4.1.5 Level I Facilities

Safe and Unsafe Classification of Level I Facilities

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

In 1990 population census data, "Households by Main Source of Drinking Water and City /Municipality", it was shown that 39 % of households depended on shallow well, dug well, undeveloped spring, lake, river and rain water collector, etc. 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 examination on the samples collected at public and private Level I wells in the province. Table 4.1.3 presents the results of water quality examination on existing shallow wells.

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

- The number of samples examined (225 samples) was very limited compared with the number of existing shallow wells (15,719) 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, unsafe percentage (27%) of shallow wells derived from the municipalities may be somewhat overestimated, although the number of samples examined was limited.

Table 4.1.3 Results of Water Quality Examination of Shallow Wells

Municipality	No. of Existing Shallow Well	Results of Water Quality Examination				
		Safe Water Source		Unsafe Water Source		Total No. of Sample
		Number	Percentage	Number	Percentage	
Anini-y	571	28	88%	4	13%	32
Barbaza	332	7	88%	1	13%	8
Belison	983	26	68%	12	32%	38
Bugasong	508	1	50%	1	50%	2
Caluya	24	1	33%	2	67%	3
Culasi	1,091	11	79%	3	21%	14
Hamtic	926	20	59%	14	41%	34
Laua-an	2,376	5	63%	3	38%	8
Libertad	554	19	68%	9	32%	28
Pandan	828	15	65%	8	35%	23
Patnongon	632	7	78%	2	22%	9
San Jose	1,255	4	80%	1	20%	5
San Remegio		n.a.	-	n.a.	-	n.a.
Sebaste	1,033	8	73%	3	27%	11
Sibalom	2,202	5	83%	1	17%	6
Tibiao	1,682	21	91%	2	9%	23
T. Fornier	499	7	78%	2	22%	9
Varderrama	223	1	50%	1	50%	2
Province	15,719	186	73%	69	27%	255

Source: PHO, 1998

As a reference information, on the other hand, the experiences in 1st to 3rd batch provinces (16 provinces) in Mindanao and Visayas area in the preparation of PW4SP show the unsafe percentage of 20-60 as summarized below.

Surigao der Norte	Agusan der Norte	Agusan der Sur	Bukidnon	Misamis Oriental	Davao Oriental	Davao der Norte	Davao der Sur
20%	50%	23%	50%	50%	40%	20%	46%
Sarangani	South Cotabato	Northern Samar	Eastern Samar	Samar	Biliran	Leyte	Southern Leyte
30%	50%	40%	40%	50%	30%	40%	60%

Based on the above study, the unsafe percentage of 27 (%) is considered within common level experienced in the 1st to 3rd batch study. Thus, the rounded percentage (30%) may be adopted as an unsafe percentage to all municipalities both in urban and rural area in unsafe classification of shallow wells. While, those sources other than shallow wells are processed as classified in the questionnaire. Table 4.1.4 presents numbers of Level I facilities by safe and unsafe classification.

Table 4.1.4 Number of Level I Facilities by Safe and Unsafe Classification

Name of Municipality	Area	Safe Sources										Unsafe Source										Grand Total
		Public					Private				Total	Public					Private				Total	
		Deep Well	Shallow Well	Covered/ Improved Dug Well	Developed Spring	Sub-total	Deep Well	Shallow Well	Covered/ Improved Dug Well	Sub-total		Shallow Well	Open Dug Well	Undeveloped Spring	Rain Water Collection	Sub-total	Shallow Well	Open Dug Well	Rain Water Collector	Sub-total		
Aninipy	Urban		12			12		29		29	41	5				5	14			14	19	60
	Rural	2	162		2	166		186		186	351	76				76	87	20		107	184	535
	Total	2	175		2	177		215		215	392	82				82	101	20		121	203	595
Barbaza	Urban	2	27			29					29	13				13					13	42
	Rural	12	43		4	59		156		156	215	20				20	73			73	93	308
	Total	14	70		4	88		156		156	244	33				33	73			73	106	350
Belison	Urban	10	88			98		306		306	404	42				42	144			144	186	590
	Rural		63			63		211		211	274	29				29	100			100	129	403
	Total	10	151			161		517		517	678	71				71	244			244	315	993
Bugasong	Urban		4			4					4	2				2					2	6
	Rural		21		4	25		320		320	345	10				10	151			151	161	506
	Total		25		4	29		320		320	349	12				12	151			151	163	512
Caluya	Urban		2			2	25			25	27	1				1					1	28
	Rural	8	3			11	48	12		60	70	1				1	5	26		31	33	103
	Total	8	5			13	73	12		85	97	2				2	5	26		31	34	131
Culasi	Urban																					
	Rural	10	111		1	122		631		631	753	52	1			53	297	2		299	352	1,105
	Total	10	111		1	122		631		631	753	52	1			53	297	2		299	352	1,105
Hamtic	Urban																					
	Rural	21	194		12	227		435		435	663	92	1			93	205			205	297	960
	Total	21	194		12	227		435		435	663	92	1			93	205			205	297	960
Laua-an	Urban	101			1	102	2	1		3	105		3			3	1			1	4	109
	Rural	84	17			101	8	1,597		1,605	1,706	8				8	752	3		755	763	2,469
	Total	185	17		1	203	10	1,599		1,609	1,812	8	3			11	752	3		755	766	2,578
Libertad	Urban		5			5		158		158	163	3				3	74			74	77	240
	Rural		68		7	75		146		146	221	32				32	68			68	100	321
	Total		73		7	80		303		303	384	35				35	143			143	177	561
Pandan	Urban		7			7		100		100	107	3				3	47			47	50	157
	Rural		90		1	91		367		367	457	42				42	172	11		183	226	683
	Total		97		1	98		466		466	564	45				45	220	11		231	276	840
Patnongon	Urban	5	7			12		35		35	47	4				4	16			16	20	67
	Rural		67		5	72	10	320		330	403	32				32	151			151	182	585
	Total	5	75		5	85	10	355		365	450	35				35	167			167	202	652
San Jose de Buenavista (Capital)	Urban	8	143			151		711		711	861	67				67	334	8		342	410	1,271
	Rural				1	1					1											1
	Total	8	143		1	152		711		711	862	67				67	334	8		342	410	1,272
San Remigio	Urban	7				7	10			10	17											17
	Rural	3			5	8	137			137	145											145
	Total	10			5	15	147			147	162											162
Sebaste	Urban		139			139		324		324	463	66				66	152			152	218	681
	Rural		23		1	24		216		216	240	11				11	102			102	113	353
	Total		163		1	164		540		540	703	76				76	254			254	331	1,034
Sibalom	Urban	1	9			10		322		322	332	4				4	152			152	156	488
	Rural		203		7	210		964		964	1,173	95	2			97	453			453	551	1,724
	Total	1	211		7	219		1,286		1,286	1,505	100	2			102	605			605	707	2,212

Table 4.1.4 Number of Level I Facilities by Safe and Unsafe Classification (Cont'd)

Name of Municipality	Area	Safe Sources										Unsafe Source										Grand Total
		Public					Private				Total	Public					Private				Total	
		Deep Well	Shallow Well	Covered/ Improved Dug Well	Developed Spring	Sub-total	Deep Well	Shallow Well	Covered/ Improved Dug Well	Sub-total		Shallow Well	Open Dug Well	Undeveloped Spring	Rain Water Collection	Sub-total	Shallow Well	Open Dug Well	Rain Water Collector	Sub-total		
Tibiao	Urban	19	5			24		8		8	32	2				2	4			4	6	38
	Rural	12	182		2	196		949		949	1,145	85				85	447			447	532	1,677
	Total	31	186		2	219		957		957	1,177	88				88	451			451	538	1,715
Tobias Fornier	Urban	3	11			14		12		12	26	5				5	6			6	11	37
	Rural	12	33		5	50		283		283	333	16	1			17	133	34		167	184	517
	Total	15	44		5	64		295		295	359	21	1			22	139	34		173	195	554
Valderrama	Urban	2	4			6		95		95	101	2				2	45			45	47	148
	Rural	1	3		2	6		50		50	55	1				1	23	2		25	27	82
	Total	3	7		2	12		145		145	157	3				3	68	2		70	73	230
Provincial Total	Urban	158	464		1	623	37	2,101		2,138	2,761	218	3			221	989	8		997	1,218	3,979
	Rural	165	1,282		59	1,506	203	6,842		7,045	8,551	603	5			608	3,220	98		3,318	3,926	12,477
	Total	323	1,746		60	2,129	240	8,943		9,183	11,312	821	8			829	4,209	106		4,315	5,144	16,456

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 17% and 83% of the total number of Level I facility, respectively. Developed springs occupy 3% of the total number of public facilities.

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	165	45%	203	55%	368
Shallow Well	1,885	16%	10,062	84%	11,947
Spring Development	59	100%		0%	59
Others	5	5%	98	95%	103
Total	2,114	17%	10,363	83%	12,477

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 1998 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 and modified at maximum 20% for some municipalities in consideration of current situation.
- 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. Table 4.1.6 (a) and (b) presents the overall population covered by Level I facilities and the number of households.

The number of households per shared public/private facility is estimated at 5 households in urban area and 6 in rural area as provincial averages, which are considered within reasonable level compared with the service level standard of Level I public facility (15 households/facility). However, the figures in the urban area of Bugasong and Caluya, and rural area of San Jose and Valderrama are considered quite large. This reason seems to arise from a large 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 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 served by public facilities is calculated using Tables 4.1.6 (a) and 4.1.6 (b) as a balance between total population served by Level I facilities and population covered by private facilities. Thus, it is estimated that 109,000 persons or 60% of the population served by Level I facilities is covered by public facilities.

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
							Unserved Percentage (1995)			Unserved Population 1998	
		Number	HH Sise	Level III	Level II	Total	Total No. of HHs	No. of Unserved	%		
Anini-y	Urban	765	5.67				125	25	20	153	612
	Rural	19,376	5.54		950	950	3,238	493	15	2,950	15,476
	Total	20,141	5.55		950	950	3,363	518	15	3,103	16,088
Barbaza	Urban	2,924	5.33	770		770	495	100	20	591	1,563
	Rural	16,251	5.15	2,002		2,002	2,851	570	20	3,249	11,000
	Total	19,175	5.17	2,772		2,772	3,346	670	20	3,840	12,563
Belison	Urban	4,809	5.30				841	5	1	29	4,780
	Rural	7,252	5.01		650	650	1,342	43	3	232	6,370
	Total	12,061	5.12		650	650	2,183	48	2	261	11,150
Bugasong	Urban	7,034	5.12	4,866		4,866	1,286	130	10	711	1,457
	Rural	21,527	5.09	4,078	2,375	6,453	3,960	792	20	4,305	10,769
	Total	28,561	5.09	8,944	2,375	11,319	5,246	922	18	5,016	12,226
Caluya	Urban	5,540	5.30				997	30	3	167	5,373
	Rural	12,372	5.31				2,224	258	12	1,435	10,937
	Total	17,912	5.31				3,221	288	9	1,602	16,310
Culasi	Urban	5,444	5.06	4,455		4,455	1,045	101	10	989	
	Rural	25,903	5.03	2,174	1,200	3,374	5,004	873	17	4,519	18,010
	Total	31,347	5.03	6,629	1,200	7,829	6,049	974	16	5,508	18,010
Hamtic	Urban	4,181	5.09	1,575	200	1,775	785	156	20	2,406	
	Rural	33,674	5.21	617	2,125	2,742	6,177	1,235	20	6,733	24,199
	Total	37,855	5.19	2,192	2,325	4,517	6,962	1,391	20	9,139	24,199
Laua-an	Urban	3,775	5.04				712	128	18	679	3,096
	Rural	18,391	4.83		3,775	3,775	3,617	723	20	3,676	10,940
	Total	22,166	4.87		3,775	3,775	4,329	851	20	4,355	14,036
Libertad	Urban	2,218	5.27				371	55	15	329	1,889
	Rural	12,831	5.51		1,975	1,975	2,054	411	20	2,567	8,289
	Total	15,049	5.47		1,975	1,975	2,425	466	19	2,896	10,178
Pandan	Urban	3,126	4.86	2,883		2,883	617	64	10	243	
	Rural	22,925	4.98	21,160	875	22,035	4,412	542	12	890	
	Total	26,051	4.97	24,043	875	24,918	5,029	606	12	1,133	

