

JAPAN INTERNATIONAL COOPERATION AGENCY

THE STUDY ON THE
PROVINCIAL WATER SUPPLY, SEWERAGE AND
SANITATION SECTOR PLAN
IN
THE REPUBLIC OF THE PHILIPPINES

VOLUME II - [5]

SUPPORTING REPORT

PROVINCIAL WATER SUPPLY, SEWERAGE AND
SANITATION SECTOR PLAN
FOR THE PROVINCE OF

NEGROS OCCIDENTAL



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VOLUME II SUPPORTING REPORT

TABLE OF CONTENTS

CHAPTER	PAGE NO.
LIST OF TABLES	iv
LIST OF FIGURES	vii
A. BACKGROUND INFORMATION AND EXISTING CONDITION	
1. INTRODUCTION	
1.3 The Provincial Plan for the Province of Negros Occidental	1 - 1
1.3.1 Preparation of the Plan	1 - 1
2. PLANNING APPROACH FOR FUTURE SECTOR DEVELOPMENT	
2.6 Planning Principles and Data Management	2 - 1
2.6.2 Data Management	2 - 1
3. PROVINCIAL PROFILE	
3.3 Socio-economic Conditions	3 - 1
3.3.1 Economic Activities and Family Income	3 - 1
3.3.3 Education	3 - 2
3.4 Population	3 - 3
3.4.1 Classification of Urban and Rural Area	3 - 3
3.5 Health Status	3 - 4
3.6 Environmental Conditions	3 - 4
3.6.2 Water Pollution	3 - 4
4. EXISTING FACILITIES AND SERVICE COVERAGE	
4.1 Water Supply	4 - 1
4.1.3 Level III Systems	4 - 1
4.1.4 Level II Systems	4 - 5
4.1.5 Level I Facilities	4 - 60
4.1.6 Water Supply Service Coverage	4 - 62
4.2 Sanitation and Sewerage	4 - 76
4.2.2 Types of Facilities and Definition of Service Level Standard	4 - 76
4.2.3 Sanitation Facilities and Service Coverage	4 - 79
5. EXISTING SECTOR ARRANGEMENTS AND INSTITUTIONAL CAPACITY	
5.5 Sector Agencies at the Local Level	5 - 1
5.6 External Support Agencies in the Sector	5 - 4
5.7 Project Management Arrangement, and Issues and Problems	5 - 6
5.7.2 Institutional Aspect	5 - 8

5.8	Community Development	5 - 12
5.8.1	General	5 - 12
6.	PAST FINANCIAL PERFORMANCE IN WATER SUPPLY AND SANITATION	
6.2	Past Public Investment	6 - 1
6.2.1	Sources of Local Fund	6 - 1
6.2.2	Availability of Funds	6 - 12
6.4	LGU's Present Financing Sources and Management Participation in the Sector	6 - 13
7.	WATER SOURCE DEVELOPMENT	
7.3	Groundwater Sources	7 - 1
7.3.2	Groundwater Availability in the Province	7 - 1
7.4	Spring Sources	7 - 4
7.5	Surface Water Sources	7 - 5
7.6	Future Development Potential of Water Sources	7 - 11
7.7	Water Source Development for Medium-Term Development Plan	7 - 20
7.7.1	Detailed Groundwater Investigation Required	7 - 20
7.7.2	Spacing Allocation for Level II and III Wells	7 - 23
B.	<i>FUTURE REQUIREMENTS AND DEVELOPMENT PLAN</i>	
8.	FUTURE REQUIREMENTS IN WATER SUPPLY AND SANITATION IMPROVEMENT	
8.2	Targets of Provincial Sector Plan	8 - 1
8.3	Projection of Frame Values	8 - 17
8.3.1	Review of Past Population Development and Population Projection	8 - 17
8.3.2	School Enrollment Projection	8 - 26
8.3.3	Projection of the Number of Public Utilities	8 - 27
8.4	Types of Facilities and Implementation Criteria	8 - 29
8.4.1	Water Supply	8 - 29
8.4.3	Urban Sewerage	8 - 34
8.5	Service Coverage by Target Year	8 - 35
8.5.1	Water Supply	8 - 35
8.5.2	Sanitation	8 - 43
8.6	Facilities, Equipment and Rehabilitation Required to Meet the Target Services	8 - 54
8.6.1	Water Supply	8 - 54
8.6.2	Sanitation	8 - 62
C.	<i>SECTOR IMPLEMENTATION ARRANGEMENTS</i>	
9.	SECTOR MANAGEMENT FOR MEDIUM-TERM DEVELOPMENT	
9.2	Sector Management	9 - 1
9.4	Project Management Arrangements	9 - 3
9.4.1	Project Approach / Strategy	9 - 3
9.4.2	Project Implementation Arrangements	9 - 5
9.5	Community Development	9 - 58
9.5.2	CD Structure and Linkages	9 - 58
9.5.5	Approaches to Participatory Community Development	9 - 61

10. COST ESTIMATES FOR FUTURE SECTOR DEVELOPMENT

10.2 Assumption for Cost Estimates	10 - 1
10.2.1 Unit Construction Cost	10 - 1
10.2.2 Unit Cost of Equipment	10 - 35
10.2.3 Cost of Laboratory and Equipment	10 - 36
10.3 Cost of Required Facilities and Equipment	10 - 37
10.3.1 Cost of Required Facilities	10 - 37
10.4 Costs of Sector Management	10 - 41
10.4.1 Breakdown of Community Development and Training Cost	10 - 41

11. FINANCIAL ARRANGEMENTS FOR MEDIUM-TERM DEVELOPMENT PLAN

11.3 Additional Funding Requirements	11 - 1
11.4 Medium-Term Implementation Arrangements	11 - 2
11.4.2 Alternative Countermeasures	11 - 2
11.5 National Government Assisted Level I Water Supply and Sanitation Project	11 - 2

12. MONITORING FOR MEDIUM-TERM DEVELOPMENT PLAN

12.4 Evaluation of Plan Implementation and Updating the PW4SP	12 - 1
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PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

LIST OF TABLES

Table No.	Title	Page No.
2.6.1	Key Parameter	2 - 2
2.6.2	Composition of Well Sources and Specific Capacity	2 - 3
2.6.3	Annual Investment	2 - 4
2.6.4	Level I Safe and Unsafe Percentage	2 - 4
2.6.5	Unit Construction Cost of Different Facilities	2 - 5
2.6.6	Scoring Factor for Municipal Investment Ranking for Urban Water Supply	2 - 6
2.6.7	Scoring Factor for Municipal Comprehensive Investment Ranking	2 - 6
3.3.1	Distribution of Families by Income Class	3 - 1
3.3.2	Employment by Major Industry Group and Class of Worker, 1994	3 - 1
3.3.3	Household Population by Highest Educational Attainment	3 - 2
3.5.1	Number and Ratio of Population to Health Facilities and/or Medical Practitioners	3 - 4
3.6.1	Types of Drainage Facilities	3 - 4
3.6.2	DENR Water Quality Criteria/Water Usage and Classification for Fresh Water	3 - 5
4.1.1	Details on Existing Level III Systems	4 - 1
4.1.2	Details on Existing Level II Systems	4 - 5
4.1.3	Results of Water Quality Examination of Shallow Wells	4 - 61
4.1.4(a)	Number of Level I Facilities by Safe and Unsafe Classification	4 - 63
4.1.4(b)	Public and Private Level I Facilities for Rural Water Supply	4 - 62
4.1.5	Estimation of Unserved Population by Municipality	4 - 66
4.1.6(a)	Estimation of Population Covered by Safe and Unsafe Source by Municipality	4 - 70
4.1.6(b)	Estimation of Population Covered by Safe and Unsafe Source by Municipality	4 - 73
4.2.1	Sanitation Facilities and Service Coverage of Household Toilets by Type, by Municipality, Urban and Rural, 1998	4 - 79
4.2.2	Number of Student and School Toilet Facilities by Municipality	4 - 82
4.2.3	Number of Public Toilet Facilities in 1998	4 - 84
5.6.1	Priority Areas/Terms and Conditions, Programs and Projects by Donor	5 - 4
5.7.1	Matrix of Current Practices and Issues from Rapid Assessment of Subject Provinces and Local Offices of Central Government Agencies	5 - 6
5.7.2	Offices/Agencies involved in WATSAN Project	5 - 8
6.2.1	Income and Expenditures of Negros Occidental, 1995-1999	6 - 1
6.2.2	Past Internal Revenue Allotment to Municipalities from Central Government	6 - 12
7.4.1	Existing Spring Sources	7 - 4
7.5.1	Gauging Station & River Water Use by Major River Basins	7 - 7
7.5.2	Probability of Surface Water	7 - 10
7.6.1	Existing Well Sources	7 - 11
7.6.2	Hydrogeological Descriptions by Municipality	7 - 15

