

4.1.5 Level I Facilities

Safe and Unsafe Classification of Level I Facilities

According to the definition of DOH, the protected deep well, protected shallow well, covered /improved dug well and developed spring are classified as safe sources, while the unprotected shallow well, open dug well, undeveloped spring and rainwater collector are classified as unsafe sources.

In the 1990 population census data, "Households by Main Source of Drinking Water and City /Municipality", it was shown that 38% of the households depended on shallow well, dug well, undeveloped spring, lake, river and rain water collector. This figure was arrived as the percentage of underserved/unserved sources, if all shallow wells were regarded as doubtful.

The PHO has conducted water quality analysis of samples collected at public and private Level I wells, however, the results by municipality/city are available for only six (6) out of 23 municipalities at present as shown in Table 4.1.3.

Under this situation, the following conditions may be considered to assume safe/unsafe percentage for this planning purpose.

- The number of samples examined was very limited compared with the number of existing shallow wells (2,016) and water sampling by PHO is usually conducted only when problems on water quality and/or incidence of water related diseases have been experienced.
- There might be some cases that examination at the same Level I sources/facilities was conducted until safety of the water was confirmed.
- Sources such as dug wells, which are defined as unsafe sources may be included in the above examination results.

Considering the above conditions on the manner of sampling, the unsafe percentage (67%) of shallow wells derived from Table 4.1.3 may be overestimated, although the number of samples examined was limited.

While, as a reference information, the experiences in 1st and 2nd batch provinces in Mindanao area in the preparation of PW4SP show the unsafe percentage of 20-50% as summarized below.

Surigao del Norte	Agusan del Norte	Agusan del Sur	Bukidnon	Misamis Oriental	Davao Oriental	Davao del Norte	Davao del Sur	Sarangani	South Cotabato
20%	50%	23%	50%	50%	40%	20%	46%	30%	50%

Table 4.1.3 Results of Water Quality Examination of Shallow Wells

Municipality	No. of Existing Shallow Well	Results of Water Quality Examination				Total No. of Sample
		Safe Source		Unsafe Source		
		Number	Percentage	Number	Percentage	
Arteche	147	ND	-	ND	-	0
Balangiga	160	ND	-	ND	-	0
Balangkayan	71	10	42%	14	58%	24
Borongan	0	5	83%	2	33%	7
Can-Avid	223	0	0%	2	100%	2
Dolores	180	ND	-	ND	-	0
Gen. Macarthur	0	ND	-	ND	-	0
Giporlos	120	ND	-	ND	-	0
Guiuan	415	1	33%	2	67%	3
Hemani	120	ND	-	ND	-	0
Jipapad	4	ND	-	ND	-	0
Lawaan	138	ND	-	ND	-	0
Llorente	54	1	100%	0	0%	1
Maslog	0	ND	-	ND	-	0
Maydolong	35	ND	-	ND	-	0
Mercedes	30	0	0%	7	100%	7
Oras	154	ND	-	ND	-	0
Quinapondan	2	ND	-	ND	-	0
Salcedo	0	2	29%	5	71%	7
San Julian	57	ND	-	ND	-	0
San Policarpo	60	ND	-	ND	-	0
Sulat	127	0	0%	1	100%	1
Taft	66	1	11%	8	89%	9
Province	2,016	20	33%	41	67%	61

Source: PHO, June 1996 – June 1998

ND: No data available

Based on the above study, the percentage of 40% as an average experienced in the 1st and 2nd batch study (10 provinces) may be adopted as an unsafe percentage to all municipalities both in urban and rural area in the classification of shallow wells. While, those sources other than shallow wells are processed as classified in the questionnaire. Table 4.1.4 (a) presents the numbers of Level I facilities by safe and unsafe classification.

Public and Private Level I Facilities for Rural Water Supply

Table 4.1.4 (b) presents the number and proportion of Level I facilities by public and private sources for rural water supply in the province. Public and private facilities share 58% and 42% of the total number of Level I facility, respectively. Developed springs occupy 10% of the total number of public facilities.

Table 4.1.4(a) Number of Level 1 Facilities by Safe and Unsafe Classification

Name of Municipality	Area	Safe Sources										Unsafe Sources						Grand Total			
		Public					Private					Public			Private						
		Deep Well	Shallow Well	Covered/Improved Dug Well	Developed Spring	Sub-total	Deep Well	Shallow Well	Covered/Improved Dug Well	Sub-total	Total	Shallow Well	Open Dug Well	Undeveloped Spring	Rain Water Collection	Sub-total	Open Dug Well		Rain Water Collector	Sub-total	Total
Aneche	Urban	11	11	15	11	15	26	7	10	43										17	43
	Rural	11	13	21	2	51	64	8	34	8										34	42
	Total	22	24	36	4	66	80	15	44	44	44	44	44	44	44	44	44	44	44	70	106
Balangiga	Urban	13	2	76	5	76	91	9	51	136										54	136
	Rural	6	11	1	4	1	12	4	1	17										1	2
	Total	19	13	77	9	77	103	13	52	153										55	138
Balangayan	Urban	13	15	2	2	17	10	2	10	29										2	31
	Rural	25	25	44	2	44	27	2	27	71										2	73
	Total	40	40	68	4	68	37	4	37	100										4	104
Borongan (Capital)	Urban	11	97	2	1	458	65	65	504	504										304	808
	Rural	29	941	1	10	134	202	62	62	354										354	708
	Total	40	191	3	11	292	207	127	127	708										708	1416
Cauayan	Urban	2	30	56	2	56	102	31	14	116										9	125
	Rural	2	31	63	13	63	36	47	47	47										47	94
	Total	4	61	119	25	119	78	84	84	163										56	219
Doloros	Urban	9	19	8	9	43	40	8	48	60										13	73
	Rural	9	50	8	9	76	10	56	8	76										37	113
	Total	18	69	16	18	119	50	64	56	136										50	226
General Misamis	Urban	12																			12
	Rural	12																			12
	Total	24																			24
Giprosos	Urban	1	21	2	1	43	68	14	14	115										33	148
	Rural	1	5	3	1	10	10	2	2	13										2	15
	Total	2	26	5	2	53	78	16	16	128										35	163
Guluan	Urban	38	63	43	43	108	152	28	28	280										72	352
	Rural	3	112	2	7	135	145	44	44	189										25	214
	Total	41	175	45	50	243	297	72	72	469										97	566
Hemani	Urban	1	17	23	1	42	43	12	12	55										16	71
	Rural	5	20	6	31	11	42	13	13	55										23	78
	Total	6	37	29	32	53	85	25	25	110										39	149
Jigpad	Urban	2		1	3	4	7	1	5	7										6	13
	Rural	2		1	3	4	7	1	5	7										6	13
	Total	4		2	6	8	14	2	10	14										12	26
Lawaan	Urban	20	4	32	24	80	56	13	13	93										24	117
	Rural	12	12	18	8	50	31	8	8	58										8	66
	Total	32	16	50	32	130	87	21	21	151										32	183
Llorente	Urban	1	13	17	7	23	40	10	10	50										10	60
	Rural	1	15	17	7	23	40	10	10	50										10	60
	Total	2	28	34	14	46	80	20	20	100										20	120

Table 4.1.4 (b) Public and Private Level I Facilities for Rural Water Supply

Facility	Public Source		Private Source		Total
	Number	%	Number	%	
Deep Well	127	98%	2	2%	129
Shallow Well	708	56%	567	44%	1,275
Spring Development	95	100%			95
Others	68	31%	154	69%	222
Total	998	58%	723	42%	1,721

4.1.6 Water Supply Service Coverage

Estimation of Service Coverage in Terms of Safe, Unsafe and Unserved Classification

Through review of the number of water supply systems/facilities and the number of households that were derived from the questionnaire, it was found out that a great number of unserved population would be accounted as a balance between the total population and the population with any levels of services (including unsafe facilities) in application of the service level standard for Level I and II. To come up with more realistic service coverage, the unserved population in 1997 was referred to using the profile in the 1990 population census data, "Households by Main Source of Drinking Water and City/Municipality" prepared by NSO. The rest of the population, those who are not served by Level III and/or II systems, were considered to be covered by shared or own use of Level I facilities. The calculation procedure is as follows:

- Service percentage/population of Level III and Level II systems was estimated based on the questionnaire survey results.
- Percentage of unserved population (using undeveloped spring, lake water, river water, peddler, etc.) of respective municipality by urban and rural area, which were studied in the 1990 population census, was discounted to half of their percentage, since the figures were estimated based on 10% sample and the situation at that time seems to have been improved.
- Population covered by Level I facilities was calculated as the balance between the total population and the population served by Level III & II systems and the unserved population.
- Level I population coverage was estimated with the assumption that 50% of the private facilities were shared by neighbors.

Unserved population and the population covered by Level I facilities are presented in Table 4.1.5. Tables 4.1.6 (a) and (b) present the overall population covered by Level I facilities and the number of households.

Table 4.1.5 Estimation of Unserved Population by Municipality

Name of Municipality	Area	Population and Household (1998)		Served Population			Unserved Population			Population Covered by Level I Facilities		
		Number	HH Size	Level III	Level II	Total	Unserved Percentage (1995)		Unserved Population 1998			
							Total No. of HHs	No. of Unserved			%	
Arteche	Urban	4,682	5.24					867	52	6	281	4,401
	Rural	8,279	5.32					1,503	711	47	3,916	4,363
	Total	12,961	5.29					2,370	763	32	4,197	8,764
Balangiga	Urban	5,970	5.29					1,038	18	2	104	5,866
	Rural	5,632	5.53		1,355	1,355	248	1,015	248	24	1,376	2,901
	Total	11,602	5.41		1,355	1,355	266	2,053	266	13	1,480	8,767
Balangkayan	Urban	2,985	5.19		1,256	1,710	2,966	575	27	5	19	19
	Rural	6,270	5.31					1,104	367	33	2,084	4,186
	Total	9,255	5.27		1,256	1,710	2,966	1,679	394	23	2,084	4,205
Borongan (Capital)	Urban	20,078	5.22		6,348	6,348	6,348	3,846	72	2	376	13,354
	Rural	30,051	5.00		319	1,333	1,652	5,707	982	17	5,171	23,228
	Total	50,129	5.09		6,667	1,333	8,000	9,553	1,054	11	5,547	36,582
Can-avid	Urban	5,674	5.83					871	55	6	358	5,316
	Rural	10,905	5.56			1,696	1,696	1,921	743	39	4,218	4,991
	Total	16,579	5.64			1,696	1,696	2,792	798	29	4,576	10,307
Dolores	Urban	11,134	5.65			650	650	1,668	124	7	828	9,656
	Rural	24,349	5.64			2,369	2,369	4,405	1,684	38	9,308	12,672
	Total	35,483	5.64			3,019	3,019	6,073	1,808	30	10,136	22,328
General Macarthur	Urban	4,388	5.46					799	42	5	231	4,157
	Rural	5,788	5.64			564	564	1,008	569	56	5,224	
	Total	10,176	5.56			564	564	1,807	611	34	5,455	4,157
Giporlos	Urban	5,168	5.26					955	27	3	146	5,022
	Rural	4,571	5.38			943	943	934	366	39	1,791	1,837
	Total	9,739	5.32			943	943	1,889	393	21	1,937	6,859
Guiuan	Urban	9,862	5.25					1,850	38	2	203	9,659
	Rural	26,116	4.94			2,620	2,620	5,208	512	10	2,567	20,929
	Total	35,978	5.02			2,620	2,620	7,058	550	8	2,770	30,588

Table 4.1.5 Estimation of Unserved Population by Municipality (Cont'd.)

Name of Municipality	Area	Population and Household (1998)		Served Population			Unserved Population			Population Covered by Level I Facilities	
		Number	HH Size	Level III	Level II	Total	Unserved Percentage (1995)		Unserved Population 1998		
							Total No. of HHs	No. of Unserved			%
Hernani	Urban	2,211	5.82				344	27	8	174	2,037
	Rural	6,242	6.08		304	304	995	370	37	2,321	3,617
	Total	8,453	6.02		304	304	1,339	397	30	2,495	5,654
Jipapad	Urban	3,402	6.31				494	34	7	234	3,168
	Rural	3,152	5.50				565	459	81	3,152	
	Total	6,554	5.88				1,059	493	47	3,386	3,168
Lawaan	Urban	5,212	6.21		342	342	715	7	1	51	4,819
	Rural	5,145	5.61		1,010	1,010	942	93	10	508	3,627
	Total	10,357	5.87		1,352	1,352	1,657	100	6	559	8,446
Llorente	Urban	6,478	4.82	506	30	536	1,344	54	4	5,942	
	Rural	8,871	4.85		389	389	1,976	737	37	3,309	5,173
	Total	15,349	4.84	506	419	925	3,320	791	24	9,251	5,173
Maslog	Urban	1,163	5.61		337	337	191	36	19	826	
	Rural	2,649	5.14		231	231	498	488	98	2,418	
	Total	3,812	5.27		568	568	689	524	76	3,244	
Maydolong	Urban	5,374	5.37	1,150	2,495	3,645	922	43	5	251	1,478
	Rural	7,333	6.09	116	1,310	1,426	1,190	589	49	3,630	2,277
	Total	12,707	5.78	1,266	3,805	5,071	2,112	632	30	3,880	3,756
Mercedes	Urban	1,335	6.74				172	2	1	14	1,321
	Rural	4,455	6.02				716	20	3	124	4,331
	Total	5,790	6.16				888	22	2	138	5,652
Oras	Urban	8,665	5.63				1,538	92	6	518	8,147
	Rural	24,358	5.51	1,432	1,432	1,432	4,154	1,252	30	7,341	15,585
	Total	33,023	5.54	1,432	1,432	1,432	5,692	1,344	24	7,860	23,731

Table 4.1.5 Estimation of Unserved Population by Municipality (Cont'd.)

Name of Municipality	Area	Population and Household (1998)		Served Population			Unserved Population				Population Covered by Level I Facilities
		Number	HH Size	Level III	Level II	Total	Unserved Percentage (1995)		Unserved Population 1998		
							Total No. of HHs	No. of Unserved		%	
Quinapondan	Urban	4,547	7.09		957	957	573	45	8	357	3,233
	Rural	8,639	5.92		1,391	1,391	1,450	613	42	3,652	5,596
	Total	13,186	6.25		2,348	2,348	2,023	658	33	4,009	6,829
Salcedo	Urban	3,053	5.08	1,458	60	1,518	591	36	6	1,535	
	Rural	12,786	4.89		366	366	2,663	492	18	2,362	10,058
	Total	15,839	4.93	1,458	426	1,884	3,254	528	16	3,897	10,058
San Julian	Urban	2,718	4.90				555	13	2	64	2,654
	Rural	9,267	4.96		694	694	1,843	178	10	895	7,678
	Total	11,985	4.94		694	694	2,398	191	8	959	10,332
San Policarpo	Urban	4,280	5.10				796	14	2	75	4,205
	Rural	7,807	5.28				1,422	193	14	1,060	6,747
	Total	12,087	5.21				2,218	207	9	1,135	10,952
Sulat	Urban	5,318	5.09	3,726	255	3,981	951	18	2	101	1,236
	Rural	9,108	5.21		703	703	1,759	251	14	1,300	7,105
	Total	14,426	5.17	3,726	958	4,684	2,710	269	10	1,400	8,342
Taft	Urban	4,758	5.53				858	19	2	105	4,653
	Rural	12,890	5.68		1,189	1,189	2,088	256	12	1,580	10,121
	Total	17,648	5.64		1,189	1,189	2,946	275	9	1,686	14,773
Provincial Total	Urban	128,455	5.42	14,444	6,836	21,280	22,513	895	4	12,772	94,403
	Rural	244,663	5.33	435	19,899	20,334	45,066	12,173	27	69,309	155,020
	Total	373,118	5.36	14,879	26,735	41,614	67,579	13,068	19	82,081	249,423

Table 4.1.6 (a) Estimation of Population Covered by Safe and Unsafe Source by Municipality

Name of Municipality	Area	Pop. Covered by Level I Facilities	Number of Facilities						Coverage of Own Use					
			Public Facilities			Private Facilities			Number of Private Facilities			(1) Population Covered		
			Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total
Arteche	Urban	4,401	11	7	18	15	10	25	8	5	13	39	26	66
	Rural	4,363	13	8	21	51	34	85	26	17	43	134	89	223
	Total	8,764	24	15	39	66	44	110	33	22	55	173	115	288
Balangiga	Urban	5,866	15	11	26	76	54	130	38	27	65	202	142	344
	Rural	2,901	11	4	15	1	1	2	0	1	1	2	4	5
	Total	8,767	26	15	41	77	55	132	38	28	66	203	146	349
Balangkayan	Urban	19	15	10	25	2	2	4	1	1	2	6	4	10
	Rural	4,186	26	17	43									
	Total	4,205	41	27	68	2	2	4	1	1	2	6	4	10
Borongan (Capital)	Urban	13,354	111	65	176	458	304	762	229	152	381	1,195	793	1,989
	Rural	23,228	134	62	196	76	50	126	38	25	63	197	132	329
	Total	36,582	245	127	372	534	354	888	267	177	444	1,393	925	2,318
Can-avid	Urban	5,316	52	33	85	50	33	83	25	17	42	145	97	242
	Rural	4,991	21	14	35	13	9	22	7	4	11	38	26	64
	Total	10,307	73	47	120	63	42	105	32	21	53	184	122	306
Dolores	Urban	9,656	32	21	53	28	12	40	14	6	20	79	34	113
	Rural	12,672	45	15	60	48	76	124	24	38	62	134	216	350
	Total	22,328	76	37	113	76	88	164	38	44	82	214	250	463
General Macarthur	Urban	4,157	12		12									
	Rural													
	Total	4,157	12		12									
Giporlos	Urban	5,022	24	14	38	44	33	77	22	16	39	116	86	203
	Rural	1,837	10	4	14	2	31	33	1	15	17	6	80	87
	Total	6,859	34	18	52	47	63	110	23	32	55	123	167	289
Guiuan	Urban	9,659	43	28	71	109	72	181	55	36	91	286	189	475
	Rural	20,929	112	44	156	33	25	58	17	13	29	87	66	152
	Total	30,588	155	72	227	142	97	239	71	49	120	373	255	627
Hernani	Urban	2,037	19	12	31	23	16	39	12	8	20	68	45	113
	Rural	3,617	31	13	44	11	8	19	6	4	10	33	22	55
	Total	5,654	50	25	75	35	23	58	17	12	29	101	68	169
Jipapad	Urban	3,168	3	1	4	5	0	5	2	0	3	15	1	16
	Rural			9	9									
	Total	3,168	3	10	13	5	0	5	2	0	3	15	1	16
Lawaan	Urban	4,819	24	13	37	32	24	56	16	12	28	101	73	174
	Rural	3,627	12	8	20	19	18	37	9	9	19	58	57	115
	Total	8,446	36	21	57	51	42	93	26	21	47	158	130	289