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
							Unserved Percentage (1995)			Unserved Population 1998	
		Number	HH Sise	Level III	Level II	Total	Total No. of HHs	No. of Unserved	%		
Patnongon	Urban	4,739	5.05	1,835		1,835	889	119	13	634	2,270
	Rural	26,145	4.93	165	4,450	4,615	5,020	1,004	20	5,229	16,301
	Total	30,884	4.95	2,000	4,450	6,450	5,909	1,123	19	5,863	18,571
San Jose de Buenavista (Capital)	Urban	41,483	5.16	9,960	150	10,110	7,619	4	0	22	31,351
	Rural	3,818	4.90		150	150	738	30	4	155	3,513
	Total	45,301	5.14	9,960	300	10,260	8,357	34	0	177	34,864
San Remigio	Urban	1,236	4.81				245	49	20	247	989
	Rural	22,744	5.33		2,450	2,450	4,072	814	20	4,547	15,747
	Total	23,980	5.30		2,450	2,450	4,317	863	20	4,794	16,736
Sebaste	Urban	10,311	5.02	2,885	800	3,685	2,035	25	1	127	6,499
	Rural	2,251	5.11		75	75	436	87	20	449	1,727
	Total	12,562	5.03	2,885	875	3,760	2,471	112	5	576	8,226
Sibalom	Urban	8,354	5.29	4,614	75	4,689	1,484	158	11	889	2,776
	Rural	40,776	5.18	486	3,000	3,486	7,398	1,355	18	7,468	29,822
	Total	49,130	5.20	5,100	3,075	8,175	8,882	1,513	17	8,358	32,597
Tibiao	Urban	4,584	4.67	1,228		1,228	982	93	9	434	2,922
	Rural	15,044	4.89	1,318	2,650	3,968	3,075	615	20	3,009	8,067
	Total	19,628	4.84	2,546	2,650	5,196	4,057	708	17	3,443	10,989
Tobias Fornier	Urban	4,407	5.34	3,683	150	3,833	806	113	14	574	
	Rural	22,364	5.02	394	3,950	4,344	4,353	871	20	4,475	13,545
	Total	26,771	5.07	4,077	4,100	8,177	5,159	984	19	5,049	13,545
Valderrama	Urban	3,561	5.00				667	139	21	742	2,819
	Rural	12,917	5.06				2,393	479	20	2,586	10,331
	Total	16,478	5.04				3,060	618	20	3,328	13,150
Provincial Total	Urban	118,491	5.12	38,754	1,375	40,129	22,001	1,494	7	9,965	68,397
	Rural	336,561	5.11	32,394	30,650	63,044	62,364	11,195	18	58,475	215,042
	Total	455,052	5.12	71,148	32,025	103,173	84,365	12,689	15	68,440	283,439

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
Anini-y	Urban	612	12	5	17	29	14	43	15	7	22	83	39	122
	Rural	15,476	166	76	242	186	107	293	93	54	147	526	304	831
	Total	16,088	177	82	259	215	121	336	107	61	168	609	343	953
Barbaza	Urban	1,563	29	13	42									
	Rural	11,000	59	20	79	156	73	229	78	37	115	415	195	611
	Total	12,563	88	33	121	156	73	229	78	37	115	415	195	611
Belison	Urban	4,780	98	42	140	306	144	450	153	72	225	810	381	1,192
	Rural	6,370	63	29	92	211	100	311	106	50	156	560	264	824
	Total	11,150	161	71	232	517	244	761	259	122	381	1,371	645	2,016
Bugasong	Urban	1,457	4	2	6									
	Rural	10,769	25	10	35	320	151	471	160	75	236	820	386	1,205
	Total	12,226	29	12	41	320	151	471	160	75	236	820	386	1,205
Caluya	Urban	5,373	2	1	3	25		25	13		13	66		66
	Rural	10,937	11	1	12	60	31	91	30	16	46	158	83	241
	Total	16,310	13	2	15	85	31	116	42	16	58	224	83	308
Culasi	Urban													
	Rural	18,010	122	53	175	631	299	930	316	149	465	1,596	756	2,352
	Total	18,010	122	53	175	631	299	930	316	149	465	1,596	756	2,352
Hamtic	Urban													
	Rural	24,199	227	93	320	435	205	640	218	102	320	1,107	521	1,629
	Total	24,199	227	93	320	435	205	640	218	102	320	1,107	521	1,629
Laua-an	Urban	3,096	102	3	105	3	1	4	2	0	2	8	2	10
	Rural	10,940	101	8	109	1,605	755	2,360	803	377	1,180	4,045	1,902	5,946
	Total	14,036	203	11	214	1,609	755	2,364	804	378	1,182	4,053	1,903	5,956
Libertad	Urban	1,889	5	3	8	158	74	232	79	37	116	416	196	612
	Rural	8,289	75	32	107	146	68	214	73	34	107	384	181	564
	Total	10,178	80	35	115	303	143	446	152	71	223	799	376	1,176
Pandan	Urban		7	3	10	100	47	147	50	24	74			
	Rural		91	42	133	367	183	550	183	92	275			
	Total		98	45	143	466	231	697	233	115	349			

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

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
Patnongon	Urban	2,270	12	4	16	35	16	51	17	8	26	87	41	129
	Rural	16,301	72	32	104	330	151	481	165	75	241	833	380	1,214
	Total	18,571	85	35	120	365	167	532	182	84	266	921	421	1,342
San Jose de Buenavista (Capital)	Urban	31,351	151	67	218	711	342	1,053	355	171	527	1,833	883	2,716
	Rural	3,513	1		1									
	Total	34,864	152	67	219	711	342	1,053	355	171	527	1,833	883	2,716
San Remigio	Urban	989	7		7	10		10	5		5	24		24
	Rural	15,747	8		8	137		137	69		69	330		330
	Total	16,736	15		15	147		147	74		74	354		354
Sebaste	Urban	6,499	139	66	205	324	152	476	162	76	238	812	382	1,194
	Rural	1,727	24	11	35	216	102	318	108	51	159	542	255	798
	Total	8,226	164	76	240	540	254	794	270	127	397	1,354	637	1,992
Sibalom	Urban	2,776	10	4	14	322	152	474	161	76	237	852	401	1,253
	Rural	29,822	210	97	307	964	453	1,417	482	227	709	2,547	1,199	3,746
	Total	32,597	219	102	321	1,286	605	1,891	643	303	946	3,399	1,600	4,999
Tibiao	Urban	2,922	24	2	26	8	4	12	4	2	6	19	9	28
	Rural	8,067	196	85	281	949	447	1,396	475	223	698	2,216	1,043	3,258
	Total	10,989	219	88	307	957	451	1,408	479	225	704	2,235	1,052	3,286
Tobias Fornier	Urban		14	5	19	12	6	18	6	3	9			
	Rural	13,545	50	17	67	283	167	450	141	84	225	756	446	1,202
	Total	13,545	64	22	86	295	173	468	148	86	234	756	446	1,202
Valderrama	Urban	2,819	6	2	8	95	45	140	48	22	70	238	112	350
	Rural	10,331	6	1	7	50	25	75	25	13	38	124	63	188
	Total	13,150	12	3	15	145	70	215	72	35	108	362	175	538
Provincial Total	Urban	68,397	623	221	844	2,138	997	3,135	1,069	498	1,568	5,250	2,446	7,696
	Rural	215,042	1,506	608	2,114	7,045	3,318	10,363	3,523	1,659	5,182	16,959	7,978	24,937
	Total	283,439	2,129	829	2,958	9,183	4,315	13,498	4,592	2,157	6,749	22,209	10,425	32,633

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		Pop.	%	Pop.	%	Pop.	%
Anini-y	Urban	416	74	490	73	13	86	2	499	65	113	15	612	80
	Rural	10,304	4,341	14,645	1,859	783	2,642	7	10,830	56	4,646	24	15,476	80
	Total	10,720	4,415	15,135	1,932	796	2,728	6	11,329	56	4,759	24	16,088	80
Barbaza	Urban	1,087	476	1,563	204	89	293	7	1,087	37	476	16	1,563	53
	Rural	7,771	2,618	10,389	1,510	509	2,019	10	8,186	50	2,814	17	11,000	68
	Total	8,858	3,095	11,953	1,714	598	2,312	10	9,273	48	3,290	17	12,563	66
Belison	Urban	3,293	296	3,589	622	56	677	2	4,103	85	677	14	4,780	99
	Rural	4,331	1,215	5,546	865	243	1,108	4	4,891	67	1,478	20	6,370	88
	Total	7,624	1,510	9,134	1,487	298	1,785	3	8,995	75	2,155	18	11,150	92
Bugasong	Urban	991	466	1,457	194	91	285	47	991	14	466	7	1,457	21
	Rural	7,374	2,190	9,563	1,450	431	1,880	7	8,193	38	2,575	12	10,769	50
	Total	8,364	2,656	11,020	1,643	522	2,165	8	9,184	32	3,042	11	12,226	43
Caluya	Urban	5,041	266	5,307	950	50	1,000	65	5,107	92	266	5	5,373	97
	Rural	7,703	2,992	10,695	1,450	563	2,014	35	7,861	64	3,075	25	10,937	88
	Total	12,744	3,259	16,002	2,401	614	3,014	41	12,968	72	3,342	19	16,310	91
Culasi	Urban													
	Rural	12,308	3,351	15,658	2,449	667	3,116	5	13,903	54	4,107	16	18,010	70
	Total	12,308	3,351	15,658	2,449	667	3,116	5	13,903	44	4,107	13	18,010	57
Hamtic	Urban													
	Rural	16,829	5,742	22,571	3,231	1,102	4,334	7	17,937	53	6,263	19	24,199	72
	Total	16,829	5,742	22,571	3,231	1,102	4,334	7	17,937	47	6,263	17	24,199	64
Laua-an	Urban	3,000	86	3,086	595	17	612	6	3,009	80	88	2	3,096	82
	Rural	4,993		4,993	1,033		1,033	1	9,038	49	1,902	10	10,940	59
	Total	7,994	86	8,080	1,629	17	1,646	1	12,047	54	1,989	9	14,036	63
Libertad	Urban	1,278		1,278	242		242	2	1,693	76	196	9	1,889	85
	Rural	5,723	2,001	7,724	1,039	363	1,402	7	6,107	48	2,182	17	8,289	65
	Total	7,001	2,001	9,002	1,281	363	1,644	5	7,800	52	2,378	16	10,178	68
Pandan	Urban													
	Rural													
	Total													