Table No.	Title	Page No.
7.6.3	Proportion of Gravel Packed and Natural Gravel Packed Wells	7 - 17
7.6.4	Proposed Location of Additional Water Quality Examination for PVC Wells	7 - 19
7.6.5	Untapped Spring Source Identified	7 - 19
7.7.1	Spacing Arrangements for Planned Wells	7 - 24
8.2.1	Estimation of Base Year Service Coverage of Water Supply	8 - 1
8.2.2	Population Coverage in Phase I Provided by Served Population in the Base Year (Water Supply)	8 - 4
8.2.3	Number of Households Served by Sanitary Toilets in the Base Year (1998)	8 - 8
8.2.4	Number of Public School Student Served by School Toilets in Base Year (1998)	8 - 10
8.2.5	Number of Public Utilities with Sanitary Toilets in the Base Year in 1998	8 - 11
8.2.6	Households Coverage in Phase I Provided by Existing Facilities in the Base Year (Household Toilets)	8 - 13
8.2.7	Public School Students and Public Utilities Coverage in Phase I by Existing Facilities in the Base Year	8 - 16
8.3.1	Regional and Provincial Population Projection by NSO	8 - 17
8.3.2	Census Population and Projected Population in Land Use Plan	8 - 19
8.3.3	Projected Population by the NSO	8 - 19
8.3.4	Census Results and Projected Population of Municipalities	8 - 21
8.3.5	Past Population Development by Urban and Rural Area	8 - 22
8.3.6	Population Projection by Urban and Rural Area: 1998, 2005 and 2010	8 - 24
8.3.9	Projected Number of Households by Urban and Rural Area by Municipality by Target Year	8 - 25
8.3.10	Projected School Enrollment by Municipality by Target Year	8 - 26
8.3.11	Projected Number of Public Utilities by Municipality by Target Year	8 - 27
8.4.1	Existing Condition and Future Requirements of Urban Water Supply by Municipality	8 - 30
8.5.1	Population to be Served by Level II System in Phase	8 - 35
8.5.2	Population to be Served in Phase I (Water Supply)	8 - 37
8.5.3	Population to be Served in Phase II (Water Supply)	8 - 40
8.5.4	Additional Number of Households to be Served in Phase I (Household Toilets)	8 - 43
8.5.5	Additional Number of Households to be Served in Phase II (Household Toilets)	8 - 46
8.5.6	Additional Number of Public School Students to be Served in Phases I and II (School Toilets)	8 - 49
8.5.7	Additional Number of Public Utilities with Sanitary Toilets in Phase I and II	8 - 50
8.6.1	Urban Water Supply Facilities Required by Target Year	8 - 55
8.6.2	Plan for Expansion of Existing Level III Systems	8 - 58
8.6.3(a)	Rural Water Supply Facilities Required by Target Year	8 - 59
8.6.3(b)	Rural Water Supply Facilities Required by Target Year	8 - 60
8.6.4	Urban Household Toilets Required by Target Year	8 - 62
8.6.5	Rural Household Toilets Required by Target Year	8 - 63
8.6.6	Public School Toilets Required by Target Year	8 - 64
8.6.7	Public Toilets Required by Target Year	8 - 65
9.4.1	Format for Level I Project Data	9 - 40
9.4.2	Format for Level II Feasibility Study	9 - 41
10.2.1	Price of Major Materials by Facility	10 - 2

Table No.	Title	Page No.
10.2.2(a)	Unit Cost of Level I (Gravel Packed Deep Well – 40m Depth)	10 - 3
10.2.2(b)	Unit Cost of Level I (Natural Gravel Packed Deep Well – 40m Depth)	10 - 4
10.2.2(c)	Unit Cost of Level I (Gravel Packed Deep Well – 40m Depth) for Acid Water	10 - 5
10.2.3(a)	Unit Cost of Level I (Gravel Packed Deep Well – 80m Depth)	10 - 6
10.2.3(b)	Unit Cost of Level I (Natural Gravel Packed Deep Well – 80m Depth)	10 - 7
10.2.3(c)	Unit Cost of Level I (Gravel Packed Deep Well – 80m Depth) for Acid Water	10 - 8
10.2.4(a)	Unit Cost of Level I (Gravel Packed Deep Well – 120m Depth)	10 - 9
10.2.4(b)	Unit Cost of Level I (Natural Gravel Packed Deep Well – 120m Depth)	10 - 10
10.2.4(c)	Unit Cost of Level I (Gravel Packed Deep Well – 120m Depth) for Acid Water	10 - 11
10.2.5	Unit Cost of Level I (Deep Well Rehabilitation)	10 - 12
10.2.6	Unit Cost of Level I (Shallow Well – 18m Depth)	10 - 13
10.2.7	Unit Cost of Level I (Spring Development)	10 - 14
10.2.8	Unit Cost of Level II (600 Service Population)	10 - 15
10.2.9	Unit Cost of Level III (5,000 Service Population)	10 - 17
10.2.10	Unit Cost of Level III (10,000 Service Population)	10 - 18
10.2.11	Unit Cost of Level III (15,000 Service Population)	10 - 19
10.2.12	Unit Cost of Flush Water Sealed with Septic Tank Toilet	10 - 20
10.2.13	Unit Cost of Pour Flush with Double Pit Latrine	10 - 21
10.2.14	Unit Construction Cost of Ventilated Improved Pit Latrine	10 - 22
10.2.15	Unit Construction Cost of Pit Latrine	10 - 23
10.2.16	Unit Cost of School Toilet	10 - 24
10.2.17	Unit Cost of Public Toilet	10 - 29
10.2.18	Cost for New Laboratory	10 - 34
10.2.19	Cost for Upgrading Laboratory	10 - 34
10.3.1	Construction Cost of Water Supply Facilities Required for Phase I (2005)	10 - 37
10.3.2	Construction Cost of Water Supply Facilities Required for Phase II (2010)	10 - 38
10.3.3	Cost for Sanitation Facilities Required for Phase I (2005)	10 - 39
10.4.1	Breakdown of Community Development and Training Cost	10 - 41
11.3.1	Percentages for Annual Investment	11 - 1
11.4.1	Comprehensive Investment Need Ranking of the Municipalities	11 - 4
11.5.1	Available IRA for GOP-Assisted Level I Water and Rural Sanitation Project for Eligible Municipalities	11 - 5
11.5.2	Available IRA for GOP-Assisted Urban Sanitation Project for Eligible Municipalities	11 - 6
11.5.3	Total Available IRA for GOP-Assisted Level I Water Supply and Sanitation Project	11 - 6
11.5.4	FIRR for Level I Water Supply	11 - 7
11.6.1	Investment Program of GOP-Assisted Level I Water Supply and Sanitation Project	11 - 8
11.6.2	O&M Cost for Level I Facilities	11 - 9
11.6.3	O&M Cost per HH/month by Facility and Proportion to Monthly Family Income	11 - 9
11.6.4	Family Income	11 - 9
11.6.5	O&M Cost for Rural Sanitation	11 - 9
11.6.6	O&M Cost for Urban Sanitation	11 - 9
12.4.1	Draft Formats for Annual Sector Performance Summary Report (Provincial and Municipal Levels)	12 - 1

