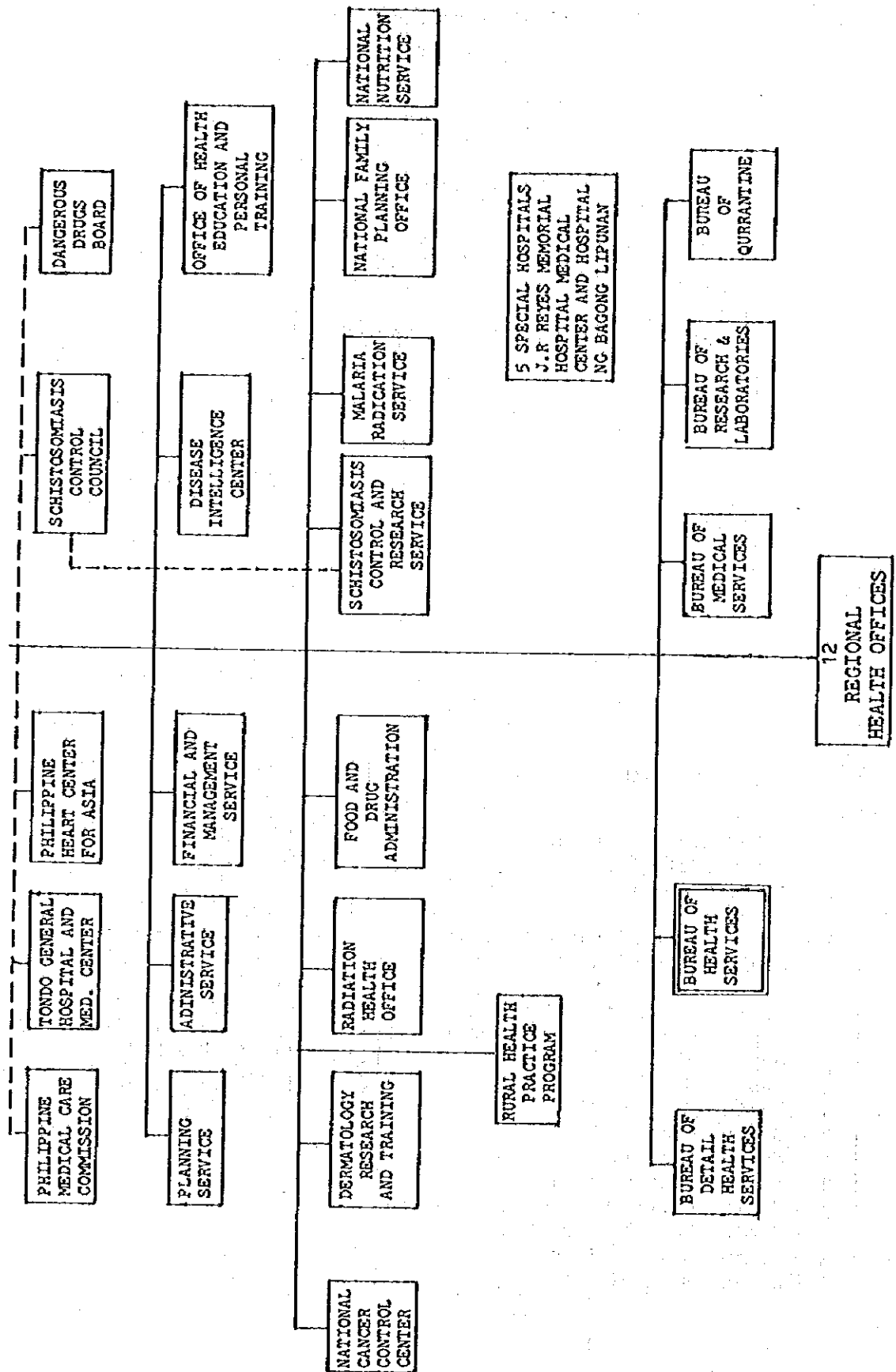