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

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		Pop.	%	Pop.	%	Pop.	%
Patnongon	Urban	1,631	510	2,141	323	101	424	10	1,718	36	551	12	2,270	48
	Rural	11,236	3,851	15,087	2,279	781	3,060	9	12,069	46	4,232	16	16,301	62
	Total	12,867	4,361	17,228	2,602	882	3,485	9	13,788	45	4,783	15	18,571	60
San Jose de Buenavista (Capital)	Urban	21,312	7,323	28,635	4,131	1,419	5,550	7	23,145	56	8,206	20	31,351	76
	Rural	3,513		3,513	717		717	717	3,513	92			3,513	92
	Total	24,825	7,323	32,148	4,847	1,419	6,267	8	26,658	59	8,206	18	34,864	77
San Remigio	Urban	965		965	200		200	17	989	80			989	80
	Rural	15,418		15,418	2,894		2,894	38	15,747	69			15,747	69
	Total	16,383		16,383	3,095		3,095	35	16,736	70			16,736	70
Sebaste	Urban	4,420	886	5,305	881	177	1,058	2	5,231	51	1,268	12	6,499	63
	Rural	929		929	182		182	1	1,472	65	255	11	1,727	77
	Total	5,349	886	6,235	1,063	177	1,239	2	6,703	53	1,523	12	8,226	65
Sibalom	Urban	1,523		1,523	288		288	1	2,375	28	401	5	2,776	33
	Rural	20,305	5,771	26,076	3,922	1,115	5,037	5	22,852	56	6,970	17	29,822	73
	Total	21,827	5,771	27,598	4,210	1,115	5,325	4	25,226	51	7,371	15	32,597	66
Tibiao	Urban	2,542	352	2,894	545	75	620	19	2,561	56	361	8	2,922	64
	Rural	4,809		4,809	983		983	1	7,025	47	1,043	7	8,067	54
	Total	7,351	352	7,703	1,528	75	1,603	2	9,586	49	1,403	7	10,989	56
Tobias Fornier	Urban													
	Rural	8,895	3,448	12,343	1,772	687	2,459	8	9,651	43	3,894	17	13,545	61
	Total	8,895	3,448	12,343	1,772	687	2,459	8	9,651	36	3,894	15	13,545	51
Valderrama	Urban	1,940	529	2,469	388	106	494	6	2,178	61	641	18	2,819	79
	Rural	7,090	3,054	10,144	1,402	604	2,006	45	7,214	56	3,117	24	10,331	80
	Total	9,030	3,582	12,613	1,790	710	2,500	20	9,392	57	3,758	23	13,150	80
Provincial Total	Urban	49,436	11,264	60,701	9,636	2,195	11,831	5	54,686	46	13,711	12	68,397	58
	Rural	149,531	40,574	190,105	29,038	7,848	36,886	5	166,490	49	48,552	14	215,042	64
	Total	198,968	51,838	250,806	38,674	10,043	48,717	5	221,176	49	62,263	14	283,439	62

4.2 Sanitation and Sewerage

4.2.2 Types of Facilities and Definition of Service Level Standard

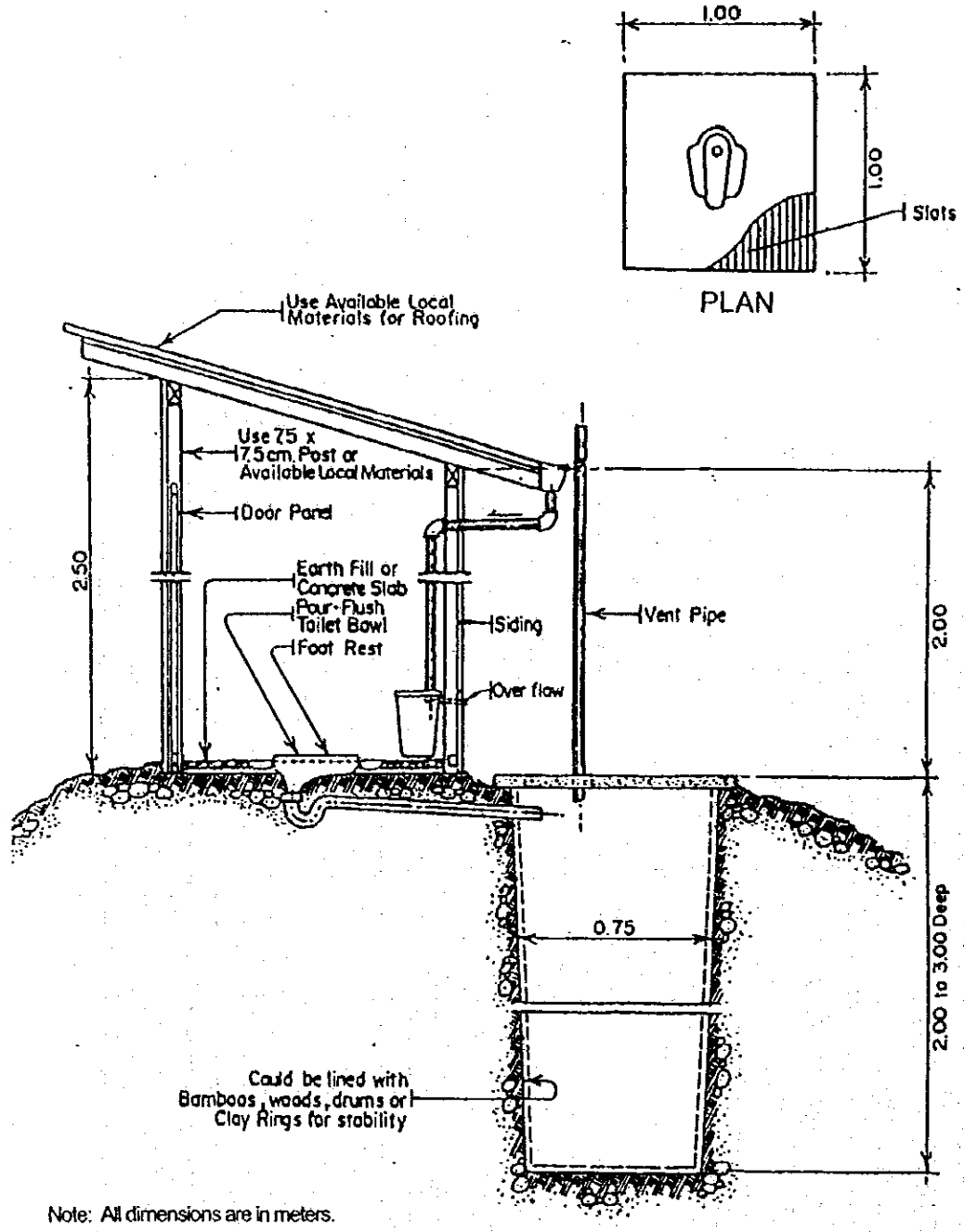
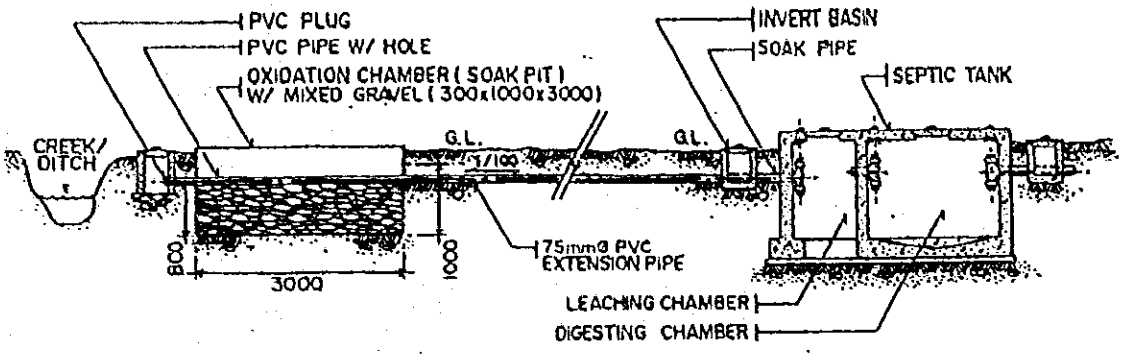