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

LIST OF FIGURES

Figure No.	Title	Page No.
1.3.1	Organization Chart for Study Implementation	1 - 6
3.4.1	Urban Area Map	3 - 3
4.2.1	Standard Structure of Private Toilet Facility	4 - 76
4.2.2	Standard Structure of School Toilet Facility	4 - 77
4.2.3	Typical Structure of Public Toilet	4 - 78
5.5.1	Provincial Planning & Development Office, Province of Negros Occidental	5 - 1
5.5.2	Provincial Engineering Office, Province of Negros Occidental	5 - 2
5.5.3	Provincial Health Office, Province of Negros Occidental	5 - 3
7.3.1	Workflow of Groundwater Availability Map	7 - 2
7.3.2	Area Category by Groundwater Utilization	7 - 3
7.5.1	River Network Map	7 - 6
7.5.2	River Flow Duration Curve	7 - 9
8.4.1	Typical Structure of Level I Well Facility	8 - 31
8.4.2(a)	Iron Removal Facility	8 - 32
8.4.2(b)	Iron Removal Facility	8 - 33
8.4.3	Staged Improvement in Sewage Collection Method	8 - 34
9.4.1	Project Implementation Arrangement and Procedure (for Water Supply Component)	9 - 7
9.4.2	Project Implementation Arrangement and Procedure (for Sanitation Component)	9 - 8
9.4.3	Organization Structure of BWSA	9 - 17

**BACKGROUND INFORMATION
AND EXISTING CONDITIONS**

A



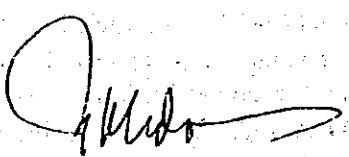
1. INTRODUCTION

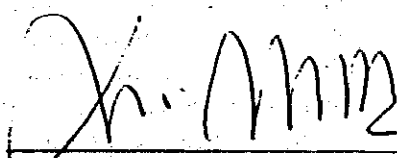
1.3 The Provincial Plan for the Province of Negros Occidental

1.3.1 Preparation of the Plan

MINUTES OF DISCUSSIONS
ON
THE INCEPTION REPORT
FOR
THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND
SANITATION SECTOR PLANS
FOR
VISAYAS AND MINDANAO
IN
THE REPUBLIC OF THE PHILIPPINES
AGREED UPON BETWEEN
THE DEPARTMENT OF THE INTERIOR AND
LOCAL GOVERNMENT
AND
THE STUDY TEAM OF
JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, JANUARY 26, 1998


MR. NORMANDO J. TOLEDO
Director
Office of the Project Development
Services
Dept. of the Interior and Local Government


MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation
Agency

Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, dispatched the Study Team to the Republic of the Philippines on January 13, 1998 to conduct "The Study on Provincial Water Supply, Sewerage and Sanitation Sector Plans for Visayas and Mindanao" (hereinafter referred to as "the Study") in accordance with the Implementing Arrangement for the Study executed between the JICA and the Department of the Interior and Local Government (hereinafter referred to as "DILG") on August 27, 1997.

A series of discussions were made on the Inception Report for the Study between the Study Team and the officials of DILG and other agencies concerned. In the course of the discussions, both parties have agreed with the general approach and methodology, and implementation arrangements detailed in the Inception Report. Also agreed upon were the changes made as to which provinces are to be covered in 1st batch and 2nd batch (refer to 1. Study Area). The list of attendees in the series of discussions is presented in Appendix A.

1. Study Area

The subject twenty-one (21) provinces were grouped into four batches in the "Implementing Arrangement on the Study". However, a delay in the organization of the Provincial Sector Planning Team (PSPT) in the 1st batch provinces of Misamis Oriental and Surigao del Sur prompted their transfer to the 2nd batch. Instead, Davao del Sur and Davao Oriental from the 2nd batch whose PSPTs were already formed were moved up in their place. In this connection, the DILG completed to exchange MOA with the provinces on the participation and full support by the provinces.

The present study area covers the following 21 provinces grouped into four batches.

1 st BATCH	2 nd BATCH	3 rd BATCH	4 th BATCH
1. Agusan del Norte	1. Davao	1. Biliran	1. Aklan
2. Agusan del Sur	2. Misamis Oriental	2. Eastern Samar	2. Antique
3. Davao del Sur	3. Sarangani	3. Leyte	3. Capiz
4. Davao Oriental	4. South Cotabato	4. Northern Samar	4. Iloilo
5. Surigao del Norte	5. Surigao del Sur	5. Southern Leyte	5. Negros
		6. Western Samar	Occidental

With regard to Davao province, the separation into two provinces is currently under legislative process. Upon the formalization of an additional province, the total number of the provinces in the study area would be 22. The DILG has requested that the forthcoming province be included in the study area. The JICA Study Team will relay the request to JICA headquarters for consideration. The DILG is expected to complete the execution of the MOAs of the 2nd batch provinces by early July to catch up with the planned schedule. The required arrangements in terms of subject provinces and study period will be discussed between the DILG and JICA.

2. General Approach and Methodology to the Study

The PW4SPs will be prepared with the full participation of the respective PSPTs together with DILG coordinators and the Study team in accordance with the approach and methodology outlined in the Inception Report. The following topics were confirmed during the discussions:

(1) Planning framework for future sector development

- a) Planning base year is 1997 for 1st and 2nd batches and 1998 for 3rd and 4th batches. Medium-term and long-term target years are 2005 (implementation program: year 2001 to year 2005) and 2010, respectively.
- b) Plan will be prepared in compliance with "Implementing Rules and Regulations of NEDA Board Resolution No. 4".

(2) Standard provision of school toilets

Discussions and confirmation on the provision of school toilets will be arranged with DECS.

(3) Options on the sludge removal from septic tank and its disposal will be shown in the plan.

(4) Model province for 1st batch is Agusan del Sur.

3. Sector Information Collection

The DILG and the JICA Study Team will continuously collect information on the projects/programs assisted by various financial sources. The information will be reflected in the plans.

4. Implementation Set-Up for the Study

In accordance with the Implementing Arrangements between the DILG and the JICA, the DILG shall:

- (1) Secure the safety of the JICA Study Team;
- (2) Assign DILG counterpart staff members who will coordinate and assist PSPTs at the provincial level;
- (3) Set-up PSPTs by respective provincial governments in the study area and secure budget to carry out the Study;
- (4) Through PSPT in each study area province; facilitate and coordinate in data gathering with municipal government and other agencies concerned, and participate in workshops and preparation of PW4SP;

- (5) Facilitate coordination with concerned agencies like DPWH, DOH, NEDA, LWUA and with appropriate bodies.

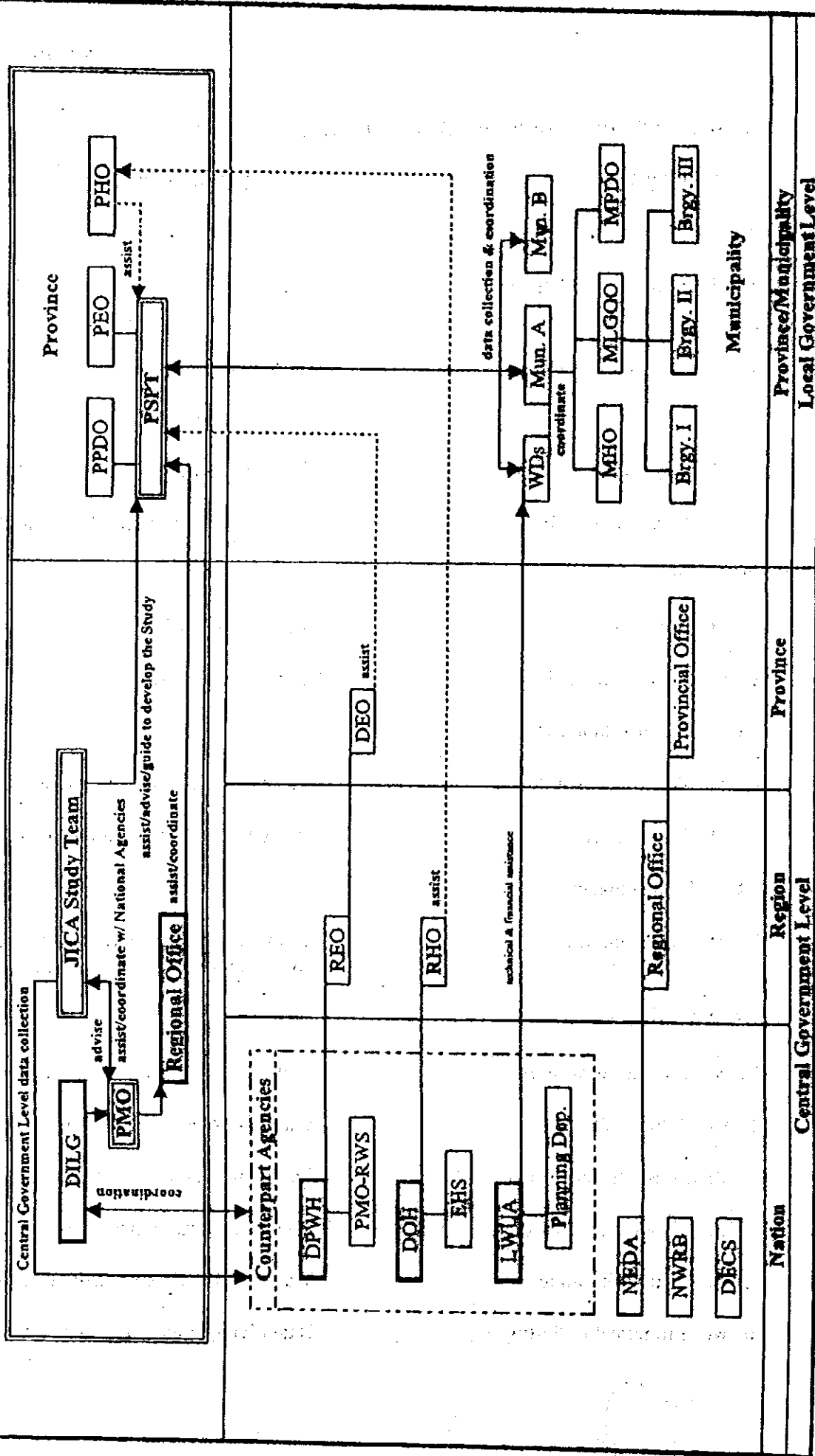
The JICA Study Team shall:

- (1) Pursue technology transfer to the Philippine counterpart personnel in the course of the Study and;
- (2) Assist PSPTs in the preparation of the PW4SP.

LIST OF ATTENDEES IN THE SERIES OF DISCUSSIONS

<u>ATTENDEES</u>	<u>DESIGNATION</u>
A. DILG	
1. Mr. Normando J. Toledo	Director, Office of Project Development Services
2. Mr. Orville M. Roque	Program Manager, WSS-PMO
3. Ms. Ellen I. Pascua	Asst. Program Manager, WSS-PMO
4. Mr. Rogelio B. Ocampo	Chief, Planning Division, WSS-PMO
5. Ms. Fe Crisilla M. Banluta	PW4SP Project Officer, WSS-PMO
B. Other Agencies	
1. Mr. Sam Siao	Officer, PMO-RWS, DPWH
2. Dr. Mario Villaverde	Director, EHS, DOH
C. JICA Advisory Committee	
1. Ms. Keiko Yamamoto	Chairman, Advisory Committee
2. Mr. Keiichi Kanaya	Member, Advisory Committee
D. JICA Headquarters	
1. Mr. Shigeyuki Matsumoto	Second Development Study Division, Social Development Study Dept.
E. JICA Study Team	
1. Mr. Masatoshi Momose	Team Leader/Water Supply Planning
2. Mr. Nobuki Abe	Water Supply/Sanitation Engineer
3. Ms. Consuelo B. Estepa	Community Dev't/WID Specialist
4. Ms. Elizabeth L. Verzola	Socio-Economic/Financial Specialist
5. Mr. Kenji Takayanagi	Water Source Development Specialist
6. Mr. Emmanuel L. Patingo	Data Management Specialist

Figure 1.3.1
Organization Chart for Study Implementation



MINUTES OF DISCUSSIONS
ON
THE PROGRESS REPORT
FOR
THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND
SANITATION SECTOR PLANS
FOR
VISAYAS AND MINDANAO
IN
THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN
THE DEPARTMENT OF THE INTERIOR AND
LOCAL GOVERNMENT


AND

THE STUDY TEAM OF
JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, MARCH 18, 1998



MR. NORMANDO J. TOLEDO
Director
Office of the Project Development
Service
Dept. of the Interior and Local Government



MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation
Agency

The Stage I fieldwork for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" started on January 13, 1998 and completed on March 23, 1998.

A series of discussions were held throughout the course of the Study, between JICA Study Team and officials concerned including DILG, NEDA, DOH, DPWH and other central government agencies and provinces. The general approach and methodologies, as presented in the Inception Report, have been employed for the fieldwork.

A Progress Report, which covers all outputs during the work period, was prepared entailing part of PW4SP for the respective provinces. The contents of the report were basically agreed upon on March 18, 1998 between JICA Study Team and officials of the DILG. The list of attendees to the meeting is presented in Appendix A. The following issues/problems on the arrangements required for the implementation of the Study were discussed, and the Study Team will relay the modified arrangements required to JICA headquarters.

(1) Modified Arrangements Required for 1st batch Study

1) Due to the presidential election scheduled on May 11, 1998, the second workshop may be held from May 18 to May 22, 1998 after the election, and tentatively starting the 2nd field work on May 13, 1998.

2) The venue for the final workshop was requested by concerned PPDCs to be held in Mindanao rather than in Manila as originally planned. This is because of the financial constraint on the travel expenses required for 7 members of respective PSPTs under the current GOP instruction to LGUs to reduce its planned annual expenditures of up to 25%.

(2) Provinces to be Covered by the 2nd Batch

The total number of provinces for the 2nd batch (5 provinces) will be kept as previously agreed between the two parties. However, Surigao del Sur will be omitted from the Study, since timely establishment of the PSPT by the province seems to be difficult. Instead of the said province, either the newly created Compostela Valley or Bukidnon(Region X) would be included.

The DILG will inform the Study Team of the possibility in the setting up of PSPT by the administration of Compostela Valley by the middle of June 1998. If not, DILG will make an advanced arrangement with Bukidnon.

(3) Electric Resistivity Prospecting and Test Boring

Comparatively reliable data to evaluate the development potential of water source were collected for 1st batch provinces during the fieldwork. It is assumed that the conduct of the field test for groundwater analysis, given a limited period, cannot be able to contribute significantly to the level of accuracy in the preparation of M/P and F/S. The situation will remain the same for 2nd batch provinces. Accordingly, it is not recommended to conduct field test for this study.

The required areas and the scope of work/surveys, such as field tests, will be recommended in the PW4SP and will be considered during detailed design and construction stages.

(4) Time Constraint in Data Collection/Validation/Follow-up

It was found, both by the Study Team and the DILG through the fieldwork, the following problems on data collection/validation/follow-up:

- 1) The summary reports on the sector status prepared by NEDA Regional Office through UNICEF fund were field confirmed as the materials to provide approximate sector situations in the fact of no existence of sector related information at present.
- 2) Data collection by PSPTs had sometimes to be done at the barangay level, due to limited data available in the municipal level. Thus, additional time was required for PSPTs to access to remote rural barangays.
- 3) Comprehensive planning work by the province in Mindanao area is still initial stage. It is necessary for the activities to ensure much more time through intensive technology transfer to DILG coordinators and PSPTs.

Based on the lessons learned, the Study Team and the DILG recognized the need of the review on the allotted period for the activities. The Study Team will relay this matter to JICA headquarters.

(5) Cities to be Covered in the Preparation of PW4SP

Of the three classes of cities in the Local Government Code, only component cities, which are under the jurisdiction of the provincial government will be considered. The subject cities are as follows:

<u>Province</u>	<u>Component City</u>
Surigao del Norte	Surigao City
Davao	Tagum City and Island Garden City
Leyte	Tacloban City
Western Samar	Calbayog City
Capiz	Roxas City
Iloilo	Passi City
Negros Occidental	Bago City, Cadiz City, La Carlota City, San Carlos City and Silay City

LIST OF ATTENDEES IN THE SERIES OF DISCUSSION

ATTENDEES

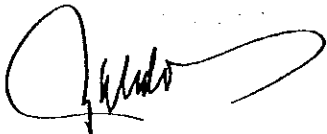
DESIGNATION

A. DILG

- | | |
|-------------------------------|-----------------------------------|
| 1. Mr. Orville M. Roque | Program Manager, WSS-PMO |
| 2. Ms. Ellen I. Pascua | Asst. Program Manager, WSS-PMO |
| 3. Mr. Rogelio B. Ocampo | Chief, Planning Division, WSS-PMO |
| 4. Ms. Fe Crisilla M. Banluta | PW4SP Project Officer, WSS-PMO |
| 5. Ms. Charito Araza | Area Coordinator, WSS-PMO |
| 6. Ms. Maria Contessa Navarro | Area Coordinator, WSS-PMO |
| 7. Ms. Josephine Ramos | Area Coordinator, WSS-PMO |
| 8. Ms. Susan Mangoda | Area Coordinator, WSS-PMO |
| 9. Ms. Crisanta Rapirap | Area Coordinator, WSS-PMO |

