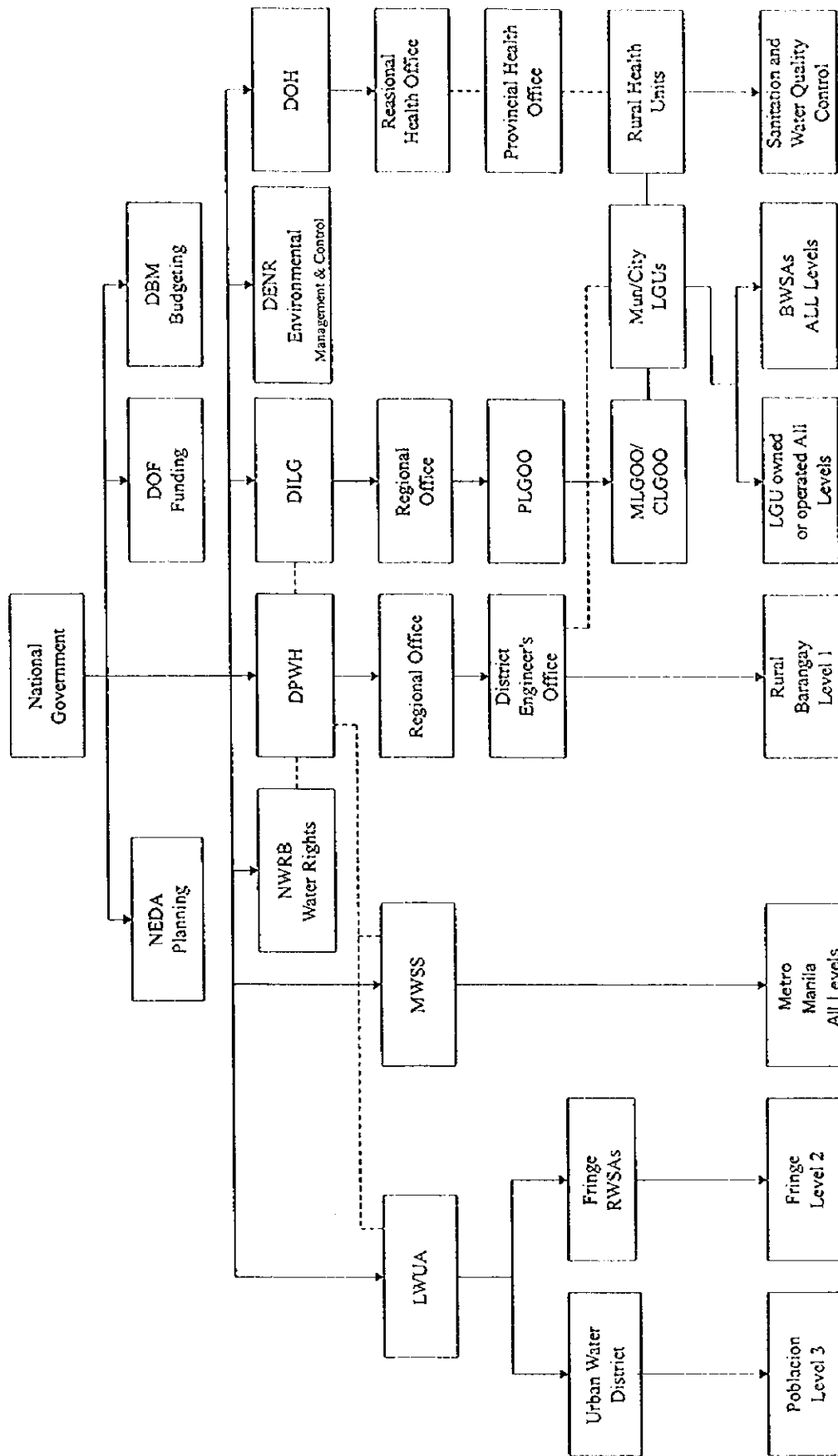


Figure 5.3.1 Functional Relationships

The drastic changes took place among the DPWH, DILG, DOH and LGUs after the government decentralization and issuance of the NEDA Board Resolution No.4. The transition functions of these agencies are presented in Table 5.3.1. As shown, those of implementing water supply projects, DPWH used to undertake, are now transferred to the LGUs. The functions of PHO under the DOH have been devolved to the LGUs. Thus, DILG now undertakes the overall coordination function for the implementation of the WATSAN projects.

**Table 5.3.1 Transition Functions of the DPWH, DILG and DOH**

Agency	Before NEDA Board Resolution No.4 in 1994	Present Involvement
DPWH	Identify projects	Transferred to the DILG
	Design/Construct Level-I	Transferred to PEO/MEO
	Repair/Rehabilitate Level-I	Transferred to PEO/MEO
	Formulate/Evaluate maintenance. Program	Transferred to PEO/MEO
	Organize BWSA	Trans. to PPDO with DILG assistance
	Train BWSAs on O&M	Transferred to LGUs with DILG assistance
	Procure/supply materials/spare parts	Transferred to PEO/MEO
DILG	Sector/Project monitoring and data-management	Transferred to LGUs with DILG assistance.
	From the DPWH functions	Overall coordination for project implementation (identification of project, training of BWSAs on O&M, and monitoring and data management)
	-do-	Assist LGUs to identify water supply systems, Level-I, II and III.
DOH	Develop and implement rural sanitation programs nationwide	Transferred to PHO
	Implement the sanitation component of integrated water supply and sanitation projects	Transferred to PHO
	Monitor, inspect and disinfect water supply systems	Transferred to PHO
	Provide its health workers with training on water quality surveillance, hygiene education, and water purification treatment processes	Transferred to PHO
	Conduct health education campaigns	Transferred to PHO
	Produce information, education and communication (IEC) materials on water supply	Transferred to PHO

## (2) Sector Finance

### 1) Cost sharing arrangement

As the recent policy of the central government, programs of central government particularly for those that have social and/or environmental objectives are implemented through a cost-sharing manner between the central government agency and LGUs. National government grant will be provided for the limited municipalities in terms of socio-economic conditions.

### 2) Financing and management systems

The LGUs may either finance the sector projects directly or involve the participation of the private sector through concession, management or service contracts.

In financing WATSAN activities, the LGUs may tap their Internal Revenue Allotments (IRAs) and/or locally generated revenues or leverage. These are also the resources to borrow from government or private financing institutions.

LGUs can access ODA loans for devolved activities, which are being channeled through conduits. These conduits are the Municipal Development Fund (MDF) and a Government Financial Institution (GFI). Their respective policy-making bodies determine the re-lending/on-lending terms passed on to the LGUs. The Policy on accessing loans through the MDF is currently under review by the central government to make the terms and conditions more concessional towards the LGUs.

## 5.4 Sector Agencies at the National Level

### (1) Department of the Interior and Local Government (DILG)

The DILG is responsible, through the promulgation of rules and regulations and by means of technical assistance and training, for facilitating the implementation of the LDC. Accordingly, it is the leading national coordination agency responsible for the supervision and administration of water supply and sanitation projects implemented by LGUs and is mandated to strengthen local capacity for delivery of the services

General administration and institution building supports to LGUs entail assistance in the formation and training of BWSAs, coordination of master plan preparation, provision of external funds, formulation and installation of sector management systems (including O&M) and BWSA financial management systems. It also provides assistance to LGUs in terms of technical support for evaluation of water sources and design of simple water

systems (Level I and II).

The Water Supply and Sanitation-Project Management Office (WSS-PMO), a unit within DILG, is primarily responsible for water and sanitation activities in the department. The provincial planning and development office (PPDO) and the municipal planning and development office (MPDO) are the immediate links of the DILG at the LGU level. For the purpose of ensuring coordination in implementing projects where there are other agencies involved, DILG facilitates the formation of Task Forces with the PPDO and the MPDO still assuming overall responsibility. Through the PPDO and MPDO, barangays needing improved water supply and households needing sanitation improvements are identified and water supply and sanitation associations are formed.

Likewise, the DILG is now one of the leading institutions to promote gender-responsive project management. Under the leadership of focal points, gender awareness training have been conducted at the regional and provincial levels.

## (2) Local Water Utilities Administration (LWUA)

Presidential Decree 198 created the LWUA to act as a specialized lending institution for local Water Districts (WDs) and oversee the development of these water utilities based on the twin concepts of financial viability and self-reliance. In 1987, LWUA responsibilities were expanded to include assistance to Level-II Rural Waterworks and Sanitation Associations (RWSAs). The provision of Level II and III services and of wastewater disposal systems in communities outside Metropolitan Manila are largely coordinated by the LWUA. However, NEDA Resolution No.4 directed LWUA to focus on its development banking role to finance only viable WDs.

Financial services include economic and financial analysis, tariff analysis and fund sourcing. Various types of loans are available to finance the construction of water systems; reactivation of non-operating systems, rehabilitation and expansion of facilities; and training. Among them, special loans finance watershed management projects: construction of administration buildings; purchase of service vehicles, communication and computer facilities; restoration of facilities damaged by calamities; initial or emergency operational needs. Commodity loans support generation of additional service connections. LWUA maintains and fields a pool of management advisors, trainers, engineers and other professionals to give WDs and RWSAs proper guidance in their operation and administration. In addition, the Central Sewerage and Sanitation Program Support Office (CPSO) was established at LWUA to coordinate the implementation of sewerage and

sanitation projects at the national level and to assist LGUs and WDs plan and manage sewerage and sanitation at the local level.

