3. PROVINCIAL PROFILE

3.3 Socio-economic Conditions

3.3.1 Economic Activities and Family Income

Table 3.3.1 Distribution of Families by Income Class

Income Class	Capiz				Region VI	
	Total Number of Families		Annual Income		Total Number of Families	Annual Income Average (Pesos)
	Number	Share	Total (P '000.00)	Average (Pesos)		
Under 15,000	6,918	6	91,204	13,184	38,620	12,865
15,000 - 19,999	6,896	5	132,228	19,174	50,543	19,828
20,000 - 29,999	31,792	25	935,649	29,431	209,138	27,662
30,000 - 39,999	25,070	20	956,200	38,142	224,397	37,336
40,000 - 59,999	36,670	29	1,983,369	54,087	280,436	51,099
60,000 - 99,999	14,248	11	1,204,607	84,544	199,449	86,842
100,000 - 249,999	3,665	3	465,613	127,033	112,990	161,051
250,000 and over	456	0	124,611	273,570	17,827	399,169

Source: 1994 Family Income and Expenditures Survey by NSO

Notes:

(1) Derived from Region VI FIES

(2) Based on NEDA and other agencies, poverty threshold in Region VI was estimated at ₱ 47,133 (₱ 8,197 annual per capita poverty threshold).

(3) For purposes of the survey, a family is defined as a group of persons usually living together and composed of the head and other persons related by blood, marriage and adoption. A single person living alone is considered as a separate family. A household is composed of 1 or more families in the same housing unit and has a common arrangement of food preparation and consumption.

Table 3.3.2 Employment by Major Industry Group and Class of Worker, 1994

Major Industry Group	Household Population 15 years and Over Who Worked	Class of Worker							
		Worked for Private Household (Domestic Services)	Worked for Private Business/ Enterprise/ Farm	Worked for Government/ Government Corporation	Self-employed Without Any Paid Employee	Employer In Own Farm or Business	Work With Pay in Own Family Operated Farm or Business	Work Without Pay in Own Family Operated Farm or Business	Not Reported
Agriculture, Hunting and Forestry	130,914	367	28,696	183	45,780	11,036	118	44,524	210
Fishing	15,381	31	6,285	12	7,615	638	28	741	31
Mining and Quarrying	327	1	183	1	69	6	0	67	0
Manufacturing	5,597	75	3,522	16	1,585	211	5	170	13
Electricity, Gas and Water	568	6	392	92	72	4	0	0	2
Construction	6,238	115	5,314	57	704	16	1	11	20
Trade	20,245	81	4,209	14	12,895	1,541	43	1,405	57
Services	54,147	12,616	16,986	16,212	6,925	818	43	455	92
Not Stated	304	8	176	5	11	1	0	16	87
Provincial Total	233,721	13,300	65,763	16,592	75,656	14,271	238	47,389	512

Source: 1995 NSO Socioeconomic and Demographic Characteristics

3.3.3 Education

Table 3.3.3 Household Population by Highest Educational Attainment

Highest Educational Attainment	Household Population 5 years Old and Over	Age Group				
		Below 20	20 - 24	25 - 29	30 - 34	35 and Over
No Grade Completed	40,354	25,435	767	811	734	12,607
Pre-school	20,558	19,516	37	64	78	863
Elementary						
1st - 4th Grade	150,393	83,678	5,053	5,174	5,565	50,923
5th - 7th Grade	120,245	39,139	8,670	9,728	9,920	52,788
High School						
Undergraduate	77,112	43,406	9,169	6,886	5,020	12,631
Graduate	50,603	9,989	10,728	9,139	6,907	13,840
Post Secondary						
Undergraduate	2,583	584	817	435	287	460
Graduate	13,832	931	4,359	3,074	2,215	3,253
College Undergraduate	27,141	7,464	7,176	3,797	2,790	5,914
Academic Degree Holder	29,811	212	4,674	5,986	5,205	13,734
Post-Baccalaureate	1,256	1	77	143	176	859
Not Stated	7,942	5,159	360	358	284	1,781
Total	541,830	235,514	51,887	45,595	39,181	169,653

Source: 1995 NSO Socioeconomic and Demographic Characteristics

3.4 Population

3.4.1 Classification of Urban and Rural Area

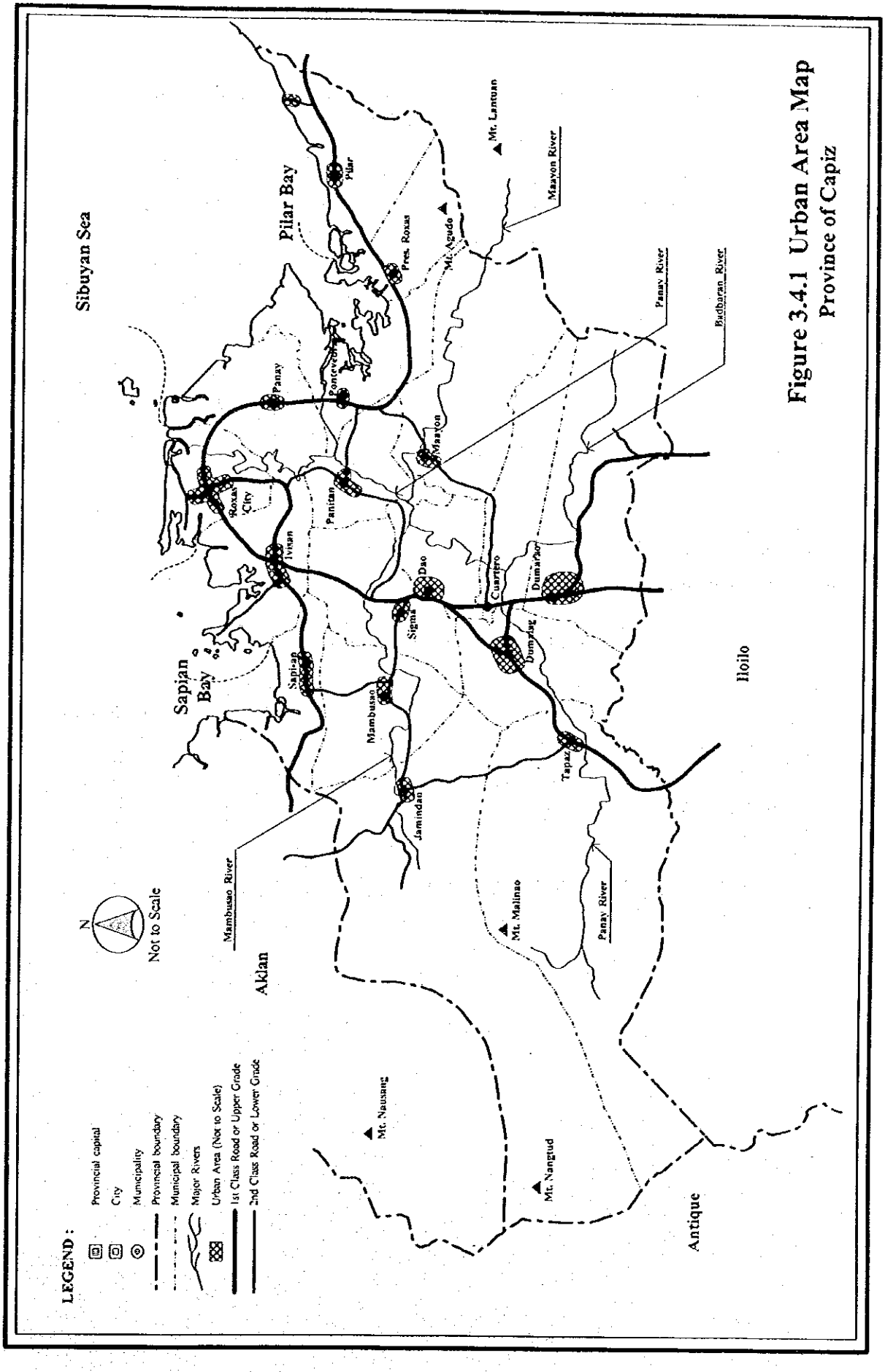


Figure 3.4.1 Urban Area Map
Province of Capiz

3.5 Health Status

Table 3.5.1 Number and Ratio of Population to Health Facilities and/or Medical Practitioners

Health Facilities and Practitioners	Capiz		Philippines	
	Number	Ratio	Number	Ratio
Health Facilities				
Hospital	12	1/54,831	1,700	1/40,206
Rural Health Units	21	1/31,332	2,335	1/29,272
Barangay Health Station	187	1/3,519	11,646	1/5,869
Practitioners				
Doctors	25	1/26,319	6,913	1/9,887
Nurses	37	1/17,783	8,849	1/7,724
Midwives	195	1/3,374	10,831	1/6,311
Dentists	17	1/38,704	1,895	1/36,068

Source: PSPT and 1997 Philippine Statistical Yearbook.

3.6 Environmental Conditions

3.6.2 Water Pollution

Table 3.6.1 Types of Drainage Facilities

Type	Length (km)
Drainage Main	13
Open Channel (with Concrete & rubble masonry)	6
Open Ditches & Unlined Laterals	12
Reinforced Concrete Circular Pipes	1
Street Gutters	20
Outfalls to rivers from drainage mains (number)	7

Source: PSPT

Table 3.6.2 DENR Water Quality Criteria/Water Usage and Classification for Fresh Water

Parameter	Unit	Class AA	Class A	Class B	Class C	Class D
Color	PCU	15	50	(C)	(C)	(C)
Temperature (max. rise in deg. Celsius)	°C rise	--	3	3	3	3
pH (range)		6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.0-9.0
Dissolve Oxygen (Minimum)	%satn	70	70	70	60	40
	mg/L	5.0	5.0	5.0	5.0	3.0
5-Day 20°C BOD	mg/L	1	5	5	7(10)	10(15)
Total Suspended Solids	mg/L	25	50			
Total Dissolved Solids	mg/L	500	1,000	--	--	1,000
Surfactants (MBAS)	mg/L	nil	0.2(0.5)	0.3(0.5)	0.5	--
Oil/Grease (Petroleum Ether Extract)	mg/L	nil	1	1	2	5
Nitrate as Nitrogen	mg/L	1	10	NR	10	--
Phosphate as Phosporous	mg/L	nil	0.1	0.2	0.4	--
Phenolic Substances as Phenols	mg/L	nil	0.002	0.005	0.02	--
Total Coliforms	MPN/100mL	50	1,000	1,000	5,000	--
or Fecal Coliforms	MPN/100mL	20	100	200	--	--
Chloride as Cl	mg/l	250	250	--	350	--
Copper	mg/L	1	1	--	0.05	--

Notes:

Class AA - Public Water Supply Class I. Intended for waters having watersheds that are uninhabited and otherwise protected and which require only approved disinfection in order to meet the national standards for drinking water.

Class A - Public Water Supply Class II. Sources of water supply that will require complete treatment (coagulation, sedimentation, filtration and disinfection) in order to meet drinking water standards.

Class B - Recreational Water Class I. For primary contact recreation such as bathing, swimming skin diving, etc. (particularly for tourism purposes).

Class C - Fishery Water for the propagation and growth of fish and other aquatic resources; recreational (for boating, etc.); industrial water supply class I for manufacturing processes after treatment.

Class D - For agriculture, irrigation, livestock watering, etc.; for industrial water supply class II (cooling, etc.); other inland waters by their quality, belong to this specification.

4. EXISTING FACILITIES AND SERVICE COVERAGE

4.1 Water Supply

4.1.3 Level III Systems

Table 4.1.1 Details on Existing Level III Systems

Sheet 1 of 4

Name of Municipality	Name of Operating Body	Level III Service								
		Number of Barangays Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Dumalag	Dumalag WS		3	3		493	493		2,465	2,465
Dumarao	Dumarao WD	2	2	4	378	68	446	1,890	340	2,230
Ivisan	Metro Roxas WD (a)	2	5	7	257	131	388	1,285	655	1,940
Mambusao	Mambusao WD	2	1	3	436	2	438	2,175	10	2,185
Panay	Metro Roxas WD (b)	3	24	27	337	992	1,329	1,685	4,960	6,645
Panitan	Panitan WD	2	2	4	199	168	367	995	840	1,835
Pilar	Pilar WD	1	2	3	172	39	211	860	195	1,055
Pontevedra	Pontevedra WD	3	9	12	736	680	1,416	3,680	3,400	7,080
Roxas City	Metro Roxas WD (c)	18	28	46	6,789	3,263	10,052	33,945	16,315	50,260
Provincial Total		33	76	109	9,304	5,836	15,140	46,515	29,180	75,695

Table 4.1.1 Details on Existing Level III Systems

Sheet 2 of 4

Name of Municipality	Name of Operating Body	Level II Service								
		Number of Public Faucets			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Dumalag	Dumalag WS									
Dumarao	Dumarao WD	5		5	25		25	75		75
Ivisan	Metro Roxas WD (a)									
Mambusao	Mambusao WD									
Panay	Metro Roxas WD (b)									
Panitan	Panitan WD									
Pilar	Pilar WD									
Pontevedra	Pontevedra WD									
Roxas City	Metro Roxas WD (c)									
Provincial Total		5		5	25		25	75		75

Table 4.1.1 Details on Existing Level III Systems

Sheet 3 of 4

Name of Municipality	Name of Operating Body	Water Sources			Consumption			
		Type [1]	Number	Production (cu.m/day)	Domestic	Institutional	Commercial	Industrial
					(cu.m/day)			
Dumalag	Dumalag WS	SP	1	108				
Dumarao	Dumarao WD	SP	2	3,110	24		3	
Ivisan	Metro Roxas WD (a)							
Mambusao	Mambusao WD	DW	1	130	204	5	2	
Panay	Metro Roxas WD (b)							
Panitan	Panitan WD	Surf	1		228	6	6	
Pilar	Pilar WD	SP	2	1,363	59			
Pontevedra	Pontevedra WD	DW	2	2,156	566	2	2	
Roxas City	Metro Roxas WD (c)	DW/Surf	1/1	21,730				
Provincial Total			9	28,597	1,081	13	13	