Table 4.1.6 (b) Estimation of Population Covered by Safe and Unsafe Source by Municipality

Name of Municipality	Area	Coverage of Shared Well										Level I Coverage (1) + (2)							
		(2) Population Covered by Private and Public					Number of Households					No. of HHs per Shared Facility		Safe		Unsafe		Total	
		Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total	No. of HHs per Shared Facility	%	Pop.	%	Pop.	%	Pop.	%	
Aneche	Urban	2,641	1,695	4,336	504	323	827	27			2,680	57	1,721	37	4,401	94			
	Rural	2,673	1,467	4,140	502	276	778	12			2,806	34	1,556	19	4,363	53			
	Total	5,313	3,162	8,476	1,006	599	1,606	17			5,486	42	3,278	25	8,764	68			
Balangga	Urban	3,436	2,087	5,523	650	394	1,044	11			3,638	61	2,229	37	5,866	98			
	Rural	2,049	847	2,896	370	153	524	33			2,050	36	851	15	2,901	52			
	Total	5,485	2,933	8,418	1,020	548	1,568	15			5,688	49	3,079	27	8,767	76			
Balangkayan	Urban	9	9	18	2			0			15	0	4	0	19	1			
	Rural	2,550	1,635	4,186	480	308	788	18			2,550	41	1,635	26	4,186	67			
	Total	2,559	1,635	4,194	482	308	790	11			2,565	28	1,639	18	4,205	45			
Borongon (Capital)	Urban	8,156	3,209	11,365	1,593	615	2,177	4			9,352	47	4,002	20	13,354	67			
	Rural	15,372	7,527	22,899	3,074	1,505	4,580	18			15,569	52	7,659	25	23,228	77			
	Total	23,528	10,736	34,265	4,637	2,120	6,757	8			24,921	50	11,661	23	36,582	73			
Can-avid	Urban	3,223	1,851	5,074	553	317	870	7			3,368	59	1,948	34	5,316	94			
	Rural	2,995	1,932	4,927	539	348	886	19			3,033	28	1,958	18	4,991	46			
	Total	6,218	3,783	10,001	1,091	665	1,756	10			6,401	39	3,905	24	10,307	62			
Dolores	Urban	6,058	3,485	9,543	1,072	617	1,689	23			6,137	55	3,519	32	9,656	87			
	Rural	7,104	5,217	12,321	1,260	925	2,185	18			7,239	30	5,433	22	12,672	52			
	Total	13,163	8,702	21,865	2,332	1,542	3,874	20			13,376	38	8,952	25	22,328	63			
General Macarthur	Urban	4,157		4,157	761		761	63			4,157	95			4,157	95			
	Rural																		
	Total	4,157		4,157	761		761	63			4,157	41			4,157	41			
Gipertios	Urban	3,026	1,793	4,819	575	341	916	12			3,143	61	1,879	36	5,022	97			
	Rural	699	1,051	1,750	130	195	325	11			705	15	1,132	25	1,837	40			
	Total	3,725	2,845	6,569	705	536	1,242	12			3,847	40	3,011	31	6,859	70			
Guiuan	Urban	5,808	3,377	9,184	1,106	643	1,749	11			6,094	62	3,566	36	9,659	98			
	Rural	14,582	6,194	20,776	2,952	1,254	4,206	23			14,669	56	6,260	24	20,929	80			
	Total	20,390	9,571	29,961	4,058	1,897	5,955	17			20,762	58	9,825	27	30,588	85			
Hemami	Urban	1,255	669	1,924	216	115	331	7			1,323	60	715	32	2,037	92			
	Rural	2,468	1,094	3,562	406	180	586	11			2,501	40	1,116	18	3,617	58			
	Total	3,722	1,763	5,486	621	295	916	9			3,824	45	1,831	22	5,654	67			
Jipapad	Urban	2,486	667	3,152	394	106	500	77			2,500	73	668	20	3,168	93			
	Rural																		
	Total	2,486	667	3,152	394	106	500	32			2,500	38	668	10	3,168	48			
Lawaan	Urban	2,966	1,680	4,645	478	270	748	12			3,066	59	1,753	34	4,819	92			
	Rural	2,007	1,506	3,512	358	268	626	16			2,064	40	1,563	30	3,627	70			
	Total	4,972	3,185	8,157	835	539	1,374	13			5,131	50	3,315	32	8,446	82			

Table 4.1.6 (b) Estimation of Population Covered by Safe and Unsafe Source by Municipality

Name of Municipality	Area	Coverage of Shared Well										Level I Coverage (1) - (2)									
		(2) Population Covered by Private and Public					Number of Households					No. of HHs per Shared Facility		Safe		Unsafe		Total			
		Safe		Unsafe		Total	Safe		Unsafe		Total	No. of HHs per Shared Facility	No. of HHs per Shared Facility	Pop.		%		Pop.		%	
		Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total	Pop.			%	Pop.	%	Pop.	%	Pop.	%	
Lorente	Urban	3,453	1,651	5,103	712	340	1,052	22					3,494	39	1,679	19	5,173	58			
	Rural	3,453	1,651	5,103	712	340	1,052	22				3,494	23	1,679	11	5,173	34				
	Total																				
Maslog	Urban																				
	Rural																				
	Total																				
Maydolong	Urban	887	559	1,446	165	104	269	45				906	17	572	11	1,478	23				
	Rural	1,333	883	2,216	219	145	364	27				1,370	19	908	12	2,277	31				
	Total	2,220	1,442	3,662	384	249	633	32				2,276	18	1,480	12	3,756	30				
Mercedes	Urban	3,425	885	4,310	569	147	716	16				3,437	77	893	20	4,331	97				
	Rural	3,425	2,206	5,631	569	343	912	21				3,437	59	2,214	38	5,652	98				
	Total	7,240	620	7,860	1,286	110	1,396	12				7,489	86	658	8	8,147	94				
Oras	Urban	9,505	5,964	15,469	1,725	1,082	2,807	20				9,526	39	6,059	25	15,585	64				
	Rural	16,745	6,584	23,329	3,011	1,192	4,203	16				17,015	52	6,717	20	23,731	72				
	Total	2,586	647	3,233	365	91	456	228				2,586	57	647	14	3,233	71				
Quimaponcán	Urban	3,356	240	3,596	567	40	607	101				3,356	39	240	3	3,596	42				
	Rural	5,942	886	6,829	932	132	1,063	133				5,942	45	886	7	6,829	52				
	Total																				
Salcedo	Urban	10,058		10,058	2,057		2,057	514				10,058	79			10,058	79				
	Rural	10,058		10,058	2,057		2,057	514				10,058	63			10,058	63				
	Total	1,681	959	2,640	343	196	539	22				1,690	62	964	35	2,654	98				
San Julian	Urban	5,453	2,181	7,634	1,059	440	1,539	39				5,475	59	2,203	24	7,678	83				
	Rural	7,134	3,139	10,274	1,443	635	2,078	33				7,165	60	3,167	26	10,332	86				
	Total	2,877	1,307	4,184	564	256	820	22				2,889	68	1,316	31	4,205	98				
San Policarpo	Urban	4,379	2,346	6,724	829	444	1,274	52				4,393	56	2,355	30	6,747	86				
	Rural	7,256	3,653	10,909	1,393	701	2,094	34				7,282	60	3,670	30	10,952	91				
	Total	742	421	1,163	146	83	228	16				786	15	450	8	1,236	23				
Sulat	Urban	4,138	2,736	6,874	794	525	1,319	15				4,240	47	2,865	31	7,105	78				
	Rural	4,879	3,157	8,036	940	608	1,548	15				5,026	35	3,316	23	8,342	58				
	Total	3,753	900	4,653	679	163	841	14				3,753	79	900	19	4,653	98				
Taft	Urban	8,150	1,971	10,121	1,435	347	1,782	23				8,150	63	1,971	15	10,121	79				
	Rural	11,903	2,870	14,773	2,114	510	2,623	19				11,903	67	2,870	16	14,773	84				
	Total	62,986	27,244	90,230	11,420	4,941	16,361	11				65,572	51	28,831	22	94,403	73				
Provincial Total	Urban	105,746	47,328	153,074	20,077	8,924	29,001	21				106,686	44	48,335	20	155,020	63				
	Rural	168,732	74,571	243,304	31,497	13,865	45,362	16				172,258	46	77,165	21	249,423	67				
	Total																				

The number of households per shared public/private facility is estimated at 10 households in urban area and 21 in rural area as provincial averages. Compared with the service level standard of Level I public facility (15 households/facility), these figures are considered within common range. However, those figures in the municipalities of Quinapondan and Salcedo are considered quite large. This reason seems to arise from a considerable number of non-reported/unidentified private wells.

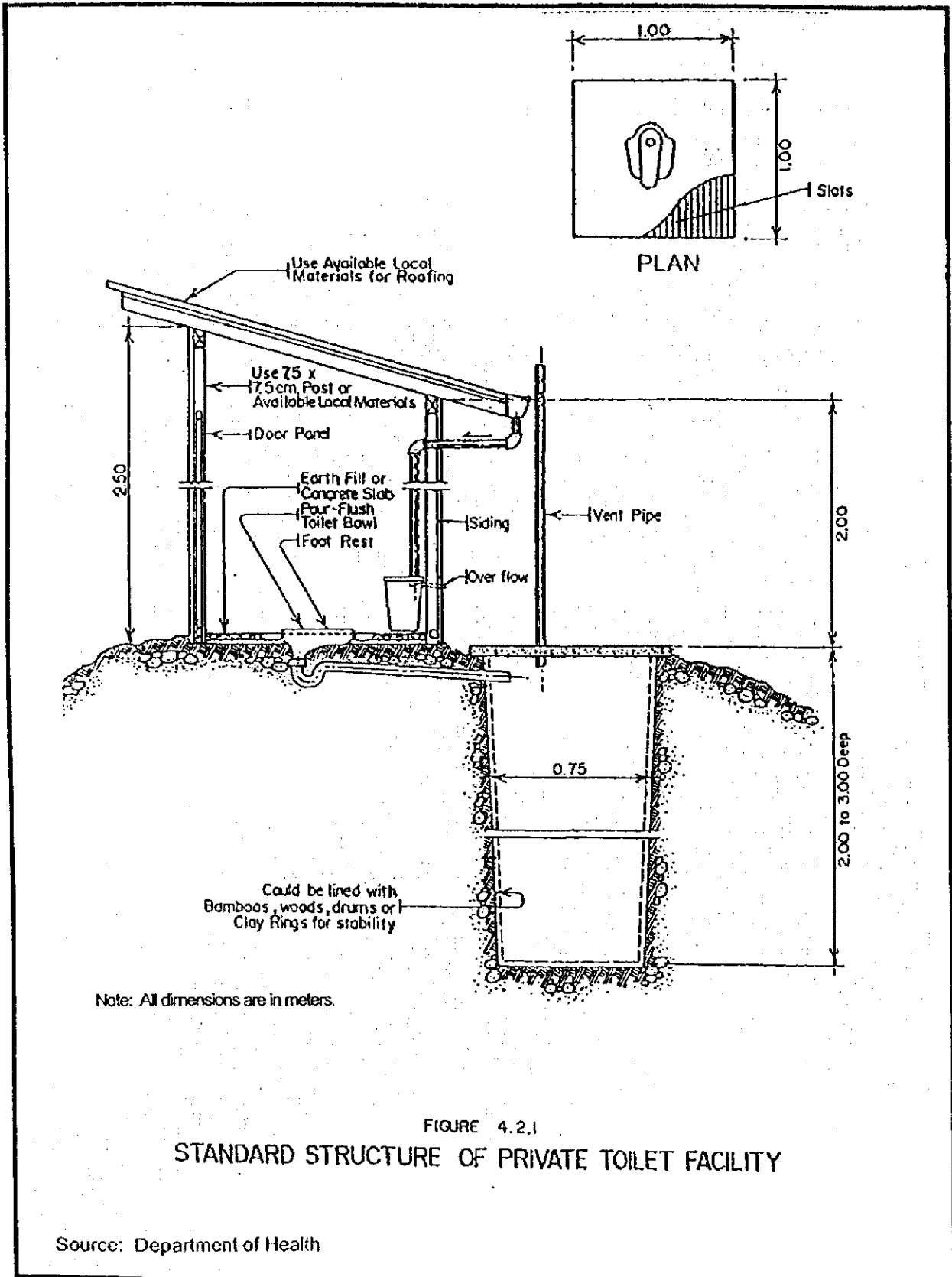
Percentage of Population Covered by Level I Public Facility for Rural Water Supply

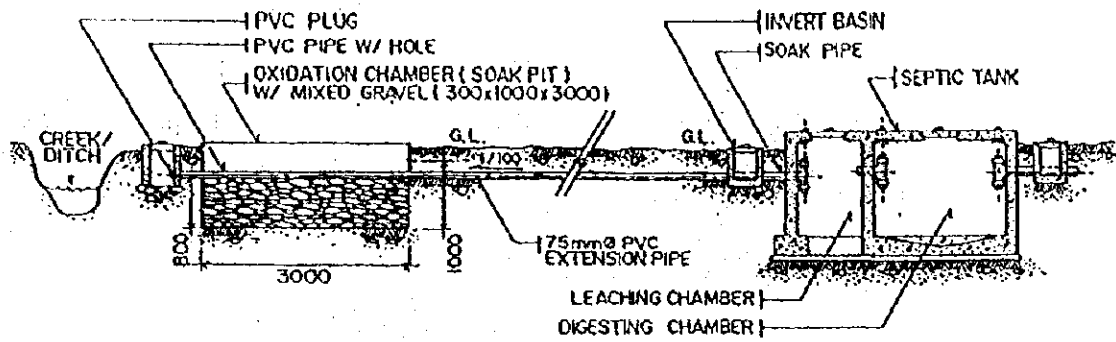
Grasping the current percentage of population covered by public facilities would be a useful information in considering as to what extent the additional population to be covered by public facilities in the future plan. This takes into account that the major facilities would be Level I especially for rural water supply in the future.

Population covered by public facilities is calculated as a balance between the total population served by Level I facilities and the population covered by private facilities. Thus, it is estimated at 104,800 persons or 98% of the total population is covered by public Level I facilities as shown in Tables 4.1.6 (a) and 4.1.6 (b).