**(3) Department of Public Works and Highways (DPWH)**

The Department was responsible for the construction and major repair/rehabilitation of rural water supply systems (Level-I) and for the planning and execution of sewerage projects in some cities and larger poblaciones in the country with participation of LGUs. However, DPWH's responsibility drastically changed with the implementation of NEDA Board Resolution No.4. Based on the new mandate, the functions of DPWH is limited to setting technical standards and assisting LGUs, upon agreement and in coordination with LGUs, in the conduct of surveys, preparation of plan, specifications, and program of work, construction management, and technical researches in WATSAN project.

The DPWH maintains about 92 District Engineering Offices (DEOs) nationwide at the field level. The DEOs were staffed with a water engineer, drilling crews and equipment. However, these days most of staff members have been transferred to the private sector and others.

**(4) Department of Health (DOH)**

The department is the principal health policy-making and implementing agency. The main function is to develop and implement sanitation programs nationwide and administer health education aimed at reducing morbidity due, among others, to waterborne and sanitation related illness specifically diarrhea diseases which ranked second leading cause of morbidity among the population in the past years.

Under the current sector arrangement, DOH shall assume the following responsibilities: i) sets and/or updates standards on water quality testing, treatment and surveillance and sanitary practices; ii) assists LGUs in the conduct of periodic water quality control and surveillance-related activities; iii) and monitors and evaluates health and hygiene education.

DOH, through PHO, conducts health and hygiene education campaigns that focused on women and children health improvement in rural communities. Centrally-produced information, education and communication (IEC) materials support the program. It has produced and distributed IEC materials on water supply and hygiene behavior nationwide. Through its field health worker, it gives orientation to BWSAs on protection and disinfection of water sources and construction and maintenance of toilets.

(5) Other National Agencies

Other national agencies provide macro planning, funding and support, and regulatory guidelines for the water supply and sanitation sector.

The National Economic and Development Authority (NEDA), as the central planning office, ensures that all agencies' plans and programs are consistent with national priorities in the Medium-Term Public Investment Program and the Priority Sub-Sector Activity Layout. External grants and loan proposals are reviewed and approved at NEDA. It also coordinates the establishment of a system for national sector master planning and the monitoring system (with DILG).

The Department of Finance (DOF) is responsible for the generation and management of the financial resources of the government. It reviews and approves all public sector debt and economic growth, and sets the fiscal deficit of major government corporations, as part of the public sector borrowing program.

The Department of Budget and Management (DBM) plans the budget allocations for the government agencies, including capital and operating expenditure, equity infusion to public corporations, grants and subsidies for congressional approval. DBM also ensures that budget releases conform with approved plans and programs.

The Department of Environment and Natural Resources (DENR) formulates and enforces policies and guidelines for environmental protection and pollution control. It is responsible for watershed protection and water resources management. It checks compliance of major projects with environmental guidelines. DENR works with all environmental management agencies and special regulatory bodies.

The Department of Education, Culture and Sports (DECS) implements hygiene education programs through schools using the Teacher-Child-Parent (TCP) approach. Health and sanitation messages are integrated in the curricula and special activities are designed to make the parents and other family members learn and put them into practice. A wide range of learning material (workbook), while prototypes of safe water sources and water sealed toilets are set up in schools supplements the program. DECS assists in the GOP school toilet building project by identifying priority schools and by supporting DOH's integrated health information, education and communication campaign using the formal and non-formal educational system.



The National Water Resources Board (NWRB) coordinates the overall policy framework for water resources development and management. NWRB was created to guide an orderly and scientific development of all water resources in the Philippines consistent with the principles of optimum utilization, conservation and protection to meet present and future needs. NWRB also deals with water rights issues. The NWRB is tasked to regulate the use of water resources through the issuance of water rights and the tariffs of privately-run water systems.

## 5.5 Sector Agencies at the Local Level

### (1) Provincial Level

The offices involved in WATSAN activities, are the Provincial Planning and Development Office (PPDO), the Provincial Engineering Office (PEO), the Provincial Health Office (PHO), the Provincial Treasury Office (PTO), the Provincial General Services Office (PGSO), the Provincial Budget Office (PBO), and the Provincial Accountant Office (PAO).

#### 1) Provincial Planning and Development Office (PPDO)

The PPDO is in charge of the formulation of comprehensive development plans and policies for consideration by the Provincial Development Council. It conducts studies, research and training programs to support plan formulation and promotes people participation in its planning activities. It likewise integrates and coordinates sectoral plans and studies undertaken by different functional groups or agencies, and monitors and evaluates the implementation of development programs/projects and activities. It exercises supervision and control over the secretariat of the PDC. The office is composed of Administrative section and three divisions, details of which are shown below (refer to Organization Chart Figure 5.5.1, Supporting Report).

- **Administrative** – Its function is to provide efficient administration and timely and adequate support services. It has four staff.
- **Plans and Programs** - The division formulates an integrated economic, social, physical and other development objectives and policies for consideration and approval of the SP and the governor. The division integrates and coordinates all sectoral plans and studies undertaken by the different functional groups or agencies in the province. It set targets, establishes and determines priorities of programs and projects in accordance with the over all development plan of the province. It promotes citizen participation through development planning at the

municipal level. It has nine staff.

- **Research and Evaluation** - It conducts researches and analyzes statistical data necessary for the development plans, programs and project. Regarding programs and projects implementation, it monitors and evaluates the progress and status. And also, it makes continuing studies and develops operational systems, for adoption by the different units of the provincial government. For dissemination of government entities, it prepares informational material regarding local development plans. It has eight staff.
- **Project Development** - The division develops specific projects and/or feasibility studies for incorporation in the development plan. It analyzes and evaluates proposals for programs/projects to determine feasibility and conformity with objectives and priorities of the province. It conducts relevant studies, training and workshops to evolve plans, programs and projects for inclusion in the development plan. It analyses the provincial income and expenditure patterns, and formulates and recommends fiscal plans and policies for the consideration and approval of the SP and the governor. It determines sources and allocation of financial resources according to the priorities established in the development plan. It has four staff.

## 2) Provincial Engineering Office (PEO)

The PEO is responsible for the administration, coordination, supervision, and control of construction, maintenance, improvement, and repair of roads, bridges, and other engineering and public works projects of the provincial government. It formulates policies and objectives, plans and programs, techniques and procedures/practices in infrastructure development and provides engineering services such as investigation and survey, designs, feasibility studies, and project management. It also provides technical supervision over all engineering offices of component municipalities. The office has six divisions: Administration, Architectural, Motor Pool and the following divisions. (refer to Organization Chart Figure 5.5.2, Supporting Report):

- **Planning, Designing and Programming** - The division is responsible for formulating and integrating general plans, programs and projects of the provincial government. It conducts designing, planning and programming of provincial/national projects assigned to the office.
- **Construction and Maintenance** - Its function is to provide technical supervision and overall activities relating to construction and maintenance of roads and bridges and drainage systems along provincial roads. It also prepares estimates of construction cost and program construction operations including equipment

requirements.

- **Quality Control** - The task is to undertake and direct the conduct of laboratory tests, on the durability and practicability of locally available materials and evaluate/assess their acceptability.

### 3) Provincial Health Office (PHO)

The PHO formulates and implements policies, plans, programs and projects to promote the health of the people in the province. It also provides technical assistance in the RHUs, institutionally belonging to respective municipalities, and BHSs belonging to barangays and assist in the promotion and maintenance of public sanitation. The office is also tasked with conducting health information campaigns and renders health intelligence services. The office undertakes 6 services: Administrative, Medical, Nursing, Ancillary, Dietary, and technical services (refer to Organization Chart Figure 5.5.3, Supporting Report). The following are referred to the Field Health Services.

- **Field Health** - This service provides health services in the hospital and supervises implementation of program activities in the field. Under this service, are 20 units, 2 of which are directly involved in the delivery of WATSAN activities.

**Environmental Sanitation (EVS) Unit.** The EVS is responsible for formulating plans of environmental sanitation, and collecting and analyzing data. It also supervises/validates all RSIs in the implementation of environmental sanitation activities and provides technical assistance to any environmental sanitation related problems. The unit is tasked with water quality control and surveillance.

**Health Education Unit.** The unit is tasked with the conduct of lecture on health education activities and IEC campaign for health providers/community. It coordinates with program managers in launching training and monitoring of health programs and monitors the continuance of household teaching classes. It also distributes IEC materials and coordinates with GOs and NGOs.

### 4) Provincial Treasurer's Office (PTO), Provincial Budget Office (PBO), Provincial Accountant Office (PAO), and Provincial General Services Office (PGSO)

The PTO is in charge of the disbursement of all local government funds. It collects taxes, revenues, fees and other charges that are estimated to support the general appropriation ordinance. The office maintains and updates the tax information system of the local supervision over all treasury offices of component municipalities. It also conducts periodic tax education information/collection campaign and trains barangay treasurers and officials in the methods of collecting real property taxes, other fees and charges.

The PBO provides fiscal budget administration for the provincial government. It is responsible for budget preparation, execution, control and accountability. The office reviews and consolidates the budget proposals of different offices of the LGU. It coordinates with the treasurer, the accountant, and the planning and development coordinator for the purpose of budgeting. It also provides prompt and efficient reviews of municipal budgets.

The PAO is tasked with the recording and review of financial transactions in accordance with generally accepted accounting principles, rules and regulations. It summarizes and prepares financial statement for submission to different offices for financial information on the financial condition and operation of the province.

The PGSO provides effective direction and coordination of the various administrative and support services necessary for the operation of the office including the keeping of government records, and the proper and timely dissemination of printed communication and correspondence. It is responsible for acquisition/procurement of supplies and materials as identified in the overall fiscal plan. It collates and disseminates information on prices, shipping and other costs of supplies and other items commonly used by the LGU.