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

Table 4.1.1 Details on Existing Level III Systems

Sheet 4 of 4

Name of Municipality	Name of Operating Body	Consumers														
		Domestic House Connections			Domestic Public Faucets			Institutional Consumers			Commercial Consumers			Industrial Consumers		
		Connection		Consumption (m^3/day)	Connection		Consumption (m^3/day)	Connection		Consumption (m^3/day)	Connection		Consumption (m^3/day)	Connection		Consumption (m^3/day)
		Metered	Unmetered		Metered	Unmetered		Metered	Unmetered		Metered	Unmetered		Metered	Unmetered	
Dumalag	Dumalag WS		493													
Dumarao	Dumarao WD	446	1	22 00	5	2	1.50				2		3 00			
Ivisan	Metro Roxas WD															
Mambusao	Mambusao WD	438		204 40				10		4 60	5		2 30			
Panay	Metro Roxas WD															
Panitan	Panitan WD	367		227 54				10		6 20	9		5 58			
Pilar	Pilar WD	211		59 00												
Pontevedra	Pontevedra WD	1,416		565 60				29		1.78	30		1 50			
Roxas City	Metro Roxas WD															
Provincial Total		2,878	494	1,079	5	2	1.50	49		12 58	46		12 38			

Table 4.1.2 Details on Existing Level II Systems
Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
					Length of Transmission Line (meter)	Reservoir		Length of Distribution Line (meter)	Number of Public Faucets
		Type	Number	Discharge (m^3/day)		Number	Volume (m^3)		
Cuartero	Agdahon WSA	SP	1		800	1	27		13
Dumalag	Duran WS	SP	1	86.4	1,500	1		300	5
	San Miguel WS	SP	1	86.4	1,500	2	20.4	1,000	26
	Municipal Total	SP	2	172.8	3,000	3	20.4	1,300	31
Dumarao	Dacuton	SP	1	129.6	1,500	1		5,200	14
Ivisan	Agustin Navarra Spring Ass.	SP	1	345.6	1,200		13.5	1,000	15
	Cabugao	SP	1	172.8	200	1	21.0	2,000	15
	Municipal Total	SP	2	518.4	1,400	1	34.5	3,000	30
Jamindan	Lucero WS	SP	1	21.6	300	1	1.0	100	12
Ma-ayon	Aglimocon	SP	1	77.8	1,200	1	13.8	250	5
	Guinbi-alan	SP	1	1,209.6	2,200	2	28.7	450	7
	Quinabonglan	SP	1	103.7	1,200	1	14.4	400	8
	Municipal Total	SP	3	1,391.0	4,600	4	56.9	1,100	20
Mambusao	Pangpang Sur WSA	SP	1		500	1	8.0		22
Panitan	Agloway	SP	1	480.0	20	1	10.0	900	9
	Cogon WSA	DW	1						16
	Municipal Total	DW/SP	1/1	480.0	20	1	10.0	900	25
Pilar	Casanayan WWSA	DW	1	603.0	10	1	75.8	1,000	15
	Cayus BWSA	SP	1	21.6	60	1		7,500	23
	Municipal Total	DW/SP	1/1	624.6	70	2	75.8	8,500	38
Pontevedra	Agbanog WSA	SP	1			1	8.0	500	6
President Roxas	Goce WSA	SP	1	1,036.8	1,200	1	18.0	1,200	5
	Pantalan WSA	DW	1			1	8.0	200	7
	Municipal Total	DW/SP	1/1	1,036.8	1,200	2	26.0	1,400	12
Roxas City (Capital)	Lanot WSA	DW	1						32
Sapi-an	Majanlud WSA	SP	1						22
Sigma	Mianay BWSA	DW	1	115.2	100	1	25.0	2,500	24
	Pinamalatican BWSA	SP	1	864.0	1,500	1		3,000	20
	Municipal Total	DW/SP	1/1	979.2	1,600	2	25.0	5,500	44
Tapaz	San Nicolas	SP	1	86.4	4,000	3			32
Provincial Total			23	5,440.4	18,990	23	292.6	27,500	353

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

Table 4.1.2 Details on Existing Level II Systems

Sheet 2 of 6

Name of Municipality/City	Name of Operating Body	Number of Barangay Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Cuartero	Agdahon WSA		1	1		67	67		402	402
Dumalag	Duran WS		1	1		25	25		125	125
	San Miguel WS		1	1		130	130		650	650
	Municipal Total		2	2		155	155		775	775
Dumarao	Dacuton		1	1		70	70		350	350
Ivisan	Agustin Navarra Spring Ass.		1	1		70	70		350	350
	Cabugao		1	1		65	65		325	325
	Municipal Total		2	2		135	135		675	675
Jamindan	Lucero WS		1	1		60	60		300	300
Ma-ayon	Aglimocon		1	1		25	25		125	125
	Guinbi-alan		1	1		35	35		175	175
	Quinabonglan		1	1		40	40		200	200
	Municipal Total		3	3		100	100		500	500
Mambusao	Pangpang Sur WSA		1	1		110	110		660	660
Panitan	Agloway		1	1		45	45		225	225
	Cogon WSA		1	1		80	80		400	400
	Municipal Total		2	2		125	125		625	625
Pilar	Casanayan WWSA		1	1		18	18		90	90
	Cayus BWSA		1	1		115	115		575	575
	Municipal Total		2	2		133	133		665	665
Pontevedra	Agbanog WSA		1	1		438	438		2,628	2,628
President Roxas	Goce WSA		1	1		25	25		125	125
	Pantalan WSA		1	1		35	35		175	175
	Municipal Total		2	2		60	60		300	300
Roxas City (Capital)	Lanot WSA		1	1		158	158		948	948
Sapi-an	Majanlud WSA		1	1		110	110		660	660
Sigma	Mianay BWSA		1	1		120	120		600	600
	Pinamalatican BWSA		1	1		100	100		500	500
	Municipal Total		2	2		220	220		1,100	1,100
Tapaz	San Nicolas		1	1		100	100		500	500
Provincial Total			23	23		2,041	2,041		11,088	11,088

Table 4.1.2 Details on Existing Level II Systems

Sheet 3 of 6

Name of Municipality/City	Name of Operating Body	Service Conditions During Dry Season								
		Supply (Hrs/day)	Dirty Water[1]	Taste or Smell[2]	Supply Interruption (number/month)				Supply Water Pressure (% of total)	
					Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
Cuartero	Agdahon WSA									
Dumalag	Duran WS									
	San Miguel WS									
Dumarao	Dacuton									
Ivisan	Agustin Navarra Spring Ass.									
	Cabugao									
Jamindan	Lucero WS									
Ma-ayon	Aglimocon									
	Guinbi-alan									
	Quinabonglan									
Mambusao	Pangpang Sur WSA									
Panitan	Agloway									
	Cogon WSA									
Pilar	Casanayan WWSA									
	Cayus BWSA									
Pontevedra	Agbanog WSA									
President Roxas	Goce WSA									
	Pantalan WSA									
Roxas City (Capital)	Lanot WSA									
Sapi-an	Majanlud WSA									
Sigma	Mianay BWSA									
	Pinamalatican BWSA									
Tapaz	San Nicolas									

Table 4.1.2 Details on Existing Level II Systems

Sheet 4 of 6

Name of Municipality/City	Name of Operating Body	Number of Staff							
		Technical Staff	Administrative Staff	Collector	Total Number of Staff	Repair Work			
						Local Trademan	MEO/CEO	DEO	Others
Cuartero	Agdahon WSA								
Dumalag	Duran WS								
	San Miguel WS								
Dumarao	Dacuton								
Ivisan	Agustin Navarra Spring Ass.								
	Cabugao								
Jamindan	Lucero WS								
Ma-ayon	Aglimocon								
	Guinbi-alan								
	Quinabonglan								
Mambusao	Pangpang Sur WSA								
Panitan	Agloway								
	Cogon WSA								
Pilar	Casanayan WWSA								
	Cayus BWSA								
Pontevedra	Agbanog WSA								
President Roxas	Goce WSA								
	Pantalan WSA								
Roxas City (Capital)	Lanot WSA								
Sapi-an	Majanlud WSA								
Sigma	Mianay BWSA								
	Pinamalatican BWSA								
Tapaz	San Nicolas								

Table 4.1.2 Details on Existing Level II Systems

Sheet 5 of 6

Name of Municipality/City	Name of Operating Body	Expenditures							Tariff					Average Collection Efficiency
		Annual	Wages	Fuel, Chem.	Transport	Repairs	Loan Repayment	Other	Consumer Payment	Cost per Pail	Cost per Cu.	Cost per HH	Other	
		(P '000.00 / year)							(Year)	(Pesos)				(%)
Cuartero	Agdahon WSA													
Dumalag	Duran WS													
	San Miguel WS													
Dumarao	Dacuton													
Ivisan	Agustin Navarra Spring Ass.													
	Cabugao													
Jamindan	Lucero WS													
Ma-ayon	Aglimocon													
	Guinbi-alan													
	Quinabonglan													
Mambusao	Pangpang Sur WSA													
Panitan	Agloway													
	Cogon WSA										30			
Pilar	Casanayan WWSA													
	Cayus BWSA													
Pontevedra	Agbanog WSA													
President Roxas	Goce WSA													
	Pantalan WSA													
Roxas City (Capital)	Lanot WSA													
Sapi-an	Majanlud WSA													
Sigma	Mianay BWSA													
	Pinamalatican BWSA													
Tapaz	San Nicolas													

Table 4.1.2 Details on Existing Level II Systems

Sheet 6 of 6

Name of Municipality/City	Name of Operating Body	Billings					Revenues				
		Annual Billing	Public Faucet Consume	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection	Subsidies	Other
		(Number)	(P '000.00 / year)								
Cuartero	Agdahon WSA										
Dumalag	Duran WS										
	San Miguel WS										
Dumarao	Dacuton										
Ivisan	Agustin Navarra Spring Ass.										
	Cabugao										
Jamindan	Lucero WS										
Ma-ayon	Aglimocon										
	Guinbi-alan										
	Quinabonglan										
Mambusao	Pangpang Sur WSA										
Panitan	Agloway										
	Cogon WSA										
Pilar	Casanayan WWSA										
	Cayus BWSA										
Pontevedra	Agbanog WSA										
President Roxas	Goce WSA										
	Pantalan WSA										
Roxas City (Capital)	Lanot WSA										
Sapi-an	Majanlud WSA										
Sigma	Mianay BWSA										
	Pinamalatican BWSA										
Tapaz	San Nicolas										

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 the unsafe sources.

In 1990 population census data, "Households by Main Source of Drinking Water and City /Municipality", it was shown that 76 % 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 of samples collected at public and private Level I wells in the province, however, only the results in five (5) municipalities, Ivisan, Jamindan, Maayon, Panitan and Sigma are available at the present time. 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 (86 samples) was very limited compared with the number of existing shallow wells (5,724) and water sampling by PHO is usually conducted where problems on water quality and/or incidence of water related diseases have experienced.
- There might be some cases that examination at the same Level I sources/facilities was conducted until the safety of the water was confirmed.
- The sources such as dug wells, which are defined as unsafe sources may have been included in the above examination results.

Considering the above conditions on the manner of sampling, unsafe percentage (13%) of shallow wells derived from five municipalities may be overestimated.

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	
Cuartero	146	n.a.	-	n.a.	-	n.a.
Dao	753	n.a.	-	n.a.	-	n.a.
Dumalag	399	n.a.	-	n.a.	-	n.a.
Dumarao	370	n.a.	-	n.a.	-	n.a.
Ivisan	224	3	100%	0	0%	3
Jamindan	102	17	89%	2	11%	19
Maayon	576	16	76%	5	24%	21
Mambusao	771	n.a.	-	n.a.	-	n.a.
Panay	3	n.a.	-	n.a.	-	n.a.
Panitan	830	3	100%	0	0%	3
Pilar	154	n.a.	-	n.a.	-	n.a.
Pontevedra	375	n.a.	-	n.a.	-	n.a.
Pre. Roxas	42	n.a.	-	n.a.	-	n.a.
Roxas City	130	n.a.	-	n.a.	-	n.a.
Sapian	321	n.a.	-	n.a.	-	n.a.
Sigma	390	36	90%	4	10%	40
Tapaz	138	n.a.	-	n.a.	-	n.a.
Province	5,724	75	87%	11	13%	86