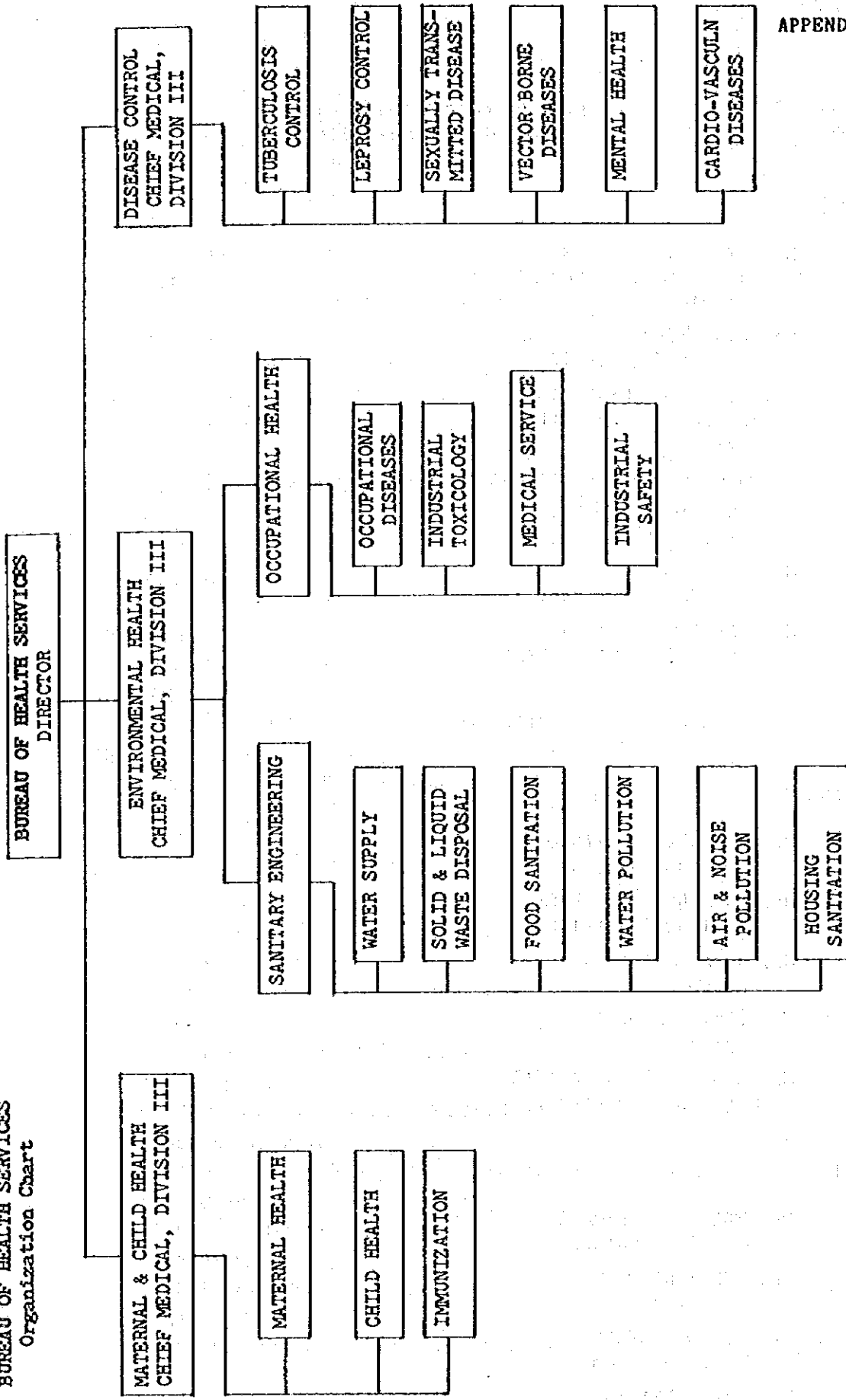