B. JICA Study Team


- | | |
|-----------------------------|-------------------------------------|
| 1. Mr. Masatoshi Momose | Team Leader/Water Supply Planning |
| 2. Mr. Nobuki Abe | Water Supply/Sanitation Engineer |
| 3. Mr. Kenji Takayanagi | Water Source Development Specialist |
| 4. Ms. Consuelo B. Estepa | Community Dev't./WID Specialist |
| 5. Ms. Elizabeth L. Verzola | Socio-economic/Financial Specialist |



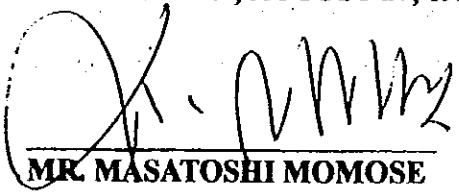
MINUTES OF DISCUSSIONS
ON
THE DRAFT FINAL REPORT
FOR
THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND
SANITATION SECTOR PLANS
FOR
VISAYAS AND MINDANAO
IN
THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN
THE DEPARTMENT OF THE INTERIOR AND
LOCAL GOVERNMENT
AND
THE STUDY TEAM OF
JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, AUGUST 27, 1998



MR. BENITO R. CATINDIG
Assistant Secretary for Support
Services and Regional Offices
Dept. of the Interior and Local Government



MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation
Agency

The Stage II fieldwork for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") resumed on May 20, 1998 and will be completed on March 30, 1999. Upon completion of the 1st batch study, the study for the 2nd batch will start on August 30 with an "Orientation Workshop". It is further scheduled that the 2nd batch study will be finalized by February 1999 and 3rd batch work will be commenced before the completion of this fieldwork.

Major conditions and assumptions for the development of Medium-Term and Long-Term sector plans for the subject provinces under the 1st batch were discussed and finalized between respective PSPTs and the JICA Study Team (hereinafter referred to as "the Team") through Workshop No. 2 (held between May 26 and 28, 1998) and during planning work thereafter. In this connection, the target year for the Medium-Term development plan was revised from 2005 to 2003 in order to realize the plan earlier.

The Draft Final Reports for the five (5) provinces of the 1st batch were prepared and the final workshop was conducted between August 24 and 26, 1998 to present and discuss the contents of the reports. The contents of the reports were basically agreed upon on August 27, 1998 by the Team and officials concerned on the Philippine side. The list of attendees to the meeting is presented in Appendix A. The following were confirmed and agreed upon by both parties.

1. Correction of typographical errors of the Draft Final Report will be undertaken by the Team prior to printing of the Final Report. The Final Report will be submitted by October 1998.
2. Adoption of the Plans by the Provincial Council (Sangguniang Panlalawigan) shall be facilitated by the DILG.
3. Inclusion of the Message of the Governor in the Main Report of respective PW4SPs.

With regard to the 2nd batch study, both parties have agreed on the general approach and methodology, and implementation arrangements adopted for the 1st batch study. Among them, the following are the basic conditions to be applied for the planning.

(1) Study Area

The DILG completed the exchange of MOA with the 2nd batch provinces on the participation and full support by the concerned provinces. The subject provinces are Misamis Oriental, Bukidnon, Davao del Norte, South Cotabato and Sarangani. The province of Bukidnon was selected for model province study.

(2) Planning Framework for Future Sector Development

- a) Planning base year is 1997 and Medium-Term and Long-Term target years are 2003 (implementation program: year 1999 to year 2003) and 2010, respectively.
- b) Plans will be prepared in compliance with the "Implementing Rules and Regulations of NEDA Board Resolution No. 4".

(3) Implementation Set-Up/Arrangements for the Study

The study will be conducted in accordance with the Implementing Arrangements between the DILG and the JICA, as done with the 1st batch study.

Both parties will make timely and effective arrangements through the study period to achieve the purpose of the Study within the set time-table based on the lessons learned from the 1st batch study. In this regard, the following are put into practice.

- a) Data collection by the PSPTs will be commenced in advance (overlapped activity with the preceding batch study) to ensure longer period for this activity as compared with the original time allotted.
- b) Planning period by the PSPTs will be extended by adjusting the timing for the conduct of 2nd workshop for data encoding and discussions to set-up planning fundamentals.
- c) Practical arrangements will be made to increase the opportunities for further collaboration in the planning work among PSPTs, DILG coordinators and the Team.

For the arrangement of the 3rd batch study, the DILG will confirm the subject provinces including the model province through the MOA by December 1998.

LIST OF ATTENDEES IN THE SERIES OF DISCUSSIONS

<u>ATTENDEES</u>	<u>DESIGNATION</u>
<i>A. DILG</i>	
1. Mr. Normando J. Toledo	Director, Office of Project Development Services
2. Ms. Ellen I. Pascua	Acting Program Manager, WSS-PMO
3. Mr. Rogelio B. Ocampo	Chief, Planning Division, WSS-PMO
4. Ms. Fe Crisilla M. Banluta	PW4SP Project Officer, WSS-PMO
<i>B. Other Agencies</i>	
1. Ms. Cristina Santiago	PIS, NEDA
<i>C. JICA Advisory Committee</i>	
1. Ms. Keiko Yamamoto	Chairman, Advisory Committee
2. Mr. Keiichi Kanaya	Member, Advisory Committee
<i>D. JICA Headquarters</i>	
1. Ms. Akiko Hayashi	Second Development Study Division, Social Development Study Depart.
<i>E. JICA Study Team</i>	
1. Mr. Masatoshi Momose	Team Leader/Water Supply Planning
2. Mr. Nobuki Abe	Water Supply/Sanitation Engineer
3. Mr. Kenji Hiramatsu	Institutional Specialist
4. Ms. Consuelo B. Estepa	Community Dev't./Gender Specialist
5. Ms. Elizabeth L. Versola	Socio-Economic/Financial Specialist
6. Mr. Emmanuel L. Patingo	Data Management Specialist

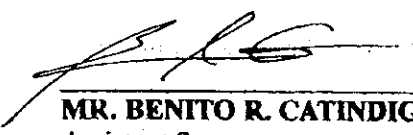
MINUTES OF DISCUSSIONS
ON
THE DRAFT FINAL REPORT (2nd BATCH)
FOR
THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND
SANITATION SECTOR PLANS
FOR
VISAYAS AND MINDANAO
IN
THE REPUBLIC OF THE PHILIPPINES

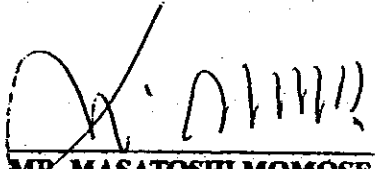
AGREED UPON BETWEEN
THE DEPARTMENT OF THE INTERIOR AND
LOCAL GOVERNMENT

AND

THE STUDY TEAM OF
JAPAN INTERNATIONAL COOPERATION AGENCY

QUEZON CITY, FEBRUARY 22, 1999


MR. BENITO R. CATINDIG
Assistant Secretary
Dept. of the Interior and Local Government


MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation Agency

The Stage II fieldwork for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") resumed on May 20, 1998 and will be completed on March 30, 1999.

The study for the 2nd batch started on August 30, 1998 and will be completed with the final workshop scheduled between February 24 and 26, 1999. During the finalization stage of the 2nd batch study, the study for the 3rd batch was started with an "Orientation Workshop" on February 8 to 10, 1999. It is further scheduled that the 3rd batch study will be finalized by the end of this year.

With regard to the 2nd batch study, major conditions and assumptions for the development of Medium-Term and Long-Term sector plans for the subject provinces were discussed and finalized between the respective PSPTs and the JICA Study Team (hereinafter referred to as "the Team") during Workshop No. 2 between November 4 to 6, 1998 and also at the time of the planning work thereafter. For the entire duration of the planning work, the Team stayed intermittently in Davao City, Cagayan de Oro City and Malaybalay City for better collaboration with the PSPTs.