## (2) Municipal and Barangay Level

The municipality serves primarily as a general purpose government for the coordination and delivery of basic, regular and direct services and effective governance of the inhabitants within its territorial jurisdiction. It has much the same organization structure and legislative authority with same relationship to the Province. As for WATSAN project, the following offices are directly involved.

### 1) Municipal Planning and Development Office (MPDO)

The MPDO is in charge of planning and development, and shall formulate integrated economic, social, physical, and development plans and policies for consideration of the Municipal Development Council. The regular activities include: preparation of planning documents, monitoring and evaluation of projects.

### 2) Municipal Engineer's Office (MEO)

MEO regularly performs engineering surveys to acquire data for designs, layout or constitution of waterworks systems, sanitation facilities and other infrastructure proj-

ects. It also inspects works of contractors based on presented plans and specifications.

3) **Barangay Councils (BCs)**

The LGC designated Barangays as independent units of local government. The Barangay Council acts as a legislative body of the barangay. Aside from their share in the IRA from the National Government, the BCs are empowered to enact tax and revenue ordinances as may be necessary to discharge the responsibilities conferred upon them by law and to promote the general welfare of the inhabitants. They are also tasked to provide solicited funds for the construction of barangay facilities, maintain and regulate their use and charge reasonable fees for the use thereof.

4) **Rural Health Units/Barangay Health Stations (RHUs/BHSs)**

The RHUs/BHSs are under the direct supervision of the respective municipality and the MHO extending health services to the barangay residents. They provide assistance in family-planning activities, emergency/relief services especially in far-flung barangays, and other similar activities that promote the general well-being and health needs of the residents. Midwives and other health workers usually schedule periodic visits to these health units/stations.

(3) **Field Offices of Central Sector Agencies**

1) **DPWH District Engineer's Office (DEO)**

The DEO is mandated to undertake and evaluate the planning, design and construction, and work supervisory functions of the DPWH for all public works within the district. It coordinates with other departments, agencies, institutions and LGUs within the district in the implementation of infrastructure projects. Currently, water supply section (previously a unit under Construction Division) is maintained at some DEOs. The staff members consist of a water supply engineer, a well driller and a supervisor.

2) **DILG Provincial /Municipal Local Government Operations Offices (PLGOO/MLGOO)**

The PLGOO/MLGOO is tasked to provide general administration and institution-building support to LGUs to strengthen local capacity for delivery of basic services. Every province has a PLGOO assigned. The Provincial Task-Force on Water Supply, Sewerage and Sanitation, previously headed by the DILG Provincial Action Officer assigned to the sector, was disbanded when the Provincial Sector Planning Team (PSPT) was created.

3) NEDA Regional Office and Regional Development Council

The organizations coordinate with DILG to establish the system for regional sector master planning and the monitoring system. Acting as Secretariat of the Regional Development Council, NEDA ensures that sector plans are consistent with regional and national priorities. It requires project proposals/plans and programs to be approved and endorsed by the Provincial Development Council (PDC) whose task is to incorporate, consolidate and prioritize municipal plans, programs and projects.

(4) Water Districts (WDs)

A Water District is a local government corporation formed pursuant to Presidential Decree No.198, organized for the purpose of serving the water supply requirements of the residents within its franchise area. Technical and financial assistance (loans) are provided by LWUA to WDs. LWUA also exercises regulatory functions vis-a-vis the districts. A WD, to be self-sufficient, is operated in a business-like manner to generate enough revenue from its water sales. The income is used to meet operational expenses, debt service and reasonable reserves for contingencies.

(5) Barangay Waterworks and Sanitation Associations/Rural Waterworks and Sanitation Associations (BWSAs/RWSAs)

A BWSA is an organization of water supply and sanitation beneficiaries in a barangay whose objective is to own, operate and maintain the water systems. RA 6716 requires its formation to ensure the provision of adequate, potable and accessible water supply to its members through proper operation and maintenance of the Level I facilities. The organizational size depends on the number of facilities, need, culture and situation in a particular barangay, but the structure is quite simple consisting of the board of directors, bookkeeper and caretaker/s. The formation activities of the BWSA are divided into three phases: pre-formation/social preparation, formation and post formation. During the formation phase, pre-membership training and election of BDO and Officers are held. In this phase, individual member's interest and community commitments are manifested through application for membership in the association and signing of Manifesto Resolution. RWSAs are organized to operate, manage and maintain Level-II and small Level-III systems, which are not covered by Water Districts.

(6) Other concerns

1) Provincial Development Council (PDC)

The main function of the PDC is to formulate a long term, medium term and annual

socio-economic development plans and policies as well as investment programs of the province. The PDC is headed by the Governor and is composed of the following: Representative of the Congressman, Chairman of Sangguniang Panlalawigan's Committee on Appropriations; municipal mayors, representatives from NGOs, president of the Association of Barangay Captains, President of the Councilors League and the Sangguniang Kabataan President (refer to 5.5 Data Report).

## 2) Private Sector

The private sector has been involved in water supply development in the form of investments, technical studies and construction of water supply and sanitation facilities. The NGOs have also demonstrated capability to undertake project development and implementation with community participation.

## 5.6 External Support Agencies Active in the Sector

### (1) Multilateral Agencies

The World Bank supported the *First Water supply, Sewerage and Sanitation Sector Project* or FW4SP. This project provided capital funds (US\$58.0M) for rural water supply in Luzon provinces and sanitation nationwide based on completed provincial master plans. The project concept called for a community based approach through BWSAs. The project was implemented from 1991 to 1995 (finally extended up to 1997), and following this project Capacity Enhancement Program (CEP) with DILG as implementing agency was conducted until the end of 1997. In addition, the Bank prepared a new loan for DILG implementation. It is the *Local Government Urban Water Supply & Sanitation Project* to assist municipalities of the lower tier income class i.e. 4th, 5th, and 6th (approximately 50 municipalities in the 20 provinces nationwide), which are not covered by water districts: to improve water supply and sanitation services. Through its various trust fund facilities, the bank has also arranged for various technical assistance grants and other support activities.

The Asian Development Bank (ADB) currently provides an assistance for the *Rural Water Supply and Sanitation Sector Project* or RW3SP. The project is aiming to improve poor situation of water supply and sanitation of the 20 Social Reform Agenda (SRA) priority provinces located in Luzon, Visayas, and Mindanao. The project consists of two parts, one is the institutional development and another is construction/rehabilitation of water supply and sanitation facilities. The total project cost is estimated at \$57.4 million equivalent, including a foreign exchange component of \$20.0 million and a local cost

component of \$37.4 million equivalent. Implementation period is scheduled from 1997 to 2001.

UNDP assists the *Institution Building for Decentralized Implementation of Community-Managed Water Supply and Sanitation Project* or *IBWSSP* known as UNDP PHH/93/010 Project under the Fifth Country Program (1994-1997), which directly responds to the Poverty Alleviation Program. In this project, UNDP provides assistance in strengthening the institution involved in the delivery of water supply and sanitation services with emphasis on support to local government units, NGOs, and communities through the BWSAs. The project will complement earlier efforts by UNDP through the UNDP/World Bank Water and Sanitation Program to promote appropriate cost effective technologies in water and sanitation and to improve training capacity of the sector. The project covered the Provinces of Agusan Del Sur, Apayao, Capiz, Cotabato, Kakinaga, Surigao del Sur and Zamboanga del Sur, and 180 sub-projects were implemented in the objective areas during implementation period 1994-1997.

The United Nations Children's Fund (UNICEF) supports the sector through the *Philippines Plan of Action for Children*. Apart from hardware support in priority project site, UNICEF assisted NEDA in updating of the national master plan. UNICEF works through the inter-agency committee on environmental health and through NGOs. With the World Health Organization (WHO), UNICEF has been assisting in the preparation of the *Information, Education and Communication (IEC)* materials and in strengthening the sector monitoring system. As a part of these various assistance, UNICEF supported in 1997 the NEDA in the assessment of *WATSAN Sector of Southern Mindanao*. This was compelled from the sudden and unexpected occurrence of water-borne epidemics that hit Region XI.

## (2) Bilateral Agencies

The Japan International Cooperation Agency (JICA) has been extending grant aid program for the *Rural Environmental Sanitation Project*, jointly implemented by DPWH and DOH. The project covered construction of Level I and II rural water systems and school toilet facilities in the ten (10) provinces. With DPWH, rural water supply systems were constructed at the evacuation centers for the Pinatubo refugees. JICA also supported the ground water development study in Cavite province (with LWUA) and the institutional development activities for MWSS. The PW4SPs for the nine (9) provinces in Luzon area were completed through previous technical cooperation

The Overseas Economic Cooperation Fund (OECF) provided financial assistance for the



RWS IV project. It provided a loan up to Y 5.08B, while counterpart fund was P 400M. The project covered construction / rehabilitation of Level I systems, construction of workshop buildings and procurement of various equipment. OECF has been supporting the Provincial Cites Water Supply Project of LWUA and the Angat Water Supply Optimization Project of MWSS.

DILG requested OECF last year to provide a loan for the *Water Supply and Sanitation Project (WSSP)* for the 6 provinces (based on JICA assisted PW4SPs). The project will achieve additional service coverage both for water supply and sanitation: 549,100 persons with water supply, 9,579 households provided with latrines, 18,750 students with 375 school toilets and 72 public toilets.

The Australian International Development Assistance Bureau (AIDAB) supported the *Central Visayas Water and Sanitation Project* through a \$ 14.65M grant. The project was implemented by the LGUs and the Regional Development Council. Project components include: planning and monitoring information systems; infrastructure planning and rehabilitation; and institution building with an emphasis on community management based on experience from other AIDAB-funded projects. The project period was extended until 1997.