MINISTRY OF HEALTH ORGANIZATION CHART



**BUREAU OF HEALTH SERVICES**  
 Organization Chart



APPENDIX 7

LIST OF GOVERNMENT OFFICERS  
WHO SUPPORTED THE STUDY

\* MPWH

Mr. TEODORO T. ENCARNACION  
Asst. Ministry for Planning  
- Project Management for Rural Water Supply -

Dr. FLORENCIO F. PADERNAL  
Project Manager IV

Mr. Danilo J. Castillon  
Project Engineer II

Mr. LAMBERTO L. ABRECEA  
Chief Mechanical Engineer

Mr. ANTONIO N. MOLANO Jr.  
Chief Civil Engineer

Mr. SAMUEL SIAO  
Head Civil Engineer

Mr. CARLITO TABLARIN  
Supervising Civil Engineer I

----- PROVINCE -----

BATANGAS

Mr. BENJAMIN CASTILLO  
District Engineer

Mr. REYNALDO R. MORADA  
Drilling Specialist

Mr. JOHN MACATANGAY  
Engineer

Mr. TIVING AGUILA  
Engineer

Mr. RODRIGO E. NATANACIAN  
Municipal Secretary, Talisay

CAVITE

Mr. FRANCISCO LIMETA  
District Engineer

Mr. BENVIENIDO MOJICA  
Well Driller

Mr. EFREN LUBIGAN  
Water Resource

Mr. RAMON LEYNES  
Water Resource

BULCAN

Mr. JOVEN C. PASTORES  
District Engineer

Mr. AMBROSHURE GONZARES  
Asst. District Engineer

Mr. BENY MENDOSA  
Engineer

Mr. LITO ANTONIO  
Civil Engineer Aid II

Mrs LINDA EVANGELESTA  
Secretary

Mr. EMIL SACDALAN  
Mun. Development Officer, Paombong

PAMPANGA

Mr. AMANDO S. LASCAMANA  
District Engineer

Mr. EDILFONSO MACATUNO  
Asst. District Engineer

Mr. WILFRED ALBARO  
Civil Engineer

Mr. NICETAS B. MALLARI  
Water Research Investigator

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\* MOH

Dr. AURORA S. VILLAROSA  
OIC, Bureau of Health Services

Dr. FLORA S. BAYAN  
OIC, Bureau of Health Services

Mr. DELFIN R. GONZALEZ  
Head Sanitary Engineer, B.H.S.

Mr. PABLO R. IMPERIO  
Asst. Project Manager & Sanitary Engineering Adviser, B.H.S.

Dr. H.K. CHANG  
WHO Consultant

Mr. W. ILUSTRE  
Sanitary Engineer

Dr. JULIO P. VALERA  
Chief, Health Intelligence Service

Mrs. CONSTANCIA M. ASINAS  
Training Nurse  
Representing Dr. F.F. Aniceto  
OIC, Health, Education & Manpower Development Services

Mr. J. ALVAREZ  
Sanitary Engineering Adviser, Project Director of Training

Mr. A. Hormillosa  
Project Engineer, FRWSSP

----- PROVINCE -----

BATANGAS

Dr. DOMINGO AQUILERA  
Integrated Provincial Health Officer

CAVITE

Dr. EDARDO GEUINOINO  
Integrated Provincial Health Officer

Dr. Hernando PULIDO  
Asst. I.P.H.O.

Miss. ADORA VALENZUELA  
Nurse for Andres Bonifacio Memorial Hospital

BULACAN

Dr. FELIX S. NAVARRO  
I.P.H.O.

Dr. ANTONIO POPEZ  
Asst. I.P.H.O.

Mr. PATERNO ARCEGA  
Hospital Administrative Officer III

Mr. HERMAN M. CRUZ  
Supervising Sanitarian

PAMPANGA

Dr. ROGELIO REYES  
I.P.H.O.

Mr. ROBERTO N. BITUIN  
Sanitarian

\* LOCAL WATER UTILITIES ADMINISTRATION (LWUA)

Mr. ERIBERTO R. CALUBAQUIB  
Manager, Hydrogeology Division

Mr. ROBERTO B. BINAG  
Chief, Project Development Division

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\* RURAL WATERWORKS DEVELOPMENT CORPORATION (RWDC)

Mr. WILLIE D. PURA  
Manager, Human Resource Development Division

Mr. EMMANUEL R. LAMSEN  
Manager, Engineering Division

Mr. NILO DELA CRUZ  
Chief, Construction Management Section, Engineering Division

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\* NATIONAL ECONOMIC & DEVELOPMENT AUTHORITY (NEDA)

Mr. AUGUSTO SANTOS  
Asst. Director, Infrastructure Staff  
Program & Project Development

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\* MINISTRY OF LABOR AND EMPLOYMENT

Mrs. A.C. VILORIA  
Chief, Wage & Welfare Standards Section  
Wage & Hour Standards Division  
Bureau of Working Condition

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NUMBER OF CASES AND DEATHS BY  
LEADING-WATER BORNE AND RELATED DISEASES

unit: 100,000 pop.