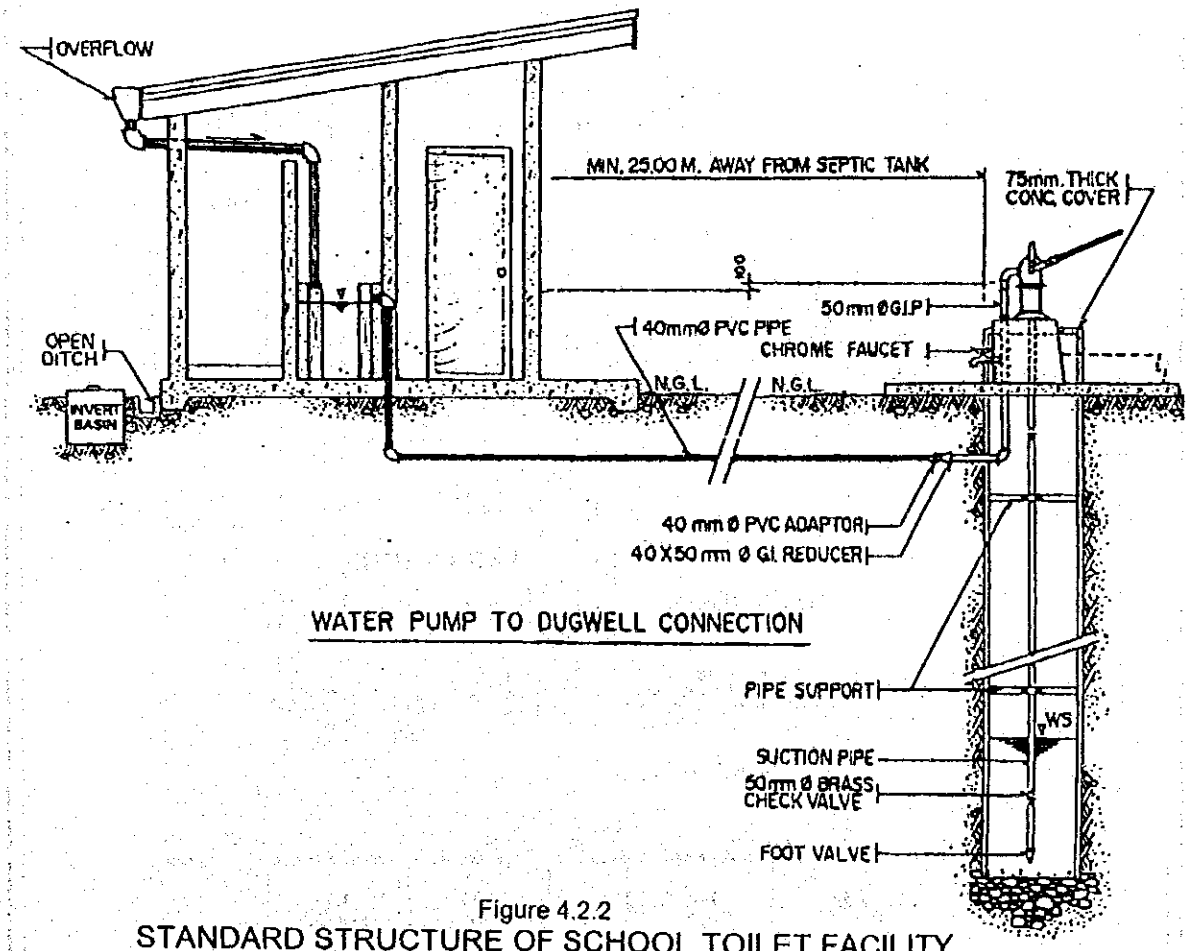
FIGURE 4.2.1

STANDARD STRUCTURE OF PRIVATE TOILET FACILITY

Source: Department of Health



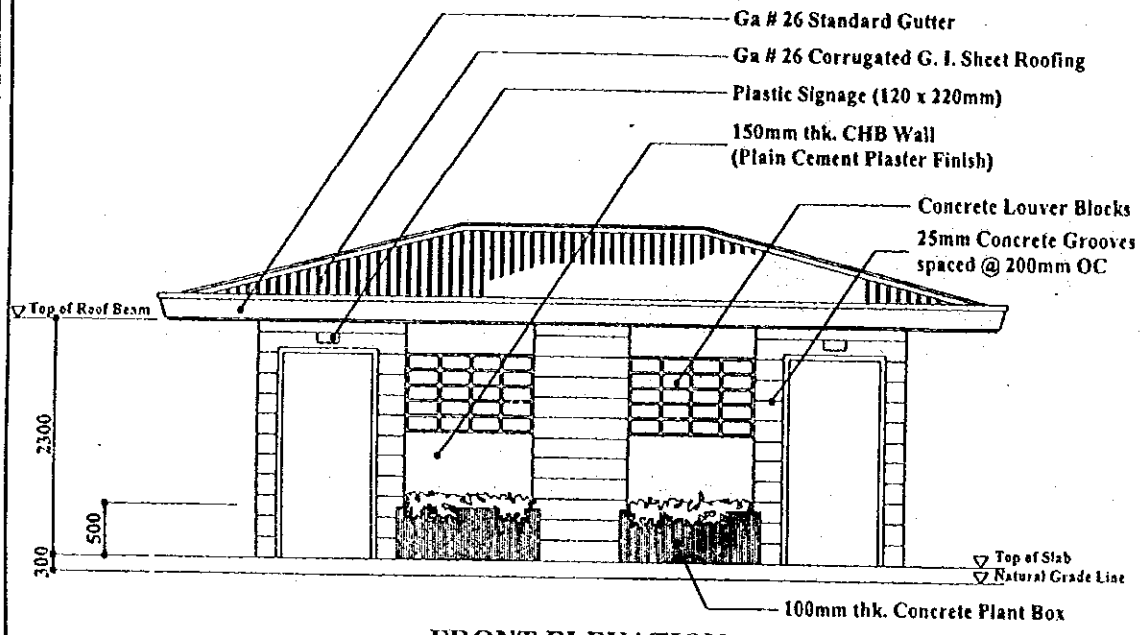
LAYOUT PLAN OF HIGH GROUND WATER SITE



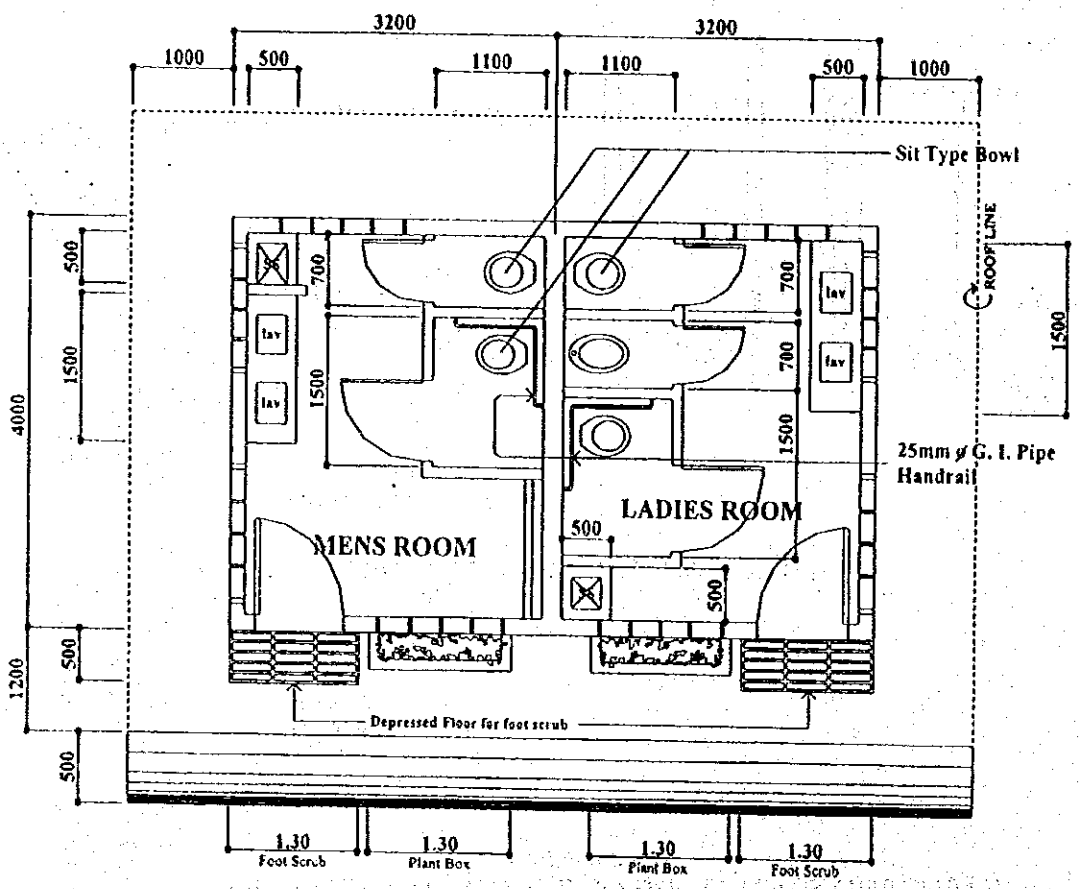
WATER PUMP TO DUGWELL CONNECTION

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. 2.3 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 Municipalities	Area	No. of Households (1998)	Households Served by Sanitary Toilets								Underserved/Unserved HHs			
			Flush Toilet		Pour Flush		VIP		Total		Unsanitary		No Facility	
			Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Anini-y	Urban	135	10	7	102	76			112	83	4	3	19	14
	Rural	3,496	14	0	2,343	67	225	6	2,582	74	278	8	636	18
	Total	3,630	24	1	2,445	67	225	6	2,694	74	282	8	655	18
Barbaza	Urban	548	39	7	401	73	42	8	482	88	3	1	63	11
	Rural	3,158	65	2	1,811	57	236	7	2,112	67	490	16	556	18
	Total	3,706	104	3	2,212	60	278	8	2,594	70	493	13	619	17
Belison	Urban	908	10	1	677	75	115	13	802	88	15	2	91	10
	Rural	1,448	11	1	914	63	305	21	1,230	85	121	8	97	7
	Total	2,356	21	1	1,591	68	420	18	2,032	86	136	6	188	8
Bugasong	Urban	1,375	28	2	474	34	408	30	910	66	409	30	56	4
	Rural	4,233	110	3	1,632	39	586	14	2,328	55	954	23	951	22
	Total	5,607	138	2	2,106	38	994	18	3,238	58	1,363	24	1,007	18
Caluya	Urban	1,044	104	10	618	59	3	0	725	69	4	0	315	30
	Rural	2,329			1,332	57	23	1	1,355	58	756	32	218	9
	Total	3,374	104	3	1,950	58	26	1	2,080	62	760	23	533	16
Culasi	Urban	1,076			812	75	60	6	872	81	15	1	189	18
	Rural	5,155	314	6	1,715	33	548	11	2,577	50	257	5	2,321	45
	Total	6,231	314	5	2,527	41	608	10	3,449	55	272	4	2,510	40
Hamtic	Urban	822	73	9	586	71	23	3	682	83	28	3	112	14
	Rural	6,465	49	1	3,720	58	688	11	4,457	69	890	14	1,118	17
	Total	7,287	122	2	4,306	59	711	10	5,139	71	918	13	1,230	17
Laua-an	Urban	749	5	1	371	50			376	50	85	11	288	38
	Rural	3,805	2	0	1,896	50	918	24	2,816	74	307	8	682	18
	Total	4,554	7	0	2,267	50	918	20	3,192	70	392	9	970	21
Libertad	Urban	421	9	2	336	80			345	82	6	1	70	17
	Rural	2,329	4	0	849	36	748	32	1,601	69	120	5	608	26
	Total	2,749	13	0	1,185	43	748	27	1,946	71	126	5	678	25
Pandan	Urban	644	112	17	364	57	32	5	508	79	28	4	108	17
	Rural	4,601	256	6	3,206	70	214	5	3,676	80	326	7	599	13
	Total	5,245	368	7	3,570	68	246	5	4,184	80	354	7	707	13
Patnongon	Urban	939	25	3	792	84			817	87	6	1	116	12
	Rural	5,303	94	2	3,311	62	821	15	4,226	80	309	6	768	14
	Total	6,242	119	2	4,103	66	821	13	5,043	81	315	5	884	14
San Jose de Buenavista (Capital)	Urban	8,040	819	10	5,233	65	553	7	6,605	82	380	5	1,055	13
	Rural	779	220	28	418	54	85	11	723	93			56	7
	Total	8,819	1,039	12	5,651	64	638	7	7,328	83	380	4	1,111	13
San Remigio	Urban	257			145	56	20	8	165	64	25	10	67	26
	Rural	4,270	243	6	1,635	38	456	11	2,334	55	880	21	1,056	25
	Total	4,527	243	5	1,780	39	476	11	2,499	55	905	20	1,123	25
Sebaste	Urban	2,055	25	1	1,700	83	20	1	1,745	85			310	15
	Rural	440			194	44	138	31	332	75	22	5	86	20
	Total	2,496	25	1	1,894	76	158	6	2,077	83	22	1	396	16
Sibalom	Urban	1,580	16	1	1,213	77	168	11	1,397	88			183	12
	Rural	7,877	13	0	4,799	61	1,570	20	6,382	81	331	4	1,164	15
	Total	9,457	29	0	6,012	64	1,738	18	7,779	82	331	4	1,347	14
Tibiao	Urban	982	106	11	645	66	39	4	790	80	20	2	172	18
	Rural	3,075			1,958	64	164	5	2,122	69	56	2	897	29
	Total	4,057	106	3	2,603	64	203	5	2,912	72	76	2	1,069	26
Tobias Fornier	Urban	825	25	3	195	24	288	35	508	62	150	18	167	20
	Rural	4,456	18	0	1,614	36	2,322	52	3,954	89	53	1	449	10
	Total	5,281	43	1	1,809	34	2,610	49	4,462	84	203	4	616	12
Valderrama	Urban	712			539	76			539	76	4	1	169	24
	Rural	2,555			427	17	1,264	49	1,691	66	358	14	506	20
	Total	3,267			966	30	1,264	39	2,230	68	362	11	675	21
Provincial Total	Urban	23,112	1,406	6	15,203	66	1,771	8	18,380	80	1,182	5	3,550	15
	Rural	65,774	1,413	2	33,774	51	11,311	17	46,498	71	6,508	10	12,768	19
	Total	88,886	2,819	3	48,977	55	13,082	15	64,878	73	7,690	9	16,318	18