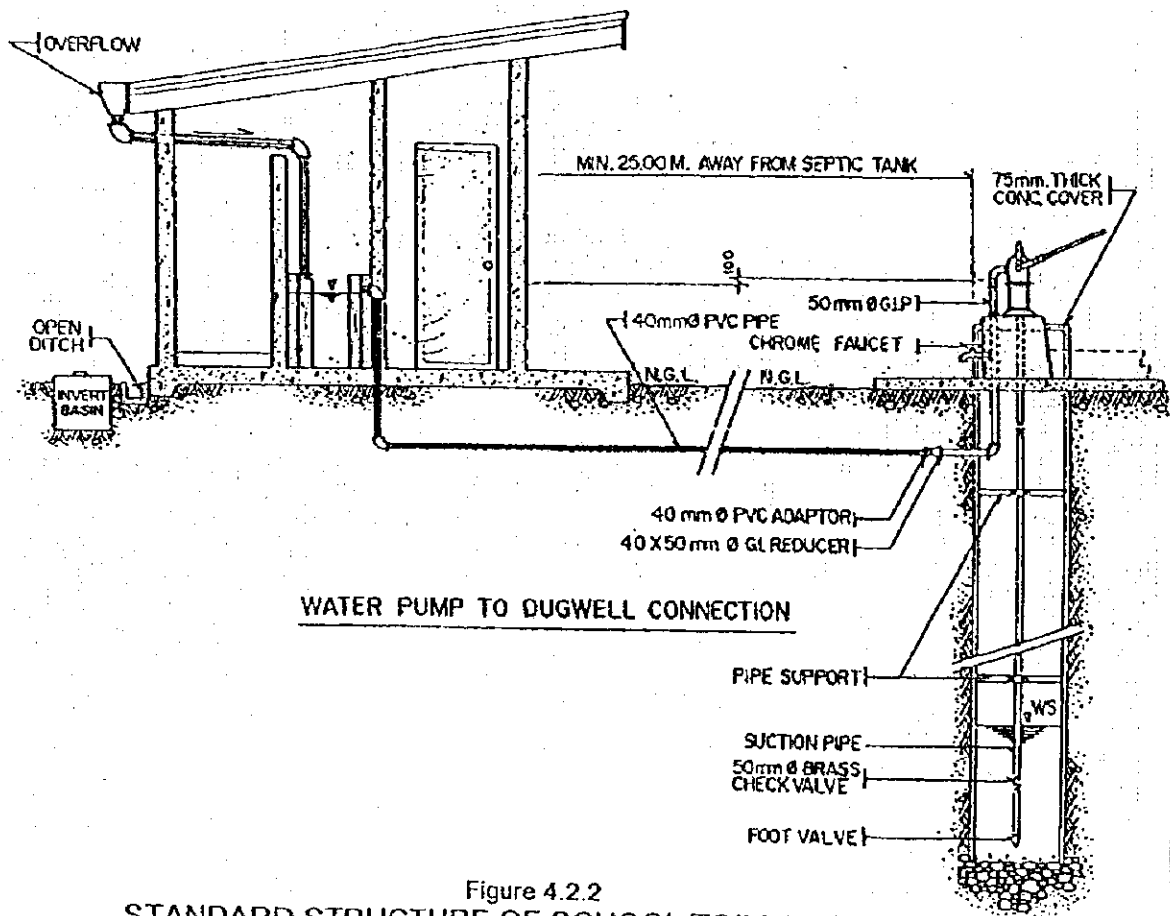
4.2 Sanitation and Sewerage

4.2.2 Types of Facilities and Definition of Service Level Standard





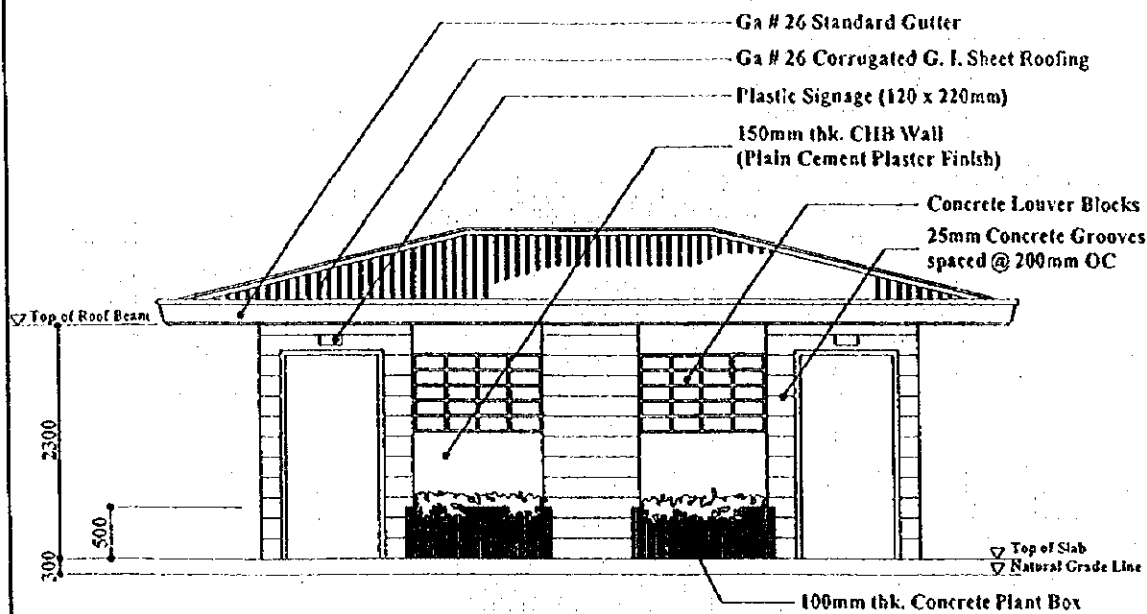
LAYOUT PLAN OF HIGH GROUND WATER SITE



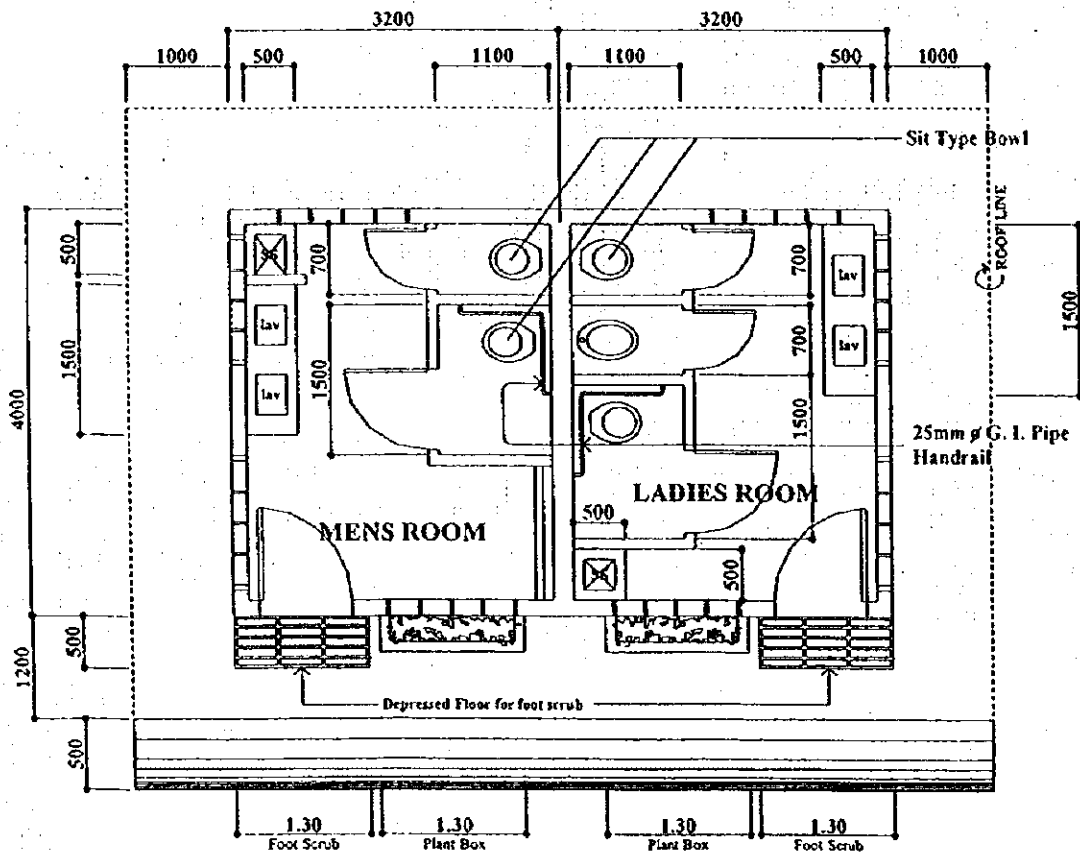
WATER PUMP TO DUGWELL CONNECTION

Figure 4.2.2
STANDARD STRUCTURE OF SCHOOL TOILET FACILITY

SOURCE: JICA - DPWH RURAL ENVIRONMENTAL SANITATION PROJECT



FRONT ELEVATION
Not to Scale



FLOOR PLAN
Not to Scale

FIGURE 4. 23 Typical Structure of Public Toilet

4.2.3 Sanitation Facilities and Service Coverage

Table 4.2.1 Sanitation Facilities and Service Coverage of Household Toilets by Type, by Municipality, Urban and Rural 1998

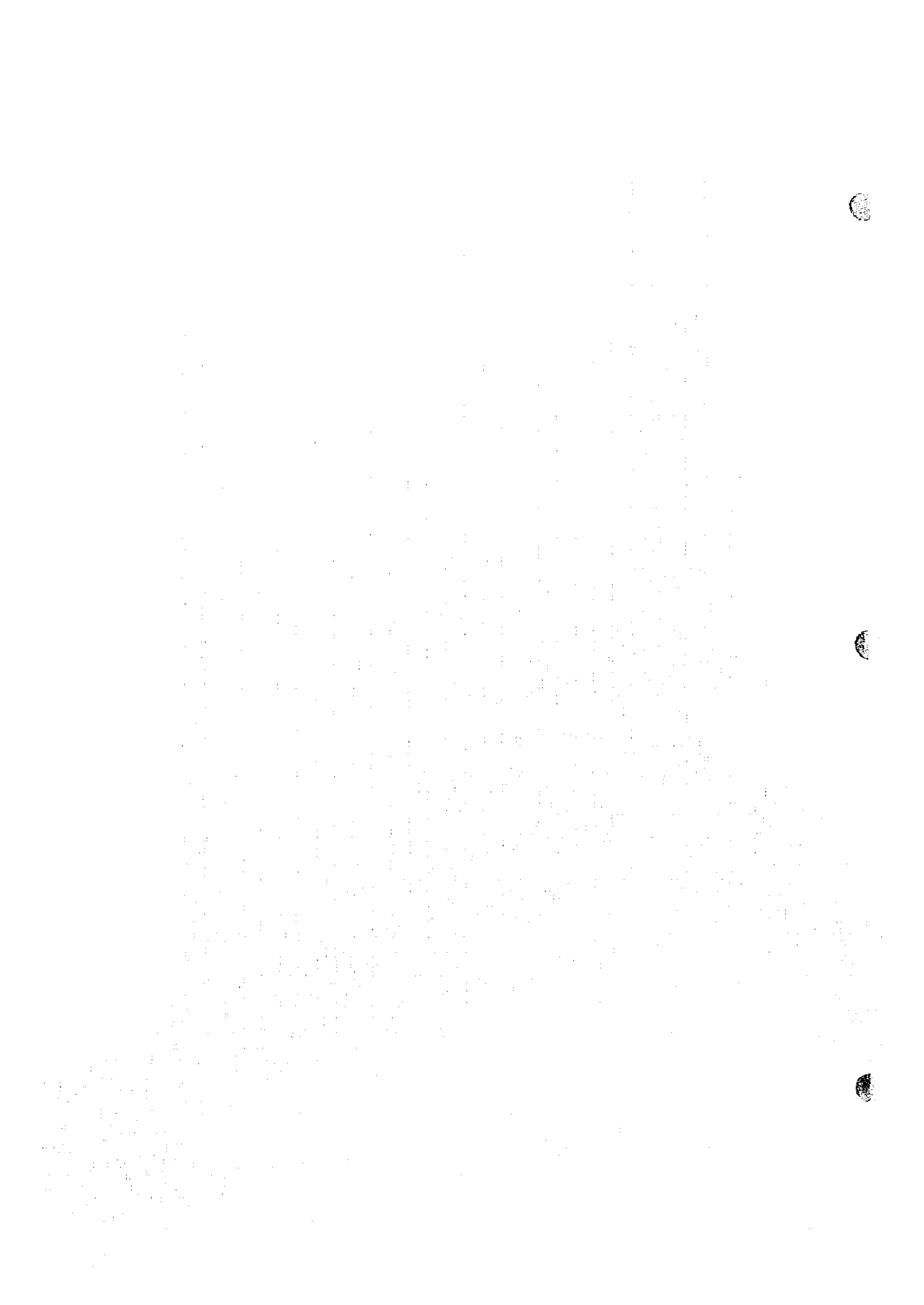
Name of Municipality	Area	No. of Households (1998)	Households Served by Sanitary Toilets								Underserved/Unserv'd Illits			
			Flush Toilet		Pour Flush		VIP-Dry		Total		Unsanitary		No Facility	
			Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Arteche	Urban	894	1	0	360	40	361	40	722	81	34	4	138	15
	Rural	1,556			353	23	353	23	706	45	215	14	635	41
	Total	2,450	1	0	713	29	714	29	1,428	58	249	10	773	32
Balangiga	Urban	1,129			682	60	92	8	774	69	44	4	311	28
	Rural	1,018			492	48	56	6	548	54	132	13	338	33
	Total	2,147			1,174	55	148	7	1,322	62	176	8	649	30
Balangayan	Urban	575			356	62	34	6	390	68	30	5	155	27
	Rural	1,181			581	49	77	7	658	56	9	1	514	44
	Total	1,756			937	53	111	6	1,048	60	39	2	669	38
Borongan (Capital)	Urban	3,816	335	9	1,025	27	1,599	42	2,959	77	159	4	728	19
	Rural	6,010	152	3	1,555	26	3,347	56	5,054	84	410	7	546	9
	Total	9,856	487	5	2,580	26	4,946	50	8,013	81	569	6	1,274	13
Can-avid	Urban	973			592	61	109	11	700	72	112	12	161	17
	Rural	1,951			313	16	202	10	1,015	52	80	4	866	44
	Total	2,934			905	31	311	11	1,715	59	192	7	1,027	35
Dolores	Urban	1,971	80	4	1,358	69	328	17	1,766	90	80	4	125	6
	Rural	4,317	2	0	1,193	28	580	13	1,775	41	1,230	28	1,312	30
	Total	6,288	82	1	2,551	41	908	14	3,541	56	1,310	21	1,437	23
General Macarthur	Urban	804			345	43	79	10	424	53	43	5	337	42
	Rural	1,026			41	4	412	40	453	44	105	10	468	46
	Total	1,830			386	21	491	27	877	48	148	8	805	44
Giporlos	Urban	983			488	50	86	9	574	58	122	12	287	29
	Rural	850			282	33	28	3	310	36	291	34	249	29
	Total	1,833			770	42	114	6	884	48	413	23	536	29
Guiuan	Urban	1,878	50	3	1,295	69	187	10	1,532	82	31	2	315	17
	Rural	5,287			1,810	34	394	7	2,704	42	122	2	2,961	56
	Total	7,165	50	1	3,105	43	581	8	3,736	52	153	2	3,276	46
Hernani	Urban	380	7	2	69	18	124	33	200	53	19	5	161	42
	Rural	1,027	1	0	52	5	645	63	698	68	28	3	301	29
	Total	1,407	8	1	121	9	769	55	898	64	47	3	462	33
Dipapad	Urban	539			393	73	72	13	465	86	34	6	40	7
	Rural	573			151	26	120	21	271	47	65	11	237	41
	Total	1,112			544	49	192	17	736	66	99	9	277	25
Lawaan	Urban	839			387	46	25	3	412	49	43	5	384	46
	Rural	917			484	53	50	5	534	58	48	5	335	37
	Total	1,756			871	50	75	4	946	54	91	5	719	41
Llorente	Urban	1,344	53	4	828	62	63	5	944	70	75	6	325	24
	Rural	1,829			982	54	39	2	1,021	56	48	3	760	42
	Total	3,173	53	2	1,810	57	102	3	1,965	62	123	4	1,085	34
Maslog	Urban	207			120	58	17	8	137	66	14	7	56	27
	Rural	515			243	47	34	7	277	54	51	10	187	36
	Total	722			363	50	51	7	414	57	65	9	243	34
Maydolong	Urban	1,001	28	3	615	61	70	7	713	71	134	13	154	15
	Rural	1,204	7	1	554	46	144	12	705	59	236	20	263	22
	Total	2,205	35	2	1,169	53	214	10	1,418	64	370	17	417	19
Mercedes	Urban	198			84	42			84	42	52	26	62	31
	Rural	740			396	54			396	54	171	23	173	23
	Total	938			480	51			480	51	223	24	235	25
Oros	Urban	1,539			795	52			795	52			744	48
	Rural	4,421			2,166	49			2,166	49			2,255	51
	Total	5,960			2,961	50			2,961	50			2,999	50
Quinapondan	Urban	641			354	55			354	55			287	45
	Rural	1,459			832	57			832	57			627	43
	Total	2,100			1,186	56			1,186	56			914	44
Salcedo	Urban	601			447	74			447	74			154	26
	Rural	2,615			1,307	50			1,307	50			1,308	50
	Total	3,216			1,754	55			1,754	55			1,462	45
San Julian	Urban	555	5	1	415	75			420	76			135	24
	Rural	1,868			1,531	82			1,531	82			337	18
	Total	2,423	5	0	1,946	80			1,951	81			472	19
San Policarpo	Urban	839			388	46	336	40	724	86			115	14
	Rural	1,479					886	60	886	60			593	40
	Total	2,318			388	17	1,222	53	1,610	69			708	31
Sulat	Urban	1,045			674	64			674	64			371	36
	Rural	1,748			1,310	75			1,310	75			433	25
	Total	2,793			1,984	71			1,984	71			809	29
Taft	Urban	860	9	1	734	85	13	2	756	88	14	2	90	10
	Rural	2,269			927	41	176	8	1,103	49	236	10	930	41
	Total	3,129	9	0	1,661	53	189	6	1,859	59	250	8	1,020	33
Provincial Total	Urban	23,641	568	2	12,804	54	3,594	15	16,966	72	1,040	4	5,655	24
	Rural	45,870	162	0	17,555	38	8,043	18	25,760	56	3,477	8	16,633	36
	Total	69,511	730	1	30,359	44	11,637	17	42,726	61	4,517	6	22,268	32