Description	National	Bulacan	Pampanga	Batangas	Cavite
Cholera El Tor	3.0/0.8	1.5/0.2	1.2/0.6	0.1/0.1	7.2/0.2
Typhoid, Parathphoid, Salmonella Infection	7.8/1.7	2.1/1.1	1.5/0.4	2.4/0.2	0.5/0.5
Amoebic Dysentery	60.7/2.7	3.2/2.2	20.9/1.2	1.1/0.2	8.5/0.5
Food Poisoning	0.7/0.5	0.3/0.2	0/0	0.2/0.2	1.7/0.3
Gastro-enteritis Cobitis	462.6/34.5	113.5/39.7	998.9/13.5	161.3/21.2	497.9/29.2
Intectious Napatitis	15.8/1.8	1.6/1.3	5.6/0.4	7.8/0.8	22.2/1.4
Malaria	77.7/2.4	0.8/0.6	9.1/0.2	1.6/0	5.8/0.2
Viral Encephalitis	0.6/0.3	0.8/0.3	0.9/0.7	0.2/0.1	0.3/0.2

Philippine Health Statistics 1978, MOH

Cases/deaths

**NUMBER AND PERCENTAGE DISTRIBUTION OF HOUSEHOLDS (H.H.)\***  
**WITH/WITHOUT TOILET FACILITIES**

Whole Country Region	Total House- holds	Total H.H. with Sanitary Toilet Facilities		Total H.H. With Unsanitary Toilet Facilities		Total H.H. With- out Toilet Facilities	
		No.	%	No.	%	No.	%
PHILIPPINES	7,341,619	3,883,218	52.9	2,043,562	27.3	1,414,839	19.3
Region: 1	558,360	383,651	68.7	132,803	23.8	41,906	7.5
2	350,132	236,514	67.5	79,062	22.6	34,556	9.9
3	719,974	400,830	55.6	173,930	24.2	145,214	20.2
4	910,438	815,615	69.6	36,625	4.0	58,243	6.4
4-A	930,011	394,714	42.4	308,433	33.2	226,864	24.4
5	543,146	212,095	39.0	165,386	30.3	165,675	30.5
6	721,798	155,791	21.6	384,756	53.3	181,251	25.1
7	619,907	336,787	54.3	129,964	20.3	157,156	25.4
8	472,724	254,761	53.9	48,182	10.2	169,781	35.9
9	352,468	111,864	31.7	142,777	40.5	97,827	27.8
10	403,671	217,747	54.0	120,047	29.7	65,877	16.3
11	453,090	241,350	53.3	170,388	37.6	41,352	9.1
12	305,555	121,509	59.7	155,209	50.8	29,137	9.5