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
Anini-y	Public	20	3,892	104	5	109
	Private	2	875	14		14
	Total	22	4,767	118	5	123
Barbaza	Public	17	4,095	36	2	38
	Private	1	472	13		13
	Total	18	4,567	49	2	51
Belison	Public	9	2,294	60		60
	Private					
	Total	9	2,294	60		60
Bugasong	Public	23	5,602	98	4	102
	Private	2	437	6		6
	Total	25	6,039	104	4	108
Caluya	Public	17	4,809	36		36
	Private	1	273	4		4
	Total	18	5,082	40		40
Culasi	Public	33	6,888	80	12	92
	Private	1	519	6		6
	Total	34	7,407	86	12	98
Hamtic	Public	37	9,232	120	7	127
	Private					
	Total	37	9,232	120	7	127
Laua-an	Public	27	4,933	54		54
	Private					
	Total	27	4,933	54		54
Libertad	Public	15	3,071	30		30
	Private	1	192	4		4
	Total	16	3,263	34		34
Pandan	Public	36	6,936	68	10	78
	Private	1	612	7		7
	Total	37	7,548	75	10	85
Patnongon	Public	41	15,266	98	30	128
	Private	1	403	5		5
	Total	42	15,669	103	30	133
San Jose de Buenavista (Capital)	Public	24	7,415	166	2	168
	Private	1	386	5		5
	Total	25	7,801	171	2	173
San Remigio	Public	40	6,222	54	56	110
	Private	1	174	6		6
	Total	41	6,396	60	56	116
Sebaste	Public	11	2,737	72	4	76
	Private	1	431	7		7
	Total	12	3,168	79	4	83
Sibalom	Public	52	11,883	212	11	223
	Private	1	139	5		5
	Total	53	12,022	217	11	228
Tibiao	Public	17	4,581	50	5	55
	Private	1	284	5		5
	Total	18	4,865	55	5	60
Tobias Fornier	Public	39	5,338	204	7	211
	Private	1	281	4		4
	Total	40	5,619	208	7	215
Valderrama	Public	22	3,876	14	11	25
	Private	1	235	4		4
	Total	23	4,111	18	11	29
Provincial Total	Public	480	109,070	1,556	166	1,722
	Private	17	5,713	95		95
	Total	497	114,783	1,651	166	1,817

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	
Anini-y	6		6				4		4	10
Barbaza		2	2							2
Belison		2	2							2
Bugasong	2		2							2
Caluya										
Culasi	2		2							2
Hamtic	2		2							2
Laua-an	2		2							2
Libertad		2	2				2		2	4
Pandan	2		2							2
Patnongon	2		2							2
San Jose de Buenavista (Capital)	4		4		2	2				6
San Remigio		2	2							2
Sebaste		2	2							2
Sibalom	2		2							2
Tibiao	2		2							2
Tobias Fornier		2	2							2
Valderrama	2		2							2
Provincial Total	28	12	40		2	2	6		6	48