Table 4.2.2 Number of Student and School Toilet Facilities by Municipality

Name of Municipality	Number of School	Number of Student	Number of Toilets		
			Sanitary	Unsanitary	Total
Arteche	Public	14	3,424	10	10
	Private				
	Total	14	3,424	10	10
Balangiga	Public	9	2,569	57	57
	Private	1	109	2	2
	Total	10	2,678	59	59
Balangkayan	Public	11	2,061	42	42
	Private				
	Total	11	2,061	42	42
Borongan (Capital)	Public	51	14,182	235	235
	Private	3	572	38	38
	Total	54	14,754	273	273
Can-avid	Public	20	3,731		
	Private				
	Total	20	3,731		
Dolores	Public	40	9,264	22	22
	Private	1	72	44	44
	Total	41	9,336	66	66
General Macarthur	Public	22	2,903	65	65
	Private	1	316	5	5
	Total	23	3,219	70	70
Giporlos	Public	13	2,668	83	83
	Private	1	141	2	2
	Total	14	2,809	85	85
Guiuan	Public	45	9,152	88	2 90
	Private	2	368	16	16
	Total	47	9,720	104	2 106
Hernani	Public	11	2,121	38	38
	Private				
	Total	11	2,121	38	38
Iipapad	Public	8	1,002	8	8
	Private	1	240	2	2
	Total	9	1,242	10	10
Lawaan	Public	8	2,523	55	55
	Private	1	157	2	2
	Total	9	2,680	57	57
Llorente	Public	2	4,174	65	65
	Private	1	176	3	3
	Total	3	4,350	68	68
Maslog	Public	12	698	28	6 34
	Private				
	Total	12	698	28	6 34
Maydong	Public	11	6,680	136	136
	Private				
	Total	11	6,680	136	136
Mercedes	Public	11	1,549	18	18
	Private				
	Total	11	1,549	18	18
Oras	Public	38	7,791	117	117
	Private	1	510	8	8
	Total	39	8,301	125	125
Quinapondan	Public	17	2,772	16	1 17
	Private				
	Total	17	2,772	16	1 17
Salcedo	Public	34	4,703	95	95
	Private				
	Total	34	4,703	95	95
San Julian	Public	12	2,998	7	7
	Private	1	103	2	2
	Total	13	3,101	9	9
San Policarpo	Public	15	2,316	43	43
	Private	1	142		
	Total	16	2,458	43	43
Sulat	Public	15	3,036	81	81
	Private	1	91		
	Total	16	3,127	81	81
Taft	Public	14	4,322	72	72
	Private				
	Total	14	4,322	72	72
Provincial Total	Public	433	96,639	1,381	9 1,390
	Private	16	3,197	124	124
	Total	449	99,836	1,505	9 1,514

Table 4.2.3 Number of Public Toilets Facilities in 1998

Name of Municipality	Public Markets			Bus/Jeepney Terminals			Parks/Playground			Total Number of Toilets
	No. of Sanitary Toilets	No. of Unsanitary Toilets	Sub-total	No. of Sanitary Toilets	No. of Unsanitary Toilets	Sub-total	No. of Sanitary Toilets	No. of Unsanitary Toilets	Sub-total	
Arteche	1		1							1
Balangiga										
Balangkayan						1				2
Borongon (Capital)	1		1							1
Can-avid	1		1							1
Dolores	2		2	2		2	1		1	5
General Macarthur	1		1							1
Giporlos										
Guiuan	3		3							3
Hernani	1		1							1
Jipapad										
Lawaan	1		1							1
Llorente	1		1							1
Maslog										
Maydolong	1		1				1		1	2
Mercedes	1		1							1
Oras										
Quinaoondan										
Salcedo										
San Julian	1		1							1
San Policarpo						1			1	1
Sular	1		1							1
Taft										
Provincial Total	16		16	4		4	2		2	22



5. EXISTING SECTOR ARRANGEMENT AND INSTITUTIONAL CAPACITY

5.5 Sector Agencies at the Local Level

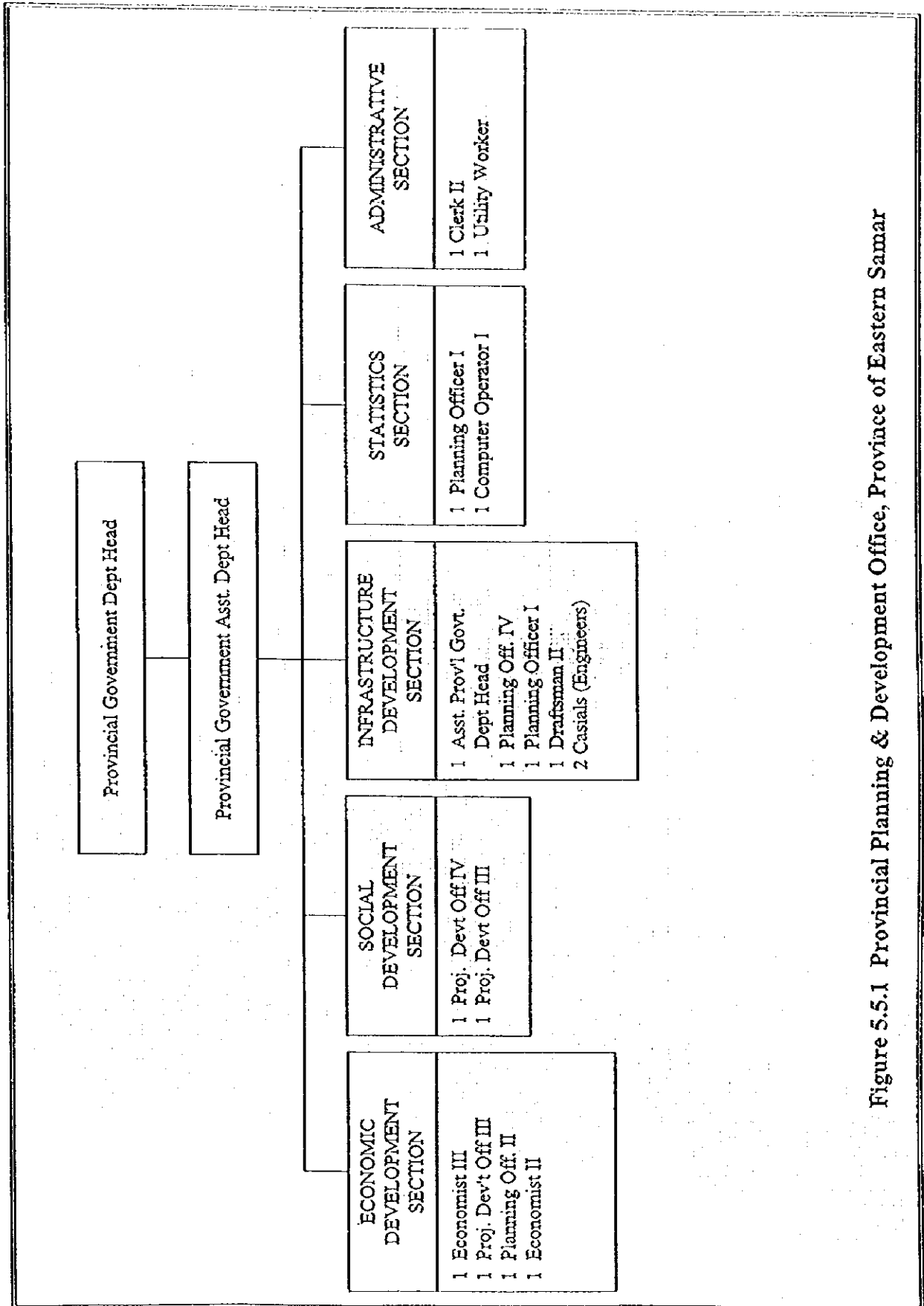


Figure 5.5.1 Provincial Planning & Development Office, Province of Eastern Samar

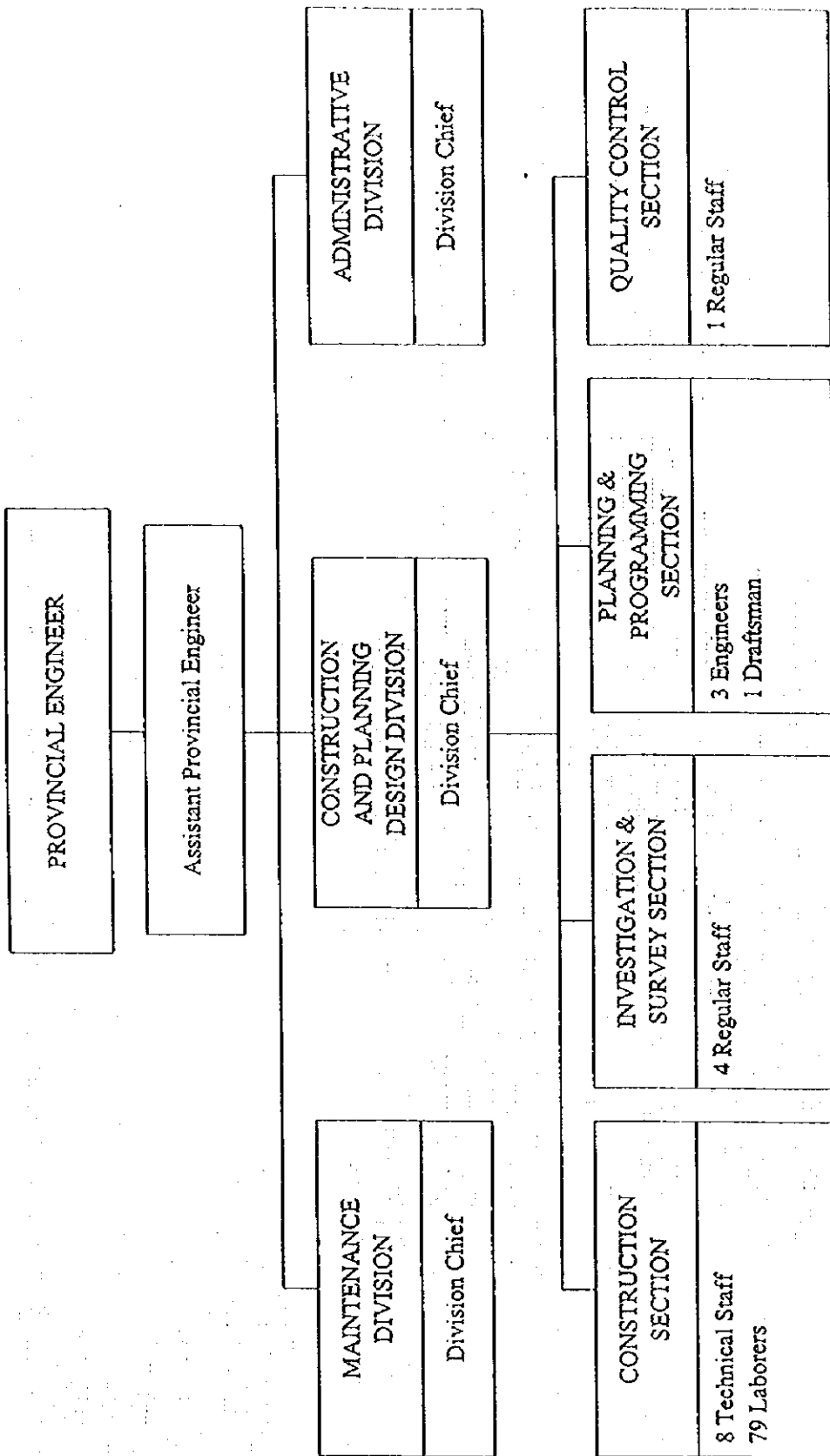


Figure 5.5.2 Provincial Engineer Office, Province of Eastern Samar

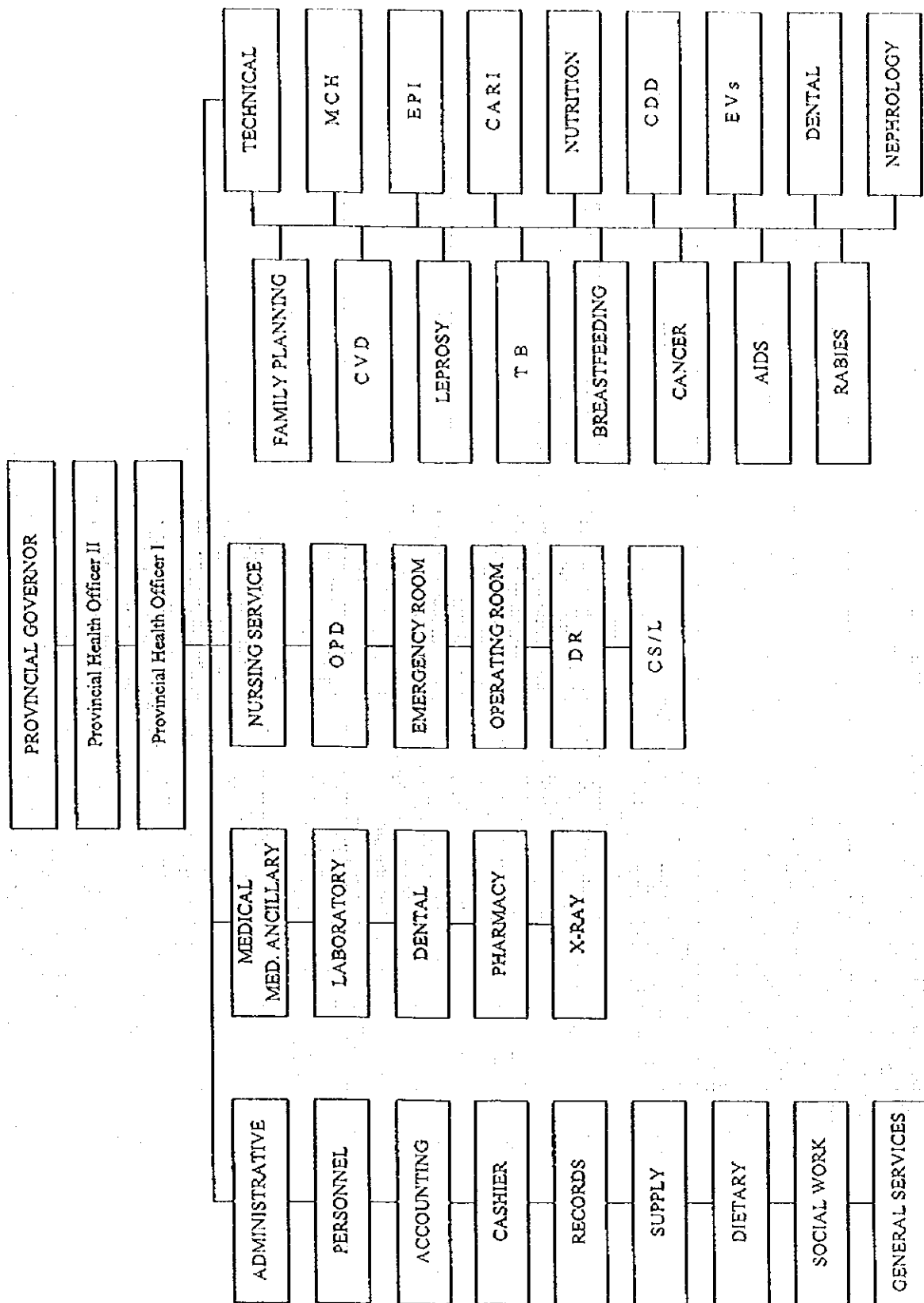


Figure 5.5.3 Provincial Health Office, Province of Eastern Samar

Table 5.6.1 Priority Areas/Terms and Conditions, Programs and Projects by Donor

Donor	Priority Areas/Terms and Conditions	Programs and Projects in the Sector/Executing Agency
OECD	Providing project loans for capital infrastructure (urban/rural), agricultural development, export promotion. Can finance 75% of total project cost of total foreign exchange component, whichever is higher. Interest Rate: 2 to 3%; 30-year amortization with 10-year grace period. Environmental projects, interest free.	Water Supply and Sanitation Project-23rd Yen Package/D.L.G.; Co-financing AWSOP, with World Bank and ADB/MWSS.
ADB	Providing both capital and technical assistance; Project loans: agriculture, agri-industry, energy, social infra., transport and communications; Program Loans (e.g., forestry, livestock environment); Can finance 60% of total project cost or 100% of foreign exchange cost whichever is higher. Special cases can finance up to 80% of total project cost. Terms: Interest rate - pool-based variable; commitment charge of 0.75% per annum; 25 years amortization period including 5-year grace period.	Rural Water Supply and Sanitation Sector Project/DPWH; Small Towns Water Supply Sector Project/LWUA; Technical Assistance for Water Supply and Sanitation Sector Study/NEDA; Co-financing AWSOP with World Bank and OECF/MWSS.
AUSAID	Providing grant aid for education, training, development, planning, resource management, environmental management, health/population, infrastructure (e.g., water supply, coal energy development), social infrastructure, community development and agriculture; providing also supplies of commodities (steel cattle, drilling).	Water supply program in Central Visayas/RDCs and LGUs; Feasibility Study for Northern Mindanao Water and Sanitation Project.
DANIDA	Providing capital and technical assistance for water supply and sanitation services and facilities, telecom ancillary equipment, small-scale power projects, environmental project, fishery and cold storage and post-harvest facilities; Can finance up to 100% of foreign exchange goods and services of Danish origin, 10% local cost on a case-to-case basis. Technical assistance can be negotiated for conduct of feasibility studies if implementation of the project will require Danish financing in the future.	Water supply projects for 10 towns/LWUA; Feasibility Study for control of pollution in the Pasig River-Metro Manila; Water Supply and Sanitation Data Bank.
Government of France	Grants for feasibility studies and detailed design for projects in priority areas, e.g., power generation, telecommunication, research involving high technology, water supply, air navigational equipment, etc. Can finance 100% of foreign exchange costs of goods and services of French origin.	Feasibility Study for water supply project in Rizal province.
German Agency for Technical Cooperation (GTZ)	Providing grants for technical assistance. Promotion of small and medium-scale industries, rural development, technical training, health/family planning, and environmental protection (forest management).	Water Supply for 20 Towns/LWUA; a national water supply and sanitation on-going program; special TA programs for cost recovery, monitoring and evaluation.
JICA	Providing a combination of capital assistance thru grant-aid and technical assistance thru Technical Cooperation for development survey and project type assistance which is a combination of experts, equipment and training. Technical assistance for conduct of feasibility studies/master plans, provision of training, limited provision of equipment. Capital assistance for provision of equipment/materials for construction of hospitals, schools, research, social welfare centers. Priority areas include basic infrastructure, e.g., construction of facilities and supply of equipment; project development for sectors dealing with basic services (agriculture, health public welfare, environment) and human-resource development (education, research, training). Can finance 100% of foreign exchange costs of civil works, equipment, training (in Japan) and of all goods and services of Japanese origin.	Groundwater study in Manila; Feasibility Study for Balara Water Treatment Plant Feasibility Study.