Canadian International Development Agency (CIDA) carried out Pre-Feasibility Study of *Malalag Bay Alliance Water Supply Project*, until March 1998, covering 10 coastal municipalities. The project included water source development, construction of storage, transmission and distribution facilities, and service connections. Basic construction costs will be allocated between MBA and municipalities. Implementation period was scheduled from 1998 to 2002. The Malalag Bay Area Development Office will submit a proposal for assistance to CIDA through Regional Management Committee of NEDA Region XI office.

Terms and conditions, priority areas, programs and projects by donor are shown in Table 5.6.1, Supporting Report.

## **5.7 Project Management Arrangement, and Issues and Problems**

With reference to project management of the Province, current policies and practices in the implementation of WATSAN projects were investigated. The findings are discussed in terms of technical, institutional, financial and community development aspects. Problems/issues are

also discussed therefrom by sub-component. Current conditions of the municipalities investigated are referred to. Furthermore, some of the discussion items covered sector management field.

### 5.7.1 Technical Aspect

#### (1) Project Identification and Prioritization

##### 1) Project conceptualization and series of procedures to select project

Annually, the provincial government conducts project identification and prioritization based on perceived needs. The PPDO conducts fieldwork to identify project needs through a series of meetings with barangay people/officials. Then, they conduct the required survey in barangays where possible projects may be introduced.

Of the selected barangays, some barangay councils submit barangay resolutions on the project/s to the municipality requesting project/s. The project proposal/s are incorporated in the municipal development plan. The Municipal Development Council (MDC) through its four sectoral committees, reviews and gives recommendations for endorsement. The MDC endorses it to the Sangguniang Bayan (SB) for adoption and approval and there after endorses to the Provincial Development Council (PDC) for appropriate action.

The PDC, before incorporating it into the provincial development plan, through its sectoral committees endorses the municipal development plan for consideration and prioritization. The PDC then endorses it to the Sangguniang Panlalawigan (SP) for adoption and approval and appropriation of funds.

Before actual implementation starts, only barangay/s selected are informed that the requested project/s were approved and funded.

##### 2) Concerned parties/people in the sector and their respective activities

The barangay people/officials are aware of the project needs and their roles through a series of meetings and assisting in the survey and identification of the project/s. The barangay council prepares and submits the resolution presenting the project to the municipality.

At the municipal level, the MDC through its four sectoral committees, such as the Macro, Economic, Social and Infrastructure Committees, reviews and gives recom-

mendations to the plan and endorses it to the SB, and further to the PDC. The MDC is composed of the municipal mayor, one SB member, all barangay chairmen and from the accredited NGO which is 25% of the total membership. The SB member is the chairman of the committee on appropriation of the SB.

At the provincial level, likewise, the PDC sectoral committee (composed of line agencies, national agencies, accredited NGO and municipal mayors) endorses the provincial development plan (incorporating the municipal development plan of the different municipalities) to the PDC for consideration. The PDC reviews the documents and if these are in order, then endorses it to the SP for adoption and approval as well as for appropriate of funds.

The PDC is composed of all municipal mayors, one SP member and from an accredited NGO that is 25% of the total membership. The SP member is the chairman of the committee on appropriation of the SP.

3) Priority criteria for selection of the projects

Selection criteria are based on the indicators prepared by the NEDA regional office, which serve to identify a) the existence of problems adversely affecting the achievement of certain development objectives; and/or b) certain development potentials.

4) Technical considerations applied for identification and prioritization

Technically, the barangay profile survey is conducted. The barangay profile includes technical matters regarding water supply and toilet facility fabrication: brief description of water sources, etc.

To further promote sustainability of the project, it is essential to involve the people, especially for Level I water supply, starting from demand identification and the basic survey stage. Accordingly, a simplified mechanism showing responsibilities/activities required among concerned parties is necessary. A periodic follow-up by LGUs at the barangays is also important to ensure logistic support and manpower requirements of the LGUs.

After submission of project request by the barangay, a series of procedures including identification, validation and prioritization is required in the concerned LGUs. These resulted in considerable time being consumed to finalize the funding. The LGUs must seek a more simple and systematic procedure.

With reference to the implementation of medium-term target plan, review and modification of selection/prioritization criteria shall be made by LGUs considering said barangay profile. The LGUs together with barangay people shall prepare the requirements including barangay profile in an expeditious manner (refer to UNDP assisted project) as part of annual activities.

(2) Preparation of Feasibility Studies (F/S) and Detailed Design (D/D) of Facilities, and Contract Procedures

1) Experience in master plan (M/P) preparation in any sector

Pre-feasibility study for water supply covering 10 coastal municipalities (Malalag Bay Area-wide Water Supply) is under preparation by a local consultant firm through the Canadian government financial assistance (CIDA) as part of the training to LGUs (Local Government Support Program; LGSP). The Malalag Bay Area Development Office prepared the proposal to CIDA through the Regional Management Committee of NEDA Region XI office.

2) Water source development experience in survey, planning and design of facilities

Throughout the implementation of WATSAN projects, the provincial government conducted water source development for both spring and ground water sources.

In case of spring development, technically-related information from barangay people is collected at first, which includes locations of the untapped springs and discharge rate during dry seasons. The preliminary topographic survey (elevation and distance) is then conducted to prepare hydraulic profile of transmission pipeline. For ground-water development, its technical feasibility is evaluated based on available technical data together with information from barangay and supported by field confirmation at the existing wells.

3) F/S of level I, II and III systems

The F/S for the development of Level II and III systems is usually done by the PEO / PPDO. In addition to the preliminary study on the said water source development, water production and the water demand are set up to comply with the project needs. Tentative locations of communal faucets are also set up in Level II system. Hydraulic profile (pipe size, length) and size of intake box / reservoirs are determined referring to materials prepared through ITN / DILG training seminars. BWP design standards are also applied. Finally, a cost estimate is made for the required facilities. Then, the F/S report is submitted to PPDC for evaluation and recommendations before approval.

#### 4) Detailed Design (D/D) of facilities and tendering

The D/D of WATSAN facilities is also prepared by the PEO/PPDO based on the F/S report within available budget. Designs of pipeline and structures are based on the standard designs prepared by BWP, while well design is from DPWH design standards. However, these offices have no experience in planning and designing large water supply facilities including pumping station/water treatment facilities.

The provincial office, likewise, does not have any experience in contracting-out to the local private sectors for facility construction. However, it has experience in the procurement of materials, such as cement, sand, reinforced bar and fittings.

An example is the limited water supply services, despite sufficient spring sources tapped, because of insufficient capacity of distribution facilities. The problems are related to planing and designing in F/S and D/D. Aside from this, future water supply system/s may require water treatment facilities for use in surface water sources. Knowledge/practice not only in hydraulic analysis but also in structural calculation and water treatment technology may be necessary. Thus, measures to increase the capacity of LGUs' technical staff in planning and designing shall be sought. Utilization of consulting services shall also be taken into account.

### (3) Procurement of Materials and Equipment, and Facility Construction and Rehabilitation

#### 1) Experiences in force account work for construction of facilities

Some materials for WATSAN projects have been procured. Terms of reference for the procurement are prepared by the PPDO and bid documents by the PGSO. After bidding the PA issued purchase order and the procurement is made by the PGSO. Likewise, Consultancy Contracts are executed through bidding.

Huge work will be required for the implementation of medium-term development plan including the preparation of the required tender documents, evaluation of pre-qualification documents and contract procedure. Furthermore, under the present limited volume of the work/projects, procurement procedure requires a longer process, which always affects project implementation. The provincial government shall examine the current procurement system to handle/manage the forthcoming projects.

#### 2) Construction, Supervision and Rehabilitation

Construction of WATSAN facilities is usually done by the LGUs, either by the mu-

municipal or provincial offices. The barangay council and the users mobilize labor. The MPDO and MEO manage project implementation by hiring skilled labors. The research, evaluation & statistics division of PPDO conducts monitoring of the project.

In spite of the LGUs' efforts, their present implementation capability is limited to a certain number of projects, due to insufficiency in manpower resources as well as shortage of supporting vehicles/equipment. Contracting-out to the private sector maybe practical. At the same time, it is necessary to increase the number of experienced water supply engineers for coordination and supervision of the future projects.

With regards to rehabilitation of the Level I facilities, some works have been conducted by employing skilled labor, only upon request from waterworks /beneficiaries, however, it was not timely done due to budgetary constraints. Thus, strategy and concrete implementation mechanisms among concerned parties have to be established.

#### (4) Operation and Maintenance (O&M) of Facilities

##### 1) O&M of facilities by service level

For Level I facilities, the BWSAs or beneficiaries have responsibility on O & M, however, it is not enough. This can be gleaned from the presence of numerous non-functioning / abandoned wells constructed by DPWH. These arise from lack of spare parts, drying up of water sources and water quality problems such as colored water, salty water, etc. In some cases, they encountered problems relating to water sources just a few months after turnover of the facility. Once again, beneficiaries use their private dug wells.

Generally, O&M of Level I facilities is not properly conducted by BWSAs/ beneficiaries because of lack of sense of ownership. Nonetheless, there is a case where the users contributed money towards the purchase of spare parts when pump facilities broke down. It is necessary for the users to consider not only repair/replacement of mechanical parts in its operation but also re-development of wells and future upgrading of the service level.