Source: PHO, 1998

As a reference information, the experiences in 1st to 3rd batch 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 percentage of 20 (%) as the lowest experienced in the 1st to 3rd batch study (16 provinces) 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/City	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		
Cuartero	Urban	5	18	2		25		39	3	42	68	5			31	36	10	2	27	39	74	142
	Rural	4	29	1		34		30		30	64	7			17	24	8		16	24	48	112
	Total	9	47	3		59		70	3	73	132	12			48	60	17	2	43	62	122	254
Dao	Urban		10			10		22	79	101	111	3			6	9	5		31	36	45	156
	Rural		150			150		421	31	452	601	37			4	41	105	14	60	179	221	822
	Total		160			160		442	110	552	712	40			10	50	111	14	91	216	266	978
Dumalag	Urban						4			4	4											4
	Rural	4	38	6	12	60	48	282	185	515	574	9			3	12	70	21	35	126	139	713
	Total	4	38	6	12	60	52	282	185	519	578	9			3	12	70	21	35	126	139	717
Dumarao	Urban		5			5	55	65	267	387	392	1				1	16		18	34	35	427
	Rural	7	30		4	41	295	196	1,379	1,870	1,911	8			3	11	49		284	333	344	2,255
	Total	7	35		4	46	350	261	1,646	2,257	2,303	9			3	12	65		302	367	379	2,682
Ivisan	Urban	4	10	3		17	3	58	16	77	94	2			3	5	15	38	21	74	79	173
	Rural	14	74	9	2	99	13	38	3	54	152	18			21	39	9	17	38	64	104	256
	Total	18	83	12	2	115	16	96	19	131	246	21			24	45	24	55	59	138	183	429
Jamindan	Urban	2	3	2		7		32	30	62	69	1			4	5	8	20	180	208	213	282
	Rural	6	14		6	26	31	32	11	74	100	4			8	12	8	3,437	182	3,627	3,639	3,739
	Total	8	18	2	6	34	31	64	41	136	170	4			12	16	16	3,457	362	3,835	3,851	4,021
Ma-ayon	Urban	2	21	3		26		82	1	83	109	5				5	21	17	63	101	106	215
	Rural	10	185		6	201		173	13	186	387	46				46	43	281	276	600	646	1,033
	Total	12	206	3	6	227		255	14	269	496	51				51	64	298	339	701	752	1,248
Mambusao	Urban	6	18			24	25	75		100	124	4				4	19	38	94	151	155	279
	Rural	34	186	4	2	226	53	338	2	393	619	47			2	49	84	503	170	757	806	1,425
	Total	40	204	4	2	250	78	413	2	493	743	51			2	53	103	541	264	908	961	1,704
Panay	Urban	1				1					1								86	86	86	87
	Rural	32	2			34					34	1			60	61			1,627	1,627	1,688	1,722
	Total	33	2			35					35	1			60	61			1,713	1,713	1,774	1,809
Panitan	Urban	4	13			17		14		14	30	3				3	3		24	27	31	61
	Rural	51	13			64		625		625	689	3				3	156	165	115	436	439	1,128
	Total	55	26			81		638		638	719	6				6	160	165	139	464	470	1,189
Pilar	Urban	1	1			2	6	18		24	25	0				0	4			4	5	30
	Rural	12	10		2	24	1	94		95	120	3				3	24			24	26	146
	Total	13	11		2	26	7	112		119	145	3				3	28			28	31	176
Pontevedra	Urban	1	6	1		8					8	2			15	17		42	4	46	63	71
	Rural	42	160	3	1	206	2	134		136	342	40			45	85	33	710	150	893	978	1,320
	Total	43	166	4	1	214	2	134		136	350	42			60	102	33	752	154	939	1,041	1,391
President Roxas	Urban	2	2			4	5	12	38	55	59	1				1	3	65	18	86	87	146
	Rural	10	13	17	3	43		6		6	49	3			27	30	2	106	63	171	201	250
	Total	12	15	17	3	47	5	18	38	61	109	4			27	31	5	171	81	257	287	396
Roxas City (Capital)	Urban	14	2			16	8	25		33	49	1			2	3	6			6	9	58
	Rural	98	14			112	18	62		80	193	4			23	27	16		75	91	117	310
	Total	112	17			129	26	87		113	242	4			25	29	22		75	97	126	368
Sapi-an	Urban	1	32			33		24		24	57	8			2	10	6	12	126	144	154	211
	Rural	38	100	22	5	165	43	101	3	147	312	25			3	28	25	19	137	181	209	521
	Total	39	132	22	5	198	43	125	3	171	369	33			5	38	31	31	263	325	363	732
Sigma	Urban		7			7		128		128	135	2			2	4	32	50	365	447	451	586
	Rural	13	84	6		103	1	93		94	197	21			23	44	23	560	78	661	705	902
	Total	13	91	6		110	1	221		222	332	23			25	48	55	610	443	1,108	1,156	1,488
Tapaz	Urban	6	3			9	2	24		26	35	1				1	6			6	7	42
	Rural	50	30	8	12	100	6	54	200	260	359	7				7	13	524	2	539	547	906
	Total	56	33	8	12	109	8	78	200	286	394	8				8	19	524	2	545	554	948
Provincial Total	Urban	49	152	11		212	108	618	434	1,160	1,372	38			65	103	154	284	1,057	1,495	1,598	2,970
	Rural	425	1,132	76	55	1,688	511	2,678	1,827	5,016	6,704	283			239	522	669	6,357	3,308	10,334	10,856	17,560
	Total	474	1,284	87	55	1,900	619	3,295	2,261	6,175	8,075	321			304	625	824	6,641	4,365	11,830	12,455	20,530

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 13% and 87% of the total number of Level I facility, respectively. Developed springs occupy 2% 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	425	45%	511	55%	936
Shallow Well	1,415	30%	3,347	70%	4,762
Spring Development	55	100%			55
Others	311	3%	11,492	97%	11,803
Total	2,206	13%	15,350	87%	17,556

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 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 8 households both in urban and 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, those figures in the urban areas of Dumalag and Roxas City 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 193,100 persons or 79% 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/City	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	%		
Cuartero	Urban	3,894	5.47				641	45	7	273	3,621
	Rural	25,529	5.66		402	402	4,058	162	4	1,019	24,108
	Total	29,423	5.63		402	402	4,699	207	4	1,293	27,728
Dao	Urban	5,646	5.21				1,070	86	8	454	5,192
	Rural	24,000	5.09				4,655	372	8	1,918	22,082
	Total	29,646	5.11				5,725	458	8	2,372	27,274
Dumalag	Urban	3,193	5.54				535	59	11	352	2,841
	Rural	27,352	5.44	2,465	775	3,240	4,664	513	11	3,008	21,104
	Total	30,545	5.45	2,465	775	3,240	5,199	572	11	3,361	23,944
Dumarao	Urban	5,447	4.85	1,890	75	1,965	1,089	218	20	1,090	2,392
	Rural	33,767	5.02	340	350	690	6,522	783	12	4,054	29,023
	Total	39,214	5.00	2,230	425	2,655	7,611	1,001	13	5,144	31,415
Ivisan	Urban	4,632	5.36	1,285		1,285	828	132	16	738	2,609
	Rural	19,098	5.09	655	675	1,330	3,593	395	11	2,100	15,668
	Total	23,730	5.14	1,940	675	2,615	4,421	527	12	2,838	18,277
Jamindan	Urban	2,516	4.95				446	58	13	327	2,189
	Rural	36,235	5.23		300	300	6,088	791	13	4,708	31,227
	Total	38,751	5.21		300	300	6,534	849	13	5,035	33,416
Ma-ayon	Urban	4,578	5.09				881	106	12	551	4,027
	Rural	26,410	5.20		500	500	4,972	298	6	1,583	24,327
	Total	30,988	5.18		500	500	5,853	404	7	2,134	28,354
Mambusao	Urban	6,492	5.53	2,175		2,175	1,113	145	13	846	3,471
	Rural	31,068	5.06	10	660	670	5,819	756	13	4,036	26,362
	Total	37,560	5.14	2,185	660	2,845	6,932	901	13	4,882	29,833
Panay	Urban	2,969	5.05	1,685		1,685	561	34	6	180	1,104
	Rural	38,031	5.48	4,960		4,960	6,617	397	6	2,282	30,789
	Total	41,000	5.45	6,645		6,645	7,178	431	6	2,462	31,893

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

Name of Municipality/City	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	%		
Panitan	Urban	2,638	5.25	995		995	494	54	11	288	1,355
	Rural	31,224	5.25	840	625	1,465	5,847	292	5	1,559	28,200
	Total	33,862	5.25	1,835	625	2,460	6,341	346	5	1,848	29,554
Pilar	Urban	5,117	4.94	860		860	1,016	152	15	766	3,491
	Rural	32,055	5.17	195	665	860	6,080	426	7	2,246	28,949
	Total	37,172	5.14	1,055	665	1,720	7,096	578	8	3,011	32,441
Pontevedra	Urban	6,427	5.70	3,680		3,680	1,089	98	9	578	2,169
	Rural	33,126	5.35	3,400	2,628	6,028	5,982	538	9	2,979	24,119
	Total	39,553	5.41	7,080	2,628	9,708	7,071	636	9	3,558	26,287
President Roxas	Urban	6,615	5.18				1,244	75	6	399	6,216
	Rural	18,736	5.26		125	125	3,467	208	6	1,124	17,487
	Total	25,351	5.24		125	125	4,711	283	6	1,523	23,703
Roxas City (Capital)	Urban	59,024	5.11	33,945		33,945	10,491	105	1	591	24,488
	Rural	71,743	5.28	16,315	948	17,263	12,331	123	1	716	53,764
	Total	130,767	5.20	50,260	948	51,208	22,822	228	1	1,306	78,253
Sapi-an	Urban	4,038	5.01				786	63	8	324	3,714
	Rural	19,055	5.21		660	660	3,569	178	5	950	17,445
	Total	23,093	5.17		660	660	4,355	241	6	1,274	21,159
Sigma	Urban	2,248	5.03				435	87	20	450	1,798
	Rural	24,264	5.12		1,100	1,100	4,609	415	9	2,185	20,979
	Total	26,512	5.12		1,100	1,100	5,044	502	10	2,634	22,778
Tapaz	Urban	2,135	5.30				403	32	8	170	1,965
	Rural	38,674	4.90		500	500	7,890	631	8	3,093	35,081
	Total	40,809	4.92		500	500	8,293	663	8	3,262	37,047
Provincial Total	Urban	127,609	5.17	46,515	75	46,590	23,122	1,549	7	8,376	72,643
	Rural	530,367	5.22	29,180	10,913	40,093	96,763	7,278	8	39,560	450,714
	Total	657,976	5.21	75,695	10,988	86,683	119,885	8,827	7	47,937	523,356

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

Name of Municipality/City	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
Cuartero	Urban	3,621	25	36	61	42	39	81	21	19	41	115	106	221
	Rural	24,108	34	24	58	30	24	54	15	12	27	83	65	148
	Total	27,728	59	60	119	73	62	135	36	31	68	198	171	369
Dao	Urban	5,192	10	9	19	101	36	137	50	18	69	262	95	357
	Rural	22,082	150	41	191	452	179	631	226	90	316	1,177	467	1,644
	Total	27,274	160	50	210	552	216	768	276	108	384	1,439	562	2,000
Dumalag	Urban	2,841				4		4	2		2	11		11
	Rural	21,104	60	12	72	515	126	641	257	63	321	1,425	350	1,775
	Total	23,944	60	12	72	519	126	645	259	63	323	1,436	350	1,786
Dumarao	Urban	2,392	5	1	6	387	34	421	193	17	211	938	83	1,021
	Rural	29,023	41	11	52	1,870	333	2,203	935	167	1,102	4,537	808	5,345
	Total	31,415	46	12	58	2,257	367	2,624	1,128	184	1,312	5,475	891	6,366
Ivisan	Urban	2,609	17	5	22	77	74	151	39	37	76	207	197	404
	Rural	15,668	99	39	138	54	64	118	27	32	59	144	172	316
	Total	18,277	115	45	160	131	138	269	66	69	135	351	370	720
Jamindan	Urban	2,189	7	5	12	62	208	270	31	104	135	154	515	669
	Rural	31,227	26	12	38	74	3,627	3,701	37	1,814	1,851	183	8,982	9,165
	Total	33,416	34	16	50	136	3,835	3,971	68	1,918	1,986	337	9,497	9,834
Ma-ayon	Urban	4,027	26	5	31	83	101	184	42	50	92	212	256	468
	Rural	24,327	201	46	247	186	600	786	93	300	393	473	1,526	1,999
	Total	28,354	227	51	278	269	701	970	135	350	485	685	1,782	2,467
Mambusao	Urban	3,471	24	4	28	100	151	251	50	75	126	277	417	694
	Rural	26,362	226	49	275	393	757	1,150	196	379	575	1,086	2,096	3,182
	Total	29,833	250	53	303	493	908	1,401	246	454	701	1,364	2,513	3,876
Panay	Urban	1,104	1		1		86	86		43	43		217	217
	Rural	30,789	34	61	95		1,627	1,627		814	814		4,108	4,108
	Total	31,893	35	61	96		1,713	1,713		857	857		4,325	4,325
Panitan	Urban	1,355	17	3	20	14	27	41	7	14	21	36	72	108
	Rural	28,200	64	3	67	625	436	1,061	312	218	531	1,639	1,144	2,784
	Total	29,554	81	6	87	638	464	1,102	319	232	551	1,675	1,216	2,891
Pilar	Urban	3,491	2	0	2	24	4	28	12	2	14	58	11	69
	Rural	28,949	24	3	27	95	24	119	48	12	60	236	58	294
	Total	32,441	26	3	29	119	28	147	60	14	74	294	69	363

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

Name of Municipality/City	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
Pontevedra	Urban	2,169	8	17	25		46	46		23	23		131	131
	Rural	24,119	206	85	291	136	893	1,029	68	447	515	387	2,548	2,934
	Total	26,287	214	102	316	136	939	1,075	68	470	538	387	2,679	3,066
President Roxas	Urban	6,216	4	1	5	55	86	141	28	43	71	142	223	365
	Rural	17,487	43	30	73	6	171	177	3	85	89	17	442	458
	Total	23,703	47	31	78	61	257	318	31	128	159	159	665	824
Roxas City (Capital)	Urban	24,488	16	3	19	33	6	39	16	3	20	84	16	100
	Rural	53,764	112	27	139	80	91	171	40	45	86	205	231	437
	Total	78,253	129	29	158	113	97	210	57	48	105	289	247	536
Sapi-an	Urban	3,714	33	10	43	24	144	168	12	72	84	60	361	421
	Rural	17,445	165	28	193	147	181	328	73	91	164	368	454	822
	Total	21,159	198	38	236	171	325	496	85	163	248	428	815	1,243
Sigma	Urban	1,798	7	4	11	128	447	575	64	224	288	322	1,124	1,446
	Rural	20,979	103	44	147	94	661	755	47	331	378	236	1,663	1,899
	Total	22,778	110	48	158	222	1,108	1,330	111	554	665	558	2,787	3,345
Tapaz	Urban	1,965	9	1	10	26	6	32	13	3	16	69	16	85
	Rural	35,081	100	7	107	260	539	799	130	270	400	688	1,429	2,116
	Total	37,047	109	8	117	286	545	831	143	273	416	757	1,445	2,201
Provincial Total	Urban	72,643	212	103	315	1,160	1,495	2,655	580	748	1,328	2,948	3,840	6,788
	Rural	450,714	1,688	522	2,210	5,016	10,334	15,350	2,508	5,167	7,675	12,882	26,543	39,425
	Total	523,356	1,900	625	2,525	6,175	11,830	18,005	3,088	5,915	9,003	15,830	30,383	46,213