Respondent Households

Source: National Health Survey, MOH, OCT. '78

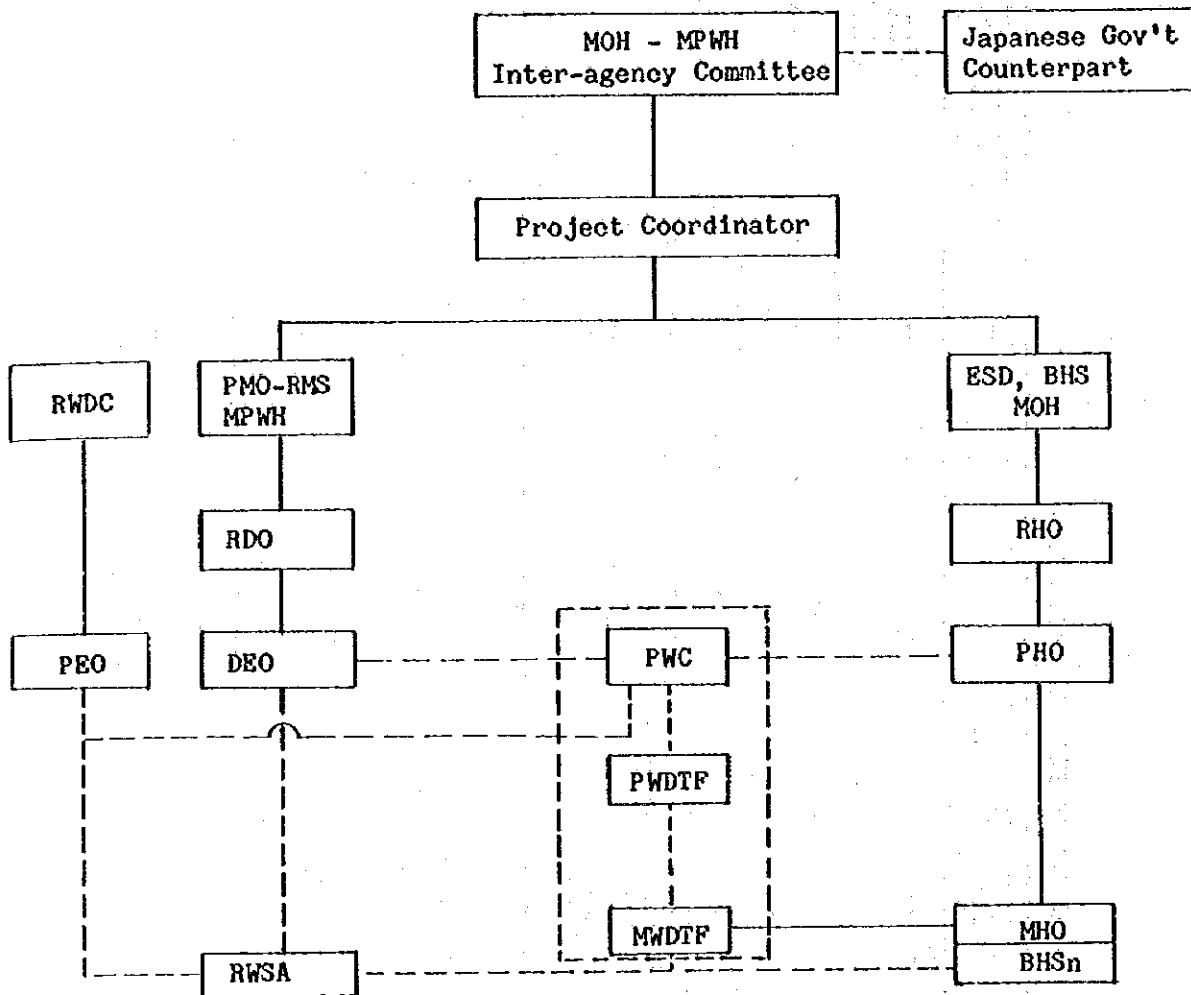


NUMBER AND PERCENTAGE DISTRIBUTION OF HOUSEHOLDS (H.H.)\*  
WITH SANITARY TOILET FACILITIES BY TYPE

Whole Country Region	Total Households	Flush With Septic Tank		Flush Direct to Sewerage System		Water Sealed or Hand Flush		Flush With Pit Only		Total H.H. With Sanitary Toilet Facilities	
		No.	%	No.	%	No.	%	No.	%	No.	%
PHILIPPINES	7,341,619	791,407	10.8	104,274	1.4	2,772,078	37.8	215,459	2.9	3,883,218	52.9
Regions: 1	558,360	49,707	8.9	-	-	323,012	57.8	10,932	2.0	383,651	68.7
2	350,132	7,760	2.2	-	-	215,501	61.5	13,253	3.8	236,514	67.5
3	719,974	122,313	16.9	-	-	226,254	31.4	52,263	7.3	400,830	55.6
4	910,430	334,592	36.3	104,274	11.4	352,217	38.7	24,532	2.7	815,615	89.6
4-A	930,011	109,151	11.7	-	-	232,751	25.0	52,312	5.7	394,714	42.4
5	543,146	15,880	2.9	-	-	179,429	33.0	16,766	3.2	212,085	39.0
6	721,798	40,514	5.6	-	-	102,223	14.2	13,054	1.6	155,791	21.6
7	619,907	40,046	6.4	-	-	292,694	47.2	4,051	0.7	336,787	54.3
8	472,724	12,384	2.5	-	-	340,637	50.9	1,740	0.4	254,761	53.9
9	352,468	7,744	2.2	-	-	91,766	26.0	12,345	3.5	111,864	31.7
10	403,671	14,884	3.7	-	-	200,816	49.8	2,347	0.5	217,747	54.0
11	453,090	24,278	5.4	-	-	215,165	47.5	1,907	0.4	241,350	53.3
12	305,555	12,154	3.9	-	-	99,617	32.5	9,738	3.2	121,509	39.7