The Draft Final Reports for the five (5) provinces of the 2nd batch were prepared and discussed on the contents of the reports between the respective PSPTs and the Team during February 15 and 19, 1999. The contents of the reports were basically agreed upon on February 22, 1999 by the Team and the officials concerned in the Philippine side in consideration of the discussion results with PSPTs.

The list of attendees to the meeting on February 22, 1999 is presented in Appendix A. The followings were confirmed and agreed upon by both parties:

1. Further modification/correction on the Draft Final Report will be undertaken by the Team prior to printing of the Final Report based on the discussions with PSPTs. The Final Report will be sent by May, 1999.
2. Adoption of the Plans by the Provincial Council (Sanggunian Panlalawigan) will be pursued and facilitated by the DILG.
3. Inclusion of the Message of the Governor in the Main Report of respective PW4SPs.

Concerning the 3rd batch study, both parties have agreed on the general approach and methodology, and implementation arrangements adopted for the previous batch studies. Among others, the followings are the basic conditions to be applied for the planning.

(1) Study Area

The DILG completed the exchange of MOAs with the 3rd batch provinces regarding the participation and full support by the concerned provinces. The subject provinces are Northern Samar, Eastern Samar, Samar, Biliran, Leyte and Southern Leyte. The province of Leyte was selected for model province study.

(2) Planning Framework for Future Sector Development

- a) Planning base year is 1998 and Medium-Term and Long-Term target years are 2004 (implementation program: year 2000 to year 2004) and 2010, respectively.
- b) Plans will be prepared in compliance with the "Implementing Rules and Regulations of NEDA Board Resolution No. 4", Series of 1994.

(3) Implementation Set-Up/Arrangements for the Study

The study will be conducted in accordance with the Implementing Arrangements between the DILG and the JICA, as done with the 1st and 2nd batch studies.

Both parties will make timely and effective arrangements throughout the study period to achieve the purpose of the Study within the set time-table based on the lessons learned from previous batch studies. In this regard, the following will be put into practice.

- a) Data collection by the PSPTs will start in advance (overlapped activity with the preceding batch study) to ensure longer period for this activity as compared with the original time allotted.
- b) Planning period by the PSPTs will be extended by adjusting the timing for the conduct of the 2nd workshop for data encoding and discussions to set-up planning fundamentals.
- c) Practical arrangements will be made to increase the opportunities for further collaboration in the planning work among PSPTs, DILG coordinators and the Team.

For the arrangement of the 4th batch study, the DILG will confirm the subject provinces including the model province through a MOA by May, 1999.

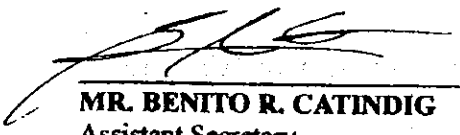
LIST OF ATTENDEES IN THE SERIES OF DISCUSSIONS

	<u>ATTENDEES</u>	<u>DESIGNATION</u>
A.	<i>DILG</i>	
1.	Mr. Benito R. Catindig	Assistant Secretary
2.	Ms. Ellen I. Pascua	Program Manager, WSS-PMO
3.	Mr. Rogelio B. Ocampo	Chief, Planning Division, WSS-PMO
4.	Ms. Fe Crisilla M. Banluta	PW4SP Project Officer, WSS-PMO
B.	<i>Other Agencies</i>	
1.	Ms. Christina Santiago	PIS, NEDA
C.	<i>JICA Advisory Committee</i>	
1.	Ms. Keiko Yamamoto	Chairman, Advisory Committee
2.	Mr. Keiichi Kanaya	Member, Advisory Committee
D.	<i>JICA Study Team</i>	
1.	Mr. Masatoshi Momose	Team Leader/Water Supply Planning
2.	Mr. Nobuki Abe	Water Supply/Sanitation Engineer
3.	Mr. Kenji Hiramatsu	Institutional Specialist
4.	Mr. Nobukatu Sakiyama	Water Source Specialist
5.	Ms. Consuelo B. Estepa	Community Dev't./Gender Specialist
6.	Ms. Elizabeth L. Versola	Socio-Economic/financial Specialist
7.	Mr. Emmanuel Patingo	Data Management Specialist

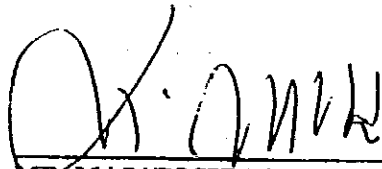
MINUTES OF DISCUSSIONS
ON
THE DRAFT FINAL REPORT (3rd BATCH)
FOR
THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND
SANITATION SECTOR PLANS
FOR
VISAYAS AND MINDANAO
IN
THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN
THE DEPARTMENT OF THE INTERIOR AND
LOCAL GOVERNMENT
AND
THE STUDY TEAM OF
JAPAN INTERNATIONAL COOPERATION AGENCY

QUEZON CITY, October 18, 1999



MR. BENITO R. CATINDIG
Assistant Secretary
Dept. of the Interior and Local Government



MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation Agency

The Stage III fieldwork for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") resumed on May 19, 1999 and will be completed on March 25, 2000.

The study for the 3rd batch started on January 12, 1999 and will be completed with the final workshop scheduled between October 20 and 22, 1999. During the conduct of the 3rd batch study, the study for the 4th batch was started with an "Orientation Workshop" on July 19 to 21, 1999. It is further scheduled that the 4th batch study will be finalized by May, 2000.

With regard to the 3rd batch study, major conditions and assumptions for the development of Medium-Term and Long-Term sector plans for the subject provinces were discussed and finalized between the respective Provincial Sector Planning Teams (hereinafter referred to as "PSPTs") and the JICA Study Team (hereinafter referred to as "the Team") during Workshop No. 2 between June 16 to 18, 1999 and also at the time of the planning work thereafter. For the entire duration of the planning work, the Team stayed intermittently in Tacloban City, Catbalogan Municipality and Ormoc City for better collaboration with the PSPTs.

The Draft Final Reports for the six (6) provinces of the 3rd batch were prepared and discussed on the contents of the reports between the respective PSPTs and the Team on October 14, 1999. The contents of the reports were basically agreed upon on October 18, 1999 by the Team and the officials concerned in the Philippine side in consideration of the discussion results with PSPTs.

The list of attendees to the meeting on October 18, 1999 is presented in Appendix A. The followings were confirmed and agreed upon by both parties.

- (1) Further modification/correction on the Draft Final Report will be undertaken by the Team prior to printing of the Final Report based on the discussions with PSPTs. The Final Report will be sent to the Department of the Interior and Local Government (hereinafter referred to as "DILG") by February, 2000.
- (2) Adoption of the Plans by the Provincial Council (Sanggunian Panlalawigan) will be pursued and facilitated by the DILG.
- (3) Inclusion of the Message of the Governor in the Main Report of respective Provincial Water Supply, Sewerage and Sanitation Sector Plans (hereinafter referred to as "PW4SPs").

Concerning the 4th batch study, both parties have agreed on the general approach and methodology, and implementation arrangements adopted for the previous batch studies. Among others, the followings are the basic conditions to be applied for the planning.

(1) Study Area

The DILG completed the exchange of Memorandum of Agreements (hereinafter referred to as "MOAs") with the 4th batch provinces regarding the participation and full support by the concerned provinces. The subject provinces are Aklan, Antique, Capiz, Iloilo and Negros Occidental. The province of Iloilo was selected for model province study.

(2) Planning Framework for Future Sector Development

Planning base year is 1998 and Medium-Term and Long-Term target years are 2005 (implementation program: year 2001 to year 2005) and 2010, respectively.

Plans will be prepared in compliance with the "Implementing Rules and Regulations of National Economic and Development Authority (hereinafter referred to as "NEDA") Board Resolution No. 4", Series of 1994.

(3) Implementation Set-Up/Arrangements for the Study

The study will be conducted in accordance with the Implementing Arrangements between the DILG and the JICA, as done with previous batch studies.

Both parties will make timely and effective arrangements throughout the study period to achieve the purpose of the Study within the set time-table based on the lessons learned from previous batch studies. In this regard, the following will be put into practice.

- a) Data collection by the PSPTs will start in advance (overlapped activity with the preceding batch study) to ensure longer period for this activity as compared with the original time allotted.
- b) Practical arrangements will be made to increase the opportunities for further collaboration in the planning work among PSPTs, DILG coordinators and the Team.