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

Name of Municipality/City	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.	%	
Cuartero	Urban	1,659	1,741	3,399	303	318	622	6	1,774	46	1,847	47	3,621	93	
	Rural	13,897	10,063	23,960	2,455	1,778	4,232	50	13,981	55	10,127	40	24,108	94	
	Total	15,556	11,803	27,359	2,758	2,096	4,854	26	15,755	54	11,974	41	27,728	94	
Dao	Urban	3,602	1,233	4,835	691	237	928	11	3,864	68	1,328	24	5,192	92	
	Rural	16,371	4,068	20,439	3,217	799	4,016	8	17,548	73	4,534	19	22,082	92	
	Total	19,973	5,301	25,274	3,908	1,036	4,944	8	21,412	72	5,863	20	27,274	92	
Dumalag	Urban	2,830		2,830	511		511	255	2,841	89			2,841	89	
	Rural	17,039	2,290	19,328	3,131	421	3,551	9	18,464	68	2,640	10	21,104	77	
	Total	19,869	2,290	22,158	3,641	421	4,062	10	21,305	70	2,640	9	23,944	78	
Dumarao	Urban	1,370		1,370	282		282	1	2,309	42	83	2	2,392	44	
	Rural	23,678		23,678	4,715		4,715	4	28,215	84	808	2	29,023	86	
	Total	25,049		25,049	4,997		4,997	4	30,524	78	891	2	31,415	80	
Ivisan	Urban	1,480	725	2,204	276	135	412	4	1,687	36	922	20	2,609	56	
	Rural	9,974	5,379	15,352	1,960	1,057	3,017	15	10,117	53	5,551	29	15,668	82	
	Total	11,453	6,103	17,557	2,236	1,192	3,428	12	11,804	50	6,473	27	18,277	77	
Jamindan	Urban	569	951	1,520	115	192	307	2	722	29	1,466	58	2,189	87	
	Rural	1,048	21,013	22,062	201	4,021	4,222	2	1,232	3	29,995	83	31,227	86	
	Total	1,617	21,965	23,582	315	4,213	4,529	2	1,954	5	31,462	81	33,416	86	
Ma-ayon	Urban	2,210	1,349	3,559	435	265	700	6	2,422	53	1,605	35	4,027	88	
	Rural	11,164	11,164	22,328	2,147	2,147	4,294	7	11,636	44	12,691	48	24,327	92	
	Total	13,374	12,514	25,887	2,582	2,412	4,994	7	14,059	45	14,296	46	28,354	92	
Mambusao	Urban	1,667	1,110	2,777	301	201	502	3	1,944	30	1,527	24	3,471	53	
	Rural	13,110	10,070	23,180	2,588	1,988	4,577	5	14,196	46	12,166	39	26,362	85	
	Total	14,776	11,180	25,957	2,889	2,189	5,078	5	16,140	43	13,693	36	29,833	79	
Panay	Urban	25	862	887	5	171	176	4	25	1	1,079	36	1,104	37	
	Rural	1,166	25,515	26,681	213	4,652	4,865	5	1,166	3	29,623	78	30,789	81	
	Total	1,191	26,377	27,568	218	4,823	5,040	5	1,191	3	30,702	75	31,893	78	
Panitan	Urban	789	458	1,247	150	87	238	6	825	31	530	20	1,355	51	
	Rural	17,755	7,661	25,416	3,384	1,460	4,844	8	19,394	62	8,805	28	28,200	90	
	Total	18,545	8,119	26,663	3,535	1,547	5,082	8	20,219	60	9,335	28	29,554	87	

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

Name of Municipality/City	Area	Coverage of Shared Well						No. of HHs per Shared Facility	Level I Coverage (1) + (2)					
		(2) Population Covered by Private and Public			Number of Households				Safe		Unsafe		Total	
		Safe	Unsafe	Total	Safe	Unsafe	Total		Pop.	%	Pop.	%	Pop.	%
Pilar	Urban	2,968	455	3,422	601	92	693	43	3,026	59	465	9	3,491	68
	Rural	24,130	4,525	28,655	4,666	875	5,541	64	24,365	76	4,584	14	28,949	90
	Total	27,098	4,980	32,077	5,266	967	6,233	61	27,391	74	5,049	14	32,441	87
Pontevedra	Urban	380	1,658	2,037	67	291	357	7	380	6	1,789	28	2,169	34
	Rural	8,198	12,986	21,184	1,532	2,427	3,959	5	8,585	26	15,534	47	24,119	73
	Total	8,578	14,644	23,222	1,599	2,717	4,316	5	8,964	23	17,323	44	26,287	66
President Roxas	Urban	2,626	3,225	5,851	507	622	1,130	15	2,769	42	3,447	52	6,216	94
	Rural	4,981	12,048	17,029	946	2,289	3,235	20	4,997	27	12,490	67	17,487	93
	Total	7,607	15,272	22,880	1,453	2,911	4,364	18	7,766	31	15,937	63	23,703	93
Roxas City (Capital)	Urban	20,863	3,526	24,389	4,085	690	4,775	124	20,946	35	3,542	6	24,488	41
	Rural	36,545	16,782	53,328	6,919	3,177	10,096	45	36,751	51	17,014	24	53,764	75
	Total	57,408	20,308	77,716	11,004	3,868	14,871	57	57,697	44	20,555	16	78,253	60
Sapi-an	Urban	1,316	1,977	3,293	263	394	657	5	1,376	34	2,338	58	3,714	92
	Rural	11,649	4,973	16,623	2,236	955	3,191	9	12,017	63	5,427	28	17,445	92
	Total	12,965	6,950	19,916	2,499	1,349	3,848	8	13,394	58	7,765	34	21,159	92
Sigma	Urban	352		352	70		70	0	674	30	1,124	50	1,798	80
	Rural	5,996	13,085	19,080	1,170	2,554	3,724	7	6,232	26	14,748	61	20,979	86
	Total	6,348	13,085	19,433	1,240	2,554	3,794	5	6,906	26	15,872	60	22,778	86
Tapaz	Urban	1,678	202	1,881	317	38	355	14	1,747	82	218	10	1,965	92
	Rural	15,889	17,076	32,965	3,241	3,484	6,725	13	16,576	43	18,505	48	35,081	91
	Total	17,567	17,278	34,845	3,558	3,522	7,080	13	18,323	45	18,723	46	37,047	91
Provincial Total	Urban	46,383	19,471	65,855	8,979	3,735	12,713	8	49,331	39	23,311	18	72,643	57
	Rural	232,590	178,699	411,288	44,720	34,083	78,803	8	245,472	46	205,242	39	450,714	85
	Total	278,973	198,170	477,143	53,699	37,818	91,517	8	294,803	45	228,553	35	523,356	80

4.2 Sanitation and Sewerage

4.2.2 Types of Facilities and Definition of Service Level Standard

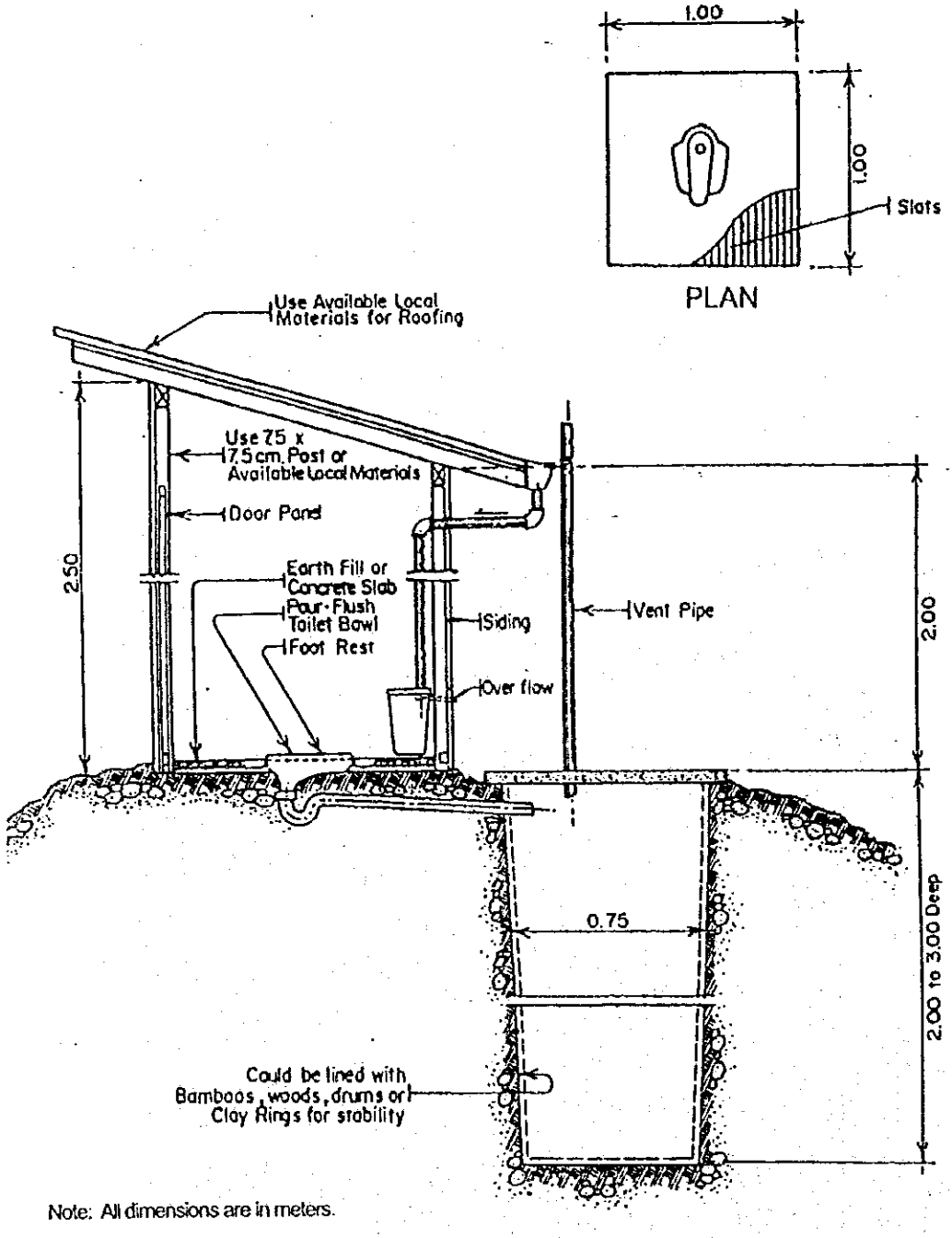
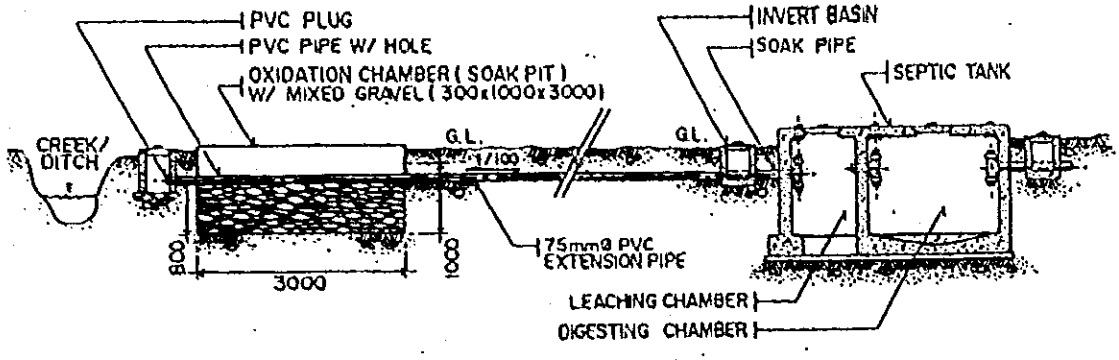