5. EXISTING SECTOR ARRANGEMENT AND INSTITUTIONAL CAPACITY

5.5 Sector Agencies at the Local Level

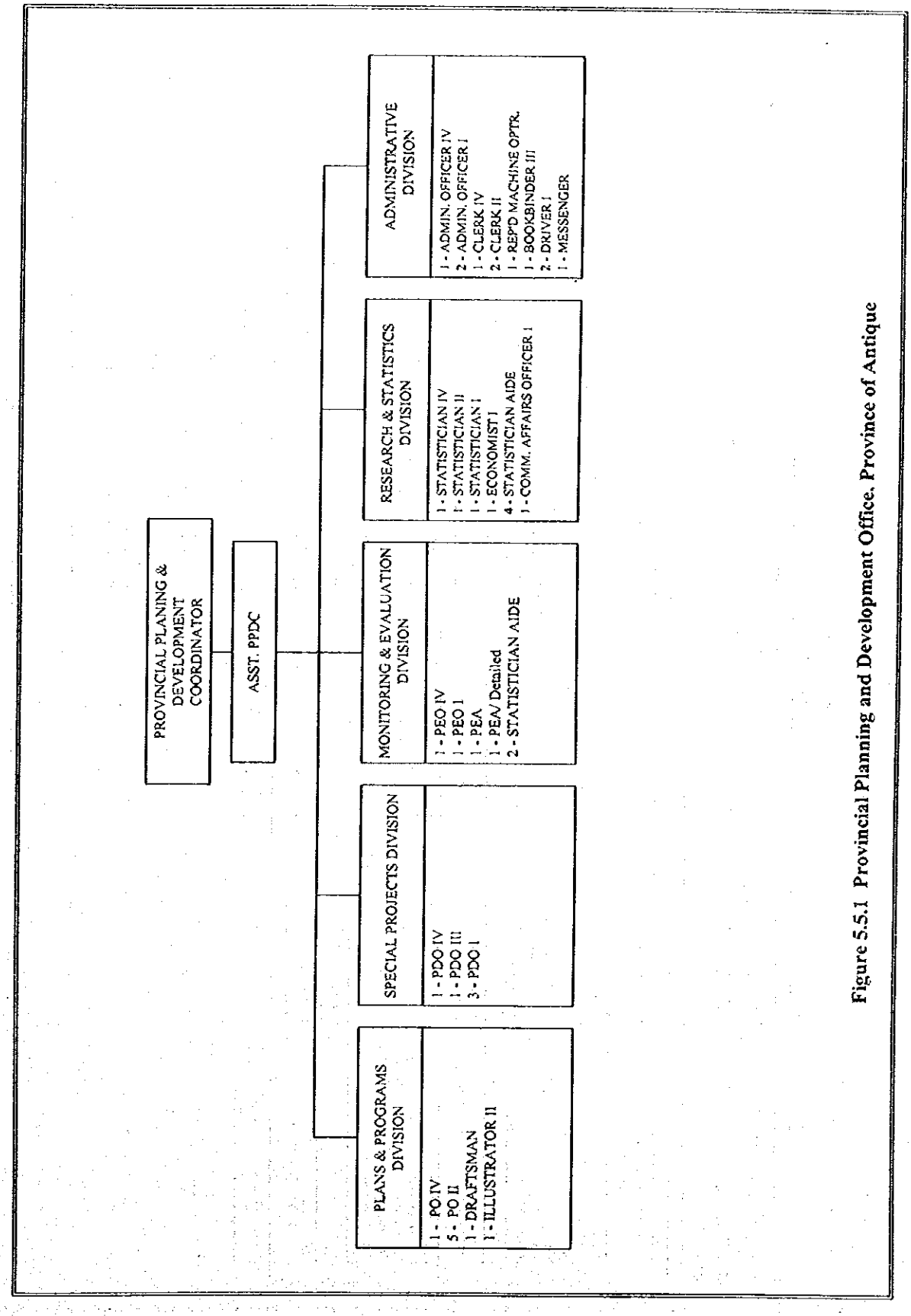


Figure 5.5.1 Provincial Planning and Development Office, Province of Antique

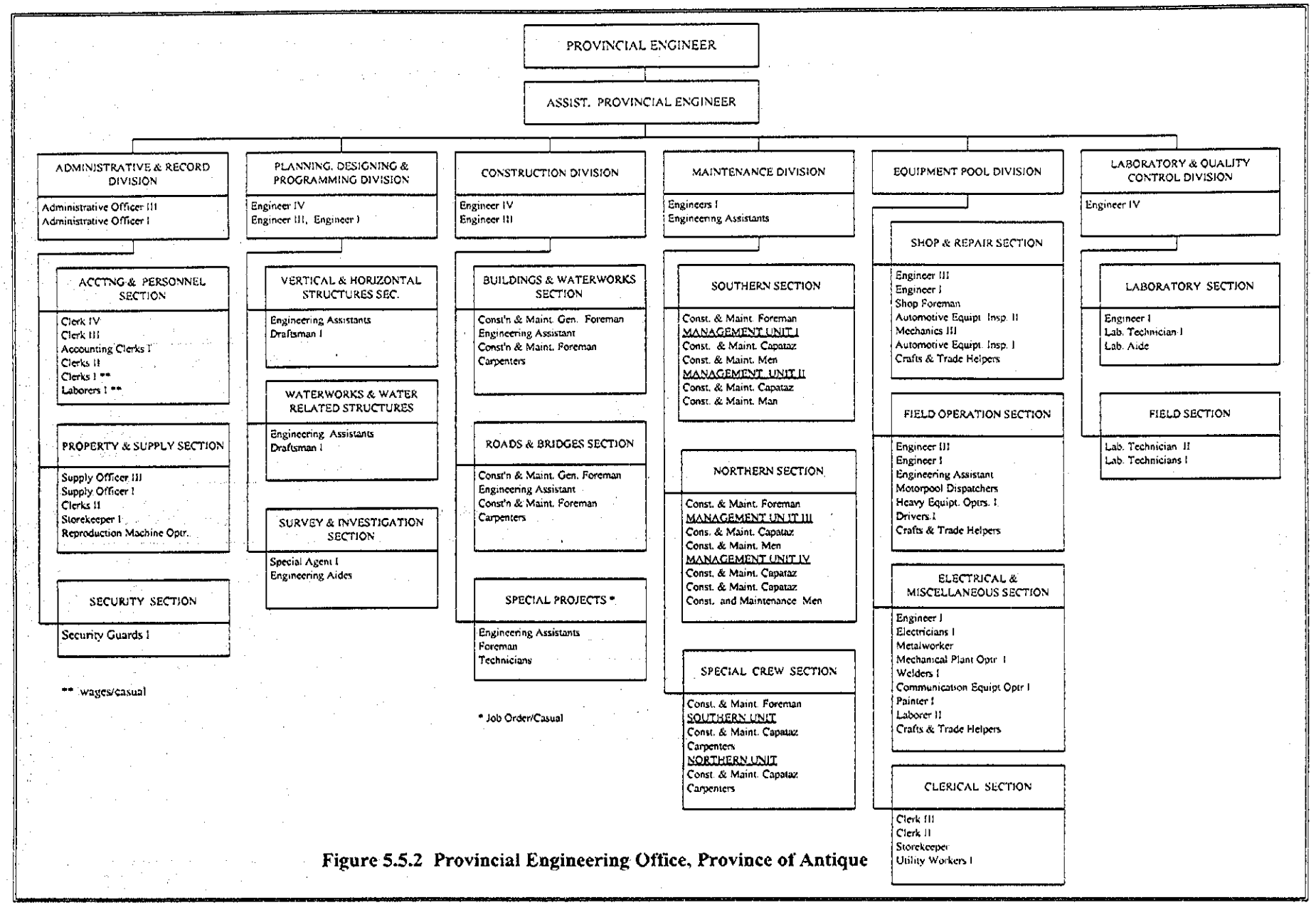


Figure 5.5.2 Provincial Engineering Office, Province of Antique

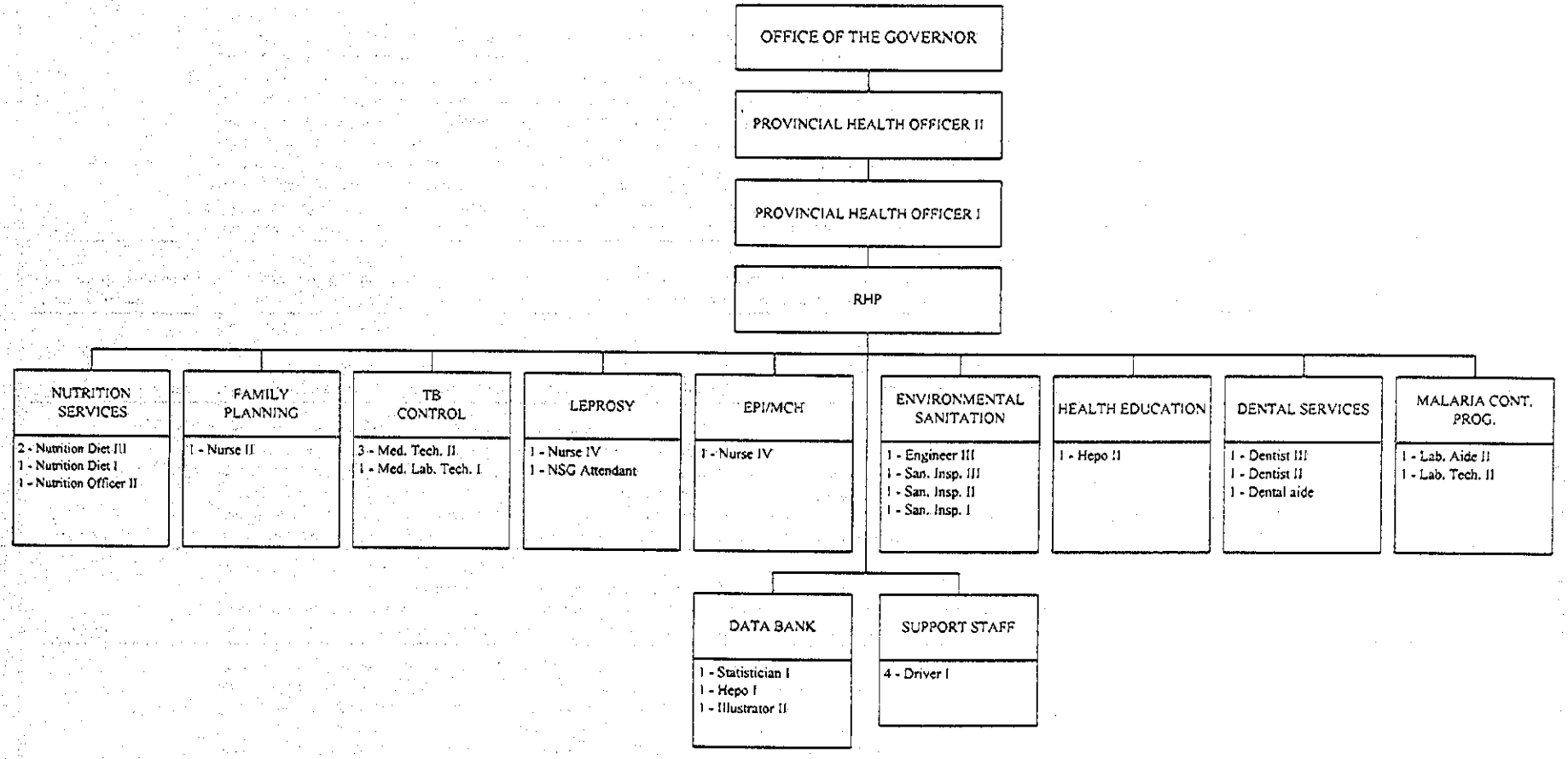


Figure 5.5.3 Provincial Health Office, Province of Antique

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
OECF	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.	Water Supply and Sanitation Project-23rd Yen Package/DILG; 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: sector 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 (drilling, etc.).	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 past-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. Environmental Sanitation Project (DPWH/DOH) for rural water systems development and school toilet facilities construction. With DPWH, rural water supply systems at Pinatubo evacuation centers. PW4SPs (DILG) for 9 (previously done, in Luzon) and 21 provinces in Mindanao/Bisayas.

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. 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).
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; broaden 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. Local Government Units - Urban Water Supply and Sanitation Project (LGU-UWSSP) covering about 250 secondary towns and cities.

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
Provincial Government Offices of Aklan, Antique, Capiz, Iloilo, and Negros Occidental	• 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. • Management is a process requiring input at every level. At the barangay level, facilities are supposed 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. In all levels, management and skills are underdeveloped. • Capacity and/or experiences of the provincial office/s WATSAN concerned are sometimes inadequate for their allotted responsibilities. Strengthening its capability in WATSAN sector is important as the municipal government requires support from the provincial government. • Technical training for O&M of Level I to beneficiaries has not been provided since 1980. Likewise, as for Level II system, technical training to the municipalities has not yet been provided. The trainer's training for provincial staff shall be firstly provided.	• 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	• 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 coursed 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	• 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 thrice, 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 grassroot 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

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

Areas	Institutional	Technical	Financial	Community Development
	• Monitoring activities are quite limited to specific projects in terms of physical performance. Project funded solely by municipalities and/or barangay are not reported to the province, thus the province is not able to illustrate the complete sector condition. No sector monitoring has been conducted. It is necessary to conduct periodically the sector monitoring for developing the sector properly. • PHO undertakes water quality surveillance thru RHU, however, the capacity of provincial laboratories are very limited in terms of equipment and number of staff. • There are few BWSA undertaking Level I O&M, and beneficiaries still reply on LGUs even for a simple replacement of parts. In case of major repair of Level II, BC collects money for repair work. Considering current situation of beneficiaries, LGUs shall lead them to recognize the need of formation of association and participation for sound O&M of the facilities.	level • Toilets in schools are not used because there is no water. FW4SP design has to be redesign.	• 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.	preparation by requiring beneficiaries to put up its equity contribution through certain amount of money or labor. Until now, the system is still functioning. • 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	• 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 are directly extended 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. • Project monitoring and evaluation system in regional level is a requisite including information on infrastructure status and investment.			
3. DILG Regional Offices	• 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			• 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 Offices/Agencies involved in WATSAN project

Offices/Agencies	Nature of Involvement
Provincial Planning & Development Office	• Incorporates WATSAN proposed projects in the provincial plan
Provincial Engineering Office	• Assists in the construction, operation and maintenance of the WATSAN facilities
Provincial Health Office	• Conducts water quality examination (thru MHO) • Provide toilet facilities
Barangay/Municipal governments (thru MPDO)	• Identifies projects • Provides counterpart support
Water Districts	• Provides water supply coverage in urban areas
Provincial General Services Office	• Responsible in procurement of materials
Provincial Accounting, Budget, Treasury Offices	• Undertakes administrative works in budgeting and funds releasing
Sangguniang Panlalawigan	• Approves projects implementation and appropriates funds (Provincial level)
Provincial Development Council	• Initiates a comprehensive multi-sectoral plan of the province
NGOs	• Provides consultancy services especially in CO/CD works
DILG, Provincial Director's Office	• Conducts/assists training especially on topics related to human resource development
DPWH, District Engineering Offices	• Provides technical assistance

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 par-

ticular 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 ANTIQUE

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 Antique. 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 Maybato North and Barangay 8 in San Jose de Buenavista and Poblacion, Anini-y.

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 provincial government. 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 private sector 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 financial 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 at 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 share may come in the form of free labor, donations in kind or in cash, or in 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 ranged from P 2,000 to P 6,000. The list of economic activities in the three barangays shows the following: livestock raising (poultry and piggery), fish vending, vegetable gardening, and tending to sari-sari-stores, for which the people earn an average of P 1,500 per month. 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, and skin diseases. This condition could also be traced to lack a sanitary 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 were willing to participate in sector projects and in the operation and maintenance of WATSAN facilities. All of the respondents indicated that the barangay council is also 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

Two of the three barangays surveyed have a BWSA organized in their communities although each BWSA had few members. These BWSAs have also their respective sets of officers.

2. Status of NGOs/CBOs/POs

Majority of the informants reported having NGOs/CBOs that do work in their communities. The area of concern of these NGOs is mostly lending (credit cooperative).

E. O&M Practices by Beneficiaries

1. Facility Conditions

Surface water is the predominant source of water in the three barangays surveyed. Water facilities that were constructed in the barangay were mostly springs that were developed in 1971. Almost all of the systems/facilities are still functional but occasionally have problems. All of the respondents indicated that the water is safe for drinking.

2. Common Difficulties and O&M Problems Encountered

Common problems cited by the respondents is the lack of funds for maintenance work. This can be attributed to the fact that majority of the members/beneficiaries do not pay for their water supply.

F. Water Charges Adopted and Collection Efficiency

1. Sufficiency of Collected Charges for O&M

As indicated by the respondents, the beneficiaries do not pay for the operation and maintenance of their WATSAN facilities.

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

Nobody was responsible for collecting the fees, according to the respondents from three barangays.

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

1. Government Subsidies Requested by End Users

Not all three barangays had received technical and financial assistance from the provincial and municipal governments. Barangay Maybato got a technical support for the provincial and municipal government which consisted mainly of the construction of shallow wells. It was also included in the project "Participatory Coastal Revenue Appraisal with Gender." The municipality, meanwhile, assisted Barangay Maybato to organize its BWSA. Barangay Poblacion and Barangay 8 both participated in capability-building seminars sponsored by the provincial and municipal government.

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 27. Of this number, 12 were males and 15 females. Two out of the three barangay captains are male.

C. Gender in the Composition of the BWSA

Only one of the barangay surveyed had functional BWSA. This BWSA had an active set of officers who met once a month.. Female outnumbered male in the BWSA membershi..

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

Majority of the key informants indicated that women actively participate in the O&M of the water facilities. Aside from assisting in the O&M, the women also act as treasurer, clean the facilities' surroundings and sometimes do manual labor.

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 (ANTIQUE)

A. General

Group interviews were conducted in two selected barangays representing two municipalities in the province of Antique. 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 20 and a maximum of 20 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: Supa (San Jose) and Magdalena (Anini-y).

B. Demographic Profile

(1) Population

The aggregate population in the two barangays was 3,368 broken down as follows: Supa (San Jose), 1,108; and Magdalena (Anini-y), 2,260.

(2) Households

As indicated by the respondents, there were 604 households in the two barangays, that is, Supa (San Jose), 204; and Magdalena (Anini-y), 400.

The figure represents an average of six (6) members per household.

TABLE 1: TOTAL POPULATION OF BARANGAYS AND NUMBER OF HOUSEHOLDS

BARANGAY (MUNICIPALITY)	M	F	T	NO. OF HH
1. Supa (San Jose)	547	561	1,108	204
2. Magdalena (Anini-y)	1,069	1,191	2,260	400
TOTAL	1,616	1,752	3,368	604

(3) Composition of Barangay Councils

There were 19 barangay council members in all two barangays. Of the barangay council members, 9 (47%) were males and 10 (53%) were females. The barangay captains in Brgy. Supa were male and in Brgy. Magdalena, barangay captains were female.

C. Respondents' Profile

(1) Number and Gender of Respondents

There were 40 respondents in the group interviews. Of this number, 20 (50%) were males and 20 (50%) 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. Supa (San Jose)	10	10	20
2. Magdalena (Anini-y)	10	10	20
TOTAL	20	20	40

(2) Age Bracket

A total of 19 respondents (9 males, 100 females) was within the 26 to 45 age bracket; 12 respondents (4 males, 8 females) constituted the 46 to 60 age bracket; four respondents (2 males, 2 females) were under 25 and below age bracket; while five respondents (1 male, 4 females) belonged to 61 and above age bracket.

TABLE 3: AGES OF THE RESPONDENTS

AGE BRACKET	M	F	T	%
25 and Below	2	2	4	10
26-45	9	10	19	47.5
46-60	4	8	12	301
61 and above	5	-	5	12.5
TOTAL	20	20	40	100

(3) Level of Education

About 32 % of the respondents (5 males, 8 females) completed elementary education; while 40% (9 males, 7 females) graduated from high school. Only four female respondents were able to complete college. Seven interviewees pursued vocational courses.

TABLE 4: RESPONDENTS' LEVEL OF EDUCATION

EDUCATION LEVEL	M	F	T	%
1. Elementary Level	-	-	-	-
2. Elementary Graduate	5	8	13	32.5
3. High School Level	-	-	-	-
4. High School Graduate	9	7	16	40
5. College Level	-	-	-	-
6. College Graduate	-	4	4	10
7. Vocational	6	1	7	17.5
8. Post Graduate	-	-	-	-
TOTAL	20	20	40	100

(4) Occupation

At the time of the interview, the majority of the respondents (11 males, 6 females) was engaged in either farming or fishing; 2 female respondents were laborers; one male respondent was a service worker; and four respondents (2 males, 2 females) were engaged in business. No one listed as a professional; and one female respondent as an employee. Fifteen other respondents had other occupations, like eleven female respondents as housekeeper, one male respondent as carpenter, and three others were government official.