On the other hand, Level II and III systems, rather small in size, are managed by RWSA / Municipal / provincial government. The required staff (permanent / casual) are designated to operate and maintain the facilities. However, there are some cases that expansion of distribution pipelines and additional service connections are undertaken without due consideration of the technical aspects, e.g., capacities of water

sources and distribution facilities. Thus, F/S and D/D shall be timely prepared by the qualified engineer/s to avoid the decrease of supply pressure and quantity. The shortage of major spare parts stored/furnished, due to budgetary constraints is also the problem in maintaining the system (preventive maintenance).

2) Communication mechanism practiced in case of facility breakdown

In case where major repairs are required (non-functioning of hand pump parts, etc. for Level I), the BWSA or Barangay Council presents a resolution to the municipality / DEO - DPWH requesting for its immediate repair. However, most BWSAs have no communication mechanism. Majority of the BWSAs have no idea of the manner of communication either with LGUs or private sector in case of major facility breakdown, and the request for repair is sometimes improperly addressed. An authorized system shall be prepared and put it into practice.

Meanwhile, for major repair of Level II and III (burst pipe/leakage), the permanent / casual staff takes action to restore / repair. In case they are short in budget, the waterworks/RWSAs submit a request letter for funding to the municipal/provincial government concerned. In areas where RWSAs are not active, the barangay captain submits a request letter to the concerned agencies, or directly to the provincial government. Under the LGC, the LGUs shall request for responsible systems for sustainable O&M.

(5) Water Quality Examination

- 1) Water quality examination is only conducted on bacteriological content and does not include physical and chemical parameters. The rural Sanitary Inspector (RSI) of MHO conducts the sampling. Frequency of sampling and disinfection is as follows: for Level I -- once every three months; Level II -- once every two months; and Level III -- monthly one sample. Private wells are also sampled and analyzed, and if found positive, are either disinfected by the RSI or the SSI of PHO.

The laboratory shall increase water quality parameters (physical and chemical) necessary to determine the potability of water as indicated in the National Drinking Water Standards. In addition, a regular program of disinfection for all levels of services is necessary, not only on occasions when the source is found positive.

2) Capacity of laboratory

Collected samples are analyzed at the provincial laboratory. Analysis of the samples

is scheduled according to the limited capacity in both facilities and manpower. The sampling in municipalities is conducted only once a month (only on Monday) with 3 to 4 samples per municipality. The laboratory can accommodate 10-14 samples per week coming from 3-4 municipalities. In connection, adequate level of facilities, chemicals and manpower shall be considered.

3) Water quality condition

Water quality problems usually occur during floods. This is aggravated with poor sanitary condition in most villages – lack or inadequate toilet facilities, improper construction of depositories/latrines, lack of sludge/sullage disposal management, and absence of drainage facilities. Handling of samples to preserve them under fresh condition may also be a cause of positive results in E coli. For areas that are far from the laboratory, preservation of samples must be strictly followed to maintain the freshness of the sample.

4) Budgetary support

Although a budget from the 20% DF was released to the WATSAN sector, the provincial government paid very little attention to address the needs/requirements of this activity. Meanwhile, there is a high incidence rate of water-borne/related diseases and the percentage of contaminated sources of drinking water remains very high. A requirement of proper allocation of budget for water quality surveillance is self-explanatory for the LGUs.

(6) Private Sector Capability for the Sector Project

The capability of existing local contractors relevant to WATSAN projects is very limited. Even considering the full utilization of local based contractors, qualified and experienced contractors as a main contractor shall be employed in view of the forthcoming projects in technical requirements and project scale. These contractors usually have offices in large cities such as Davao, Cebu and Manila. It is necessary to prepare inventories on the available contractors, especially for well construction with required capacities for the project.

## 5.7.2 Institutional Aspect

(1) Linkages among Concerned Parties/Departments

The PPDO, a lead provincial office responsible in the implementation of WATSAN projects, works either directly or indirectly with national government local offices and mu-



municipalities as well as other provincial offices (refer to Table-5.7.1, Supporting Report).

There is no established arrangement and responsibility delineation among the agencies involved in the WATSAN sector implementation in the province wherein interrelationship/linkages are clearly shown. Administrative and functional linkages are not spelled out.

### (2) Health and Hygiene Education with Typical Program

Due to shortage of financial support and manpower to the PHO, relevant activities are quite limited at the present time, unless it is a component of DOH/UNICEF/NGO projects/program. It is suggested to put more attention to the need by LGUs to ensure sustainable implementation of the sector development.

### (3) Training

#### 1) Planning and engineering for LGU staff

The central government agencies provided technical training on a project basis.

#### 2) Institutional/community development/financial/gender specialists of LGU staff

WATSAN Trainers Training and Community Organizing Training/Workshop were provided by DILG-PMO. During this study, one of the PPDO staff was sent out to the Development Academy of the Philippines to take gender-responsiveness in planning development projects programs and other training courses.

#### 3) Organizing the association at barangay level

The beneficiaries are provided with information on the association set-up before the construction starts. The manner is currently rather demand-driven and participatory by the beneficiaries compared to the previous supply-driven approach.

#### 4) O&M for users

The provincial government has adopted the cascade approach in providing technical assistance (Province-Municipality-Barangay).

Although the central government agencies extended technical training to BWSAs/beneficiaries on the foreign assisted project basis, O&M of Level I facilities is commonly neglected. The fact that some barangay people are willing to undertake training for O&M of the facilities, effective program/s shall be implemented by LGUs to ensure demand-responsiveness with reference to community development.

### 5.7.3 Financial Aspect

#### (1) Budgetary Allocation to the Sector

The province appropriates its capital expenditures from the 20% DF of the IRA. The LGU may allocate more than 20% of the total IRA to capital projects with a condition that the income of the LGU from all sources (including IRA) must first be applied to the contractual and statutory obligations of the province. The Provincial Development Council (PDC) determines the allocation of the DF to the respective sectors in the province.

Due to the limited resources of the province, it has to prioritize projects for allocation of capital in the budget. The GOP recently issued an administrative order directing all government agencies, government corporations and units (including LGUs) to implement austerity measures, limit government spending and cut capital outlays to inhibit the negative effect of the peso devaluation. In view of the high social impact of the sector, the province, nevertheless, prioritizes allocation of funding to the sector.

The budgetary allocation for the sector is included in the reported 20% DF and in other items unless the waterworks is an economic enterprise of the LGU. In evaluating the capacity of the province in terms of financial capability, there is no database on the budgetary allocation at present. This can be remedied by computerizing the system for easy access of the information.

#### (2) Access to External Funds

- 1) In the past, the province has experienced getting a bank loan from the Land Bank of the Philippines for the purchase of road building equipment/drilling machine. The loan was contracted between the Governor (for the Province) based on the authority from the SP.
- 2) The most accessible for the province to have additional funds from external sources is to get a bank loan, but with increased interest rates due to the devaluation of the peso, the province is hesitant to do so at this time.
- 3) The province is interested to access through ODA directly, but the province lacks information on this.
- 4) As previously stated, the province is also a beneficiary of CIDA through LGSP. The

pre-F/S for water supply covering 10 municipalities proposed to sell water to water districts (bulk sales) and BWSAs the way NAPOCOR does. Another CIDA-funded project is the Local Government Support Program's (LGSP's) Provincial Agro-Industrial Center (PAIC).

### (3) Cost Recovery Practices by LGUs and by Users

For the period that the DPWH was constructing Level I water supply facilities, the DPWH formed many BWSAs. Some of the BWSAs collecting monthly fees are still active. However most of these BWSAs are no longer functioning, resulting to no water fee collection. As a consequence, the users have to go to the government (usually barangay or municipal) to address the problem. In some cases, the users also approach the DPWH for assistance. Although the DPWH has no budget for operations and maintenance, it extends assistance in the form of materials (such as gaskets or joint pipes) from their supplies, if these are available.

Cost recovery on capital cost for the Sector is dependent on how the community or the clientele perceives their role in the Sector. To the extent that the beneficiaries experience a sense of ownership for the facilities, will they contribute to the sustainability of the facilities. In the case of capital expenditures, provision of counterpart from the beneficiaries in terms of labor would help in giving the beneficiaries a sense of ownership for the facilities and hence, a sense of responsibility for the sustainability of the system.

Similarly, in the O&M cost recovery, the extent that the beneficiaries contribute to the sustainability of the water supply facilities, through monthly contributions, is the extent of ownership and hence, responsibility towards the system determined. To this ultimate objective should government initiate community empowerment through active participation even at the construction period.

#### **5.7.4 Institutional Arrangements/Capability of the Municipal Government**

The municipalities are responsible for the implementation of infrastructure facilities to service the needs of the residents of the municipality. As for WATSAN project, when the barangay is not able to finance the project from its own funds; the BDC then endorses the project to the municipality. The municipality finance said project, if fund available, usually by providing technical and material support. In case the municipality is not able to finance it, the project is once again endorsed to the province.

The municipality, through the MPDO, prepares municipal development plans and formulates an integrated economic, social and physical development plan. It identifies and prioritizes water projects and secures for funding support. MEO provides technical services including investigation and survey, engineering designs, feasibility studies and project management. It is primarily responsible for the organization and training of the BWSAs within the administrative boundary.

## **5.8 Community Development**

### **5.8.1 General**

This section presents the current status or the existing condition for community development (CD) in the Province of Davao del Sur for the WATSAN sector from the side of the government, on one hand; and the point of view of the people and the communities served, on the other. Thus, it traces the development of CD through policy measures promulgated and/or enacted on the national level and shows how CD has filtered down to the local level.