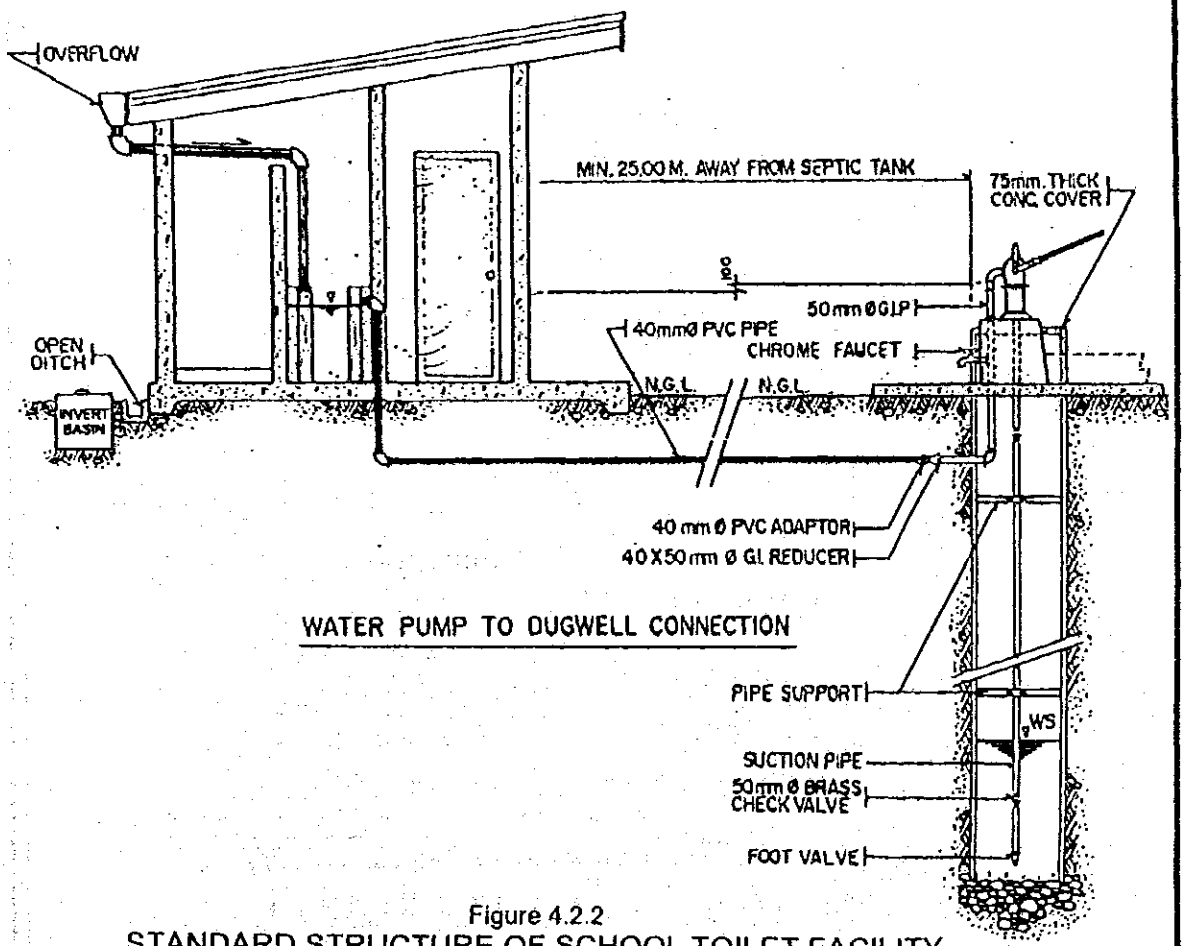
FIGURE 4.2.1

STANDARD STRUCTURE OF PRIVATE TOILET FACILITY

Source: Department of Health



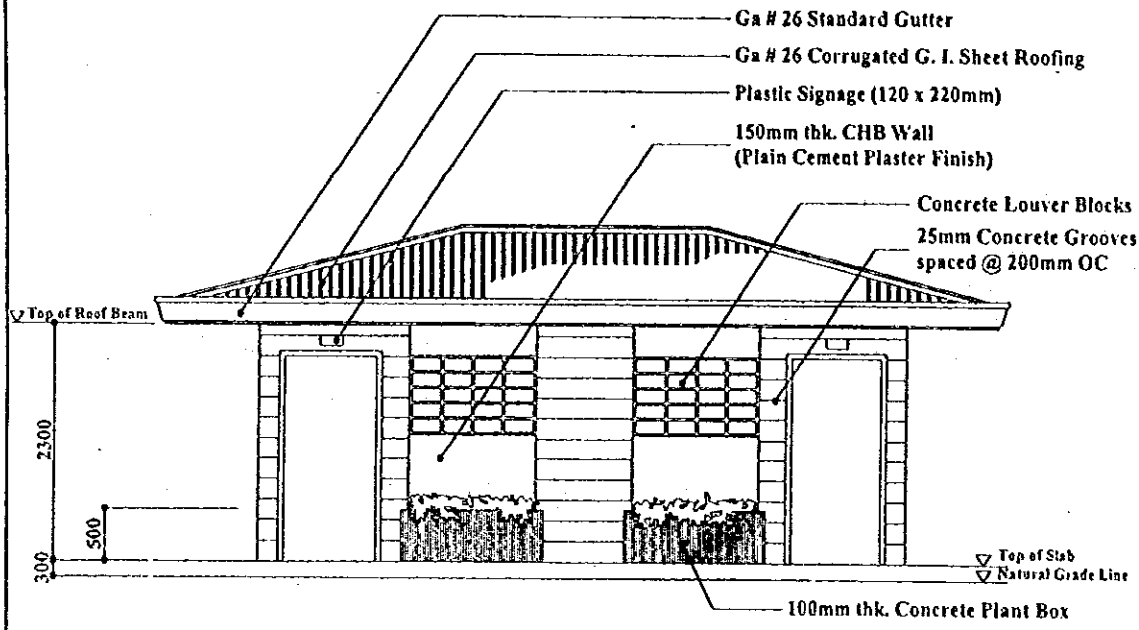
LAYOUT PLAN OF HIGH GROUND WATER SITE



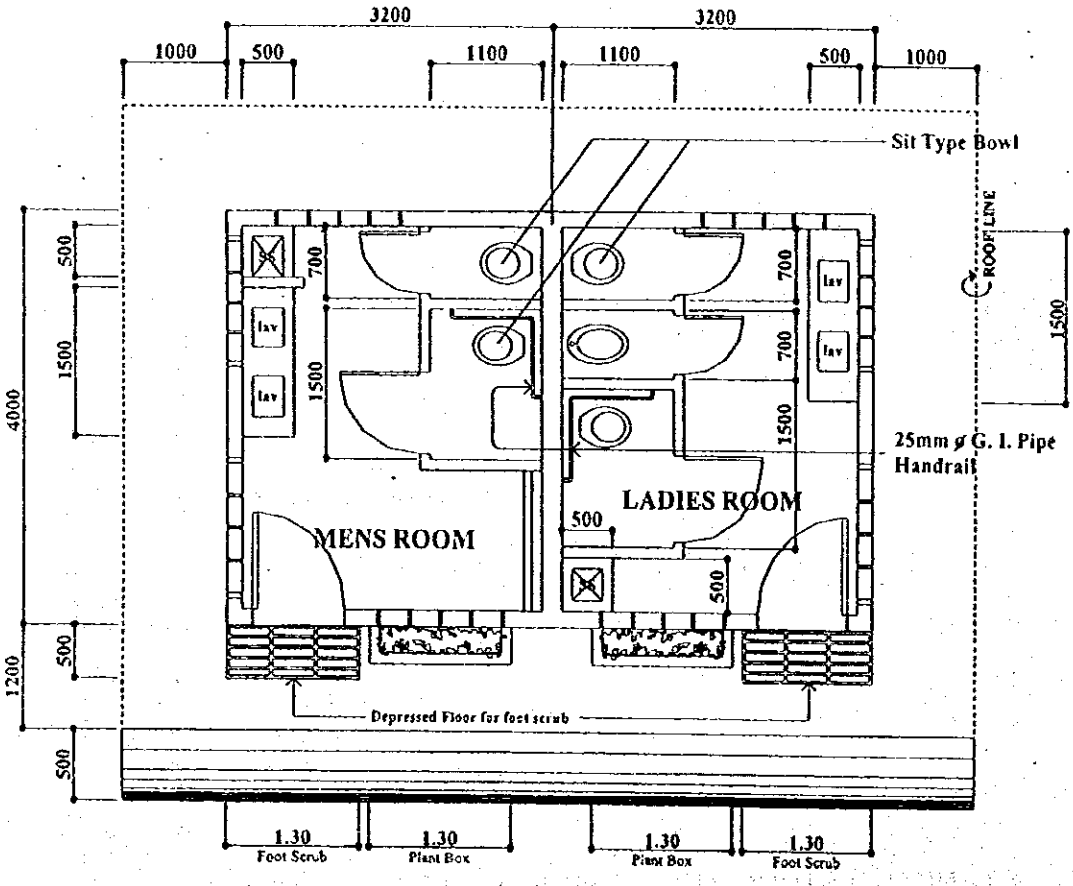
WATER PUMP TO DUGWELL CONNECTION

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 Municipality/City	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	%
Cuartero	Urban	712	152	21	512	72	12	2	676	95	36	5		
	Rural	4,509			250	6	21	0	271	6	4,238	94		
	Total	5,222	152	3	762	15	33	1	947	18	4,274	82		
Dao	Urban	1,084	38	4	971	90			1,009	93	75	7		
	Rural	4,716			1,571	33	2,635	56	4,206	89	510	11		
	Total	5,799	38	1	2,542	44	2,635	45	5,215	90	585	10		
Dumalag	Urban	577	13	2	370	64			383	66	194	34		
	Rural	5,025			2,585	51	1,779	35	4,364	87	633	13	28	1
	Total	5,602	13	0	2,955	53	1,779	32	4,747	85	827	15	28	0
Dumarao	Urban	1,123	40	4	801	71	206	18	1,047	93	47	4	29	3
	Rural	6,724	12	0	241	4	4,813	72	5,066	75	1,547	23	111	2
	Total	7,847	52	1	1,042	13	5,019	64	6,113	78	1,594	20	140	2
Ivisan	Urban	865			804	93			804	93	61	7		
	Rural	3,753			2,540	68			2,540	68	101	3	1,112	30
	Total	4,618			3,344	72			3,344	72	162	4	1,112	24
Jamindan	Urban	508			450	89	40	8	490	96	14	3	4	1
	Rural	6,934			1,290	19	4,856	70	6,146	89	157	2	631	9
	Total	7,442			1,740	23	4,896	66	6,636	89	171	2	635	9
Ma-ayon	Urban	900			682	76	163	18	845	94	55	6		
	Rural	5,079			2,459	48	1,125	22	3,584	71	1,444	28	51	1
	Total	5,979			3,141	53	1,288	22	4,429	74	1,499	25	51	1
Mambusao	Urban	1,173			439	37	642	55	1,081	92	92	8		
	Rural	6,134			2	0	5,390	88	5,392	88	742	12		
	Total	7,307			441	6	6,032	83	6,473	89	834	11		
Panay	Urban	588			568	97			568	97	20	3		
	Rural	6,934			5,699	82			5,699	82	1,000	14	235	3
	Total	7,522			6,267	83			6,267	83	1,020	14	235	3
Panitan	Urban	503	19	4	366	73			385	77	118	23		
	Rural	5,951			1,742	29			1,742	29	4,209	71		
	Total	6,454	19	0	2,108	33			2,127	33	4,327	67		
Pilar	Urban	1,036			918	89			918	89	90	9	28	3
	Rural	6,198			1,092	18	4,406	71	5,498	89	539	9	161	3
	Total	7,234			2,010	28	4,406	61	6,416	89	629	9	189	3
Pontevedra	Urban	1,127	379	34	488	43	93	8	960	85	80	7	87	8
	Rural	6,190	388	6	4,104	66	1,036	17	5,528	89	373	6	289	5
	Total	7,317	767	10	4,592	63	1,129	15	6,488	89	453	6	376	5
President Roxas	Urban	1,277			635	50	339	27	974	76	128	10	175	14
	Rural	3,559			2,217	62	774	22	2,991	84	369	10	199	6
	Total	4,836			2,852	59	1,113	23	3,965	82	497	10	374	8
Roxas City (Capital)	Urban	11,556	4,148	36	6,954	60	179	2	11,281	98	101	1	174	2
	Rural	13,583	2,802	21	9,391	69	521	4	12,714	94	545	4	324	2
	Total	25,139	6,950	28	16,345	65	700	3	23,995	95	646	3	498	2
Sapi-an	Urban	806			742	92			742	92	56	7	8	1
	Rural	3,657			2,895	79			2,895	79	423	12	339	9
	Total	4,463			3,637	81			3,637	81	479	11	347	8
Sigma	Urban	447			261	58	122	27	383	86	64	14		
	Rural	4,736			173	4	3,290	69	3,463	73	1,256	27	17	0
	Total	5,183			434	8	3,412	66	3,846	74	1,320	25	17	0
Tapaz	Urban	403			371	92			371	92	32	8		
	Rural	7,890			1,856	24	1,536	19	3,392	43	4,479	57	19	0
	Total	8,293			2,227	27	1,536	19	3,763	45	4,511	54	19	0
Provincial Total	Urban	24,683	4,789	19	16,332	66	1,796	7	22,917	93	1,263	5	505	2
	Rural	101,574	3,202	3	40,107	39	32,182	32	75,491	74	22,565	22	3,516	3
	Total	126,257	7,991	6	56,439	45	33,978	27	98,408	78	23,828	19	4,021	3

Table 4.2.2 Number of Student and School Toilet Facilities by Municipality

Name of Municipality/City		Number of School	Number of Student	Number of Toilets		
				Sanitary	Unsanitary	Total
Cuartero	Public	22	6,699	16		16
	Private					
	Total	22	6,699	16		16
Dao	Public	21	6,146	24		24
	Private	1	495	2		2
	Total	22	6,641	26		26
Dumalag	Public	20	5,510	40	4	44
	Private	2	222	2		2
	Total	22	5,732	42	4	46
Dumarao	Public	34	10,120	98	29	127
	Private	4	781	4	2	6
	Total	38	10,901	102	31	133
Ivisan	Public	16	6,269	36		36
	Private					
	Total	16	6,269	36		36
Jamindan	Public	36	9,196	62		62
	Private					
	Total	36	9,196	62		62
Ma-ayon	Public	34	9,600	80		80
	Private					
	Total	34	9,600	80		80
Mambusao	Public	33	7,311	41	39	80
	Private	2	604	6		6
	Total	35	7,915	47	39	86
Panay	Public	31	8,778	30	32	62
	Private					
	Total	31	8,778	30	32	62
Panitan	Public	27	8,282	54		54
	Private					
	Total	27	8,282	54		54
Pilar	Public	27	10,277	52		52
	Private					
	Total	27	10,277	52		52
Pontevedra	Public	22	10,201	46		46
	Private	2	455	14		14
	Total	24	10,656	60		60
President Roxas	Public	19	6,224	32		32
	Private	4	1,456	12		12
	Total	23	7,680	44		44
Roxas City (Capital)	Public	47	27,754	159		159
	Private	12	2,184	24		24
	Total	59	29,938	183		183
Sapi-an	Public	23	6,237	48		48
	Private					
	Total	23	6,237	48		48
Sigma	Public	23	4,873	32		32
	Private					
	Total	23	4,873	32		32
Tapaz	Public	51	10,472	53	35	88
	Private	1	347	4		4
	Total	52	10,819	57	35	92
Provincial Total	Public	486	153,949	903	139	1,042
	Private	28	6,544	68	2	70
	Total	514	160,493	971	141	1,112

Table 4.2.3 Number of Public Toilets Facilities in 1998

Name of Municipality/City	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	
Cuartero	2		2							2
Dao	2		2				2		2	4
Dumalag	2		2				2		2	4
Dumarao	1		1					2	2	3
Ivisan	2		2							2
Jamindan	2		2				2		2	4
Ma-ayon	2		2				2		2	4
Mambusao	1	1	2					2	2	4
Panay	2		2							2
Panitan	2		2				2		2	4
Pilar	2		2							2
Pontevedra	2		2							2
President Roxas	2		2							2
Roxas City (Capital)	10		10	3		3				13
Sapi-an	2		2							2
Sigma	2		2							2
Tapaz	3		3				2		2	5
Provincial Total	41	1	42	3		3	12	4	16	61