Table 5.6.1 Priority Areas/Terms and Conditions, Programs and Projects by Donor

Donor	Priority Areas/Terms and Conditions	Programs and Projects in the Sector/Executing Agency
UNDP	Providing technical assistance for capacity building, human resource training, technology transfer, policy research, planning, technology development and pre-investment studies; Technical assistance are formulated within country program (CP) frameworks: 6th CP (1997-2001) -poverty and sustainable livelihood, protection and regeneration of the environment and sound governance, gender equality.	WATSAN Program for LGUs and selected BWSAs/DILG.
UNICEF	Providing grant aids for technical assistance. Priority area: social services, particularly for children.	Community-based water supply program in Palawan Province; Water supply and sanitation Study for Southern Mindanao.
USAID	Providing grant aid within its strategic objectives. Six strategic objectives and one special objectives are: Accelerate the economic transformation of Mindanao; Improve national systems for trade and investment; Reduce population growth and improve maternal and child health; Enhance management of renewable national resources; reduce emissions of greenhouse gas; broader participation in public formulation/implementation (selected areas); prevent rapid increase of HIV/AIDS.	Barangay Water Program (BWP) for communities with populations of less than 10,000; TA for private sector participation in the sector.
World Bank	Providing capital assistance in the form of under IBRD and IDA. IBRD (Project/Program) Loans: Interest rate = less than 7%; 20 years amortization with 5 years grace period; IDA Loans: interest free with 30 to 40-year amortization period. Providing also technical assistance in the form of ESW, IDF, Poverty and Human Resource Development Project Preparation and Policy Notes. Can finance 100% of foreign exchange costs of the project. Priority areas: power and energy; roads and railways; telecommunications; ports, water supply and sanitation, agriculture and social services.	AWSOP co-financed with ADB and OECF/MWSS; TA for a Water Supply Sector Program Study/DILG; TA on private sector participation in the water supply and sanitation sector; Water Districts Development Project. LGU-Urban Water and Sanitation Project.

(1) Foreign 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 system in Luzon provinces and sanitation system 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 with an extension up to 1997. Subsequently, the Capacity Enhancement Program (CEP) with DILG as implementing agency was conducted until the end of 1997.

In addition, the World Bank prepared a new loan for DILG implementation - the *Local Government Unit Urban Water Supply & Sanitation Project (LGUWSSP)*. This project aims to support the water supply requirement in the urban centers of approximately 250 small and medium-sized municipalities nationwide, benefitting about 6 million people. The project consists of three components, namely: i) Water and Sanitation Facilities Component, ii) Institutional Development Component and iii) Technical Assistance Component. The project is to be implemented from 1999 to 2006 in three phases, and estimated cost is US\$ 250 M. More information on this project is attached on the following pages.

UNDP assists the *Institution Building for Decentralized Implementation of Community-Managed Water Supply and Sanitation Project* or *IBWSSP* known as *UNDP PHI/93/010* Project under the Fifth Country Program (1994-1997). This project directly responds to the government's Poverty Alleviation Program. 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 the training capacity of the sector. The project covered seven (7) provinces; 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 the priority project site, UNICEF assisted NEDA in updating 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 Information, Education and Communication (IEC) materials and in strengthening the sector monitoring system. As part of these various

assistance, UNICEF supported NEDA in 1997 for the assessment of WATSAN Sector of Eastern Visayas (Region VIII) and Southern Mindanao (This was compelled by the sudden and unexpected occurrence of water-borne epidemics that hit Region XI).

Asian Development Bank (ADB) support the *Rural Water Supply & Sanitation Sector Project (RW3SP)* through sector lending approach for the 20 prospect provinces of the country. The project area covers about 3,000 rural communities with population ranging from 200 to 5,000 persons in provinces located in Luzon, Visayas (Biliran, Eastern Samar and Southern Leyte included from Region VIII) and Mindanao. RW3SP will: i) provide capacity-building to local government units (LGUs) to enhance the delivery of social services, ii) improve social infrastructure for basic needs such as water supply and sanitation, and iii) reduce poverty incidence. The project also includes: i) comprehensive institutional capacity-building, ii) community development program, iii) point source water supply systems, and iv) public and household latrine facilities. This will be implemented from 1995 – 2000. More information on this project is attached on the following pages.

The Japan International Cooperation Agency (JICA) has been extending a grant aid program for the *Rural Environmental Sanitation Project* which is/was jointly implemented by DPWH and DOH. The project covered construction of Level I and II rural water systems and school toilet facilities in 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 of up to Y 5.08B, with a counterpart fund of P 400M. The project covered construction/rehabilitation of Level I systems, construction of workshop building and procurement of various equipment. OECF has also been supporting the *Provincial Cities 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 or WSSP* for the 6 provinces (based on JICA assisted *PW4SPs*). The project will achieve additional service coverage both for water supply and sanitation as follows: 549,100 persons with water supply, 9,579 households provided with latrines, 18,750 students with 375 school toilets and 72 public toilets.

The *Barangay Water Program (BWP)* was a special project being implemented by the then Ministry of Local Government (now DILG) with financial assistance from the USAID. The program envisions to alleviate the health standards of small rural farming and fishing communities by providing safe, adequate and potable water through the establishment of public faucets or individual house connections. The systems for these communities should be owned, operated, maintained and managed by the users themselves through rural waterworks and sanitation associations. The program also intended to enhance the capabilities of local government units in project planning, programming, designing, implementation, evaluation and monitoring. Phase I of the BWP was implemented in the period 1978 -- 1981; Phase II started in 1982 and was extended until December 1987. Phase II operations officially ended in December 1987, but a one-year winding-up period was agreed upon between the GOP and USAID. USAID extended loans to cover the construction costs and the installation of facilities on a reimbursement basis while the GOP through DILG shouldered the operational, training and personnel costs. Through BWP, waterworks projects were implemented in 50 provinces, 22 cities and 7 municipalities.

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.

The *Water Supply and Sanitation Performance Enhancement Project (WPEP)* funded by AusAid through WSP-EAP aims: i) to initiate a systematic program of applied research examining what works and what does work in the field from the recent past and from the new generation of WATSAN projects, ii) to provide technical advice to any privately sponsored community-based field experiments which would seek to apply demand-responsive approaches to bring sustainable WSS; iii) to enhance capacity building programs and implemented to LGUs about operationalizing demand-responsive approaches in the field and; iv) to help refine policy implementation guideline, and policy where were learned from the field. WPEP is an applied research activity. It will help National Government consolidate its facilitative role in the future. Its structured approach will be a key collaborative activity with NEDA's new Project Performance Monitoring System (PPMS). The project will be executed by DILG in coordination with NEDA in two years from 1999.

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

(2) WATSAN project by GOP

To provide safe/accessible water and sanitation serves to the basic sector groups within the 5th and 6th class municipalities; to enhance the capabilities of the target LGUs in terms of WATSAN planning, implementation and maintenance of the facilities; and to minimize the incidence of water borne diseases through proper site selection, disinfection of contaminated water sources and management waster water, the project of the WATSAN component of PAF 2 (Poverty Alleviation Fund 2 – Potable Water Development and Sanitation Component) was implemented with GOP fund in all the 960 municipalities belonging to the 5th and 6th class. The project started from 1997 to 1998. GOP provided project fund of P533M (P485,000 for each municipality as capital outlay). The project was implemented with a strategy: i) facility construction by the LGUs themselves; ii) water supply facilities limited to Level I hand pumps with some Level II on a case to case basis; iii) provision of skills enhancement training for LGU personnel; iv) provision of assistance to LGUs in the organization, training, and sustainability of BWSAs; v) installation of an effective projects monitoring and evaluation network; and other effective arrangements.

(3) Local Government Unit - Urban Water Supply and Sanitation Project (LGUWSSP)

1) Project Objectives

The Project has the following objectives: (i) to assist LGUs in improving and sustaining the provision of water, sanitation, drainage and other environmental services to their urban populations; (ii) to build institutional capability for decentralized planing, implementation and management of water and sanitation services at all levels of government national provincial and municipal; and (iii) to test the implementation of the government policy framework vis-a-vis LGU financing of local infrastructure.

2) Basic Project Principles

The project is based on two underlying principles aimed at ensuring project sustainability, to wit: (i) The "demand driven approach" in project development and implementation, meaning

that the project shall provide services that the consumers want and are willing to pay for and that the services shall be managed at the lowest appropriate levels; and (ii) The adoption of commercial principles in the management/operation of water utilities by involving the private sector, or simply put, the facilities must be operated as commercial entities and water treated as an economic commodity.

3) The Project Rules

- i) The project promotes full cost recovery, that is, the tariff to be paid by the consumers should cover the cost of operation and maintenance and the repayment of the LGU DBP loan.
- ii) The system shall be operated by a private operator under a long-term lease contract with the LGU.

4) Project Coverage

The project aims to support the water supply requirement in the urban centers of approximately 250 small and medium-sized municipalities, benefiting about 6 million people. There are two sets of market targets, namely: (i) Municipalities/cites, irrespective of income class, which have not formed a water district; and (ii) Municipalities/cites, irrespective of income class, which have water districts but are not in LWUA's current program of assistance (in which case, the LGU should secure a certification/clearance to that effect. In the event that the local water district is servicing a loan from LWUA, the local water district shall seek clearance from LWUA prior to entering into an agreement with LGU concerned in any program of system expansion rehabilitation).

5) Project Components

The project consists of three components, namely:

Part A Water and sanitation facilities component

- construction/improvement/rehabilitation of Level III water facilities
- provision/improvement of sanitation facilities construction/improvement
- construction/improvement of urban drainage

Part B Institutional development component

- Training of LGUs in decentralized planning, implementation and management of water facilities applying the following commercial principles:
 - i) Demand-driven approach, ii) Private sector participation, iii) Full cost recovery

Part C Technical assistance component consists of

- This component consists of i) Feasibility study and ii) Detailed engineering

6) Estimated cost and implementation timetable

Phase	World Bank	LGU	Total	LGU Coverage
I. 1999 - 2002	\$ 23.3 M	\$13.7 M	\$ 37.0 M	40
II. 2000 - 2004	60.0 M	20.0 M	80.0 M	80
III. 2003 - 2006	100.0 M	33.0 M	133.0 M	130
Total	\$ 183.3 M	\$ 66.7 M	\$ 250.0 M	250

* The required LGU equity ranges from 10% -25% of the total project cost.

7) Relending Terms

World Bank funds shall be channeled thru the Development Bank of the Philippines (DBP) which shall relend them as subproject loans to the LGUs. The DBP subproject loans shall include costs of feasibility study, technical design and construction of the water facility. Basic terms of the loan are: i) Interest per annum: 15 % per annum, ii) Amortization period: 15 years with 3-year grace period.

8) DBL Scheme

The subprojects will be implemented thru the DBL (Design, Build and Lease). A qualified private constructor designs and constructs the facility (while F/S is done by WB consultant), and another private entity, qualified, undertakes the system operation thru a lease contract with LGU (respective municipality).

(4) Rural Water Supply & Sanitation Sector Project (RW3SP)

1) Project overview

The RW3SP's objectives are: i) to improve the capacity of sector agencies in enhancing the delivery of social services; ii) to provide safe, adequate and reliable WSS services to selected low-income rural communities through community-based arrangements; and iii) to support health and hygiene education, water quality surveillance, and community management activities. The project will help develop the technical capability of LGUs and communities in the planing, implementation and O&M of basic WSS services, promote a sense of subproject ownership and enhance community management of rural WSS services, and improve health and hygiene education in the Project areas to ensure the sustainability of Project benefits.

The project will cover about 3,000 rural communities (barangays) with populations ranging from 200 to 5,000 persons. This represents about 50% of the total number of communities in the SRA (Social Reform Agenda) provinces, spread through Luzon, Visayas and Mindanao. They are also the least developed provinces in the country. Presently, only about 40% of the

rural population in these provinces have adequate access to safe and reliable WSS facilities compared with the nation wide average of 70% for the rural areas.

SRA provinces: Batanes, Benguet, Abra, Ifugao, Apayao, Kalinga, Mt. Province, Aurora, Masbate, Romblon, Antique, Guimaras, Biliran, Eastern Samar, Southern Leyte, Agusan del Sur, Surigao del Sur, Basilan, Sulu, Tawi-tawi

The project involves institutional development and improvement of WSS in about 3,000 rural income communities through the construction and rehabilitation of WSS facilities serving approximately 2.0 million persons and thereby increase the coverage of the project areas rural population from 40 to 90 percent by the year 2000. The project will cover five years and 50% of the rural communities in the poorest provinces under the National Rural WSS Development Programs. The project consists of two main parts; Part A: Institutional Development, and Part B: Water Supply and Sanitation Facilities.

Part A. Institutional Development consists of four components

- Capacity -building program for local institutions covering training courses for LGUs
- Community management program to help the communities to design and set up cost recover, O&M and the community management organization
- Health and hygiene education program focusing in safe drinking water, good habits for personal hygiene and the control of diarrhea. Various media will be used. Educational material (handouts, posters, cassettes and vide tapes) will be developed. A total of 750 person-months of sanitary inspector and 750 person months of midwives will implement the education program covering the target communities
- Water quality control and surveillance program: A total of 500 person months of sanitary inspectors and 500 person months of water quality technicians will establish this program in the project provinces, in addition, 50 laboratories will be constructed and equipped.

Part B. WSS Facilities consists of subprojects for the construction and rehabilitation of point source (Level I) water supply systems. It is estimated that over 6,100 new water supply systems will be constructed. In addition, 2,000 shallow and deep wells, 130 springs, and transmission lines will be rehabilitated. The subprojects will also selectively cover sanitation facilities, such as the construction of sanitary public and household latrines, and district laboratories.

2) Cost estimates and budgetary requirement

Based on the cost estimates of the eight representative subprojects appraised and the subprojects proposed for about 200 communities the total cost of the designated segment of the rural was investment program the project is estimated at \$57.4 million equivalent, including taxes and duties as well as interest during construction. The foreign exchange cost is estimated at \$20.0 million equivalent (including \$1.4 million for interest and service charge during construction) or about 35 percent of the project cost, and the local currency cost is \$ 37.4 million equivalent of about 65% of the project cost. The fund to be provided by the government to the executing and implementing agencies will be channeled through regular budgetary allocations. Each province participation in the project will provide for the contribution of 10% for the total cost of each subproject in a particular province.

3) Implementation Schedule

Designed to commence in mid 1997, the project is planned to implement over a period of five years, with completion expected by 1 August 2001. The advance project preparation activities that have been carried out in about 200 communities in the project areas through the community management approach will ensure that the project gets off to a fast start.