TABLE 5: OCCUPATION OF RESPONDENTS

OCCUPATION	M	F	T	%
1. Farmer/Fisherfolk	11	6	17	42.5
2. Laborer	2	-	2	5
3. Service Worker	1	-	1	2.5
4. Businessman/woman	2	2	4	10
5. Professional	-	-	-	-
6. Office Worker	-	1	1	2.5
7. Tech. Equipment Operator	-	-	-	-
8. Others	4	11	15	37.5
TOTAL	20	20	40	100

D. Socio Economic Profile

(1) Level of Education of Household Members

An almost equal number of the respondents' household members graduated from the elementary and high school levels. Of the household members who moved on to college, 15 males and 10 females were able to complete a college degree.

TABLE 6: LEVEL OF EDUCATION OF HH MEMBERS

EDUCATIONAL LEVEL	EDUCATED HOUSEHOLD MEMBERS			
	Male Respondents		Female Respondents	
	M	F	M	F
1. Elementary Level	-	-	-	-
2. Elementary Graduate	9	5	8	13
3. High School Level	-	-	-	-
4. High School Graduate	11	10	6	5
5. College Level	-	-	-	-
6. College Graduate	8	2	1	-
7. Vocational	3	-	4	-
8. Post Graduate	-	-	2	7

(2) Employed Household Members

More male household members were employed compared the females. Twenty of the employed males belonged to the 26 to 45 age bracket; 10 to the 25 and below age bracket and two to the 46 to 60 age bracket. Most of the female household members employed belonged to the 25 and below age bracket. Only four belonged to the age 26 to 45 age bracket.

TABLE 7: EMPLOYED HH MEMBERS

RESPONSE	EMPLOYED HOUSEHOLD MEMBERS			
	Male Respon-dent		Female Respondent	
	M	F	M	F
25 and Below	1	-	-	-
26-45	13	8	8	11
46-60	4	3	7	1
61 and above	2	-	-	-

(3) Occupation of Household Heads and Other Members

Male household members constituted the working group where 32 were employed compared to only eight female household members. The majority of the men was engaged in farming or fishing (18); while the others were laborers (7), professionals (3), and other occupations (4). The women employed were either engaged in farming/fishing (4), business (2), professionals (2), office workers (3), laborer (1) and other occupations (4).

Most of the household members who were gainfully employed earned a monthly income of P 5,000.00 and below. Seven household members (5 males, 2 females) earned P 5,000.00 to P 14,999, while only one household member earned P 15,000 to P 24,999.00

TABLE 8: OCCUPATION OF HH MEMBERS

OCCUPATION	Male Respondents		Male Respondents	
	M	F	M	F
1. Farmer/Fisherfolk	11	1	9	6
2. Laborer	3	6	3	0
3. Service Worker	1	1	4	0
4. Businessman/woman	2	2	1	1
5. Professional	3	2	1	0
6. Office Worker	-	-	1	1
7. Technician	-	-	-	-
8. Others	1	1	3	2

TABLE 9: AVERAGE MONTHLY INCOME OF HH MEMBERS

ITEM	M	F	T	%
Below P 5,000.00	15	17	32	80
P 5,000 to 14,999	5	2	7	17.5
P 15,000 to 24,999	-	1	1	2.5
Above P 25,000	-	-	-	-
TOTAL	20	20	40	100

(4) Average Expenditures of Household

As indicated by an overwhelming majority, the average monthly expenditure of a family was below P 5,000.00. Three respondents reported that the family spent an average of P 5,000.00 to P 14,999.00 a month.

TABLE 10: AVERAGE MONTHLY EXPENSES OF HH MEMBERS

ITEM	M	F	T	%
Below P 5,000	15	18	33	83
P 5,000 to 14,999	5	2	7	17
P 15,000 to 24,999	-	-	-	-
Above P 25,000	-	-	-	-
TOTAL	20	20	40	100

(5) Practices

Source of Drinking Water. Fourteen respondents said that the source of their drinking water was from communal shallow wells; 16 from communal deep well; one from communal faucet; seven from private shallow wells; and two respondents from private deep well. There were 17 respondents who reported to have been getting water from springs (not listed).

TABLE 11: SOURCES OF DRINKING WATER

SOURCES	USER RESPONDENT		T	%
	M	F		
1. Communal Shallow Well	18	16		
2. Communal Deep Well	2	-		
3. Communal Dug Well	-	-		
4. Communal Faucet	1	-		
5. Private Shallow Well	-	2		
6. Private Deep Well	1	-		
7. Piped Water Supply	8	2		
8. Private Dug Well	-	-		
9. Others	-	-		
TOTAL		20	40	100

Responsible for Fetching Water. According to the 22 female respondents, the wife was still the one responsible for fetching water. Only 10 female respondents said that the husband helped. The male child helped in the task, according to 13 female respondents; but for another nine female respondents, the female children also assisted in fetching water from source to home. For 19 male respondents, it was the husband was the one responsible for hauling drinking water for family use, although six of them admitted that the wife assisted in this task. Ten male respondents pointed to their male children in being equally responsible for fetching water, although another four said that the female children also helped out.

TABLE 12: RESPONSIBLE FOR FETCHING DRINKING WATER

FAMILY MEMBER	USER RESPONDENT	
	M	F
1. Husband	12	-
2. Wife	2	18
3. Male Children	3	4
4. Female Children	3	3
5. Others	-	-

Frequency of Fetching Water. Twenty-two respondents indicated that it took once a day to fetch drinking water. For 10 respondents, it took three times a day; for seven, twice a day; and for one female respondent, it took four times a day to haul water for domestic use.

TABLE 13: FREQUENCY OF FETCHING DRINKING WATER

DURATION	RESPONDENTS M	F	T	%
1. Once a Day	14	8	22	55
2. Twice a Day	5	2	7	17.5
3. 3x a Day	1	9	10	25
4. 4x a Day	-	1	1	2.5
5. More than 5x days	-	-	-	-
TOTAL	20	20	40	100

Duration of Fetching Water. Fifteen respondents reply, it took less than one minute for them to fetch water from the source to their homes, five said it took about 10 minutes to fetch water; for 3 female respondents, it took about 20 minutes, for 8 respondents, it took about 30 minutes, while nine replied it took more than 30 minutes.

TABLE 14: DURATION FOR FETCHING DRINKING WATER

DURATION	RESPONDENTS M	F	T	%
1. Less than 5 Minutes	9	6	15	37.5
2. About 10 Minutes	4	1	5	12.5
3. About 20 Minutes	3	-	3	7.5
4. About 30 Minutes	4	4	8	20
5. More Than 30 Minutes	-	9	9	22.5
TOTAL	20	20	40	100

Problems with Source. Majority of the respondents (19 males, 18 females) reported that they have problems with the current water source. Only three respondents said they have not encountered any problem with the current source.

TABLE 15: PROBLEM WITH SOURCE OF WATER

RESPONSE	RESPONDENTS M	F	T	%
1. No Problem	1	2	3	7.5
2. There are problems	19	18	37	92.5
TOTAL	20	20	40	100

E. Institutional

(1) Presence of BWSA

Majority of the respondents, 35, (15 males, 20 females) except for five male respondents, indicated that there was no BWSA in their barangays.

TABLE 16: KNOWLEDGE OF THE EXISTENCE OF BWSA

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	15	20	35	87.5
2. No	5	-	5	12.5
TOTAL	20	20	40	100

(2) Membership to BWSAs

There being no BWSA in their barangay, would mean that all respondents could neither be a member nor be actively involved in the affairs of the BWSA.

TABLE 17: MEMBERSHIP TO THE BWSA

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	10	14	24	60
2. No	10	6	16	40
TOTAL	20	20	40	100

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

RESPONSE	RESPONDENTS		T	%
	M	F		
1. As BWSA Officer	9	4	13	32.5
2. As Collection Officer	-	-	-	-
3. Assist in the repair/maintenance of facilities	1	-	1	2.5
4. Attend/ Facilitate Training	-	-	-	-
5. Not active	7	10	17	42.5
6. BWSA Member	-	-	-	-
7. No Response	3	6	9	22.5
TOTAL	20	20	40	100

(3) Who maintains the facilities of the BWSA?

For thirty respondents it was someone from the barangay who was responsible for maintaining the facilities, while for ten male respondents, someone from BWSA.

TABLE 19: RESPONSIBLE FOR MAINTAINING BWSA FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Someone in the Barangay	10	20	30	75
2. Professional caretaker	-	-	-	-
3. Someone from the BWSA	10	-	10	25
4. No one	-	-	-	-
TOTAL	20	20	40	100

(4) Interested to be a member of BWSA

Twenty-eight respondents indicated interest in becoming a member of BWSA once it will be formed and/or activated in their respective barangays. Eleven respondents did not respond to this question.

TABLE 20: INTEREST OF RESPONDENTS TO JOIN BWSA

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Interested	12	16	28	70
2. Not Interested	1	-	1	2.5
3. No Response	7	4	11	27.5
TOTAL	20	20	40	100

(5) How can respondents become actively involve in BWSA affairs?

Most of the female respondents were willing to contribute cash and labor, be a BWSA officer, collect water fees or do repair and maintenance work as a manifestation of their active involvement with the BWSA. Most of the male respondents wanted to be just a plain member. No female respondents were willing to do repair and maintenance work for the BWSA should this be put up in their communities.

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

RESPONSE	RESPONDENTS	
	M	F
1. Contribute Cash	9	10
2. Contribute labor	9	10
3. Be Officer	5	3
4. Collection of Fees	1	1
5. Do Repair/Maintenance	5	-
6. Just Member	11	7

(6) If not interested, where to get source of water

All the respondents, except for one, showed interest at becoming member of the BWSA.

(7) Responsible for minor repairs of water facilities

Sixty percent of the respondents said it was the male members of the community who were responsible for doing minor repairs on the water supply facilities; while around 37.5 % said the facilities were being cared for by someone in the barangay; while one female respondent said it was a female member of the community who did minor repairs.

TABLE 22: RESPONSIBLE FOR MINOR REPAIRS

SOURCE OF WATER	RESPONDENTS		T	%
	M	F		
1. Female Member	-	1	1	2.5
2. Male Member	11	13	24	60
3. Somebody in the Brgy.	9	6	15	37.5
4. Professional Caretaker	-	-	-	-
5. Owner of the Well	-	-	-	-
6. Uncertain	-	-	-	-
TOTAL	20	20	40	100

F. Training Activities

(1) Training Program attended in 1998

Only 30% of the respondents, 2 males and 10 females, attended training programs for the year 1998, while 70% of the respondents were not able to attend any training program.

TABLE 23: TRAINING ATTENDED BY RESPONDENTS IN 1998

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	2	10	12	30
2 No	18	10	18	70
TOTAL	20	20	40	100

(2) Kinds of Training Program

For respondents who attended various training programs in 1998, Table 24 summarizes the training programs/seminars they had attended.

TABLE 24: TRAINING COURSES ATTENDED BY RESPONDENTS IN 1998

BARANGAY	MALE	FEMALE
1. Supa (San Jose)	Para-Legal management CVD Training Health Training	Values / Leadership Training Livelihood / Business Seminar Herbal Medicine Seminar
2. Magdalena (Anini-y)	No training attended	No training attended

(3) On BWSA Training

Some of the female respondents were not aware of any training program for BWSA members. Only 7 male respondents and 14 female respondents were aware of the care-takers' training, finance and collection, and repair/O&M. However, 16 male respondents were interested in attending any BWSA training for the barangay. Only 17 females were interested, and the rest, or 3, were uncertain.

TABLE 25: AWARENESS ON THE FOLLOWING TRAINING FOR BWSA

TRAINING PROGRAM	YES		NO	
	M	F	M	F
1. Caretaker's Training	7	14	13	6
2. Collection/Finance	7	14	13	6
3. Repair/O&M	7	14	13	6

TABLE 26: WILLINGNESS TO ATTEND BWSA-RELATED TRAINING PROGRAMS

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	17	20	37	92.5
2. No	3	-	3	7.5
TOTAL	20	20	40	100

(4) Training on Health Education

Only eight interviewees, 4 males and 4 females participated in health education and training programs. The rest did not attend. If given a chance, the respondents wanted to attend WATSAN related training programs such as: Project Management, Community Development Training, Technical Training, Livelihood Program, Health related training, and Management and Financial Training.