5. EXISTING SECTOR ARRANGEMENT AND INSTITUTIONAL CAPACITY

5.5 Sector Agencies at the Local Level

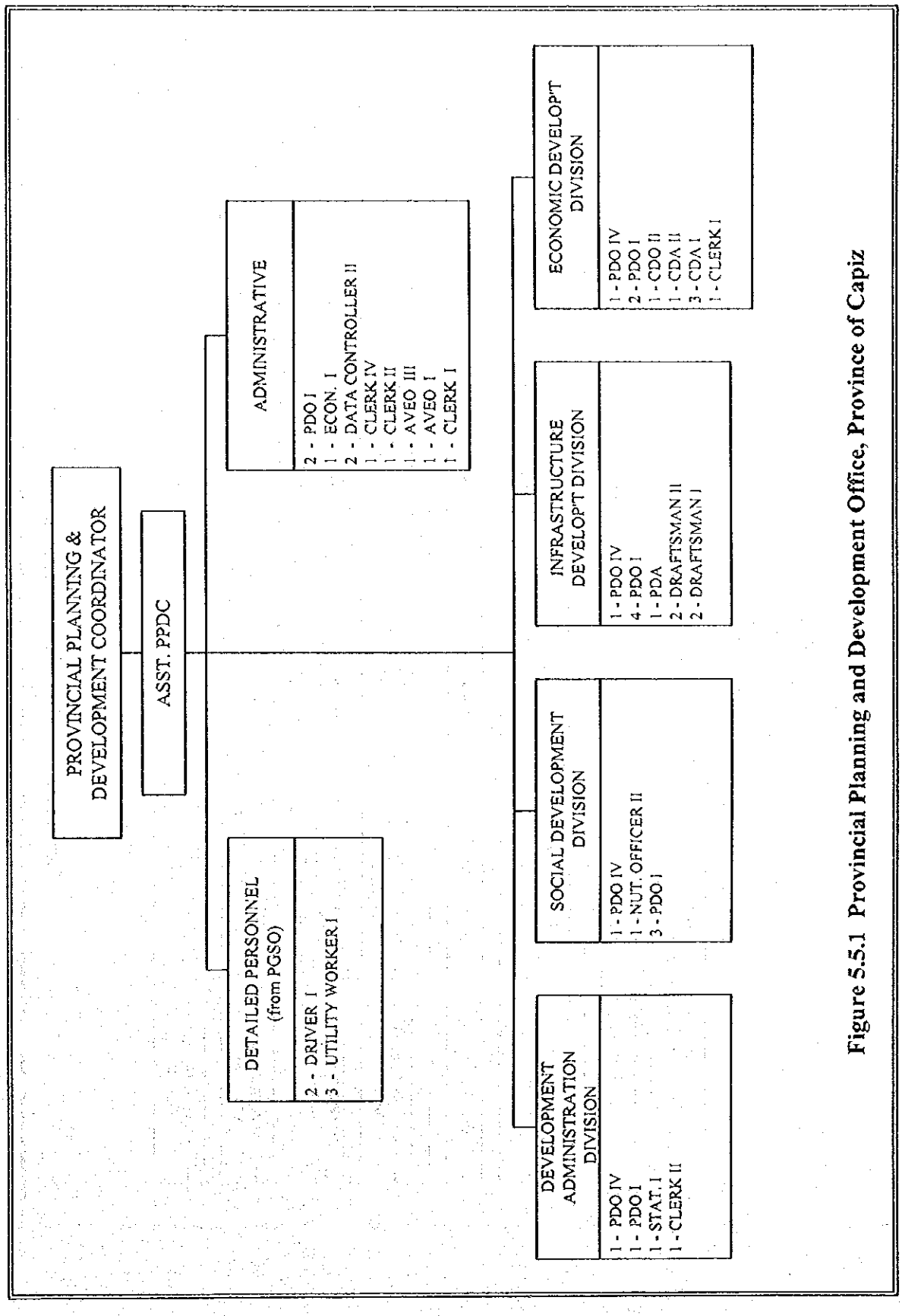


Figure 5.5.1 Provincial Planning and Development Office, Province of Capiz

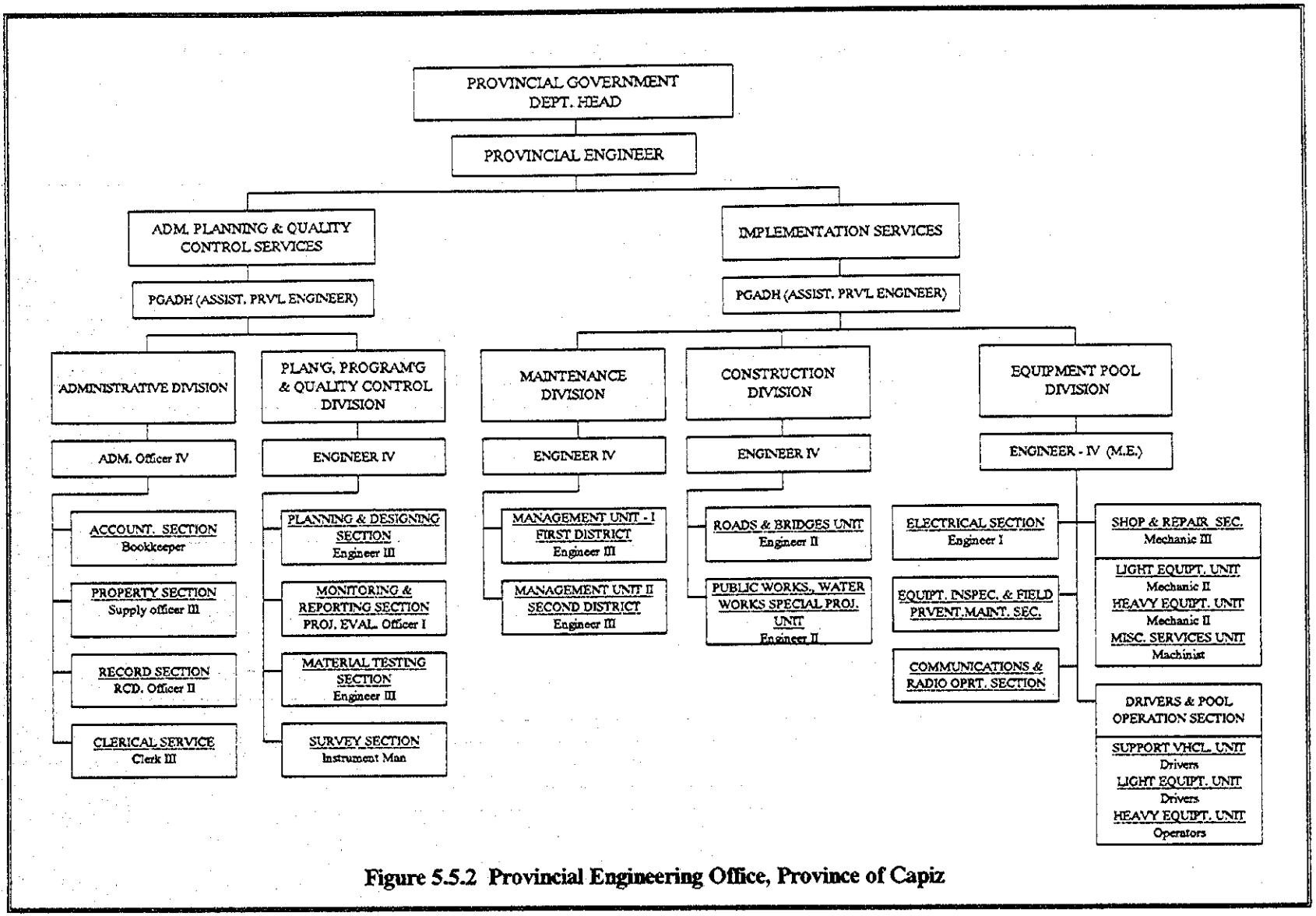


Figure 5.5.2 Provincial Engineering Office, Province of Capiz

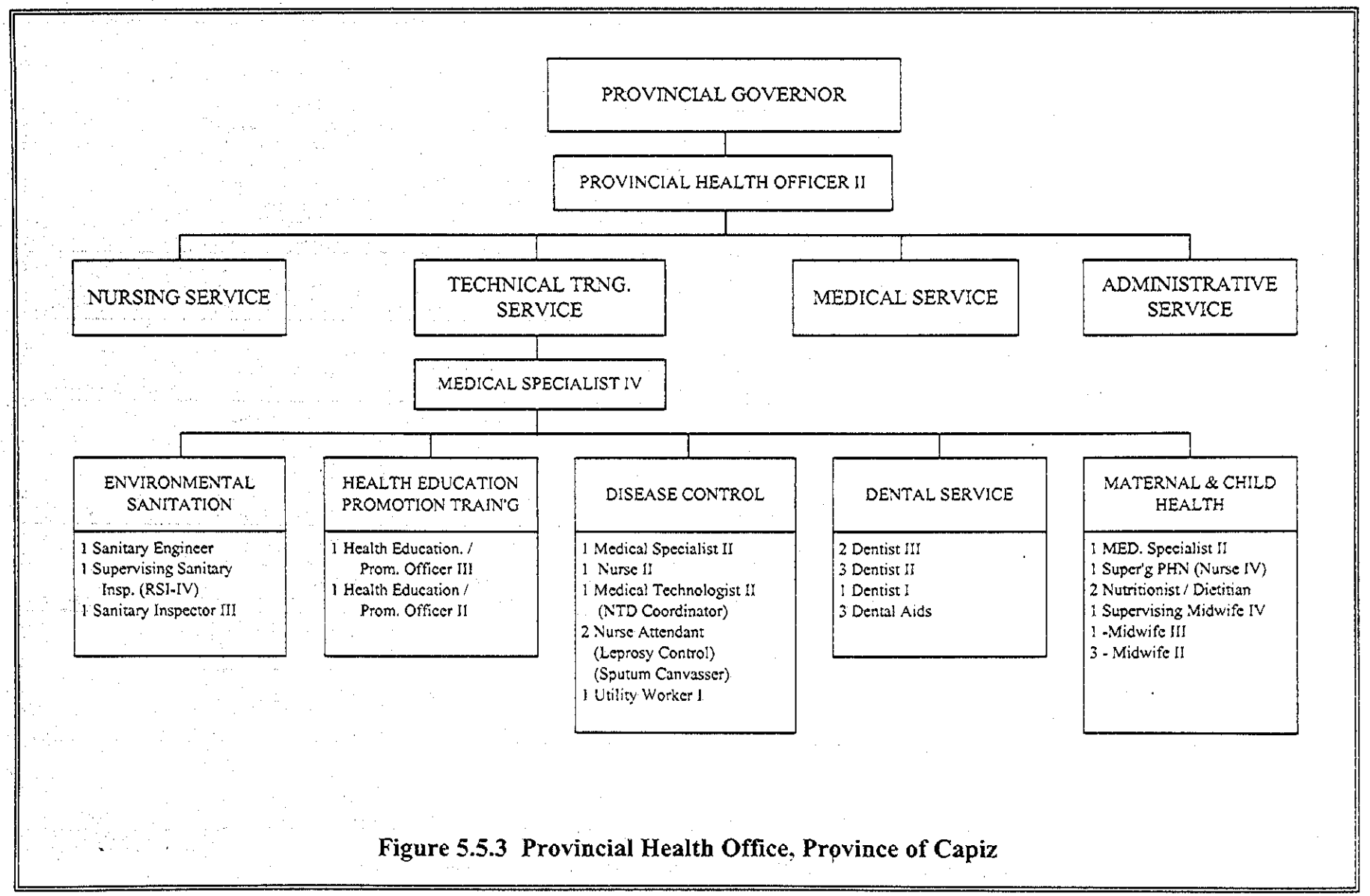


Figure 5.5.3 Provincial Health Office, Province of Capiz

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

2) Too many agencies involved in the sector

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

3) Inter-agency coordination

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

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

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

5) Lack of data management

The main problem concerning to data management are the inadequacy of the network coverage, outdated monitoring equipment, scattered data collection responsibilities, lack of continuous data records and lack of an integrated water resources data base.

Most data collection efforts are project related and are usually discontinued once the project is terminated.

6) Accountability and responsiveness of stakeholders

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

7) Absence of over-all coordination body

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

8) Lack of available staff at the LGU level

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

9) Large demand for training

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

(3) Issues on Financial Aspects

1) Access of the LGUs to other financing institutions

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

2) Cost sharing arrangement

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

3) Varied level of preparedness of the LGUs

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

5.8 Community Development

5.8.1 General

(1) RESULTS OF THE BARANGAY KEY INFORMANT SURVEY FOR CAPIZ

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 two municipalities in the province of Capiz. 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: Agtambi (Dao), Quinabcaban (Dao), and Cabugao (Ivisan)

B. Community Organization

1. Manner of Participation in Sector Development

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

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

Except in Barangay Cabugao where a BWSA exists, it was the barangay councils that is in charge of providing safe, potable water in the other two barangays.

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 barangays.

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

II. COMMUNITY PARTICIPATION

A. General

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

B. Socio-Economic Conditions

1. Average Monthly Income in the Rural Area

The average monthly income of the households in the barangays surveyed was P 2,000. The list of economic activities shows the following: livestock and poultry raising, vegetable gardening and sari-sari-store tending from which the people earn an average of P 1,400 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 most barangays surveyed. Most prevalent diseases are typhoid fever and diarrhea. This is compounded by the absence of effective drainage and garbage disposal systems in the areas.

C. Willingness to Participate

1. Initiating the Organization of a WATSAN Association

Only Cabugao had a committee on water and sanitation within its barangay council. However, majority of the key informants indicated that the barangay councils are willing to participate in sector projects and in the operation and maintenance of WATSAN facilities. All of the respondents indicated that the barangay councils are 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 councils had the capability to implement information dissemination activities.

D. Status of BWSAs/NGOs/CBOs/Pos

1. Number of Barangay with Functional BWSAs

As mentioned earlier, only Barangay Cabugao had a functional BWSA.

2. Status of NGOs/CBOs/POs

Each of the barangay had active NGO/PO. The areas of concern of these NGOs are limited to livelihood, lending and health and sanitation.

E. O&M Practices by Beneficiaries

1. Facility Conditions

Groundwater is widely used as source of water Barangays Agtambi and Quinabcaban (Dao). Barangay Cabugao utilized surface water. Water facilities in the barangay were mostly shallow and deep wells and were mostly constructed in early 1990s, although some wells were built in as early as the 1960s. Most of the systems/facilities are still functional but occasionally have problems. Most of the respondents claimed that their water supply is safe for drinking. However, the male respondents from Barangay Cabugao (Ivisan) reported that their water is not fit for drinking.