The discussions are focused on the experience of the LGUs in performing CD work with reference to the typical manner through which the participation of the community is secured for the sector, whether these be Level I, Level II or Level III projects. The experience reveals the degree of readiness of the LGUs in doing CD work by examining the structures and linkages in place in the province that may either enhance or be an obstacle to the successful execution of sector projects. It also provides the true state of information, education and communication (IEC) processes in the province in so far as these relate to the supporting sector projects.

The valuable information were taken from the following: (1) The interviews undertaken with LGU officials during the study period; (2) The answers to the "CD/GAD Questionnaire" distributed to select provincial and municipal officials involved in sector development; (3) The "Result of the Barangay Key Informant Survey for Davao del Sur", a survey administered to the officials of the select local communities (details are referred to Supporting Report); and (4) Other documents researched on and provided by the national, regional, provincial, municipal and barangay level offices.

The other major part of this section presents the different levels of community participation in sector projects as determined by the people or the beneficiaries themselves. As such, it reveals the type and degree of involvement of the people in past sector projects and whether or not this involvement was adequate. It also illustrates the manner through which the benefi-

aries want to actively participate in future sector projects, thereby demonstrating the predisposition and willingness of the community to commit themselves to new development projects.

The responses of the beneficiaries to the information desired are gender sensitive and were derived from the following: (1) The "Result of the Group Interview Survey for Davao del Sur" (details are referred to Supporting Report); and (2) The "Result of the Barangay Key Informant Survey for Davao del Sur"; and (3) The results of studies conducted on CD by the national/regional/provincial agencies.

Due to time limitation, only five barangays were made to participate in the key informant survey and two for the group interviews; but the results are highly indicative of the situation prevailing in the entire province in so far as participatory community development is concerned on both the government's point of view and the side of the community. The current CD status is not without its share of problems; but this is exactly the purpose of the study, that is, to improve the WATSAN sector's performance by plugging all leaks that may get in the way of the successful implementation of sector projects, CD included.

#### **5.8.2 Provincial CD Structure and Linkages for WATSAN Sector Projects**

The 1987 Philippine Constitution recognizes and mandates the participation of every Filipino in attaining overall national development. Thus, community development is utilized as a national strategy and has been adopted in the Medium Term Philippine Development Plan-1993-1998 (MTPDP) and the Updated MTPDP (1996-1998) to address the country's problems of poverty and unemployment. As a general policy, the Plan gives the greater masses of the people a voice in charting and implementing programs in the country while encouraging the collaboration of the private sector, non-government organizations and all other sectors of society in the formulation and implementation of plans, policies and programs supportive of the development goals of the country.

The Philippine National Development Plan: Directions for the 21<sup>st</sup> Century which was released early 1998 gives more focus to building the capacities of communities for self-reliance. By recognizing the people's self-dignity and inherent capacity to improve their own lives, community-based approaches will be utilized when delivering basic services to the people. Towards this end, a development planning system that institutionalizes the bottom-up planning process was adopted.

In the 1980s up to the early 1990s, sector projects under the Barangay Water Program (BWP) and those funded out of OECF, WB and ADB were required some level of community participation. However, according to both the project implementors and people served, community participation was generally a "one shot deal," limited to having the beneficiary communities organize themselves into a BWSA/RWSA based on a set of guidelines. During the implementation of the project, some of the BWSA/RWSA members also contributed labor as the community's counterpart in the construction of facilities, while only a few of the beneficiaries donated materials and cash.

Yet today, many of the BWSAs and RWSAs that have been organized under the BWP and the other sector programs are no longer in existence and the constructed facilities are either badly deteriorated or no longer functioning because of the lack of proper maintenance. Some water supply and sanitation associations near water districts are better off, as in the case of two RWSAs that have opted to merge with the Digos Water District. The other RWSAs, whose Board or memberships are inactive, are not as fortunate.

Sector planners and implementors have attributed the prevailing condition of water supply and sanitation associations in the province to the inadequate social preparation of the project beneficiaries. But project beneficiaries voiced out insufficient consultations prior to project implementation as one of the reasons why the community does not involve itself in running its own water and sanitation association.

One of the measures initiated by the province to help improve the WATSAN facilities' conditions in the barangays is making the barangay people self-reliant. There is standing instruction that each of the barangays in the province should now appropriate some IRA for the O&M of the wells or other WATSAN facilities in their areas.

Recent WATSAN projects that were implemented by the province that necessitated community participation involved the construction of Level II waterworks systems in the following barangays: Balangunan, Ibo, Punta Biao and Astorga. Municipal-level WATSAN projects that were recently undertaken and that also required CD intervention was the spring development program of Hagonoy covering the barangays of Labon and Laperas.

### **5.8.3 Assignment of CD Specialist to Sector Projects**

At present, there is no one in the province, as well as in the municipalities that does CD work for sector projects alone. The initial effort of the province on this aspect was the creation of

the Provincial Waterworks Task Force (PWTF) during the implementation phase of the past Barangay Water Program. The Task Force is composed of a Training Officer, who takes the lead in the organization and training of all BWSAs/RWSAs; and a Financial Analyst who oversees the financial aspect and audits of all RWSAs/BWSAs. The staff members come from PPDO. There is also a Waterworks Engineer from the PEO who handles the technical aspect and one health personnel from PHO that handles health and hygiene. Within the Task Force is a person assigned to undertake CD work focused on water and sanitation.

This apparent lack of identified major responsible players on CD in the LGUs creates a serious gap to the critical linkage and support of sector projects, from the provincial to the municipal and as far down as the barangay levels. Firstly, there is no CD framework in place and no permanent structure within the LGUs that serve guideposts in doing CD work, except for the manner/experience of the BWP and past sector programs.

This leads to the second situation. CD work, to be successful, is a continuous and consistent undertaking. Without a CD framework, a permanent structure or identified responsible people for said undertaking, then any CD work started cannot prosper to its successful completion.

The third condition is really a question of whether the provincial and municipal officials are cognizant of and committed to the true importance of CD as a foundation activity for sustainable sector projects. This awareness on the importance of CD must be translated to giving full support – financial, human and material – to sector projects in their entirety.

The provincial officials share the view that community participation is needed to ensure the sustainability of the WATSAN facilities. The province is willing to open a position for a CD Specialist to generate an increased level and improved quality of community participation so that the users/beneficiaries can be involved in managing the WATSAN organization, or trained in doing simple repairs, among others.

#### **5.8.4 Training on CD**

Various community development training programs were participated in by the provincial/municipal level staff provided mainly by the WATSAN sector project/agency proponents for Levels I and II systems. It should be noted, however, that the most recent training was conducted last year; and the rest of the other trainings conducted/attended by the LGUs were over 10 years ago.

- 1) *Trainor's Training on "How to Conduct Training"* conducted by LGSP-CIDA in September 1997.
- 2) *RWSSP Trainor's Training*, conducted by DILG in 1989.
- 3) *Provincial Trainors Team Training Course on Water Supply*, conducted by the DPWH in 1989.
- 4) *Workshop on Water Supply and Sanitation Facilities Development*, conducted by the Regional Health Office in September 1987.
- 5) *Barangay Water Program Trainor's Training* conducted by the DILG in 1983.
- 6) *Provincial Waterworks Task Force Trainor's Training*, conducted in August 1983 by the RWDC.

Water district personnel also attended various trainings and seminars conducted by the Local Water Utilities Administration (LWUA) and other private training institutes focused on administrative, financial and technical aspects of Level III water supply systems. The varied skills that WD staff learned can also be applicable to small systems and therefore can be replicated or transferred to BWSA/RWSA personnel.

#### **5.8.5 Utilization of NGOs**

The NGOs are actively involved in all the development activities of the province. At present, about 42 NGOs have been accredited by the province. The NGO representatives seat as a member of the different development councils, from the barangay to the municipal to the provincial levels. They assist the province in getting the community mobilized, organized, and in eliciting the communities' involvement in developmental projects and programs. The other sectors that are equally active are the youth and women's sectors.

This fact has been validated from the results of both the barangay and group surveys where people were familiar and comfortable with the work of NGOs, CBOs and POs. Some of these organizations obviously possess the necessary skills in community development work and can be tapped for the WATSAN sector (refer to Supporting Report for the list of NGOs and CBOs in Davao del Sur).



## 5.8.6 Existing Community Development Processes

### (1) Manner of Participation in Sector Development

The efforts of the LGUs in encouraging community participation for sector projects were generally confined to the organization of BWSAs for Level I systems, RWSAs for Level II systems and water districts or LGU waterworks for Level III system or combination of a Level II and Level III system. Once formed, the organized BWSA, RWSA, LGU-WS and WD became responsible for soliciting the participation and involvement of the users-beneficiaries in ensuring the sustainability of the WATSAN organization and its various projects and activities.

For the BWSA/RWSA, the users' participation was in the provision of free labor right-of-way, land contribution and donation/contribution of other materials needed during the construction phase of the project. Left to the central and local government planners was the responsibility for the other stages of project development such as planning and design, monitoring and evaluation which included activities as project identification, site selection, water rate setting, and operation and maintenance. As a result, only a few BWSAs/RWSAs are in operation because facilities have not been properly maintained and very few users continue to pay their water bills.

The central and local government planners should, therefore, look for proper opportunities in opening formal or informal avenues that would allow the beneficiary communities more freedom in presenting their own ideas as well as in doing what they feel is in the best interest of the sector. This would greatly enhance the manner and quality of the users' participation in the sector.

A positive factor for this study, as suggested in the results of the Group Interviews conducted, is the eagerness by which the men and women have overwhelmingly indicated in playing a more dynamic role in sector projects. They professed willingness to form themselves into water associations, readiness to contribute cash, materials, sites for the construction of WATSAN facilities. In addition, the interviewees felt that they are already primed to assume higher responsibilities in managing, operating and maintaining the WATSAN facilities.