TABLE 27: PARTICIPATION IN HEALTH EDUCATION AND TRAINING

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	4	4	8	20
2. No	16	16	32	80
TOTAL	20	20	40	100

TABLE 28: TYPES OF TRAINING RESPONDENTS WISH TO ATTEND

BARANGAY	MALE	FEMALE
1. Supa (San Jose)	Project Management Community development Training	Livelihood Program/Training
2. Magdalena (Anini-y)	Technical Training Livelihood Training	Management & Financial Training Livelihood Training Health Education

(5) Desirable Training Period

The respondents were divided on the number of days allotted for training. Seven male respondents wanted more than three days, 12 desired only one day of training. The rest

wanted less than a day (10), two days (8), three days (3). The male respondents, however, opted for either three days or more.

TABLE 29: DESIRABLE TRAINING PERIOD

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Less Than 1 Day	-	10	10	25
2. One (1) Day	7	5	12	30
3. Two (2) Days	3	5	8	20
4. Three (3) Days	3	-	3	8
5. More Than Three Days	7	-	7	18
TOTAL	20	20	40	100

G. Community Development

(1) CBOs and contact person

Majority of the respondents was aware of NGOs working in their communities. Seventeen out of 40 respondents, however, did not know of NGOs or CBOs 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	16	7	23	57.5
2. No	4	13	17	42.5
TOTAL	20	20	40	100

TABLE 31: NGOS/CBOS IN THE BARANGAYS

BARANGAY	AREAS OF CONCERN	CONTACT PERSON
1. Supa (San Jose)	**Male**	
	Catinaran Center	Loreta Delgado
	Multi-Purpose Coop.	Carlos Almine
	Female	
	Katin-Aran Center	Loreta Delgado
	Self-employment Assistance	Jeralyn Bantolo
2. Magdalena (Anini-y)	**Male**	
	Antique Development Foundation	Sonny Mancol

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

All the respondents, except for three females, indicated they were not consulted and/or briefed on their proposed roles and responsibilities on the planning, design and construction of their water supply facilities. This was also true for the operation and maintenance and financing aspects of the system.

TABLE 32: RESPONDENTS CONSULTED IN PAST WATSAN PROJECTS

BWSA ACTIVITIES	YES		NO	
	M	F	M	F
1. Planning & Design	10	6		
2. Construction Facilities	1	8		
3. O&M of the System	4	11		
4. Financing of the System	10	10		

(3) Were the respondents consulted when BWSA was formed?

Since there was no BWSA in the community, then the process of consultations has not been in effect as of the time the interviews were held.

TABLE 33: WERE YOU CONSULTED WHEN:

ACTIVITIES	YES		NO	
	M	F	M	F
1. BWSA was formed in the Brgy.	16	20		
2. Water fee was decided upon	4	10		
3. Level or type of service was agreed upon	3	10		
4. Facilities were constructed	3	10		

(4) How did the respondents participate in past construction projects?

Since there was no BWSA formed, the respondents were uncertain/ not sure of the nature of their participation.

TABLE 34: PARTICIPATION IN PAST CONSTRUCTION PROJECTS

TYPE OF PARTICIPATION	RESPONDENTS		T	%
	M	F		
1. Contributed Cash	1	10	11	27.5
2. Provided labor	14	2	16	40
3. Donated Site	-	-	-	-
4. Provided Materials	-	-	-	-
5. Others	-	6	6	15
6. No Contribution	5	2	7	17.5
TOTAL	20	20	40	100

(5) Will the respondents participate in future projects?

For future projects, the respondents showed varying degrees of willingness to participate and/or contribute for future WATSAN projects. There were twenty female who did not volunteer to participate depending on the activity to be undertaken such as in the formulation of water rates and construction of facilities.

TABLE 35: WILLINGNESS/TYPE OF PARTICIPATION IN FUTURE PROJECTS

PROJECT ACTIVITIES	YES		NO	
	M	F	M	F
1. Formation of BWSA	20	20	-	-
2. Formulation of water rates	20	10	-	10
3. Selection of sites and levels of services	20	20	-	-
4. Construction of facilities	20	10	-	10
5. Operation and maintenance	20	20	-	-

II. Financial Aspects

(1) Are respondents presently paying for their water supply?

Sixty Seven percent of the respondents claimed that they do not paying for their water supply. Only thirteen respondents, 9 males and 4 females, paid their bills.

TABLE 36: NUMBER OF RESPONDENTS PRESENTLY PAYING WATER FEE

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	9	4	13	32.5
2. No	11	16	27	67.5
TOTAL	20	20	40	100

(2) If so, how much per household per month?

For some who paid spent below P 5.00 and P 6.00to P 10.00 a month for water.

TABLE 37: PRESENT WATER FEES PAID

WATER FEES	RESPONDENTS		T	%
	M	F		
Below P 5.00	2	-	2	5
P 6.00 to P 10.00	7	4	11	27.5
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	11	16	27	67.5
TOTAL	20	20	40	100

(3) Is the water fee enough for O&M?

Half of the respondents was uncertain if the water fee being collected was adequate for the operation and maintenance of the system. Ten female respondents claimed that the fees being collected were not enough, and the other ten said that the fees being collected were enough.

TABLE 38: ADEQUACY OF WATER FEE FOR O&M

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	6	4	10	25
2. No	10	-	10	25
3. Uncertain	4	16	20	50
TOTAL	20	20	20	100

More than half of the respondents was not sure of the reasons why fees being collected were not adequate for the operation and maintenance of facilities. Some indicated water fees is low and not all water users pay their water fee.

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

REASON/S	M	F	T	%
1. Water fee is low	4	-	4	10
2. O&M cost is too high	-	-	-	-
3. Not all water users pay their Water fee	12	-	12	30
4. Others/Uncertain	4	20	24	60
TOTAL	20	20	20	100

(4) Who shoulders the O&M of Facilities?

The majority of the respondents claimed it was the barangay council that shouldered the operation and maintenance costs. Three claimed, it was the private owner while the rest no reply.

TABLE 40: RESPONSIBILITY FOR SHOULDERING THE O&M COSTS

PERSON	RESPONDENTS		T	%
	M	F		
1. Barangay Council	7	16	23	57.5
2. WATSAN Association	-	-	-	-
3. Private Owner	3	-	3	7.5
4. Others	4	-	4	10
5. No response	6	4	10	25
TOTAL	20	20	20	100

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

Thirty-nine respondents except for one male respondents, expressed willingness to pay for the operation and maintenance of future WATSAN facilities.

TABLE 41: RESPONDENTS' WILLINGNESS TO PAY FOR FUTURE FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	19	20	39	97.5
2. No	1	-	1	2.5
TOTAL	20	20	20	100

(6) How much are respondents willing to pay?

The majority of those who were willing to pay claimed they could pay from P6.00 to P10.00. Eleven male respondents wanted to pay water fees of about P11.00 to P20.00; while 1 male was ready to pay around P21.00 to P30.00. Five respondents claimed they could only pay below P 5.00.

TABLE 42: AMOUNT RESPONDENTS ARE WILLING TO PAY

RESPONSE	RESPONDENTS		T	%
	M	F		
Below P 5.00	4	1	5	12.5
P 6.00 to P 10.00	14	9	23	57.5
P 11.00 to P 20.00	1	10	11	27.5
P 21.00 to P 30.00	1	-	1	2.5
P 31.00 to P 40.00	-	-	-	-
P 41.00 to P 50.00	-	-	-	-
Above P 50.00	-	-	-	-
TOTAL	20	20	40	100

(7) Are you willing to contribute for future projects?

One hundred percent of 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	20	20	40	100
2. No	-	-	-	
TOTAL	20	20	40	100

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

REASON/S	M	F	T	%
1. Cannot afford to pay 2. Gov't must provide water for free 3. Water service is not good 4. Others (Specify) 5. No Response	N/A			
TOTAL				

(8) If so, what kind?

Almost all of the respondents indicated the type of contribution they were willing to give. They preferred providing free labor or materials for the construction of WATSAN facilities.

TABLE 45: TYPES OF CONTRIBUTION

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Will free provide labor	19	20	39	97.5
2. Will donate site	-	-	-	-
3. Will provide materials	1	-	1	2.5
4. Others	-	-	-	-
TOTAL	20	20	40	100

(9) Reason/s for not Contributing

Since all of them were willing to contribute they no longer responded to the question.

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

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

I. Health and Sanitation

(1) Type of toilet

The majority of the respondents (31, or 77.5%) used toilet with flushes to septic tank on the site. The rest were divided on the following: private pit latrine (4); public toilet (3); shared flush toilet w/ septic tank (3); and bush or other open outdoor site (2).

TABLE 47: TYPES OF TOILETS RESPONDENTS USE

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Toilet w/ flushes to septic tank on the site	16	15	31	77.5
2. Toilet w/ flushes/ drops straight to sea	-	-	-	-
3. Private pit latrine	3	1	4	10
4. Shared flush toilet w/ septic tank	-	3	3	7.5
5. Public toilet	-	-	-	-
6. Bush or other open outdoor site	1	1	2	5
7. Pour Flush Water	-	-	-	-
8. Others	-	-	-	-
TOTAL	20	20	40	100

(2) Who got sick during the past year? What sickness?

About 30% were uncertain as to the types of illnesses that afflicted their family members in the past year. But reported illness were diarrhea (8), and skin disease (8), followed by Schistosomiasis (6) and skin diseases (2 each). Others were also hit by cough, fever and colds. The more than half of the respondents were uncertain which of the household members most afflicted with illnesses in the past year.

TABLE 48: WATER ILLNESSES

DISEASE	RESPONDENTS		T	%
	M	F		
1. Diarrhea	7	1	8	20
2. Kidney trouble	-	-	-	-
3. Gastro-enteritis	-	3	3	7.5
4. Cholera	-	-	-	-
5. Typhoid fever	-	1	1	2.5
6. Malaria	-	-	-	-
7. Skin Disease	4	4	8	20
8. Schistosomiasis	1	5	6	15
9. Others/ Influenza	2	-	2	5
10. Uncertain	6	6	12	30
TOTAL	20	20	40	100

TABLE 49: HOUSEHOLD MEMBERS FREQUENTLY GOT SICK IN 1998

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Husband	3	3	6	15
2. Wife	2	2	4	10
3. Father	1	-	1	2.5
4. Mother	-	1	1	2.5
5. Male Children	-	1	1	2.5
6. Female Children	1	3	4	10
7. Grandmother	-	-	-	-
8. Grandfather	-	-	-	-
9. Others	-	1	1	2.5
10. Uncertain	13	9	22	55
TOTAL	20	20	40	100

(3) Health and hygiene practices

All of the respondents recognized the importance of good health and hygiene practices. They learned about health and sanitation matters mostly from health workers/inspectors, health sanitation/clinics/hospitals and school. For other females, family and friends were also a good source of good information.

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

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	20	20	40	100
2. No	-	-	-	-
TOTAL	20	20	40	100

TABLE 51: WHERE PEOPLE LEARNED HEALTH AND HYGINE EDUCATION

RESPONSE	RESPONDENTS	
	M	F
1. Radio	17	18
2. Newspapers	4	10
3. Television	16	16
4. NGOs	3	5
5. Family and Friends	2	17
6. Health Sanitation/Clinics/Hospitals	20	19
7. Health workers/ inspection	20	19
8. School	20	9