2. Common Difficulties and O&M Problems Encountered

Common problems cited by the respondents range from defective pumps to lack of funds for the maintenance work. This can be attributed to the lack of sufficient fund to maintain the operations of WATSAN facilities.

F. Water Charges Adopted and Collection Efficiency

1. Sufficiency of Collected Charges for O&M

Majority of the respondents indicated that the residents do not pay for the operation and maintenance of their water supply facilities. Respondents, however, indicated that people are willing to pay for the water.

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

The designated Treasurer collected fees for water supply in Barangays Cabugao.

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

1. Government Subsidies Requested by End Users

Most barangays were recipients of financial and institutional development assistance from the provincial and municipal government. However, the assistance were mainly on the maintenance of health facilities such as barangay and health centers, and in the conduct of health programs.

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 was 27. Of this number, 24 were males and 3 females. All of the barangays had a male barangay captain.

C. Gender in the Composition of the BWSA

Only Barangay Cabugao had a functional BWSA. It has a set of officers that meets monthly. Male members outnumbered females in the BWSA.

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

Majority of the respondents indicated women do not participate in the O&M of the water facilities. According to those who claimed that women participated, the role of women is limited to collection of fees from the members.

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 their answers to questions such as assis-

tance extended by LGUs, facility conditions, and O&M practices.

(2) RESULT OF GROUP INTERVIEWS (CAPIZ)

A. General

Group interviews were conducted in two selected barangays representing two municipalities in the province of Capiz. The objectives of the group survey/interviews were to identify potential service population and service level desired by the community, to assess the degree of involvement of both men and women in planning, managing, operating and maintaining WATSAN projects, and the willingness and capacity to pay of potential users.

The Project Team conducted the interviews on two sets of interviewees: an all female group and an all male group each consisting of a minimum of 10 and a maximum of 12 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: Agustin Navarra (Ivisan) and Bita (Dao).

B. Demographic Profile

(1) Population

The aggregate population in the two barangays was 1,253 broken down as follows: Agustin Navarra (Ivisan), 773 and Bita (Dao) 480

(2) Households

As indicated by the respondents, there were 261 households in the two barangays, that is: Agustin Navarra (Ivisan) 170 and Bita (Dao), 91.

The figure represents an average of 4.8 members per household.

TABLE 1: TOTAL POPULATION OF BARANGAYS AND NUMBER OF HOUSEHOLDS

BARANGAY (MUNICIPALITY)	M	F	T	NO. OF HH
1. Agustin Navarra (Ivisan)	392	381	773	170
2. Bita (Dao)	254	226	480	91
TOTAL	646	607	1,253	261

(3) Composition of Barangay Councils

There were 16 barangay council members in the two barangays. Of the barangay council members, thirteen (81%) were males and three (19%) were females. Both barangay had male barangay captains.

C. Respondents' Profile

(1) Number and Gender of Respondents

There were 45 respondents in the group interviews. Of these, 22 (49%) were males and 23 (51%) 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. Agustin Navarra (Ivisan)	10	11	21	51
2. Bita (Dao)	12	12	24	49
TOTAL	22	23	45	100

(2) Age Bracket

About 47% of the respondents, or 21 (7 males, 14 females) composed the 26 to 45 age bracket; 42%, or 19 (11 males, 8 females) constituted the 46 to 60 age bracket; 7% (2 males, 1 female) was under the 25 and below age bracket; and 4% (2 males) belonged to 61 and above age bracket.

TABLE 3: AGES OF THE RESPONDENTS

AGE BRACKET	M	F	T	%
25 and Below	2	1	3	7
26-45	7	14	21	47
46-60	11	8	19	42
61 and above	2	-	2	4
TOTAL	22	23	45	100

(3) Level of Education

Most of the respondents (10 males, 6 females) were elementary graduates. Twelve (7

males, 5 females) finished high school while 8 (1 male, 7 females) attended but did not complete elementary education. Three (1 male, 2 females) were college graduates, and five (2 males, 3 females) pursued vocational course.

TABLE 4: RESPONDENTS' LEVEL OF EDUCATION

EDUCATION LEVEL	M	F	T	%
1. Elementary Level	1	7	8	17.78
2. Elementary Graduate	10	6	16	35.56
3. High School Level	-	-	-	-
4. High School Graduate	7	5	12	26.67
5. College Level	-	-	-	-
6. College Graduate	1	2	3	6.67
7. Vocational	2	3	5	11.11
8. Post Graduate	-	-	-	-
9. No Response	1	-	1	2.22
TOTAL	22	23	45	100

(4) Occupation

At the time of the interview, the majority of the respondents (21 males, 15 females) was engaged in either farming or fishing. Others were also engage in different occupation not listed in the table.

TABLE 5: OCCUPATION OF RESPONDENTS

OCCUPATION	M	F	T	%
1. Farmer/Fisherfolk	21	15	36	80
2. Laborer	-	-	-	-
3. Service Worker	-	-	-	-
4. Businessman/woman	-	-	-	-
5. Professional	-	-	-	-
6. Office Worker	-	-	-	-
7. Tech. Equipment Operator	-	-	-	-
8. Others	1	8	9	20
TOTAL	22	23	45	100

D. Socio Economic Profile

(1) Level of Education of Household Members

As indicated by the majority of the respondents, most of the household members were elementary graduates. A significant number of household members also graduated from high school and college. Some household members likewise pursued vocational courses and post graduate degree.

TABLE 6: LEVEL OF EDUCATION OF HH MEMBERS

EDUCATIONAL LEVEL	EDUCATED HOUSEHOLD MEMBERS	
	M	F
1. Elementary Level	-	-
2. Elementary Graduate	15	21
3. High School Level	-	-
4. High School Graduate	10	12
5. College Level	-	-
6. College Graduate	10	23
7. Vocational	11	7
8. Post Graduate	5	3

(2) Employed Household Members

According to the respondents, most of the household members who were employed during the interview, belonged to the 26 to 45 age group. Thirty five interviewees (20 males, 15 females) indicated this figure. The next most employed age group was the 46 to 60 age bracket, as attested by 13 respondents. There was only one employed under the 61 years and above group.

TABLE 7: EMPLOYED HH MEMBERS

RESPONSE	RESPONDENTS	
	Employed Male Members	Employed Female Members
25 and below	-	-
26-45	20	15
46-60	9	4
61 and above	1	-

(3) Occupation of Household Heads and Other Members

As indicated by the respondents, majority of the male and female was engaged in farming and/or fishing, and as laborers. The occupations held by the remaining respondents were: business; service and office worker.

Around 93% of the household members who were gainfully employed earned a monthly income of P5,000.00 and below. Three respondents also claimed having members who earned between P5,000.00 to P 14,999.

TABLE 8: OCCUPATION OF HH MEMBERS

OCCUPATION	M	F	T
1. Farmer/Fisherfolk	15	15	30
2. Laborer	12	12	24
3. Service Worker	-	-	-
4. Businessman/woman	-	1	1
5. Professional	-	1	1
6. Office Worker	1	-	1
7. Technician	-	-	-
8. Others	2	1	3
TOTAL	30	30	60

TABLE 9: AVERAGE MONTHLY INCOME OF HH MEMBERS

ITEM	M	F	T	%
Below P 5,000.00	19	23	42	93
P 5,000 to 14,999	3	-	3	7
P 15,000 to 24,999	-	-	-	-
Above P 25,000	-	-	-	-
TOTAL	22	23	45	100

(4) Average Expenditures of Household

Corollary to the household income, the majority of the respondents reported that the average monthly expenditure of a family was P5,000.00 or below. Five interviewees reported they spent an average of P5,000.00 to P14,999.00 a month.

TABLE 10: AVERAGE MONTHLY EXPENSES OF HH MEMBERS

ITEM	M	F	T	%
Below P 5,000	19	21	40	89
P 5,000 to 14,999	3	2	5	11
P 15,000 to 24,999	-	-	-	-
Above P 25,000	-	-	-	-
TOTAL	22	23	45	100

(5) Practices

Source of Drinking Water. Most of the respondents (17) identified that their drinking water came from piped water supply. Other sources mentioned were: communal shallow wells (10); communal deep wells (7); communal dug well (4); communal faucet (1);private shallow well (3); private dug well (2) and other/spring (1).

TABLE 11: SOURCES OF DRINKING WATER

SOURCES	USER RESPONDENT		T	%
	M	F		
1. Communal Shallow Well	5	5	10	22.22
2. Communal Deep Well	-	7	7	15.56
3. Communal Dug Well	2	2	4	8.89
4. Communal Faucet	1	-	1	2.22
5. Private Shallow Well	2	1	3	6.67
6. Private Deep Well	-	-	-	-
7. Piped Water Supply	9	8	17	37.78
8. Private Dug Well	-	2	2	4.44
9. Others	1	-	1	2.22
TOTAL	22	23	45	100

Responsible for Fetching Water. Both male and female respondents agreed that the wife was responsible for fetching drinking water, as confirmed by 6 male and 13 female interviewees. The husband was not so much involved in the task, as only 1 male and 3 female respondents pointed to husband. Eleven (11) interviewees (4 males, 7 females) also concurred that the second most responsible water fetcher was the male children. Female children also shared in the task, according to four male respondents. Five male interviewees were uncertain to this issue.

TABLE 12: RESPONSIBLE FOR FETCHING DRINKING WATER

FAMILY MEMBER	USER RESPONDENT		TOTAL	%
	M	F		
1. Husband	1	3	4	8.89
2. Wife	6	13	19	42.22
3. Male Children	4	7	11	24.44
4. Female Children	4	-	4	8.89
5. Others	2	-	2	4.44
6. Uncertain	5	-	5	11.11
TOTAL	22	23	45	100

Frequency of Fetching Water. The majority of the respondents, or 30 (9 males, 21 females) indicated that it took only once a day for a family to fetch drinking water. Another four male respondents indicated that they fetch water twice a day. Eleven respondents reported different time schedules not listed.

TABLE 13: FREQUENCY OF FETCHING DRINKING WATER

DURATION	RESPONDENTS		T	%
	M	F		
1. Once a Day	9	21	30	67
2. Twice a Day	4	-	4	9
3. 3x a Day	-	-	-	-
4. 4x a Day	-	-	-	-
5. More than 5x days	-	-	-	-
6. Others	9	2	11	24
TOTAL	22	23	45	100

Duration of Fetching Water. For most of the respondents (13), it took ten minutes to fetch water from the source to the house. Another 11 interviewees, one needed five minutes or less to haul water.. For 10 respondents, fetching water took about 20 minutes while for two respondents, the task requires about 30 minutes to complete.

TABLE 14: DURATION FOR FETCHING DRINKING WATER

DURATION	RESPONDENTS M	F	T	%
1. Less than 5 Minutes	11	-	11	24.44
2. About 10 Minutes	1	12	13	28.89
3. About 20 Minutes	1	9	10	22.22
4. About 30 Minutes	-	-	-	-
5. More Than 30 Minutes	-	2	2	4.44
6. No Response	9	-	9	20
TOTAL	22	23	45	100

Problems with Source. The majority of the respondents (22 males and 18 females) reported to having problems with the current water source. Five female respondents did not reply.

TABLE 15: PROBLEM WITH SOURCE OF WATER

RESPONSE	RESPONDENTS M	F	T	%
1. No Problem	-	-	-	-
2. There are problems	22	18	40	89
3. No Response	-	5	5	11
TOTAL	22	23	45	100

E. Institutional

(1) Presence of BWSA

The majority of the respondents, or 24 (12 males, 12 females) had no knowledge of the existence of a BWSA in their respective barangays. Only about 40%, or 18, of the interviewees (10 males, 8 females) were aware of the presence of BWSAs. Three female interviewees did not respond to the question.

TABLE 16: KNOWLEDGE OF THE EXISTENCE OF BWSA

RESPONSE	RESPONDENTS M	F	T	%
1. Yes	10	8	18	40
2. No	12	12	24	53
3. No Response	-	3	3	7
TOTAL	22	23	45	100

(2) Membership to BWSAs

Consequently, most of the respondents, or 24 (12 males, 12 females) have not been members of BWSA. Eighteen (10 males, 8 females) have been affiliated with the BWSA. Of these, one served as an officer, nine were indirectly involved through the provision of assistance in the repair and maintenance of the facilities, while eight males attended BWSA training..

TABLE 17: MEMBERSHIP TO THE BWSA

RESPONSE	RESPONDENTS M	F	T	%
1. Yes	10	8	18	40
2. No	12	12	24	53
3. No Response	-	3	3	7
TOTAL	22	23	45	100

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

RESPONSE	RESPONDENTS M	F	T	%
1. As BWSA Officer	1	-	1	2
2. As Collection Officer	-	-	-	-
3. Assist in the repair maintenance of facilities	1	8	9	20
4. Attend/ Facilitate Training	-	8	8	18
5. Not active	20	7	27	60
TOTAL	22	23	45	100

(3) Who maintains the facilities of the BWSA?

Most of the respondents, or 36 (21 males, 15 females) did not know the person(s) responsible for maintaining the WATSAN facilities Only nine interviewees reported it was someone from the BWSA who maintained the WATSAN facilities.

TABLE 19: RESPONSIBLE FOR MAINTAINING BWSA FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Someone in the Barangay	-	-	-	-
2. Professional caretaker	-	-	-	-
3. Someone from the BWSA	1	8	9	20
4. No one	-	-	-	-
5. Don't know	21	15	36	80
TOTAL	22	23	45	100

(4) Interested to be a member of BWSA

More than half of the respondents indicated interest in becoming a more active member of BWSA in their respective barangays. The other interviewees did not respond to this question.

TABLE 20: INTEREST OF RESPONDENTS TO JOIN BWSA

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Interested	12	12	24	53
2. Not Interested	-	-	-	-
3. No Response	10	11	21	47
TOTAL	22	23	45	100

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

More male respondents (5) indicated to be just BWSA members. Three would be willing to contribute cash or do repair and maintenance works. Two could contribute labor and just one was willing to be a BWSA officer. On the other hand, the female respondents, though not all, could become actively involved in WATSAN projects by contributing cash or assist in the repair and maintenance of the facilities.