5.7 Project Management Arrangement, Issues and Problems

Table 5.7.1 Matrix of Current Practices and Issues from Rapid Assessment of Subject Provinces and Local Offices of Central Government Agencies

Areas	Institutional	Technical	Financial	Community Development
<p>1. Provincial Government Offices of Northern Samar, Eastern Samar, Samar, Biliran, Leyte and Southern Leyte</p>	<ul style="list-style-type: none"> • Sector implementation is project-based arrangement by setting up a multi-agency team/task force. There is no overall mechanism and responsibility delineation among members wherein interrelationships/linkages are clearly shown. • There is no current provincial plan for the sector except for the annual investment plan that serves as the basis for project funding and Local Development & Investment Plan (LDIP) as a "Shopping List". As planning is budget centered, it focuses on the completion of facilities resulting to haphazard planning and poor/absence of maintenance of constructed facilities. • Management is a process requiring input at every level. At the barangay level, facilities are to be managed by the community. Management at higher levels is also necessary to effectively and efficiently implement a plan, and requires administration abilities, and technical, negotiation, finance and economic skills. • Qualifications and experiences of the provincial office staff are sometimes inadequate/inappropriate for their allotted responsibilities. This is important as the municipal government, having no permanent staff for water supply, requires support from the provincial government. • Training has been irregularly organized. Course materials are complicated and provided a very wide range of topics that are difficult to absorb by the participants at one given time considering their background and experience. 	<ul style="list-style-type: none"> • Project identification is usually upon the request of the barangay/municipal officials and approval is done by the Sanguniang Panlalawigan (SP). • Most of constructions are by administration with procurement of materials done by the LGUs. • Majority of the wells constructed by DPWH is abandoned/non-operational due to user's attitude which suggest the need of community organization. • O&M is participated by barangay officials with LGUs providing technical and material supply assistance upon request. • Dry-type sanitary toilet shall be considered in areas where water is not available. • Water quality problems, such as coliform contamination, salt water intrusion, high iron and manganese content, etc. are often encountered especially in shallow wells resulting to abandonment of these wells. • There is a shortage of equipment and supplies at all levels of administration. Technologies are sometimes inappropriate to local conditions (e.g. no readily available spares for pumps). • More extensive data on groundwater resource is required to determine potential yields and chemical quality. Very limited drilling expertise/equipment. • Proper O&M is unlikely without significant training and equipment support at the barangay/association level. • Toilets in schools are not used because there is no water. FW4SP design has to be redesign. 	<ul style="list-style-type: none"> • Income of the province comes from local taxes, IRA, national wealth share (3 provinces), and revenues from economic enterprises. • Budgeting is guided by DILG circulars and approval is by the SP. • Budgetary allocation to the sector comes from 20% development fund capital expenditures for projects. However, the allocation by sector is lumped under general headings, so that allocation for WATSAN projects cannot be readily identified in the listing. • Counterpart fund of LGUs for sector projects is usually for material purchase and the community is providing their labor. Sometimes, the provincial government allocates funds for WATSAN projects and the municipal government put up its counterpart fund provided by the province. • Cost recovery mechanisms by LGUs and the users are not in place. BWSAs and RWSAs charge water fees for O&M purposes only and do not consider capital costs. Rates are usually based on agreement among association members. • Logistics and incentives for water associations are sourced through the barangays but are limited and most often subject to availability of funds. • Most of the provinces have accessed development banks to finance infrastructure projects and purchase of equipment. Foreign assistance, e.g. CIDA, UNICEF, is availed through the Regional Development Council. 	<ul style="list-style-type: none"> • Limited involvement of local communities/end-users particularly in the planning and maintenance of facilities. • Active involvement of religious NGOs as community organizers. • No established arrangement on gender-responsiveness. • There is little investigation of socio-cultural issues related to WATSAN; there is not enough commonsense understanding of the community it is working with. Little attention is given to or understanding of ethnic groups which is a serious constraint on sustainability. • BWSAs formed by the DPWH-DEO are mostly not functioning now. A case of one BWSA which was formed three, the first by the DEO, then the last two times by themselves is finally working and earning income from water fee collection. The failure for the first two times was due to low collection efficiency and money mismanagement. • No formal system for community participation in site selection and project request; participation at the grassroots level is only considered if willingness from the beneficiaries is required for project request from the provincial government. Process is for barangay government to submit request to MDC/PDC, but no regular process for barangay to formulate projects from consultation and community participation. • DILG's experimented with social preparation by requiring beneficiaries to put up its equity contribution through certain amount of money or labor. Until now, the system is still functioning.

Table 5.7.1 Matrix of Current Practices and Issues from Rapid Assessment of Subject Provinces and Local Offices of Central Government Agencies (contd)

Areas	Institutional	Technical	Financial	Community Development
	<ul style="list-style-type: none"> For monitoring and reporting, no arrangements are made to merge reports of line agencies/offices resulting in fragmentary information and difficulty of feedback. Lack of manpower to monitor. There are a few functional BWSAs, then majority needs reactivation through a joint effort of the Province and DILG. 		<ul style="list-style-type: none"> IRA is not sufficient. 20% development fund is used for other sectors as well. LGU managed waterworks can directly source funds from the Land Bank for initial capitalization and operation. They can request funds from the Province, particularly the barangay based waterworks. 	<ul style="list-style-type: none"> In some BWSAs, the practice is to ban those who get water but are not paying. Participation of NGOs in the planning process is through their membership in the MDC/PDC.
2. NEDA Regional Offices	<ul style="list-style-type: none"> Communication between central and regional offices is deficient. Not all information on the on-going projects is reported to central office. Some multi/bilateral assistance projects are reported to the regional offices under certain amount, such as funds from UNICEF, Japanese government grass-root assistance. Only foreign assisted and national projects are reported regularly (quarterly reporting) by the regional office to NEDA central office. Regional office has just started and staffing is minimal compared to other regional offices causing difficulty in smooth implementation of the work. Plans to start computer-aided information control system. Project monitoring and evaluation system in regional level is a requisite including information on infrastructure status and investment. NEDA follows a general flow of reporting system within its organization. In spite of this, the central office has no complete or any information on region-specific projects. 			
3. DILG Regional Offices	<ul style="list-style-type: none"> The DILG has field offices down to municipal level. Increasing responsibilities of the DILG as a result of devolution and decentralization of authority to the LGUs, would require greater logistic support, i.e., administrative support, not only technical support. 			
4. DPWH - DEO			<ul style="list-style-type: none"> The DEO has no more budget for WATSAN activities because this has been devolved to the LGUs. However, the people still approach the office and request for financial help for its O&M. 	

5.7.2 Institutional Aspect

Table 5.7.2 Office/Agencies involved in WATSAN Project

Office/Agencies	Nature of Involvement
Provincial Planning & Development Office	<ul style="list-style-type: none"> • Formulates of comprehensive development plans and policies for the PDC • Integrates and coordinates sectoral plans by functional groups and monitor and evaluate program(s)/project(s) implementation.
Provincial Engineering Office	<ul style="list-style-type: none"> • Assists in the construction, operation and maintenance of the WATSAN facilities
Provincial Health Office	<ul style="list-style-type: none"> • Conducts water quality examination examination thru Sanitary Inspector • Conduct health and hygiene education thru RHU
Provincial Accounting Office, Budget Office, Treasury Office, General Service Office	<ul style="list-style-type: none"> • Responsible for provincial administrative works
Barangay/Municipal governments thru Municipal Planning & Development Office	<ul style="list-style-type: none"> • Identifies projects • Provides counterpart support during implementation • Conducts water testing thru RSI
NGOs	<ul style="list-style-type: none"> • Provides consultancy services especially in CO/CD works
DILG, Provincial Office	<ul style="list-style-type: none"> • Conducts/assists training especially on topics related to human resource development
District Engineering Offices of DPWH	<ul style="list-style-type: none"> • Implements central government funded projects • Provides some assistance to Barangays
Water Districts	<ul style="list-style-type: none"> • Provides water supply coverage in urban areas
Sangguniangs (LGU Council)	<ul style="list-style-type: none"> • Adopts priority programs and projects and appropriates funds
Local Development Councils of LGUs	<ul style="list-style-type: none"> • Institute multi-sectoral development of LGUs
Regional Development Council	<ul style="list-style-type: none"> • Institute multi-sectoral development of the region

Sector Issues and Problems

The implementation of the water supply and sanitation undertaken by the different agencies encounters issues and problems which primarily concerns with existing policy, existing institutional arrangement and management, access to financing institutions and capability building issues that needs to be addressed if LGUs are now given the full responsibility in project implementation.

(1) Issues on Policy

1) Weak enforcement of laws, policies and regulations

The apparent weakness in the enforcement of water resources laws, rules and regulation could be seen in the prevalence of illegal tapping of urban and irrigation water by parties who do not possess permits, the unregulated exploitation of ground water resources through drilling without permits secured at NWRB or any deputized agencies for that matter, in inefficient use of limited resources available, pollution of water bodies and degradation of the environment.

2) ICC – Financing policy to devolved services

One of the constraints in the implementation of this policy is obviously seen in the varied level of capability and readiness of the LGUs to provide and manage reliable water supply and sanitation services and the lack of political will to pursue development initiatives without depending too much on grants assistance from the national government.

3) Economic regulation and market

While it has been established that there are significant advantages to adopting economic and market-based instrument, the actual policy shift has been slow. Most apparent is the lack of technical capabilities and data required to enable to design and implement these policy reforms. Political difficulties encountered under the current institutional and regulatory framework and the viewing of water as free and public good to one which has a price should be fully understood.

(2) Issues on Institutional and Management Framework

1) Lack of integrated management and non-systematic approach to water resources

For the water resources sector, the existing institutional and regulatory framework is the result of incremental developments for the past years, each in response to

particular changes. This had led the absence of an integrated water resources management system that adopts a holistic approach in the organization of the system. Though NWRB is seen to be the over all coordinating and regulatory body for this sector, yet it lacks technical capabilities and still needs institutional strengthening to fulfill its functions.

2) Too many agencies involved in the sector

These are more than twenty government agencies involved in different aspects of the water sector resulting inevitably in a fragmented approach to water management. With this number of agencies involved, it resulted to overlapping of work, varied types of data needed depending on the agency that implements which creates confusion at the LGU level.

3) Inter-agency coordination

For tri-agency program such as DPWH, DILG and DOH implementing water supply projects, weak coordination had been demonstrated. There was difficulty in synchronizing activities which deals on physical construction of facilities (DPWH) as to activities that entails training of provincial and municipal water and sanitation task forces and formation of BWSAs where target facilities will be constructed (DILG) and the installation of latrines and promotion of health and education programs (DOH).

4) Absence of an over all planing framework to guide investment activities.

As a result of too many agencies involved in the sector and the fragmentation of water resources management, there are no cross-sectoral water resource plans to integrate effectively the various water and land use activities. Water quality and quantity management, and proper utilization of surface and groundwater.

5) Lack of data management

The main problem concerning to data management are the inadequacy of the network coverage, outdated monitoring equipment, scattered data collection responsibilities, lack of continuous data records and lack of an integrated water resources data base. Most data collection efforts are project related and are usually discontinued once the project is terminated.

6) Accountability and responsiveness of stakeholders

A lot has been said about improving the delivery of water supply and sanitation services by LGUs in the light of the devolution policy of the government. However, little attention has been given on the extent of which these LGUs carried out their devolved functions and responsibilities to their constituents. While its true that some problems were attributed to varying levels of preparedness and capacity to implement projects at their level, it can also be due to lack of political-will and commitment of the LGUs to perform their tasks and accountabilities.

7) Absence of over-all coordination body

Due to fragmental planning and implementation of sector projects, a number of agencies and offices had overlapping activities and functions. For the development of the sector to progress, there must be a body/agency/office that will serve as a focal point, responsible for all related initiatives.

8) Lack of available staff at the LGU level

In the light of devolved policy as enacted in the LGC and NEDA Board No.4 where LGUs could now implement all levels of water supply services, a need to develop their capability and interpersonal skills to ensure sustainability of projects. But is has been observed that the provincial and municipal planning staff who are supposed to be responsible for managing, coordinating, implementing training programs at the local levels and monitoring the performance of BWSAs/RWSAs are unable to devote full time due to lack of staff and too many job assignments with other projects.

9) Large demand for training

Various training programs have been developed and designed to suit the needs for training with different levels of approaches for foreign and locally funded projects. However, due to lack of funds to support the training programs, training opportunities were not fully delivered to the recipient LGUs. And, there is another issue on training that due to large number of barangays to be covered nationwide, some of these were not able to access training provided by the different agencies like DILG. This could also be attributed to the geographic location, accessibility to these areas and lack of initiative of the LGUs to request training which could then be prioritized based on immediate need.

(3) Issues on Financial Aspects

1) Access of the LGUs to other financing institutions

Most of the LGUs depend on their IRA to fund waters supply projects which often times limit them to implement only for level I facilities. Although the LGUs initiated to take risk in borrowing from banks to financed Level II or III systems, they are constraints to pursue the loan due to high interest rates imposed by the financing institutions, requirements needs the hold-out of their IRA, and some LGUs lack information where to access funding.

2) Cost sharing arrangement

With the limited available funds to be used in implementing water supply and sanitation projects, cost sharing mechanism have been encourage to LGUs to feel sense of ownership of the system. However, the lack of political-will and lack of commitment of the leaders hinders the success of its implementation.

3) Varied level of preparedness of the LGUs

In the light of NEDA-ICC financing policy where no subsidy from the national government will be provided for Level II and III systems and 0 (zero) to 50 percent will be subsidized by national government but limited only to Level I for 5th and 6th class municipalities, it has been observed that most of the LGUs are dependent on grants/assistance provided by the national government or other funding institutions.

5.8 Community Development

5.8.1 General

(1) RESULTS OF THE BARANGAY KEY INFORMANT SURVEY FOR EASTERN SAMAR

I. BARANGAY

A. General

The barangay is the smallest political unit in the Philippines. It is headed by a barangay captain who is elected for a three-year term. Together with the barangay council, the barangay captain is responsible for running the affairs of the barangay. Water supply and sanitation sector projects are important to the barangay. Benefits are directly related to health and productivity, as well to improved economic activities in the community.

The key informant survey was conducted in three barangays representing three municipalities in Eastern Samar. The key informants 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. The barangays surveyed were: Sulat (Del Remedio), San Julian (Campidhan), and San Julian (San Isidro).

B. Community Organization

1. Manner of Participation in Sector Development

The need for water supply and sanitation facilities is discussed within and prioritized by the Barangay Development Council (BDC). If the barangay is not able to finance the WATSAN project from its own funds, the BDC then endorses the project to the municipality. Again, the prioritization and funding of the endorsed project is discussed in the municipal development council (MDC). If the municipality can finance said project, then it does so, usually by providing technical and material support. The barangay is asked to contribute its share, which is usually in the form of free labor. If, however, the municipality cannot fund the barangays request, the project is once again endorsed, but this time to the province. The project is then discussed/prioritized and provided funding by the provincial development council. If implemented by the province, a counterpart is

asked of the barangay and sector participation is in the form of free labor and/or donations in cash or in kind.

2. Existing Community Organization Serving /Acting as the Water Association

The BWSA is still the WATSAN organization that provides water service in the barangays surveyed, although the barangay councils have demonstrated active participation in the provision of safe, potable water to their constituents.

3. Role of the Barangay Council in O&M Assistance in the Form of Funds/ Manpower/Materials

The barangay councils provide direct assistance in the operation and maintenance of the water systems. They coordinate with the local government units (PHO/MHO) in extending technical and functional assistance to the BWSA.

The barangay councils are also willing to pay for the training of community members/volunteers on the operation and maintenance of WATSAN facilities.

II. COMMUNITY PARTICIPATION

A. General

The beneficiaries' participation is recognized as one of the determining factors in the success of the WATSAN sector plans on the community level. Participation by the barangay people is measured by their willingness to organize themselves into a water association and contribute their share towards its operationalization. This may come in the form of free labor, donations in kind or in cash, or their active involvement in the management, operation and maintenance of the WATSAN facilities.

B. Socio-Economic Conditions

1. Average Monthly Income in the Rural Area

The average monthly income of the households in the barangays surveyed ranges from P1,500.00 to P3,500. The list of economic activities shows the following: livestock raising (poultry and piggery), copra trading, cottage industry, vegetable gardening, and operating a sari-sari-store. The list shows that both genders are equally involved in these economic activities.

2. Waterborne/Water Related Diseases

Incidences of waterborne and water related diseases were reported in all the barangays surveyed. Most prevalent diseases are intestinal disorder, diarrhea, and skin diseases. This is compounded by the lack of a garbage disposal system in the areas.

C. Willingness to Participate

1. Initiating the Organization of a WATSAN Association

Each of the three barangays surveyed has a committee on water and sanitation within the barangay council. The key informants indicated that all the barangay councils are willing to participate in sector projects and in the operation and maintenance of WATSAN facilities. All of the respondents also indicated that the barangay council is willing to pay for and/or facilitate the training for the user-beneficiary volunteers on O&M. In the area of health and sanitation education, almost all interviewees believed that the barangay council has the capability to implement information dissemination activities.

D. Status of BWSAs/NGOs/CBOs/POs

1. Number of Barangay with Functional BWSAs

All three barangays surveyed have BWSA organized in their communities. These BWSAs have their respective sets of officers.

2. Status of NGOs/CBOs/POs

Majority of the respondents reported having NGOs/CBOs that do work in their communities. The areas of concern are in livelihood, health and sanitation, entrepreneurship, livestock raising, and education.

E. O&M Practices by Beneficiaries

1. Facility Conditions

Groundwater is widely used as source of water in the barangays surveyed although some also utilized surface water especially in Barangay Sulat (Del Remedio). Water facilities that were constructed in the barangays were mostly shallow and deep wells that were constituted in as early as in 1963. Springs were also developed in Barangay Sulat. Almost all of the systems/facilities are still functional but occasionally have problems. All of the respondents indicated that the water is fit for drinking.

2. Common Difficulties and O&M Problems Encountered

Common problems cited by the respondents range from defective pumps to lack of funds for the maintenance work. This can be attributed to the fact that only about 50% of the beneficiaries pay for their water supply.

F. Water Charges Adopted and Collection Efficiency

1. Sufficiency of Collected Charges for O&M

Only the respondents from Barangay Sulat reported that the beneficiaries pay for the operation and maintenance of their water supply facilities. The respondents indicated that the residents pay a small amount, which is below P10.00, for water and they believe that it is already sufficient for the O&M of the WATSAN facilities. Meanwhile, the respondents from the two other barangays believe that the people should pay to their water supply.

2. Current Practices with Affordability by Users and Manner of Fee Collection

The female BWSA officers were responsible for collecting the fees, according to the respondents from Barangay Sulat.

G. Requests by the Beneficiaries on O&M of the Facilities from LGUs and other Sources

1. Government Subsidies Requested by End Users

All barangays were recipients of technical and financial assistance from the provincial and municipal government. Barangays Sulat and San Julian received technical training, BWSA Caretakers Program, Bookkeeping and Accounting Procedures and Toilet Bowl Fabrication. Meanwhile, Barangay San Julian (San Isidro) was provided with pumps and spare parts for the repair of WATSAN facilities aside from technical training similar to the other two barangays.

III. GENDER

A. General

The survey results do not point to a severe lack of gender responsiveness to sector projects, but awareness of the key informants must be enhanced as to why both genders' participation is important in the WATSAN sector plans and implementation.

B. Gender in the Composition of the Barangay Council

In the three barangays surveyed, the total number of barangay council members is 25. Of this number, 16 were males and 9 females. Two of the barangay captains are male.