Respondent Households  
Source: National Health Survey, MOH. Oct. '78

ORGANIZATION CHART FOR THE PROJECT



Legend:

- BSD - Environmental Sanitation Division
- BHS - Bureau of Health Services
- RHO - Regional Health Office
- PWC - Provincial Waterworks Committee
- PWDTF - Provincial Waterworks Development Task Force
- MWDTF - Municipal Waterworks Development Task Force
- DEC - District Engineers Office
- PMO-RWS - Project Management Office for Rural Water Supply
- PHO - Provincial Health Office
- MHO - Municipal Health Office
- BHSn - Barangay Health Station
- RWDC - Rural Waterworks Development Corporation
- PEO - Provincial Engineer Office

RESULT OF SITE INVESTIGATION

Pampanga

MUNICIPALITY	BARANGAY	Project Site	Population	Total H.H.	Existing Well S-Shallow D=Depth	Depth (ft) Dia (in)	Proposed Level (FPI) -min	Served H.H.	Power Cost # Phase	Transmission	School		Liveli- hood	Income (P/Wo)
											No. Pupils	Existing Toilet		
LUBAO	1 Sta Cruz	A.P. (EL 5.0m)	6,000	1,200	S = 80 D = 80	400/ft	III	I	P1.6/s	Land	1,200	5 (bowl)	Commercial Farming Fishing 600-120	1,500
	2 Bananal Pugad *	A.L. (EL 0-2.0m)	1,000	118	S = 3 D = 1	400/5.5	-	II	P1.62/s	Water Treating (100m) Land	296	2 (Puhrip)	Fishing 400	200
FLORIDIANCA	3 Bodega	A.P. (EL 15m)	1,319	250	S = 75 D = 20	120/3	I	II	P1.15/s	Land	950	2	Farming	900
	4 Camachillo	M. (EL 100-250m)	150	70	S = 2 D = -	65/1.5	I	I	-	Treating (200m) Land	44	-	-	200
POMC	5 Dampo	A.P. (EL 15m)	1,463	238	S = 10 D = -	120/1.5	I	II	P1.15/s	Land	240	2	-	900
	6 Gutad	"	1,500	200	S = 46 D = -	20/1.5	I	II	P1.6/s	Land	300	3	-	900
POMC	7 Jalung	"	1,729	300	S = 20 D = 2	100/0	II	II	P1.13/s	Treating (50m) Land	300	4	-	1,500
	8 Dolores * ((PAO))	Pen A.P. (EL 130-160m) (EL 50m)	2,730	500	S = 1 D = 1 Spring	3 GPM	-	II	P1.61/s	Land	420	1	-	1,000

A.P.: Alluvial Plain  
A.L.: Alluvial Lowland  
M: Mountainous  
\* : Additional Point  
(-): Change Point  
H.H.: Households