Located in provincial urban centers, water districts generally practice participatory community development. Users-beneficiaries are consulted on practically all phases of project development, that is, from the start of the water district's operation, before loans to be

contracted, and before water rates are set and/or adjusted. Maintenance of the WATSAN facilities before the water meter, however, remains the responsibility of the water district.

(2) Typical CD Work

The present CD practice for sector projects is a carry-over from the manner it was done during the implementation of the BWP and other sector projects funded by the ADB, World Bank or OECF during the 1980s and 1990s. In other words, before any sector project is implemented, a water and sanitation association must first be organized and its officers appointed.

Community participation is solicited through the conduct of trainings, the first of which is a five-day pre-operational training held during the construction of the WATSAN facilities or when at least 90% of the project is completed. After the completion of the project, technical training is conducted. Only after these and other requirements are complied with is the project/facility turned-over to the WATSAN association.

One of the provinces under this sector study, Agusan del Sur, has been implementing a typical CD process that has been the result of a recent UNDP study (refer to Supporting Report for the Detailed CD Process of Agusan del Sur).

Today, all special projects, such as WATSAN projects, fall under the PPDO's area of responsibility. It is the PEO, however, that implements WATSAN projects down to the municipal levels by providing needed technical assistance to those communities without technical capability. The present practice is that the province assists municipalities/barangays even after the turnover of constructed facilities.

The province is also in possession of well drilling equipment utilized for WATSAN projects. The contribution of the beneficiary community is either manpower or the provision of materials.

In forming the water districts, LWUA, in coordination with the LGUs concerned, conducts a series of sectoral consultation with the community. Since water districts are formed at the option of the LGU, LWUA first consults the people, through a succession of public hearings, to arrive a consensus on whether or not to form the water district. LWUA also encourages the community to participate in the selection of the WDs' five-man board of directors, who are nominated from various sectors. Once formed and operating, the water district conducts regular dialogues with its concessionaires on various is-

sues such as water rates formulation/adjustment, expansion program and other matters that may affect the people-WD relationship.

#### **5.8.7 Information, Education and Communication (IEC) as Foundation Activities for Community Development**

A comprehensive, well-planned and executed IEC program on the sector informs and educates the people on the value of water, the benefits derived from good health and sanitation and on the programs and activities of government on the sector. This provides the proper media and venue for a sustaining mechanism to promote free, open, two-way exchange of information and communication at all times.

The province has no existing comprehensive IEC program on sector plans and programs in order to gain the support of various publics. Efforts are minimal, unplanned and unsystematic. No other media of communication is being utilized in disseminating information on the community on sector policies, opportunities and programs. Communication approaches have been confined to community assemblies and seminars.

The municipalities and the barangays likewise do not have existing IEC program to generate community participation on sector projects nor do they have any funds appropriated for the purpose. Dissemination of information on sector issues and development is limited to discussions at health centers mostly between health workers and mothers. During barangay council meetings, sector information is only discussed when there are new government programs and the barangay is a recipient of such program.

In general, water districts (WDs) implement a systematic and comprehensive IEC program. Most WDs produce printed information materials such as newsletters, leaflets and posters that are disseminated to the concessionaires. Regular press releases on WD development issues are submitted to local newspapers. There are some WDs that sponsor radio programs while others conduct regular dialogues with the community. Those that do not possess enough expertise are assisted by bigger WDs within the province/region (the concept of Godfather Water District) or by the Public Affairs Office of LWUA. A region-wide Water Information Network has been established with all WDs as members. This network undertakes a regular public information drive and helps smaller WDs to disseminate information.

### 5.8.8 Health and Hygiene Education

On matters relating to health and hygiene education, the Department of Health (DOH) has a better organized IEC program planned at the central government level, and executed by their local offices. One of these programs is the Environmental Sanitation program that aims to educate the entire community on the need and benefits of clean water, food and sanitation facilities. This program utilizes the radio, print media (posters) and *bandillo* (mobile announcements). The provincial health officer, the municipal health officer, the rural sanitation inspector and the barangay health worker are active disseminators of health and sanitation information.

The result of the group interviews revealed that the people recognize the importance of good health and hygiene practices. Most of them learned about health and sanitation matters from varied sources such as the schools, health clinics/hospitals, from health workers, friends and relatives and from newspapers, radio and television.

## 5.9 Gender

### 5.9.1 General

This chapter presents the current status or the existing condition for gender and development in the Province of Davao del Sur for the WATSAN sector from the side of the government, on one hand; and the point of view of the people and the communities served, on the other. As such, it elucidates on the evolvement of gender policies on the national level and shows how these have filtered down to the local level where gender responsive planning has become a requirement for all development efforts on the WATSAN sector. It also reveals the extent of the awareness that the people and/or beneficiary communities have on gender matters as seen through their participation in past sector projects as well as their perceived participation in future projects.

Gender-related information were taken from the following: (1) The interviews undertaken with LGU officials during the study period; (2) The answers to the "CD/GAD Questionnaire" distributed to select provincial and municipal officials involved in sector development; (3) The "Result of the Barangay Key Informant Survey for Davao del Sur" administered to the officials of the select local communities; and (4) The "Result of the Group Interviews for Davao del Sur" conducted at the barangay level; and (5) Other documents researched on and provided by the national, regional, provincial, municipal and barangay level offices.

### 5.9.2 The Evolution of Gender and Development

The 1987 Philippine Constitution recognizes and ensures the fundamental equality of women and men before the law and cites their respective roles in nation building. The National Commission on the Role of Filipino Women (NCRFW), established in 1975, ensures the integration of gender concerns in all aspects of the project development. In 1991, Republic Act 7192, better known as "Women in Development and Nation Building" was enacted to strengthen the mandate of the NCRFW. The Act called for the allocation of a substantial portion of the official development assistance funds from foreign governments and multilateral agencies to support programs and activities for women.

The adoption of the Philippine Plan for Gender Responsive Development (1995-2025) paved the way for full participation of women and men in planning and implementation of technology for infrastructure projects, including those in the water supply and sanitation sector. In 1995, the Office of the President issued Memorandum Order No. 282 directing various government training institutions to incorporate "Gender and Development (GAD) Concerns and Programs" in their respective curricula in order to further institutionalize gender and development programs. The General Appropriations Act of 1997 mandated all departments, offices and agencies to set aside a minimum amount of 5% out of their 1997 appropriations to be used for projects designed to address gender issues. The Local Government Code includes a provision giving political empowerment to women by creating sectoral seat for women to be elected in every local legislative assembly all over the country. To facilitate the whole process, a gender conscious system of data gathering, processing and generation has been established.

The significance of RA 7192 has started to gradually filter down to the LGU levels. The DILG gives *Gender Awareness Orientation and Training* to its officials and employees, from the central down to the municipal level. The purpose for this is not only to establish a common awareness on gender, but also to recognize that men and women are catalysts of growth and development for LGUs. In compliance with the policies enunciated in RA 7192, all government departments and agencies were directed to revise, review all their regulations, circulars, issuances and procedures to remove any gender bias. Thus, recent projects that national government agencies have incorporated gender concepts including the projects from the water and sanitation sector.

The DILG implements gender responsive WAISAN projects. The DPWH implemented in 1991 the First Rural Water Supply and Sanitation Project which adopted the "Women in De-

velopment" (WID) approach aimed to create support mechanisms to enable women to surmount problems regarding water and sanitation thereby increasing their productivity efforts and giving them greater participation in decision-making. Most of the water and sanitation projects of the DOH are directed towards the improvement of women's health and physical condition as well as their social status in the community. As such, implementation of most health and sanitation projects, including water supply, utilizes the women's sector in the community.

### **5.9.3 The LGU and Gender**

Gender and development has just been recently introduced in the province. As of the time of this study, one of the staff members in the PPDO was sent out on a four-week training in the Development Academy of the Philippines. The main subject of the said training is gender-responsiveness in planning development projects. The officials believe that upon this staff member's return, the province will be able to incorporate gender and development in the planning process for the sector.

The province has very active women's groups where women's rights are promoted. There is the Rural Improvement with the women as its more active promoter. This Club emphasizes livelihood projects for the countryside folks. Women are also amply represented in local governance, such as in the barangay and municipal councils. In the water supply and sanitation sector, the participation of women is encouraged. One example given is that of Barangay Asturga, where the system superintendent is a woman.

### **5.9.4 Gender in WATSAN Sector Projects**

#### **(1) Gender Participation in Sector Development Projects**

Since gender has not yet filtered down to sector projects in the province, a province-wide survey and group interviews were undertaken to assess gender sensitivity of barangay officials and constituents in the roles of both men and women as well as their modes of participation in sector projects.

The respondents in the key informant survey were either an official of the barangay council, an official of the BWSA, or a recognized community leader. The purpose of the survey was to find out the degree and type of government assistance on the sector that cascades from the national government down to the barangay level.

In the five barangays surveyed, the total number of barangay council members is 40. Of this number, 29 were males and 11 females. The barangay councils are still male-dominated although in one barangay, the women outnumbered men in the composition of the council, 5 to 3, including the barangay captain.

The respondents in the group interviews, on the other hand, were almost equal numbers of men and women in selected communities, the majority of whom belong to the 31-50 age bracket. The level of education of most of the interviewees was in the high school level with women outnumbering men at having graduated from high school and college. The occupation of a big majority of the respondents is farming/fishing, with more men than women engaged in this occupation.