C. Gender in the Composition of the BWSA

All three barangay have functional BWSAs. These BWSAs have active set of officers who meet regularly. Females outnumber male members of BWSA.

D. Gender in Participation in the O&M of the Water Facilities

Most of the key informants indicated that women actively participate in the O&M of the water facilities. Women handle of the collection, cleaning of the surroundings, purchase of materials, membership recruitment, and assist in fund sourcing.

E. Gender in Knowledge or Awareness of Sector Related Information

There is no gender bias when it came to awareness of sector related information. Both women and men were knowledgeable as seen from the answers to questions such as assistance extended by LGUs, facility conditions, and O&M practices.

(2) RESULT OF GROUP INTERVIEWS

A. General

Group interviews were conducted in two selected barangays representing two municipalities in the province of Eastern Samar. 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 Project Team conducted the interviews on two sets of interviewees: an all female group and an all male group each consisting of a minimum of 10 and a maximum of 32 participants. None of the respondents belonged to the same household. Answers to interview questionnaires were made by raising of hands. The group interviews were conducted in the following barangays: Sto. Nino (Sulat) and Casoroy (San Julian).

B. Demographic Profile

1. Population

The aggregate population in the two barangays was 1,452 broken down as follows: Sto. Nino (Sulat) 1,256 and Casoroy (San Julian) 983.

2. Households

As indicated by the respondents, there were 432 households in the two barangays, that is: Sto. Nino (Sulat) 254 and Casoroy (San Julian) 178.

The figure represents an average of 3.5 members per household.

TABLE 1: TOTAL POPULATION OF BARANGAYS AND NUMBER OF HOUSEHOLDS

BARANGAY (MUNICIPALITY)	M	F	T	NO. OF HH
1. Sto. Nino (Sulat)	626	630	1,256	254
2. Casoroy (San Julian)	496	487	983	178
TOTAL	1,122	1,117	2,239	432

3. Composition of Barangay Councils

There were 17 barangay council members in the two barangays. Of the barangay council members, eight (47%) were males and nine (53%) were females. The barangay captains in both barangays were male.

C. Respondents' Profile

1. Number and Gender of Respondents

There were 61 respondents in the group interviews. Of these, 26 (43%) were males and 35 (57%) were females. Table 2 presents the number of respondents by gender for each barangay.

TABLE 2: NUMBER OF RESPONDENTS

BARANGAY (MUNICIPALITY)	M	F	T
1. Sto. Nino (Sulat)	13	19	32
2. Casoroy (San Julian)	13	16	29
TOTAL	26	35	61

2. Age Bracket

About 44% of the respondents (10 males, 17 females) was under the 26 to 45 age bracket; 31% (7 males, 12 females) constituted the 46 to 60 age bracket; 16% was under the 25 and below age bracket; and 9% (3 males, 2 females) belonged to 61 and above age bracket.

TABLE 3: AGES OF THE RESPONDENTS

AGE BRACKET	M	F	T	%
25 and Below	6	4	10	16
26-45	10	17	27	44
46-60	7	12	19	31
61 and above	3	2	5	9
no response	-	-	-	-
TOTAL	26	35	61	100

3. Level of Education

The majority of the respondents (14 males, 20 females) completed elementary education; while 18 respondents (8 males, 10 females) graduated from the high school level. Meanwhile, only two respondents (1 male, 1 female) completed college. Seven interviewees took vocational courses.

TABLE 4: RESPONDENTS' LEVEL OF EDUCATION

EDUCATION LEVEL	M	F	T	%
1. Elementary Level	-	-	-	-
2. Elementary Graduate	14	20	34	56
3. High School Level	-	-	-	-
4. High School Graduate	8	10	18	30
5. College Level	-	-	-	-
6. College Graduate	1	1	2	3
7. Vocational	3	4	7	11
8. Post Graduate	-	-	-	-
TOTAL	26	35	61	100

4. Occupation

At the time of the interview, the majority of the respondents (17 males, 21 females) was engaged in either farming or fishing. The rest of the respondents was: engaged in business (9); laborer (1); professional (1); technical equipment operator (1); factory worker (1); and the others (10) were employed as househelp.

TABLE 5: OCCUPATION OF RESPONDENTS

OCCUPATION	M	F	T	%
1. Farmer/Fisherfolk	17	21	38	62
2. Laborer	1	-	1	2
3. Service Worker	-	1	1	2
4. Businessman/woman	3	6	9	14
5. Professional	-	1	1	2
6. Office Worker	-	-	-	-
7. Tech. Equipment Operator	1	-	1	2
8. Others	4	6	10	16
9. Factory Worker	-	-	1	-
TOTAL	26	35	61	100

D. Socio Economic Profile

1. Level of Education of Household Members

The majority of the respondents indicated that most of their household members were elementary graduates. A good number also graduated from high school. There were also some household members, mostly female, who went on to complete a college degree. Only one pursued a vocational course.

TABLE 6: LEVEL OF EDUCATION OF HH MEMBERS

EDUCATIONAL LEVEL	EDUCATED HOUSEHOLD MEMBERS	
	M	F
1. Elementary Level	-	-
2. Elementary Graduate	24	27
3. High School Level	-	-
4. High School Graduate	14	15
5. College Level	-	-
6. College Graduate	6	12
7. Vocational	-	1
8. Post Graduate	-	-

2. Employed Household Members

Some male and female household members were employed during the time of the interview. Most of those employed were from the 26 to 45 age group, which numbered 19. This was followed by those belonging to the 46 to 60 age bracket, with eight employed. There was only one employed under the 15 and below age group; and none in the 61 years and above category.

TABLE 7: EMPLOYED IHH MEMBERS

RESPONSE	RESPONDENTS	
	Employed Male Members	Employed Female Members
25 and Below	-	1
26-45	11	8
46-60	4	4
61 and above	-	-

3. Occupation of Household Heads and Other Members

As indicated by the respondents, there were 61 persons (26 males, 35 females) among the respondents' household members who were productive or employed. The majority (23 males, 16 females) was engaged in farming and/or fishing. The occupations held by the remaining respondents were: business, 6; service worker, 4; others, 12.

Around 95% of the household members who were gainfully employed earned a monthly income of P 5,000.00 and below. Three members earned P 6,000.00 to P 14,999.

TABLE 8: OCCUPATION OF IHH MEMBERS

OCCUPATION	M	F	T
1. Farmer/Fisherfolk	23	16	39
2. Laborer	-	-	-
3. Service Worker	-	4	4
4. Businessman/woman	3	3	6
5. Professional	-	-	-
6. Office Worker	-	-	-
7. Technician	-	-	-
8. Others	-	12	12
TOTAL	26	35	61

TABLE 9: AVERAGE MONTHLY INCOME OF IHH MEMBERS

ITEM	M	F	T	%
Below P 5,000.00	38	20	58	95
P 6,000 to 14,999	2	1	3	5
P 15,000 to 24,999	-	-	-	-
Above P 25,000	-	-	-	-
TOTAL	40	21	61	100

4. Average Expenditures of Household

An overwhelming majority of the respondents reported that their average monthly expenditure was below P5,000.00. Four respondents reported they spent an average of P5,000.00 to P14,999.00 a month.

TABLE 10: AVERAGE MONTHLY EXPENSES OF HH MEMBERS

ITEM	M	F	T	%
Below P 5,000	24	33	57	93
P 5,000 to 14,999	2	2	4	7
P 15,000 to 24,999	-	-	-	-
Above P 25,000	-	-	-	-
TOTAL	26	35	61	100

5. Practices

Source of Drinking Water. Most of the respondents identified that their drinking water came from communal faucets. Other sources mentioned were: communal shallow wells (11); communal deep wells (11); private deep well (1 respondent), and springs (16).

TABLE 11: SOURCES OF DRINKING WATER

SOURCES	USER RESPONDENT		T
	M	F	
1. Communal Shallow Well	5	6	11
2. Communal Deep Well	10	1	11
3. Communal Dug Well	-	-	-
4. Communal Faucet	-	22	22
5. Private Shallow Well	-	-	-
6. Private Deep Well	-	1	1
7. Piped Water Supp	-	-	-
8. Private Dug Well	-	-	-
9. Others	11	5	16
TOTAL	26	35	61

Responsible for Fetching Water. From the answers of 21 respondents (6 males, 15 females), it was the wife who was responsible for hauling water from the source to the home. Tied in for second place as water "fetchers," at 15 respondents each, were the husbands (7 males, 8 females) and male children (11 males, 4 females). Five female respondents did not spare the female children from the task of fetching water for the use of the household.

TABLE 12: RESPONSIBLE FOR FETCHING DRINKING WATER

FAMILY MEMBER	USER RESPONDENT		TOTAL
	M	F	
1. Husband	7	8	15
2. Wife	6	15	21
3. Male Children	11	4	15
4. Female Children	-	5	5
5. Others	-	3	3
6. Uncertain	2	-	2
TOTAL	26	35	61

Frequency of Fetching Water. The majority of the respondents (11 males, 21 females) fetched water more than five times a day. Thirteen respondents indicated that they fetched drinking water only once a day. The rest of the respondents were spread to fetching water twice a day (5); thrice a day (6) and four times a day (5).

TABLE 13: FREQUENCY OF FETCHING DRINKING WATER

DURATION	RESPONDENTS		T	%
	M	F		
1. Once a Day	7	6	13	21
2. Twice a Day	3	2	5	9
3. 3x a Day	3	3	6	10
4. 4x a Day	2	3	5	9
5. More than 5x days	11	21	32	51
TOTAL	26	35	61	100

Duration of Fetching Water. Around 87% of the respondents budgeted 30 minutes or more for the hard task of fetching water. For a total of 31 respondents (16 males, 15 females), it took about more than 30 minutes to haul water from the source to their house. For 22 respondents, fetching water took about 30 minutes. Only eight respondents said it took a little less time to fetch water, that is from 10 to 20 minutes.

TABLE 14: DURATION FOR FETCHING DRINKING WATER

DURATION	RESPONDENTS		T	%
	M	F		
1. Less than 5 Minutes	-	-	-	-
2. About 10 Minutes	-	6	6	10
3. About 20 Minutes	1	1	2	3
4. About 30 Minutes	9	13	22	36
5. More Than 30 Minutes	16	15	31	51
TOTAL	26	35	61	100

Problems with Source. An overwhelming majority of respondents (24 males and 35 females) reported to having problems with the current water source. Only two male respondents felt they don't have any problem with the current situation.

TABLE 15: PROBLEM WITH SOURCE OF WATER

RESPONSE	RESPONDENTS		T	%
	M	F		
1. No Problem	2	0	2	3
2. There are problems	24	35	59	97
TOTAL	26	35	61	100

E. Institutional

1. Presence of BWSA

All the respondents 61 (26 males, 35 females) had knowledge of the existence of a BWSA in their respective barangays.

TABLE 16: KNOWLEDGE OF THE EXISTENCE OF BWSA

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	26	35	61	100
2. No	-	-	-	-
TOTAL	26	35	61	100

2. Membership to BWSAs

The majority of the respondents 52 (17 males, 35 females) indicated that he or she was a member of BWSA. Nine male respondents were not members of the BWSA.

Only eight out of 18 male respondents were actively involved in the affairs of the BWSA. Five served as BWSA officers, one as collection officer, and two assisted in repair and maintenance work. Of the female respondents, 22 out of 35 were active. One was a collection officer, 17 females were involved in repair and maintenance of the BWSA facilities, and four facilitated training.

TABLE 17: MEMBERSHIP TO THE BWSA

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	17	35	52	85
2. No	9	-	9	15
TOTAL	26	35	61	100

TABLE 18: HOW ACTIVELY ARE YOU INVOLVED IN THE AFFAIRS OF THE BWSA

RESPONSE	RESPONDENTS		T	%
	M	F		
1. As BWSA Officer	5	-	5	8
2. As Collection Officer	1	1	2	3
3. Assist in the repair maintenance of facilities	2	17	19	31
4. Attend/ Facilitate Training	-	4	4	7
5. Not active	18	13	31	51
TOTAL	26	35	61	100

3. Who maintains the facilities of the BWSA?

For 23 female interviewees, it was someone from the BWSA who maintained the WATSAN facilities; 11 said it was someone in the barangay, while one admitted she did not know. Conversely, 11 male respondents did not know who was responsible for maintaining the WATSAN facilities; 14 said it was a professional caretaker and only one said it was someone from the BWSA itself.

TABLE 19: RESPONSIBLE FOR MAINTAINING BWSA FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Someone in the Barangay	-	11	11	18
2. Professional caretaker	14	-	14	23
3. Someone from the BWSA	1	23	24	39
4. No one	-	-	-	-
5. Don't know	11	1	12	20
TOTAL	26	35	61	100

4. Interested to be a member of BWSA

Twenty-seven female respondents indicated interest in becoming a more active member of BWSA in their respective barangays. The other interviewees did not respond to this question.

TABLE 20: INTEREST OF RESPONDENTS TO JOIN BWSA

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Interested	-	27	27	44
2. Not Interested	-	-	-	-
3. No Response	26	8	34	56
TOTAL	26	35	61	100

5. How can respondents become actively involve in BWSA affairs?

The female respondents exhibited varying degrees of interest in wanting to be actively involved in WATSAN projects, such as contributing cash and labor, being an officer, collecting fees and even in doing repair and maintenance work. A very few wanted to be just a plain member. The male respondents, on the other hand, wanted to be involved only by being an officer, being in charge of collection of fees, and in doing repair and maintenance work.

TABLE 21: HOW RESPONDENTS CAN BECOME ACTIVELY INVOLVED IN WATSAN PROJECTS

RESPONSE	RESPONDENTS	
	M	F
1. Contribute Cash	-	23
2. Contribute labor	-	24
3. Be Officer	7	19
4. Collection of Fees	5	20
5. Do Repair/Maintenance	13	19
6. Just Member	-	6

6. Responsible for minor repairs of water facilities

The majority of the female respondents pointed to a professional caretaker as the one responsible for minor repairs of the WATSAN facilities. For the male respondents, they said that it was either a male member or "someone" in the barangay who took care of minor repairs. Only two pointed to a professional caretaker as the one responsible for minor repairs.

TABLE 22: RESPONSIBLE FOR MINOR REPAIRS

SOURCE OF WATER	RESPONDENTS		T	%
	M	F		
1. Female Member	-	-	-	-
2. Male Member	11	-	11	18
3. Somebody in the Brgy.	12	1	13	21
4. Professional Caretaker	2	29	31	51
5. Owner of the Well	-	-	-	-
6. Uncertain	-	-	-	-
7. Others	1	5	6	10
TOTAL	26	35	61	100

F. Training Activities

1. Training Program attended in 1998

The majority of the respondents did not attend any training program in 1998. Only 18 interviewees did (11 males, 7 females) indicated they attended training programs.

TABLE 23: TRAINING ATTENDED BY RESPONDENTS IN 1998

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	11	7	18	30
2. No	15	28	43	70
TOTAL	26	36	61	100

2. Kinds of Training Program

Table 24 summarizes the training programs/seminars of those who attended training programs for 1998.

TABLE 24: TRAINING COURSES ATTENDED BY RESPONDENTS IN 1998

BARANGAY	MALE	FEMALE
1. Sto. Nino (Sulat)	Caretaker's Training	BWSA Organizational Training Bookkeeping and Accounting Procedures
2. Casoroy (San Julian)	BWSA Organizational Training Caretaker's Training	Bookkeeping and Accounting Procedures

3. On BWSA Training

The majority of the respondents was aware of any training program for BWSA members. While all the male respondents were willing to attend BWSA-related training programs, 10 females objected.

TABLE 25: AWARENESS ON VARIOUS TRAINING FOR BWSA

TRAINING PROGRAM	YES		T	%
	M	F		
1. Caretaker's Training	15	10	25	41
2. Collection/Finance	-	10	10	16
3. Repair/O&M	11	15	26	43
TOTAL	26	35	61	100

TABLE 26: WILLINGNESS TO ATTEND BWSA-RELATED TRAINING PROGRAMS

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	26	25	51	84
2. No	-	10	10	16
TOTAL	26	35	61	100

4. Training on Health Education

Only 12 out of 61 respondents participated in health education and training programs. Most of those who attended were males, 10:2.

If given a chance, the respondents wanted to attend WATSAN related training programs such as: Operation and Maintenance, BWSA Organizational Training, Bookkeeping and Accounting Procedures, Skills Training, and Livelihood.

TABLE 27: PARTICIPATION IN HEALTH EDUCATION AND TRAINING

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	10	2	12	20
2. No	16	33	49	80
TOTAL	26	35	61	100

TABLE 28: TYPES OF TRAINING RESPONDENTS WISH TO ATTEND

BARANGAY	MALE	FEMALE
1. Sto. Nino (Sulat)	Operation and Maintenance	BWSA Organizational Training Bookkeeping and Accounting Procedures
2. Casoroy (San Julian)	Operation and Maintenance of Water Facilities	Skills Training Livelihood

5. Desirable Training Period

In relation to this, the 49 out of 61 respondents desired for more than three-day training period. The rest opted for two or three days worth of training.