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

RESPONSE	RESPONDENTS	
	M	F
1. Contribute Cash	3	8
2. Contribute labor	2	-
3. Be Officer	1	-
4. Collection of Fees	-	-
5. Do Repair/Maintenance	3	8
6. Just Member	5	-

(6) Responsible for minor repairs of water facilities

Twenty respondents (12 males, 8 females) pointed to a male member as the one responsible for minor repairs of the WATSAN facilities. For five respondents, they said that it was "someone" in the barangay who took care of minor repairs. Twenty respondents were uncertain as the one responsible for minor repairs.

TABLE 22: RESPONSIBLE FOR MINOR REPAIRS

SOURCE OF WATER	RESPONDENTS		T	%
	M	F		
1. Female Member	-	-	-	-
2. Male Member	12	8	20	44.44
3. Somebody in the Brgy.	-	5	5	11.12
4. Professional Caretaker	-	-	-	-
5. Owner of the Well	-	-	-	-
6. Others / Uncertain	10	10	20	44.44
TOTAL	22	23	45	100

F. Training Activities

(1) Training Program attended in 1998

The majority of the respondents, or 24 (12 males, 12 females) indicated they were able to attend training program in 1998. While four male interviewees did not attend any training programs, the rest of the respondents did not respond to this question.

TABLE 23: TRAINING ATTENDED BY RESPONDENTS IN 1998

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	12	12	24	53
2. No	4	-	4	9
3. No Response	6	11	17	38
TOTAL	22	23	45	100

(2) Kinds of Training Program

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

TABLE 24: TRAINING COURSES ATTENDED BY RESPONDENTS IN 1998

BARANGAY	MALE	FEMALE
1. Agustin Navarra (Ivisan)	CIDSS Training Farmer's Training (small fisherman)	Farmer's Training BHW , SATP, CIDSS
2. Bita (Dao).	Planning and Budgeting Integrated Development Management	Food Processing

(3) On BWSA Training

More male respondents were aware of various training program for BWSA members. Twelve male interviewees had knowledge while only eight female respondents were aware. Nevertheless, all respondents were willing to attend BWSA-related training programs.

TABLE 25: AWARENESS ON VARIOUS TRAINING FOR BWSA

TRAINING PROGRAM	YES	
	M	F
1. Caretaker's Training	12	8
2. Collection/Finance	12	8
3. Repair/O&M	12	8

TABLE 26: WILLINGNESS TO ATTEND BWSA-RELATED TRAINING PROGRAMS

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	22	23	45	100
2. No	-	-	-	-
TOTAL	22	23	45	100

(4) Training on Health Education

Only 18, mostly female, respondents participated in past health education and training programs. Seventeen interviewees (10 males, 7 females) had no response on this question.

If given a chance, the respondents wanted to attend WATSAN related training programs such as: Water and Sanitation Training, Income Generating Training, Skills and Livelihood Training, Agricultural Training, Health and Livelihood Training and Mothers Training.

TABLE 27: PARTICIPATION IN HEALTH EDUCATION AND TRAINING

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	2	16	18	40
2. No	10	-	10	22
3. No Response	10	7	17	38
TOTAL	22	23	45	100

TABLE 28: TYPES OF TRAINING RESPONDENTS WISH TO ATTEND

BARANGAY	MALE	FEMALE
1. Agustin Navarra (Ivisan)	Water and Sanitation Training Income Generating Training	WATSAN, Livelihood, OSY Mothers Training
2. Bita (Dao).	Skills and Livelihood Training Agricultural Training	BWSA Health Livelihood

(5) Desirable Training Period

In relation to this, majority of the respondents desired for a three-day training period. The rest opted for two days (15 respondents) and one day (2 female respondents) while one male respondent wanted more than three days.

TABLE 29: DESIRABLE TRAINING PEERIOD

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Less Than 1 Day	-	-	-	-
2. One (1) Day	2	-	2	4.44
3. Two (2) Days	13	2	15	33.33
4. Three (3) Days	6	21	27	60
5. More Than Three Days	1	-	1	2.22
TOTAL	22	23	45	100

G. Community Development

(1) CBOs and contact person

All of the respondents were aware of NGOs working in their communities. All of them indicated that there were community-based organizations doing different development works in the barangays. Table 31 lists down these NGOs/CBOs and their contact persons:

TABLE 30: ARE THERE NGOs WORKING IN THE BARANGAY

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	22	23	45	100
2. No	-	-	-	-
TOTAL	22	23	45	100

TABLE 31: NGOS/CBOS IN THE BARANGAYS

BARANGAY	AREAS OF CONCERN	CONTACT PERSON
1. Agustin Navarra (Ivisan)	**Male** Small Farmers Association **Female** Taytay sa Kauswagan Small Coconut Farmers Association Farmers Association A. Navarra Multi-Purporse Coperative	Arevalo Undalo Brgy. Captain Leonardo Loberes Arevalo Undalo Edmar Loberes
2. Bita (Dao).	**Male** World Vision Bita Farmers Association **Female** World Vision Bita Multi-Purpose Cooperative PAGLAUM Development Assn., Inc	Hazel Feguro/Norberto Villorente Oeograciais Tianzon, Jr. Virgie Villanueva Delia Felecia Norberto Villorente

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

All of the female respondents indicated they were consulted and/or briefed on their proposed roles and responsibilities on all aspects - planning and design, construction, and operation and maintenance as well as the financing of past WATSAN projects. Less male interviewees were involved.

TABLE 32: RESPONDENTS CONSULTED IN PAST WATSAN PROJECTS

BWSA ACTIVITIES	YES		T	%
	M	F		
1. Planning & Design	8	23		
2. Construction Facilities	5	23		
3. O&M of the System	3	23		
4. Financing of the System	-	23		
TOTAL				

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

Only half of the male respondents were consulted in varying degrees on the different activities prior, during, and after the BWSA was formed. All female respondents did not respond to this question.

TABLE 33: WERE YOU CONSULTED WHEN:

ACTIVITIES	YES		T	%
	M	F		
1. BWSA was formed in the Brgy.	10			
2. Water fee was decided upon	10			
3. Level or type of service was agreed upon	10			
4. Facilities were constructed	10			
TOTAL				

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

Only half of the male respondents did participate in past construction activities of the BWSA. Most provided free labor while three contributed cash. Meanwhile half (12) of the female interviewees provided materials and the other 12 donated materials in past construction projects.

TABLE 34: PARTICIPATION IN PAST CONSTRUCTION PROJECTS

TYPE OF PARTICIPATION	RESPONDENTS		T	%
	M	F		
1. Contributed Cash	2	-	2	
2. Provided labor	10	12	22	
3. Donated Site	-	-	-	
4. Provided Materials	-	12	12	
5. Others	-	-	-	
6. No Contribution	-	-	-	
TOTAL	12	24	36	

(5) Will the respondents participate in future projects?

For future projects, however, the majority of the respondents (22 males, 20 females) indicated that they would participate and/or contribute for all activities such as: on the formation of BWSA, on the formulation of water rates, in the selection of sites and levels of services, construction of facilities and in the operation and maintenance.

TABLE 35: WILLINGNESS/TYPE OF PARTICIPATION IN FUTURE PROJECTS

PROJECT ACTIVITIES	YES		T	%
	M	F		
1. Formation of BWSA	22	20		
2. Formulation of water rates	22	20		
3. Selection of sites and levels of services	22	20		
4. Construction of facilities	22	20		
5. Operation and maintenance	22	20		
TOTAL				

H. Financial Aspects

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

Twenty-four respondents (12 males, 12 females) admitted not paying their water fees. Only 18 female interviewees claimed that they pay the water fees charged them. Three female participants did not answer the question.

TABLE 36: NUMBER OF RESPONDENTS PRESENTLY PAYING WATER FEE

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	10	8	18	40
2. No	12	12	24	53
3. No Response	-	3	3	7
TOTAL	22	23	45	100

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

Of those paying their water fee, (18) respondents indicated that they pay about P6.00 to P10.00 a month. The 27 non-paying respondents did not answer the question.

TABLE 37: PRESENT WATER FEES PAID

WATER FEES	RESPONDENTS		T	%
	M	F		
Below P 5.00	-	-	-	-
P 6.00 to P 10.00	10	8	18	40
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	12	15	27	60
TOTAL	22	23	45	100

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

Eighteen respondents claimed that the water fees being collected are not adequate to cover the cost of operating and maintaining of the facilities. Again, the 27 non-paying respondents were uncertain on the matter.

The reasons cited for such inadequacy were the low water fee (9 respondents), O&M cost is too high and not all water users pay their water fee.

TABLE 38: ADEQUACY OF WATER FEE FOR O&M

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	-	-	-	-
2. No	10	8	18	40
3. Uncertain	12	15	27	60
TOTAL	22	23	45	100

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

REASON/S	M	F	T	%
1. Water fee is low	5	4	9	20
2. O&M cost is too high	5	-	5	11
3. Not all water users pay their water fee	-	4	4	9
4. No Response/Uncertain	12	15	27	60
TOTAL	22	23	45	100

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

Most of the respondents (10 males, 11 females) could not tell the responsible person(s) to shoulder the O&M of facilities. Another 11 female interviewees said it was the Barangay Council who shouldered the O&M. Only one respondent claimed it was the private owner;. Twenty-one others did not answer the question; while twelve said it could be "others."

TABLE 40: RESPONSIBILITY FOR SHOULDERING THE O&M COSTS

PERSON	RESPONDENTS		T	%
	M	F		
1. Barangay Council	-	11	11	24
2. WATSAN Association	-	-	-	-
3. Private Owner	-	1	1	2
4. Don't know	-	-	-	-
5. Others	12	-	12	27
6. No Response	10	11	21	47
TOTAL	22	23	45	100

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

Except for three respondents who did not answer, the majority (93%) of the respondents expressed willingness to pay for the O&M of future facilities.

TABLE 41: RESPONDENTS' WILLINGNESS TO PAY FOR FUTURE FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	22	20	42	93
2. No	-	-	-	-
3. No Response	-	3	3	7
TOTAL	22	23	45	100

(6) How much are respondents willing to pay?

Of those who were willing to pay, the majority (36 or 80%) claimed they could pay below P11.00 to P 20.00. Five respondents could pay water fees from P 6.00 to P 10.00, and for one male respondent claimed he could pay only below P 5.00.

TABLE 42: AMOUNT RESPONDENTS ARE WILLING TO PAY

RESPONSE	RESPONDENTS		T	%
	M	F		
Below P 5.00	1	-	1	2
P 6.00 to P 10.00	5	-	5	11
P 11.00 to P 20.00	16	20	36	80
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 Response	-	3	3	7
TOTAL	22	23	45	100

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

Except for three female respondents who did not respond, almost all the respondents indicated their willingness to contribute in cash or in kind for the construction of future WATSAN facilities in their respective barangays.

TABLE 43: WILLINGNESS TO CONTRIBUTE FOR FUTURE FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	22	20	42	93
2. No	-	-	-	-
3. No Response	-	3	3	7
TOTAL	22	23	45	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)	N/A			
TOTAL				

(8) If so, what kind?

Should they be required to contribute, the majority of the respondents preferred to give free labor and materials during the construction.

TABLE 45: TYPES OF CONTRIBUTION

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Will free provide labor	22	20	42	
2. Will donate site	-	-	-	
3. Will provide materials	22	12	34	
4. Others	-	-		
TOTAL	44	32	76	

(9) Reason/s for not Contributing

Only three female respondents reasoned out for not giving contribution for future projects. Two could not afford to contribute cash and one said she did not have kand to contribute,

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

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

I. Health and Sanitation

(1) Type of toilet

The majority used toilets which flush to a septic tank on site. The rest used private pit/latrine (9).

TABLE 47: TYPES OF TOILETS RESPONDENTS USE

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Toilet w/ flushes to septic tank on the site	21	15	36	80
2. Toilet w/ flushes/ drops straight to sea	-	-	-	-
3. Private pit latrine	1	8	9	20
4. Shared flush toilet w/ septic tank	-	-	-	-
5. Public toilet	-	-	-	-
6. Bush or other open outdoor site	-	-	-	-
7. Pour Flush Water	-	-	-	-
TOTAL	22	23	45	100

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

The majority of the respondents was uncertain as to the types of illnesses that afflicted their family members in the past year. Three interviewees (1 male, 2 females) said diarrhea was prevalent while two male respondents cited gastro-entiritis.

Thirteen reported other illnesses not listed in the table such as: fever, colds and high blood pressure. More men (husbands, male children, fathers, grandfathers) were afflicted with various ailments and illness compared to the female group.

TABLE 48: WATER ILLNESSES

DISEASE	RESPONDENTS		T	%
	M	F		
1. Diarrhea	1	2	3	7
2. Kidney trouble	-	-	-	-
3. Gastro-enteritis	2	-	2	4
4. Cholera	-	-	-	-
5. Typhoid fever	-	-	-	-
6. Malaria	-	-	-	-
7. Skin Disease	-	1	1	2
8. Schistosomiasis	-	-	-	-
9. Others	13	-	13	29
10. Uncertain	6	20	26	58
TOTAL	22	23	45	100

TABLE 49: HOUSEHOLD MEMBERS FREQUENTLY GOT SICK IN 1998

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Husband	3	2	5	11.11
2. Wife	-	1	1	2.22
3. Father	1	-	1	2.22
4. Mother	-	1	1	2.22
5. Male Children	4	1	5	11.11
6. Female Children	7	1	8	17.78
7. Grandmother	-	-	-	-
8. Grandfather	-	-	-	-
9. Others/Uncertain	7	17	24	53.33
TOTAL	22	23	45	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 radio television; NGOs; health sanitation/clinics/hospitals; health workers/inspectors; schools; and from family and friends.

TABLE 50: AWARENESS ABOUT THE INFORMATION ABOUT HEALTH AND SANITATION

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	22	23	45	100
2. No	-	-	-	-
TOTAL	22	23	45	100

TABLE 51: WHERE PEOPLE LEARNED HEALTH AND HYGINE EDUCATION

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Radio	22	21	43	
2. Newspapers	-	-	-	
3. Television	10	14	24	
4. NGOs	-	23	23	
5. Family and Friends	10	11	21	
6. Health Sanitation/Clinics/Hospitals	-	19	19	
7. Health workers/ inspectors	22	23	45	
8. School	-	11	11	
TOTAL				