The objectives of the group survey/interviews were to identify potential service population and service level desired by the community, to assess the degree of involvement of both men and women in planning, managing, operating and maintaining WATSAN projects, and the willingness and capacity to pay of potential users. The findings are:

On the formation/composition of the BWSA/RWSA/WD Board:

The boards of the existing BWSAs/RWSAs are male-dominated. Of the 14 board members identified, 10 are males while 4 are females. To the women members were reserved the traditional roles, such as that of board secretary or treasurer. The majority of both the male and female respondents showed interest in becoming a member of a WATSAN association once it is formed and/or activated in their respective barangays. In this connection, the men indicated their willingness to participate in all phases of WATSAN development; while the women's participation is limited to contributing cash or materials for the construction of the water supply and sanitation facilities.

There are five sectors represented in the water district's Board of Directors, one of which is the women's sector. More often than not, the educational sector almost always nominates/appoints a female educator.

On participation in WATSAN training:

While most of the respondents did attend various training programs for the year, none of them were aware of or attended any sector-related training program in 1997. If given a chance, the women indicated their preference for training on the operation and maintenance of water supply facilities, in the same manner as the men wanted training on

WATSAN skills and BWSA operations, aside, of course, from the usual livelihood training. The desired training period ranged from one day for women, to three days for men.

**On participation in health and hygiene:**

Most of the male and female respondents equally recognized the importance of good health and hygiene practices. However, only the women, and none of the men participated in health education and training. If given a chance, most interviewees would like to attend any training program on health and sanitation.

The women learned of good health and hygiene practices from health clinics and their workers and from the schools. The men, however, learned this from the same sources, in addition to television and radio. It was found out that women were still the more afflicted gender with water-related diseases such as gastroenteritis, stomach upset and kidney trouble as compared to the men.

**On participation in operation and maintenance:**

Both the men and women believe that they can participate in operating and maintaining the WATSAN facilities. The men said that they could assist in the management of the association, do repair of facilities, or maintain the cleanliness of the facilities. The women, on the other hand, affirmed that they could assist in the cleaning of the surroundings, facilitate repair of broken facilities and disseminate information concerning the operation of the association.

Many of the respondents did not know who was responsible for operating or doing simple repairs for their WATSAN facilities. Those who did indicated that the private owners or the barangay member are the ones responsible for the operation and maintenance of WATSAN facilities, apart from doing minor repairs of these facilities.

**(2) Gender in Water Supply and Sanitation Practices**

The same survey and interview results also indicated gender sensitivity in water supply and sanitation practices, as presented in the following findings:

**Responsibility in Fetching Water**

All of the male respondents said that the men (the husband and/or eldest son) are still the ones responsible for hauling drinking water for family use. Ironically, a big majority the female respondents said it is the women (particularly the wife) who are the main water



fetchers. For the same female respondents, only a few husbands and male children share this demanding task.

Women fetch water three times a day with a duration of about 10 minutes per haul. On the other hand, the men believed that drinking water is fetched more than four times a day and that this takes from 10 to 30 minutes per task. It seems, therefore, that the women only fetched water if the water source is nearer their homes. Fetching water from sources that are farther away becomes the responsibility of the male household members.

Almost 87% of the male and female respondents surveyed revealed that they have problems with the current water source. The rest were uncertain on the issue.

## **5.10 Existing Project and Sector Monitoring**

### **(1) Sector Monitoring**

The primary sources of sector data are the field office and staff of DPWH, DOH, LWUA, DILG and NSO. Other agencies, including NEDA and LGUs, use data from these agencies. Each of these agencies run its own project and/or activity monitoring system largely based on required reports of its field offices. Only the NSO gathers and assesses information nationwide on a regular basis as part of its Census on Population and Housing (CPH). The CPH "long form", which includes "water supply", is administered on 10% of the households once every ten years, and "short form" every five years. Water and sanitation is not included in the short form.

### **(2) Project Monitoring**

Project monitoring has been conducted by different government levels depending on the characteristics of the project i.e., local funded or foreign assisted projects. However, only projects handled by the local offices of central government agencies are monitored, mainly focusing on physical accomplishments and capital expenditures of projects, by respective central government line agencies.

Monitoring activities under the Regional Development Council cover four components: Macro, Economic, Social welfare and Infrastructure. Monitoring report on foreign assisted infrastructure projects, including water supply project is submitted monthly from PPDO to the regional Office of DILG, while, the reports on other sectors and non-foreign assisted projects are submitted quarterly. The monitoring report submitted to the regional office of DILG is sent to the central government (NEDA) through RDC after compilation

with other monitoring reports (by the secretariat of RDC). The central government agencies also report to the foreign assistance agencies such as ADB, WB, etc.

There are no differences in the current project monitoring systems at LGU level. However, the monitoring report on foreign assisted projects is submitted to the concerned central government agencies through the regional office.

The exchange of monitoring information between concerned agencies seems to be insufficient/not systematic, though there are opportunities to do so, such as, through the periodic meetings done by the Regional Development Council. In addition to the insufficient/non-systematic exchange of monitoring information no data-management system causes not only increasing working burden in the monitoring and also wide dissatisfaction among project implementers themselves as monitoring report preparation is seen as nuisance to performing one's job and is thus haphazardly done. This leads to the problem of reliability of information coming from the fields. A clear mechanism and data management system are required among relevant agencies.

**WATSAN related projects monitoring:** The monitoring for WATSAN related projects are conducted under the Regional Monitoring and Evaluation System. The PPDO conducts monitoring from the start until completion of the project. Projects that are getting negative feedback and require validation and verification are closely monitored. The report covers status of implementation, finance, percentage of accomplishment and slippage/problems as well as evaluation and countermeasure. Figure 5.10.1 shows an example of UNDP assisted project illustrating the linkages among concerned agencies.

**UNDP/PHI/93/010 PROJECT  
PARTICIPATORY MONITORING FEEDFORWARD  
AND FEEDBACK MANAGEMENT MECHANISM**

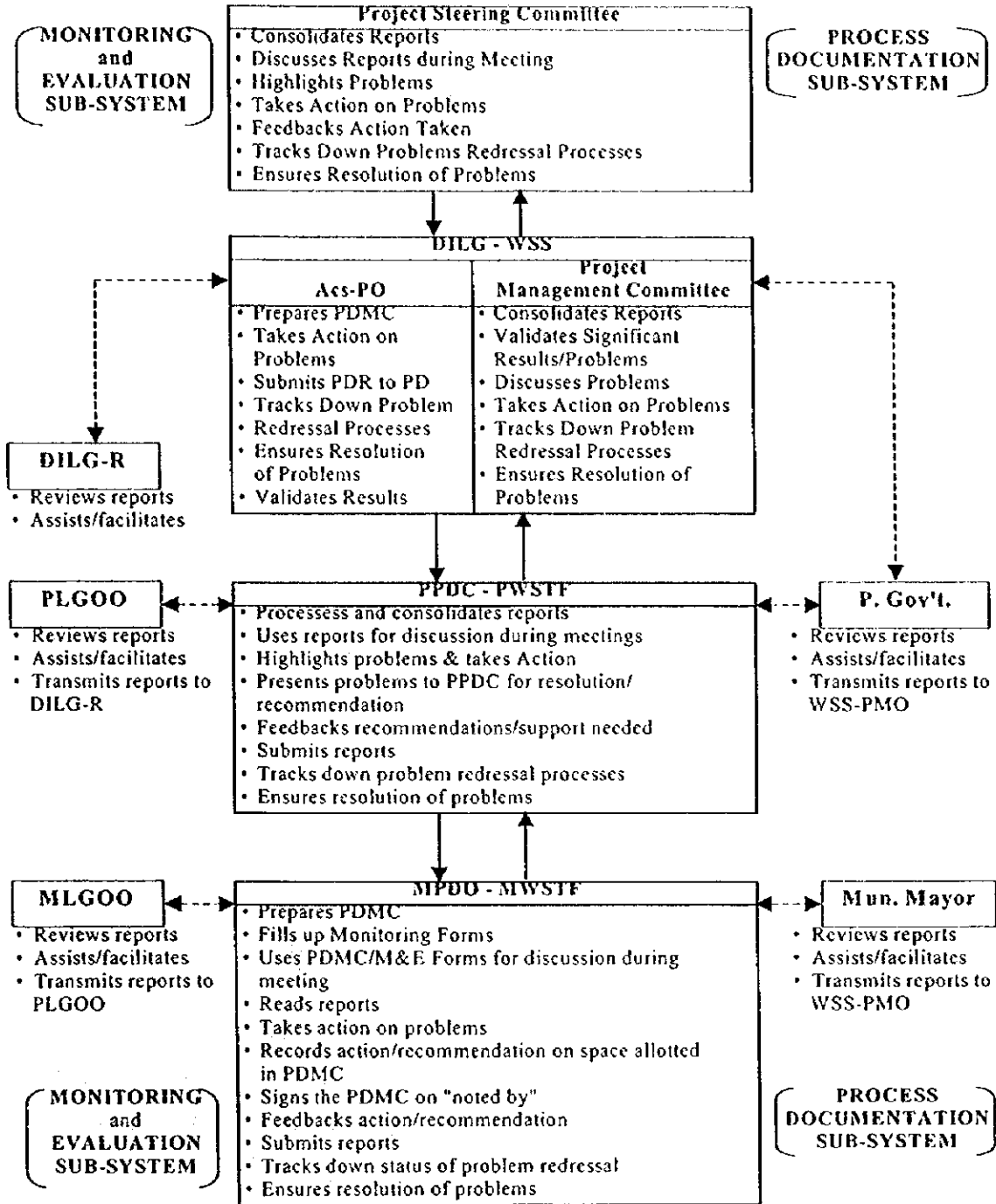


Figure 5.10.1