Appendix A

LIST OF ATTENDEES IN THE SERIES OF DISCUSSIONS

		ATTENDEES	DESIGNATION
A.		DILG	
	1.	Mr. Benito R. Catindig	Assistant Secretary
	2	Ms. Ellen I. Pascua	Program Manager, WSS-PMO
	3	Mr. Rogelio B. Ocampo	Chief, Planning Division, WSS-PMO
	4	Ms. Fe Crisilla M. Banluta	PW4SP Project Officer, WSS-PMO
B.		<i>Other Agencies</i>	
	1.	Ms. Christina Santiago	PIS, NEDA
C.		<i>JICA Advisory Committee</i>	
	1	Mr. Keiichi Kanaya	Member, Advisory Committee
D		<i>JICA Headquarters</i>	
	1	Ms. Kayo Minagawa	Second Development Study Division, Social Development Study Depart.
E		<i>JICA Study Team</i>	
	1.	Mr. Masatoshi Momose	Team Leader/Water Supply Planning
	2.	Mr. Nobuki Abe	Water Supply/Sanitation Engineer
	3.	Mr. Kenji Hiramatsu	Institutional Specialist
	4.	Mr. Nobukatsu Sakiyama	Water Source Specialist
	5.	Ms. Consuelo B. Estepa	Community Dev't./Gender Specialist
	6	Ms. Elizabeth L. Versola	Socio-Economic/financial Specialist
	7	Mr. Emmanuel Patingo	Data Management Specialist

2. PLANNING APPROACH FOR FUTURE SECTOR DEVELOPMENT

2.6 Planning Principles and Data Management

2.6.2 Data Management

(1) Computer-based System

The data management system was established to support the Provincial Sector Planning Team (PSPT) in the preparation of the Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP). An essential task of data management is to organize various kind of data into an effective and efficient information base.

A computer-based system was applied as a viable solution to process large amount of data and to minimize the human-error in calculation. For this particular project, a dynamic system is designed to allow the planner to adjust planning factors and update the information when further data becomes available.

It is viable and economical to choose the microcomputer with software suitable for the average skills of the common user. In this connection, of the two types of software package available, database and spreadsheet, the latter method was selected. Among the available spreadsheet-type software, EXCEL was used. Excel support file conversion (opening and saving), multiple file opening, graphic presentation of data, What-You-Sec-Is-What-You-Get (WYSIWYG) formatting, scaleable font and view, etc. The following are the advantage and disadvantages of the spreadsheet method with reference to database method.

Advantage	Disadvantage
1. Minimum programming skills	1. Repeated entry of same formula
2. Friendly environment to users	2. Sorting or indexing is done manually
3. Graphics presentation of data at user's option.	3. All data are loaded in memory, which require huge amount of memory.
4. Execution of data linkages at formula level entry	4. Limited to static data linkages
5. Guided formula creation using function wizard	

Data management task starts from the collection of data using the questionnaire forms. The existence and accuracy of data are major concern at this stage to prepare main information bases. Using the microcomputer provided with EXCEL spreadsheet, data in the questionnaire forms are transferred into the forms constructed in EXCEL. Applicable policy, criteria and assumption are entered into key parameter tables. These data are then processed and finally consolidated into target forms. These final provide a map of provincial profile, service coverage, future requirements, cost estimates for future sector development, and funding requirements.

Table 2.6.1 Key Parameter

No.	Description of Key Parameter		Unit	Values
1.	Service Level	Water Supply		
		Number of household to be served by Level I Facility	HH/Source	
		Number of household to be served by Level II System	HH/Public Faucet	
		Water Consumption Rate for Level III System	Liter/capita/day	
		Sanitation		
2.	Provincial Sector Target	Std. number of student to be served by a unit of Sanitary toilet	Student/Toilet	
		Standard number of toilets for a public utility	Toilet/Public Facility	
		Water Supply		
		Urban Water Supply	% of Population	
		Rural Water Supply	% of Population	
		Sanitation		
		Household Toilet		
		Urban Household Toilet	% of Household	
		Flush	% of Household	
		Pour Flush	% of Household	
		VIP Latrine	% of Household	
		Rural Household Toilet	% of Household	
		Flush	% of Household	
		Pour Flush	% of Household	
		VIP Latrine	% of Household	
		School Toilet	% of Public Student	
		Public Toilet	% of Public Utility	
		Solid Waste	% of Population	
		Water Supply		
		Urban Water Supply	% of Population	
		Rural Water Supply	% of Population	
		Sanitation		
		Household Toilet		
		Urban Household Toilet	% of Household	
		Flush	% of Household	
		Pour Flush	% of Household	
		VIP Latrine	% of Household	
		Rural Household Toilet	% of Household	
		Flush	% of Household	
		Pour Flush	% of Household	
		VIP Latrine	% of Household	
		School Toilet	% of Public Student	
		Public Toilet	% of Public Utility	
		Urban Sewerage	% of Urban Population	
3.	Percentage of Level I Deep Wells to be Rehabilitated		%	
4.	Percentage of Sector Management Cost to Construction Cost			
	Feasibility and Detail Design		% of Construction Cost	
5.	Community Development and Training Cost			
	Level III		% of Construction Cost	
6.	Recurrent Cost	Level I, II and Public Toilet	% of Construction Cost	
		Level III System (Operating Cost)	Pesos/HH/year	
		Level III System (Spare Parts/Equipment)	% of Construction Cost	
		Level II System (Spare Parts/Equipment)	Pesos/HH/year	
		Level I System (Spare Parts/Equipment)	Pesos/HH/year	
		Public School Toilet Maintenance Cost	Pesos/Toilet/year	
		Public Utility Toilet Maintenance Cost	Pesos/Toilet/year	
7.	Allocation Factors/Percentages of IRA			
	From Provincial		%	
8.	Funding Levels/Percentages for Different Financing Scenarios			
	1st Scenario		% Funding Available	
	2nd Scenario		% Funding Available	
	3rd Scenario		% Funding Available	
	4th Scenario		% Funding Available	
	5th Scenario		% Funding Available	

Table 2.6.2 Composition of Well Sources and Specific Capacity

Name of Municipality	Type	Type Water Source	Proportion (%)	Standard Specification		
				Depth (m)	SWL (m)	Specific Capacity (liter/sec/m)
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
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	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				

Table 2.6.3 Annual Investment							
Sub-Sector	Component	1999	2000	2001	2002	2003	Total
Urban Water Supply	Level III System						
	Feasibility Study and Detail Design						
	Construction & Supervision						
Rural Water Supply	Community Development & Training						
	Level I Facility						
	Detail Design						
	Construction & Supervision						
	Community Development & Training						
	Level II System						
Sanitation	Detail Design						
	Construction & Supervision						
	Community Development & Training						
	Urban Household Toilet						
	Rural Household Toilet						
	Public School Toilet						
	Public Toilet						
	Disinfection of Level I Wells						
	Detail Design						
	Construction & Supervision						
	Community Development & Training						

Table 2.6.4 Level I Safe & Unsafe Percentage

Name of Municipality	Safe (%)	Unsafe (%)
Provincial Total		

Table 2.6.5 Unit Construction Cost of Different Facilities

Description	Unit Construction Cost (Pesos)	Service Coverage		Unit Cost	
		Served Population	Served Household	Pesos/ Person	Pesos/ Household
Water Supply					
<i>Level III - New System</i>					
For 5000 Population					
For 10000 Population					
For 15000 Population					
<i>Level III - Expansion</i>					
For 5000 Population					
For 10000 Population					
For 15000 Population					
<i>Level II</i>					
<i>Level I</i>					
Deep Well - 40 meter depth					
Deep Well - 80 meter depth					
Deep Well - 120 meter depth					
Shallow Well - 18 meter depth					
Spring Development					
<i>Rehabilitation Cost for Level I Deep Well</i>					
<i>Disinfection of Level I Wells</i>					
Sanitation					
Flush					
Pour Flush					
VIP / Dry					
School Toilet					
Public Toilet					
Urban Sewerage					

Table 2.6.6 Scoring Factor for Municipal Investment Ranking for Urban Water Supply