RESULT OF SITE INVESTIGATION

Bulacan

MUNICIPALITY	BANTAGAY	Project Site	Population	Total H.H.	Existing well S=Shallow D=Deep	Depth (ft) Dia (in)	Proposed Level	Served H.H.	Power Cost 5 Phase	Transmission	School		Livelihood	Income (P/mo)
											No. Pupils	Existing Toilet		
OBANDO	9 Binuangan	A.L (EL 1.0m)	5,000	500	D=3 Level-III	950/8-12	I	70	P1.48 (s)	Water	510	2	Fishing	
	10 Cabangalan	" (EL 1.0-2m)	4,100	510	S=many D=2	400/2-3	I	70		Land	450	3	Farming	
	11 Nulo	"	4,000	400	S=2 D=-	100/2	II	70		"	25	2	Fishing	
	12 Lava	"	12,000	2,000	D=50 Level-III	400 - 500/2-3	II	100		"	300	3	Farming	
	13 N.S.D. Salambao	" (EL 1.0m)	530	62	S=- D=7	600/3	I	30		Water Trecking (100m)	-	-	Fishing	
	14 Paoo	" (EL 1.0-2.0m)	6,000	1,000	D=5 Level-III	200/2-3	I	100		Land	1,148	5	Farming	
	15 Pag-asa	"	6,000	500	D=1 Level-II	400/3	I	50		"	-	-	Fishing	
	16 Binakod	" (EL 1.0m)	2,000	200	S=5 D=-	40/2	I	30		Water	100	-	Fishing	
	17 Kapitangan	" (EL 2.0-4.0m)	1,555	262	S=10 Level-III	459/4	I	40	P1.60	Land	360	1	Farming Fishing	
	18 Malusot	" (EL 1.0-2.0m)	1,344	222	S=1 Level-III	880/2	I	222	P1.60	"	-	-	Farming	
	19 Masukol	" (EL 1.0m)	1,800	300	S=7 D=-	200/2-3	I	35	P1.55	Water	250	3	Fishing	
	20 Pinalagan	" (EL 2.0-3.0m)	1,409	232	S=20 D=-	450/2	I	20		Land	213	2	Farming	
	21 San Jose	" (EL 2.0-4.0m)	2,138	340	S=9 D=-	40.0/8	-	180	P1.60	"	-	-	Farming Fishing	
22 San Isidro I		2,163	373	S=15 Level-III	120/3	I	20		"	-	-	Farming		
23 San Isidro II		3,323	557	S=15	400/4-5	I	20		"	-	-	Farming Fishing		
	Population	Selected Toilet	-	-	-	-	-	-	-	-	1,268	3	-	

A.L: Alluvial Lowland  
A.P: Alluvial Plain  
H.H: Households

RESULT OF SITE INVESTIGATION

Cavite

MUNICIPALITY	BARANGAY	Project Site	Population	Total H.H.	Existing well S=Shallow D=Deep	Depth (ft) Dia (in)	Proposed Level Minutes	Served Plan H.H.	Power Cost S Phase	Transportation	School		Livelihood	Income (P/mo)
											No. Pupils	Existing Toilet		
AMIGDO	24 Matim	T.L (EL 510-530m)	2,000	250 Level-II	D = 1	150/-	I	250	P1.50/3	Land	150	4	Farming	150
GEN. TRIAS	25 Duonaviata	" (EL 100m)	3,954	560	S = 12 Level-II	200/4	II	360	P1.50/3	"	581	3	Farming	1,200
	26 Mangahan	" (EL 115-120m)	3,000	500	S = 3 D = 6	200/5.5	I	100	P1.50/3	"	68	2	Farming (50%) Industry (50%)	800
	27 Balabag	" (EL 430-450m)	530	132	D = 1 Level-II	300/5.5	II	132	P2.00/3	"	40	2	Farming Industry	1,100
INDANG	28 Pilipit	" (EL 450-470m)	510	70	D = 1 Level-II	200/4	II	70	P1.20	"	30	2	Farming	1,500
	29 Cuyam, Malaki	" (EL 390-400m)	1,000	200	S = 10 D = 2	250/4	I	50	P1.57/3	"	200	3	"	1,000
	30 San. Pascual	" (EL 390-400m)	355	65	S = 1 D = 1	60/2.5 146/3	I	40	P1.50/3	"	"	"	"	1,500
MARAGUION	31 Agus-Os	" (EL 150-170m)	1,000	150	S = -	360/2.5	I	150	"	"	"	"	"	1,500
	32 Pantihen III	" (EL 160-180m)	1,000	130	S = 1 D = 3	120-150/-	I	50	"	"	180	"	"	600
	33 Tulay	" (EL 30-40m)	1,500	250	S = 3 D = 3	300/2	I	30	"	"	320	2	"	"
NATC	34 Malalinen Luma	" (EL 50-60m)	800	150	S = 11 D = 2	100/2	I	50	"	"	403	2	"	"
	35 Malalinen Dago	A.P (EL 2.0m)	3,500	350	S = 50 D = -	50/2	I	60	P1.43/3	"	430	4	"	"
SILANG	36 Palangue I	T.L (EL 60-70m)	1,005	150	S = - D = 1	150/-	I	10	"	"	594	4	"	Farming Industry
	37 Palangue II	" (EL 60-70m)	804	120	S = - D = 1	150/-	I	10	"	"	62	3	Farming	1,200
	38 Pasong Jangka	" (EL 420mm)	2,000	150	S = - D = 1	200/-	-II	150	P1.06/3	"	"	1	"	"

T.L.: Table Land

A.P.: Alluvial Plain.