TABLE 29: DESIRABLE TRAINING PERIOD

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Less Than 1 Day	-	-	-	-
2. One (1) Day	-	-	-	-
3. Two (2) Days	-	5	5	9
4. Three (3) Days	2	5	7	11
5. More Than Three Days	24	25	49	80
TOTAL	26	35	61	100

G. Community Development

1. CBOs and contact person

The majority of the respondents (13 males and 35 females) was aware of NGOs working in their communities. Other respondents indicated that there were community-based organizations doing different development works in the barangays. Table 31 lists down these NGOs/CBOs and their contact persons:

TABLE 30: ARE THERE NGOS WORKING IN THE BARANGAY

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	13	35	48	79
2. No	13	-	13	21
TOTAL	26	35	61	100

TABLE 31: NGOS/CBOS IN THE BARANGAYS

BARANGAY	AREAS OF CONCERN	CONTACT PERSON
1. Sto. Nino (Sulat)	BFARMCI	Jun Pulvoraja
2. Casoroy (San Julian)	FSFLI SEA-K CKAB-Fattening SEAK	Mr. Lario Desoloc Erenia Acusar Mr. Joseph Baldosa Marianita Duras

2. Were the respondents consulted on their respective roles and responsibilities?

The majority of the respondents (19 males and 25 females) indicated they were consulted and/or briefed on their proposed roles and responsibilities only on two aspects: the construction of the facilities and on the operation and maintenance of the BWSA. Both the male and female respondents claimed they were not involved during the planning and design of facilities and when the water fees were being determined.

TABLE 32: RESPONDENTS CONSULTED IN PAST WATSAN PROJECTS

BWSA ACTIVITIES	YES		T	%
	M	F		
1. Planning & Design	-	-	-	-
2. Construction Facilities	7	10	17	28
3. O&M of the System	19	25	44	72
4. Financing of the System	-	-	-	-
TOTAL	26	35	61	100

3. Were the respondents consulted when BWSA was formed?

The respondents were consulted in varying degrees on the different activities prior, during, and after the BWSA was formed. The only activity where both female and male respondents were not consulted was when the level or type of water service was determined.

TABLE 33: WERE YOU CONSULTED WHEN:

ACTIVITIES	YES		T	%
	M	F		
1. BWSA was formed in the Brgy.	19	10	29	48
2. Water fee was decided upon	-	10	10	16
3. Level or type of service was agreed upon	-	11	11	18
4. Facilities were constructed	7	4	11	18
TOTAL	26	35	61	100

4. How did the respondents participate in past construction projects?

The male respondents' participation in past construction activities of the BWSA was through cash contribution (8); provision of labor (9); donation of site (1). Eight did not contribute. The female respondents' participation was through provision of labor (15); donation of site (2); other types of contribution (18). The answers showed that all the female respondents participated.

TABLE 34: PARTICIPATION IN PAST CONSTRUCTION PROJECTS

TYPE OF PARTICIPATION	RESPONDENTS		T	%
	M	F		
1. Contributed Cash	8	-	8	13
2. Provided labor	9	15	24	39
3. Donated Site	1	2	3	5
4. Provided Materials	-	-	-	-
5. Others	-	18	18	30
6. No Contribution	8	-	9	13
TOTAL	26	35	61	100

5. Will the respondents participate in future projects?

For future projects, however, the respondents indicated that they would participate and/or contribute for certain activities. For the formation of BWSA, 22 respondents will participate. On the formulation of water rates, nine female interviewees will likely participate. This is also true in the selection of sites (5), construction of facilities (6) and

in the operation and maintenance, where (10) male and (9) female respondents signified intention to participate.

TABLE 35: WILLINGNESS/TYPE OF PARTICIPATION IN FUTURE PROJECTS

PROJECT ACTIVITIES	YES		T	%
	M	F		
1. Formation of BWSA	13	9	22	36
2. Formulation of water rates	-	9	9	15
3. Selection of sites and levels of services	1	4	5	8
4. Construction of facilities	2	4	6	10
5. Operation and maintenance	10	9	19	31
TOTAL	25	36	61	100

II. Financial Aspects

1. Are respondents presently paying for their water supply?

All the male respondents and more than half of the female respondents admitted to not paying their water fees. Only 16 female interviewees claimed that they are paid the water fees charged them.

TABLE 36: NUMBER OF RESPONDENTS PRESENTLY PAYING WATER FEE

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	-	16	16	26
2. No	26	19	45	74
TOTAL	26	35	61	100

2. If so, how much per household per month?

Of those presently paying, (16) respondents indicated that they paid about P 5.00 and below a month. The 45 non-paying respondents did not answer the question.

TABLE 37: PRESENT WATER FEES PAID

WATER FEES	RESPONDENTS		T	%
	M	F		
Below P 5.00	-	16	16	26
P 6.00 to P 10.00	-	-	-	-
P 11.00 to P 20.00	-	-	-	-
P 21.00 to P 30.00	-	-	-	-
P 31.00 to P 40.00	-	-	-	-
P 41.00 to P 50.00	-	-	-	-
Above P 50.00	-	-	-	-
No Pay/No Response	26	19	45	74
TOTAL	26	35	61	100

3. Is the water fee enough for O&M?

Sixteen female respondents claimed that the water fees being collected were not adequate to cover for the operation and maintenance of the facilities. Again, the 45 non-paying respondents were uncertain on the matter.

TABLE 38: ADEQUACY OF WATER FEE FOR O&M

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	-	-	-	-
2. No	-	16	16	26
3. Uncertain	26	19	45	74
TOTAL	26	35	61	100

The majority of the respondents said that they were not sure of the reasons why fees being collected were not adequate. However, the 16 paying female respondents said this was because many water users do not pay their water fee.

TABLE 39: IF NOT ADEQUATE, STATE THE REASON/S

REASON/S	M	F	T	%
1. Water fee is low	-	-	-	-
2. O&M cost is too high	-	-	-	-
3. Not all water users pay their water fee	-	16	16	26
4. Others/Uncertain	26	19	45	74
TOTAL	26	35	61	100

4. Who shoulders the O&M of Facilities?

Twenty-seven female respondents and 23 of the male respondents said it was the Barangay Council who shouldered the operation and maintenance of the water supply facilities. Only one respondent claimed it was the BWSA; two others did not know; while eight said it could be "others."

TABLE 40: RESPONSIBILITY FOR SHOULDERING THE O&M COSTS

PERSON	RESPONDENTS		T	%
	M	F		
1. Barangay Council	23	27	50	82
2. WATSAN Association	1	-	1	2
3. Private Owner	-	-	-	-
4. Don't know	2	-	2	3
5. Others	-	8	8	13
TOTAL	26	35	61	100

5. Are the people willing to pay for O&M of future facilities?

All the respondents expressed willingness to pay for the O&M of future facilities.

TABLE 41: RESPONDENTS' WILLINGNESS TO PAY FOR FUTURE FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	26	35	61	100
2. No	-	-	-	-
TOTAL	26	35	61	100

6. How much are respondents willing to pay?

Of those who were willing to pay, the majority (32) claimed they could only pay below P5.00 while 29 respondents could pay water fees from P 6.00 to P 10.00.

TABLE 42: AMOUNT RESPONDENTS ARE WILLING TO PAY

RESPONSE	RESPONDENTS		T	%
	M	F		
Below P 5.00	13	19	32	52
P 6.00 to P 10.00	13	16	29	48
P 11.00 to P 20.00	-	-	-	-
P 21.00 to P 30.00	-	-	-	-
P 31.00 to P 40.00	-	-	-	-
P 41.00 to P 50.00	-	-	-	-
Above P 50.00	-	-	-	-
TOTAL	26	35	61	100

7. Are you willing to contribute for future projects?

All the respondents indicated their willingness to contribute in cash or in kind for the construction of WATSAN facilities in their respective barangays.

TABLE 43: WILLINGNESS TO CONTRIBUTE FOR FUTURE FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	26	35	61	100
2. No	0	0	0	0
TOTAL	26	35	61	100

TABLE 44: IF NOT WILLING, STATE THE REASON/S

REASON/S	M	F	T	%
1. Cannot afford to pay	N/A			
2. Gov't must provide water for free				
3. Water service is not good.				
4. Others (Specify)				
TOTAL				

8. If so, what kind?

Should they be required to contribute, the majority of the respondents (26 males, 24 females for a total of 50) preferred to give free labor during the construction. Five male interviewees opted to donate a site for future WATSAN facilities, and six female interviewees preferred to provide materials.

TABLE 45: TYPES OF CONTRIBUTION

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Will free provide labor	26	24	50	82
2. Will donate site	-	5	5	8
3. Will provide materials	-	6	6	10
4. Others	-	-	-	-
TOTAL	26	35	61	100

9. Reason/s for not Contributing

All the respondents were willing to contribute in one way or another.

TABLE 46: IF NOT WILLING TO CONTRIBUTE, STATE REASONS:

REASONS	RESPONDENTS		T
	M	F	
1. Cannot afford to contribute	N/A	N/A	
2. No land/site to contribute			
3. Government should provide water for free			
4. No Response			

I. Health and Sanitation

1. Type of toilet

The majority used toilets which flush to a septic tank on site. The rest used private pit/latrine (17); toilet which flushes to sea (2); and public toilet (1).

TABLE 47: TYPES OF TOILETS RESPONDENTS USE

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Toilet w/ flushes to septic tank on the site	23	18	41	67
2. Toilet w/ flushes/ drops straight to sea	2	-	2	3
3. Private pit latrine	1	16	17	28
4. Shared flush toilet w/ septic tank	-	-	-	-
5. Public toilet	-	1	1	2
6. Bush or other open outdoor site	-	-	-	-
7. Pour Flush Water	-	-	-	-
TOTAL	26	35	61	100

2. Who got sick during the past year? What sickness?

Most of the respondents were uncertain as to the types of illnesses that afflicted their family members in the past year. The rest pointed to diarrhea (4); gastro-enteritis (2); typhoid fever (5); and skin disease (19). More men (husbands, male children, fathers, grandfathers) were afflicted with various ailments and illness compared to the female group.

TABLE 48: WATER ILLNESSES

DISEASE	RESPONDENTS		T	%
	M	F		
1. Diarrhea	3	1	4	7
2. Kidney trouble	-	-	-	-
3. Gastro-enteritis	2	-	2	3
4. Cholera	-	-	-	-
5. Typhoid fever	5	-	5	8
6. Malaria	-	-	-	-
7. Skin Disease	4	15	19	31
8. Schistosomiasis	-	-	-	-
9. Others	2	-	2	3
10. Uncertain	10	19	29	48
TOTAL	26	35	61	100

TABLE 49: HOUSEHOLD MEMBERS FREQUENTLY GOT SICK IN 1998

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Husband	7	15	22	36
2. Wife	-	1	1	22
3. Father	3	-	3	5
4. Mother	-	-	-	-
5. Male Children	4	-	4	7
6. Female Children	-	-	-	-
7. Grandmother	5	-	5	8
8. Grandfather	7	-	7	11
9. Others	-	19	19	31
TOTAL	26	35	61	100

3. Health and hygiene practices

Most of the respondents recognized the importance of good health and hygiene practices. They learned about health and sanitation matters mostly from radio (46%); health sanitation/clinics/hospitals (24%); health workers/inspectors (20%); schools (7%); and from family and friends (3%).

TABLE 50: WHERE DO YOU RECEIVE/GET INFORMATION ABOUT HEALTH AND SANITATION

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	7	35	42	69
2. No	19	-	19	31
TOTAL	26	35	61	100

TABLE 51: WHERE PEOPLE LEARNED HEALTH AND HYGINE EDUCATION

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Radio	8	20	28	46
2. Newspapers	-	-	-	-
3. Television	-	-	-	-
4. NGOs	-	-	-	-
5. Family and Friends	-	2	2	3
6. Health Sanitation/Clinics/Hospitals	10	5	15	24
7. Health workers/ inspectors	7	5	12	20
8. School	1	3	4	7
9. Others/HMO	-	-	-	-
TOTAL	26	35	61	100

5.8.5 Utilization of NGOs

List of NGOs/CBOs for Eastern Samar

Name of NGOs/PSOs/POs	Services	Address / TEL #
1. Up-Up Samar Movement	Environment/Livelihood	Tarusan, Borongan / 261-2859
2. BAGDEF	Environment/Livelihood Farmers	Campesao, Borongan / 330-1142
3. ESADEF	Environment/Livelihood Farmers	Baybay, Borongan / 261-2047
4. Eastern Samar Social Action Center	Social Action/Human Rights Advocacy	Bishops Palace, Borongan / 261-2113
5. ES Chamber of Commercial & Industry	Small Industries Consultancy & Promotion	Poblacion, Borongan / 261-2017

5.8.6 Existing Community Development Process

Detailed Typical CD Process in Agusan del Sur

- 1) **Make courtesy calls.** Courtesy calls are made to barangay/sitio officials prior to the conduct of meetings with the community. Then, a series of meetings and community assemblies are done where the WATSAN program is introduced, its significance and impact taken up and the importance of organizing promoted. This is followed by a more detailed presentation/orientation of the project – its concept, features, history, stakeholders, and the CO process utilized. Depending on the level of community awareness regarding the program/project, two or three meetings/assemblies are needed before doing the baseline survey.

2) Preparation of profile (secondary information) and survey forms.

(a) **General information.** Distance from barangay to poblacion, mode of travel, time and fare; no. of sitio/purok; dominant ethnic groups, common occupation of residents; demographic data (no. of household, male and female population) by sitio/purok, no. of dwelling structures, school buildings, other buildings, availability of electricity by sitio/purok.

(b) **Barangay WATSAN status.** Existing water supply system, by sitio/purok, by type and service level, no. of facilities (functioning), portability, no. of HH served, who installed, who operates, user charges, if any; HHs toilet facilities, by sitio/purok, no. of HHs with private toilets by type, no. HH using shared toilets by type, no. of HH without toilets; no. of community waste disposal systems by sitio/purok, by method and wastewater system; no. of reported morbidity and mortality cases of water-borne/contact/vector-borne disease of barangay residents.

(c) **WATSAN related programs and project in the barangay.** Existing WATSAN program/project by type of activity, implementing organization/agency, sponsoring funding agency, specify years when operated in barangay, name of community association organized, if any; past WATSAN programs/projects by type of activity, implementing organization/agency, sponsoring funding agency, specify years when operated, name of community association organized, if any; Community organizations in the barangay, WATSAN related groups/organization and other community organizations, its name of group/organization, sitios where members are, sponsoring agencies, year organized and status; other barangay facilities.

(d) **Resources for barangay water supply and toilet facilities fabrication.** Brief description of water sources-undeveloped springs, streams and other water sources which can be tapped and developed, source which can be improve including estimated distance to center of HHs to be served, availability of water, estimated flows during dry and wet seasons; water and well depths by sitio/purok, by season; availability of construction materials for water supply and toilet if available for free at barangay or at hardware/other stores, its sources, name and address of store, materials available, distance from barangay and means of transport for materials, sources of pumps and spare parts for pumps – name and address of dealer/store, types of pumps/parts available and distance from barangay; barangay residents with skills in water supply system construction and maintenance, type of skill, no. of persons and remarks; well drillers and water supply contractors who can be

tapped for barangay works, their name address, services rendered and charging rates; local fabricators of toilet bowls, their name, location, type/description of toilet bowl.

- 3) **Identify of community volunteers.** As an initial step in community organizing, a core group of about 7 persons consisting of community leaders is formed. This is the formation of an informal community organization that will assist the CD worker in the preparation of CO strategies, community profiling, identification of project sites, and other work.
- 4) **Conduct baseline survey.** In the conduct of this survey, focus group discussion was applied and the result validated during barangay spot mapping. The barangay spot map reflects the location of structures (scaled) and different facilities/infrastructure. This serves as a planning tool in the development of WATSAN program for the area.
- 5) **Inspect/Identify project sites and validates projects.** An assembly is called again to present the results of the survey, its profile, assessment and needs. The CD team situates the community, i.e., where they are now in the sector. A member of the CD team will then facilitate the surfacing of thoughts from the group in terms of identifying the needs for WATSAN facilities, how project will be implemented in their area, how they facility will be designed and constructed, and how the community perceives their role in the project. In some cases, the community request technical assistance from the Center on site selection of identified areas.
- 6) **Conduct technical and community consultative meetings** of members and officers together with barangay officials. By this time, the one group has already specific projects to be implemented. Together with these interim officers, meetings with barangay officials are undertaken to determine local counterpart funding support to the program/project.
- 7) **Facilitate project implementation.** After funding has been assured, the CD team facilitates the implementation of the project through supervision and monitoring progress of construction. Contribution from the community comes in the form of free labor (pahina).
- 8) **Consolidate BWSA Organization.** The core group formulates the by-laws and policies of the organization and have these ratified by the members. The election of BWSA officers follows. A barangay resolution is passed endorsing the association and submitted to the Municipal Development Council/Sangguniang Bayan for registration/accreditation.

Parallel to this activity is the completion of the facility and in most cases, the turn-over of the facility to the newly-organized BWSA, which can coincide with the swearing-in of BWSA officials.

9) **Conduct training on skills and management to BWSA officials by the Center.** The module includes topics on: human resource development (self and group awareness, communication skills, group facilitation and conducting meeting, effective community work, leadership skills and roles of officers and members, and conflict management); technical (hydrogeology and site selection, well construction and identification of handpump parts, equipment plumbing tools and materials for construction and repairs, hand pump principles of operations, maintenance and approach in trouble shooting, spring development, types of spring, their characteristics and method of developing, operation and maintenance of tank, spring box and distribution line, excreta, liquid and solid disposal system, water related diseases-prevention/control and water quality surveillance); financial management; project planning management; and action planning.

10) **Undertake follow-up activities.** The CD team after the construction of the WATSAN facilities undertakes follow-up activities such as monitoring and evaluation and the provision of recommendations/adjustments on the O&M of the facilities, where needed.

Source: DILG/WATSAN UNDP-PHI as modified by Province of Agusan del Sur