Score	Underserved and Underserved Population in Base Year	Underserved and Underserved Population in Phase I	Population Underserved by Level III Systems in Base Year
1.0	< %	< %	< %
0.8	< % < 40	< % < 40	< % < 40
0.6	< % < 30	< % < 30	< % < 30
0.4	< % < 20	< % < 20	< % < 20
0.2	% < 10	% < 10	% < 10
Weight Allocation Score (%)			

Table 2.6.7 Scoring Factor for Municipal Comprehensive Investment Ranking

Score	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation
1.0	N.A.	< %	< %	< %
0.8	N.A.	< % < 40	< % < 40	< % < 40
0.6	N.A.	< % < 30	< % < 30	< % < 30
0.4	N.A.	< % < 20	< % < 20	< % < 20
0.2	N.A.	% < 10	% < 10	% < 10
Weight Allocation Score (%)				

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	Negros Occidental				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	10,276	2	132,637	12,907	38,620	12,865
15,000 - 19,999	15,551	4	306,258	19,694	50,543	19,828
20,000 - 29,999	76,908	18	2,113,645	27,483	209,138	27,662
30,000 - 39,999	84,092	20	3,093,759	36,790	224,397	37,336
40,000 - 59,999	118,220	28	5,931,355	50,172	280,436	51,099
60,000 - 99,999	80,404	19	6,723,509	83,622	199,449	86,842
100,000 - 249,999	33,310	8	5,033,761	151,117	112,990	161,051
250,000 and over	2,157	1	489,304	226,887	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 P 47,133 (P 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							Not Reported
		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	
Agriculture, Hunting and Forestry	333,687	1,001	177,654	601	67,739	37,573	1,568	45,315	2,236
Fishing	39,163	200	15,484	51	18,928	2,001	165	1,970	364
Mining and Quarrying	3,439	14	3,175	33	160	27	1	10	19
Manufacturing	30,038	312	21,883	126	5,800	937	63	532	385
Electricity, Gas and Water	2,732	23	2,286	129	226	28	2	3	35
Construction	19,541	324	15,641	453	2,708	131	12	55	217
Trade	59,367	279	10,805	48	38,005	5,005	238	4,352	635
Services	162,327	38,618	62,885	37,968	17,759	2,370	179	1,071	1,477
Not Stated	1,479	40	564	37	151	27	4	49	607
Provincial Total	651,773	40,811	310,377	39,446	151,476	48,099	2,232	53,357	5,975

Source: 1995 NSO Socioeconomic and Demographic Characteristics

3.3.3 Education

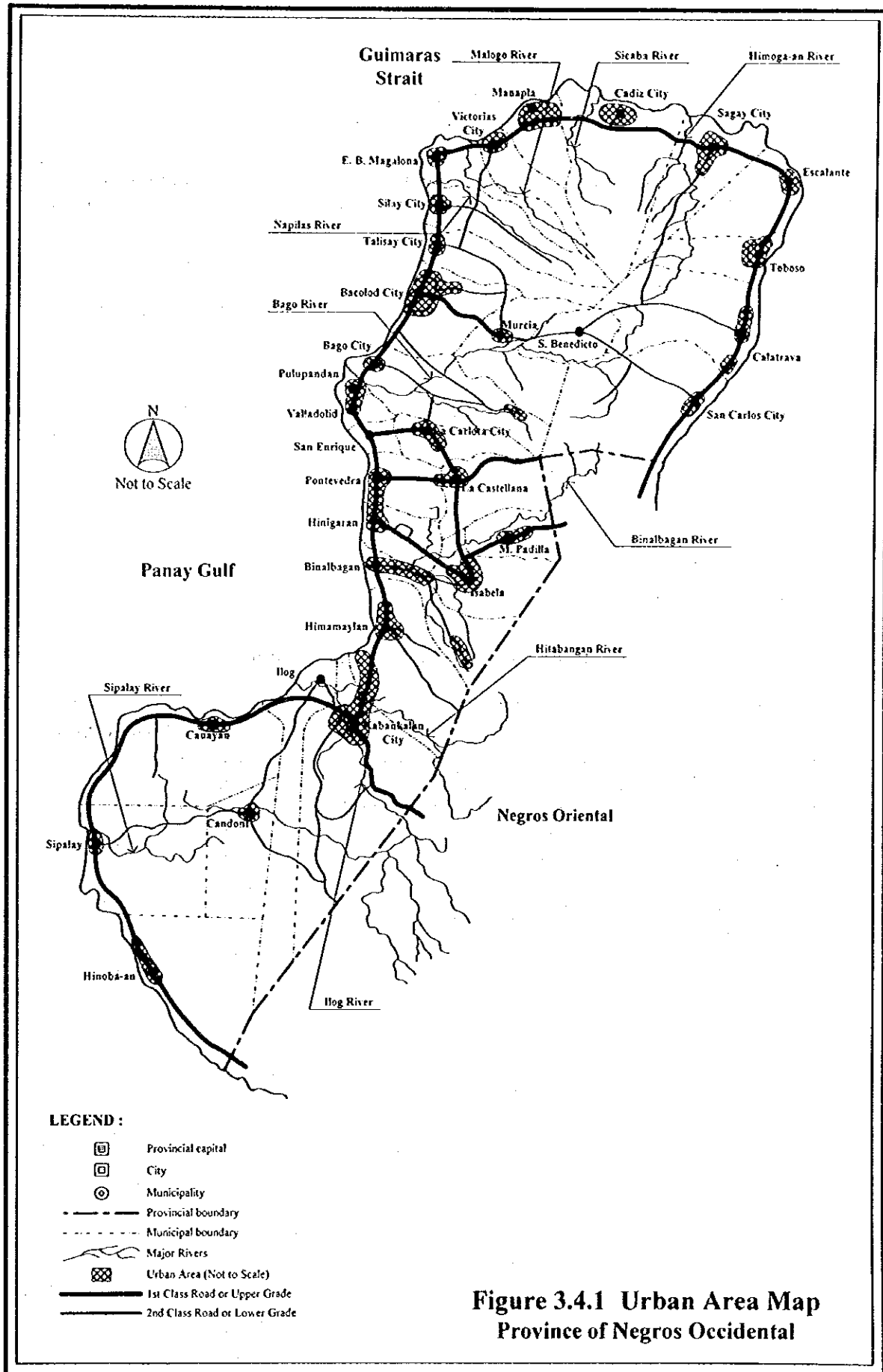
Table 3.3.3 Household Population by Highest Educational Attainment

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	139,808	99,278	2,335	2,307	2,265	33,624
Pre-school	61,633	58,490	321	290	314	2,219
Elementary						
1st - 4th Grade	508,581	281,703	25,531	24,819	25,582	150,947
5th - 7th Grade	396,727	126,199	34,317	36,975	35,904	163,333
High School						
Undergraduate	235,008	121,617	27,802	20,681	16,028	48,882
Graduate	175,735	32,107	35,288	29,295	22,775	56,270
Post Secondary						
Undergraduate	10,223	1,730	2,885	1,903	1,324	2,382
Graduate	31,579	1,882	7,955	7,112	5,308	9,322
College Undergraduate	77,692	18,452	19,571	10,271	8,375	21,024
Academic Degree Holder	80,008	592	13,353	15,482	13,281	37,300
Post-Baccalaureate	1,354	3	93	127	157	974
Not Stated	28,078	19,565	1,457	1,129	927	5,001
Total	1,746,426	761,618	170,908	150,391	132,240	531,278

Source: 1995 NSO Socioeconomic and Demographic Characteristics

3.4 Population

3.4.1 Classification of Urban and Rural Area



3.5 Health Status

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

Health Facilities and Practitioners	Negros Occidental		Philippines	
	Number	Ratio	Number	Ratio
Health Facilities				
Hospital	30	1/71,473	1,700	1/40,206
Rural Health Units	32	1/67,006	2,335	1/29,272
Barangay Health Station	512	1/4,188	11,646	1/5,869
Practitioners				
Doctors	278	1/7,713	6,913	1/9,887
Nurses	438	1/4,895	8,849	1/7,724
Midwives	796	1/2,694	10,831	1/6,311
Dentists	87	1/24,646	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	56
Open Channel (with Concrete & rubble masonry)	37
Open Ditches & Unlined Laterals	58
Reinforced Concrete Circular Pipes	31
Street Gutters	72
Outfalls to rivers from drainage mains (number)	30

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 Phosphorous	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.