H.H.: Households

RESULT OF SITE INVESTIGATION

Batangas

MUNICIPALITY	BARANGAY	Project Site	Population	Total H.M	Existing Well Shallow or Deep	Depth (ft.) Dia (in)	Proposed Level Minutes	Served Plan H.H	Power Cost Phase	Transportation	School		Livelihood	Income (P/mo)
											No. Pupils	Existing Toilet		
LEMERY	39 Arumahan	Mountainous (EL 80-140m)	2,000	400	D = 5 Level-II	420ft/5	II	II	(3)	Land	100	5	Farming	800
	40 Bagong Pook	" (EL 40-80m)	2,000	300	S = -	132/3	I	II	(3)	"	"	"	"	"
	41 Cullod	" (EL 40-80m)	1,000	100	D = 7	435/2.5	I	II	(3)	"	300	3	"	"
	42 Mahabang Bahilig	" (EL 60-100m)	2,000	300	S = -	"	I	I	"	"	240	6	"	"
	43 San Isidro	" (EL 100-140m)	671	115	Rain Water Catchment	"	I	I	"	"	210	2	"	"
	44 Masalal	" (EL 100-120m)	619	109	"	"	I	I	"	"	58	2	"	200
	45 Tubuan	" (EL 200-240m)	1,128	200	"	"	I	I	"	"	54	"	"	"
	46 Dinka	" (EL 100-200m)	614	104	"	"	I	II	(3)	"	420	6	Farming	600
	47 Buroi	" (EL 130m)	403	94	"	270/4	II	II	(3)	"	100	3	"	"
	48 Iruman	" (EL 120m)	450	80	S = 1 D = 2	130/3	I	I	(3)	"	254	3	"	"
STA. TERESITA	49 Kalayaan	" (EL 90-100m)	1,000	120	S = -	350/6	II	I	(3)	"	80	3	"	"
	50 Cuta East	" (EL 100-120m)	1,500	452	S = -	550/6	I	I	(3)	"	"	"	"	"
	51 Cuta West	" (EL 180-190m)	625	100	D = 1	"	I	I	(3)	"	"	"	"	"
	Poblacion	" (EL 160-170m)	414	60	"	"	"	"	"	"	320	"	"	600
	52 Aya	Beneel Toilet Fan (EL 10-20m)	4,500	716	S = 150 D = -	280/5	I	I	(3)	Land	592	3	Farming	"
	53 Balas	" (EL 5-15m)	1,000	100	S = Many D = -	30/-	I	I	(3)	"	335	4	"	"
	54 Danga	" (EL 10-15m)	1,444	243	S = -	70/2	I	I	(3)	"	100	2	"	"
	55 Calococan	" (EL 5-10m)	953	150	S = 50 D = -	70/2	III	II	(3)	"	319	3	"	"
	56 Miranda	" (EL 190-200m)	690	150	S = 3 Level-II	Spring	I	I	"	Trucking (200m) Land	50	4	"	"
	57 Quiling	" (EL 15-20m)	2,100	390	S = 50 D = 2	180/3	I	I	(3)	"	300	3	"	"
TALISAY	58 Sampaloc	" (EL 10-15m)	2,000	350	S = 30 D = -	30/2	I	I	(3)	"	220	4	"	"
	59 Sta. Maria	" (EL 5-15m)	638	101	S = 10 D = 1	60/2	I	I	(3)	"	"	"	"	"
	60 Tunaway	" (EL 20-30m)	1,000	200	S = 10 D = 1	30/1.5	I	I	(3)	"	"	"	"	"

81 Manila-Luzon  
L.I.P. Distribution



