

Part-H

Resettlement Issues and Proposed Measures

Part-H: RESETTLEMENT ISSUES AND PROPOSED MEASURES

Table of Contents

	<u>Page</u>
H1 General	H-1
H2 The Legal Framework of Resettlement in the Philippines	H-2
H2.1 National Legal Framework on Resettlement.....	H-2
H2.2 National Legal Framework for the Protection of Indigenous People's Rights	H-3
H2.3 Resettlement Framework for the Development of Water Resources for Metro Manila	H-4
H3 Review of the Social Dimension of Previous Studies	H-7
H3.1 Major Data Collected on Social Issues Pertaining to the Study Area	H-7
H3.2 The Initial Environment Examination	H-13
H4 The Existing Conditions and Considerations in the Study Area	H-17
H4.1 General.....	H-17
H4.2 Water Resource Development Alternatives and the Social Dimension..	H-17
H4.3 Water Conveyance Schemes	H-29
H5 Proposed Resettlement Plan	H-32
H5.1 General Criteria.....	H-32
H5.2 Water Resources Development Scheme	H-32
H5.3 Social Impacts of the Conveyance Schemes and Their Mitigation	H-37
H5.4 Resettlement and Compensation Plan for Phase II.....	H-37

List of Tables

	<u>Page</u>
Table H4.1 Chronology of Events and Activities for the Laiban Dam.....	HT-1
Table H5.1 Preliminary Estimate of Resettlement and Compensation Cost	HT-3

Part-H: RESETTLEMENT ISSUES AND PROPOSED MEASURES

H1 General

This chapter describes the evaluation of the alternative water resources development plans in the Agos river basin with regard to the various social issues and implications of said development schemes. In particular, this concerns the adverse impacts of the project on the people and their communities, such as the loss of land and other fixed assets, and the number of communities and/or persons that may be marginally or severely affected. It also includes the important requirement for resettlement and compensation for project-affected persons (PAPs) and vulnerable communities that have been identified in each of the alternative development schemes. In the final analysis, such social issues and their resolution would spell the difference between the success or failure of the project.

To arrive at the appropriate countermeasures in order to avoid, minimize and/or mitigate adverse impacts where these are inevitable, a careful review and analysis of the social aspects of previous studies were performed. These studies were not limited to MWSS' water supply development projects, particularly on the Laiban Dam; but also involved studies of the Agos River basin by the Department of Environment and Natural Resources (DENR) and the National Power Corporation (NPC).

A significant part of this review included an examination of the existing resettlement framework of development projects of line government agencies and government owned and controlled corporations (GOCCs), including local government units (LGUs). Notable among these are the NPC, the National Irrigation Administration (NIA), the National Housing Authority (NHA), the Department of Public Works and Highways (DPWH), the Department of Agrarian Reform (DAR), and the DENR. The emphasis of the review was on resettlement, relocation and compensation of project-affected communities, families and persons so that the future implementation of the best among the development alternative schemes for water resources development of Metro Manila would find social acceptability and viability.

Special attention was given to indigenous cultural communities that would be affected by the alternative development schemes.

H2 The Legal Framework of Resettlement in the Philippines

The Study on Water Resources Development for Metro Manila recognizes the importance of and provides equal emphasis on the technical, environmental and social aspects of the project. There are many laws governing the protection of the rights of citizens who would be displaced by development projects planned and executed by both the government and the public sector. When translated, these laws find its place in policies of the various agencies tasked with the implementation of projects that have impacts on the social, economic, environmental and political landscape.

H2.1 National Legal Framework on Resettlement

The 1987 Constitution of the Philippines provides the overall mandate that describes the inherent and inalienable right of all Filipinos. This right cannot be violated even in the face of development projects deemed to directly benefit the people. Article III, Section 1, states that “No person shall be deprived of life, liberty, or property without due process of law, nor shall any person be denied the equal protection of the laws;” while Article II, Section 9, states that “Private property shall not be taken for public use without just compensation.”

There are other laws, executive orders, administrative orders that support the constitutional provisions cited above. Those that have direct social impact, such in the resettlement of project affected persons (PAPs), are briefly cited below:

(1) Executive Order 1035

This provides for the procedures and guidelines for the expeditious acquisition by the government of private real properties or rights thereon for infrastructure and other government development projects; such as but not limited to the conduct of a feasibility study, public information campaign, parcellary survey and assets inventory.

(2) Republic Act 6389

This provides for disturbance compensation to agricultural lessees equivalent to five times the average gross harvest in the last five years.

(3) Republic Act No. 7279 (Urban Development and Housing Act of 1992), as amended by RA 8368 (1997)

Describes and defines disturbance compensation and when this would be given as compensation to relocatees and resettlers brought about by infrastructure and other development projects.

(4) Implementing Rules and Regulations between the DILG and the HUDCC (1992)

This details the procedures and guidelines for proper and humane relocation and resettlement operations as mandated by RA 7279.

(5) Administrative Order 50 (1999)

Fair compensation will be based on the zonal value of the land plus 10%. If this fails, the government agency will initiate expropriation proceedings and the following parameters will be considered during compensation:

- (a) Classification and use for which the property is suited
 - (b) Development costs for improving the land
 - (c) Value declared by the owner
 - (d) Current selling price of similar lands in the vicinity
 - (e) Reasonable disturbance compensation for the removal and/or demolition of certain improvements on the land and for the value of improvements thereon
 - (f) Size, shape or location, tax declaration and zonal valuation of the land
 - (g) Price of the land as manifested in the ocular findings, oral as well as documentary evidence presented
 - (h) Facts and events so as to enable the affected property owners to have sufficient funds to acquire similarly-situated lands of approximate areas as those required from them by the government, and thereby rehabilitate themselves as early as possible.
- (6) DAR Administrative Order No. 1, Series of 1999 – Revised Rules and Regulations in the Conversion of Agricultural Lands to Non-Agricultural Uses

This re-defined the rules that govern the conversion of agricultural lands to residential, commercial, industrial, institutional and other non-agricultural purposes, pursuant to Republic Acts No. 6657 and 8435 and Executive Order No. 129-A.

H2.2 National Legal Framework for the Protection of Indigenous People's Rights

This landmark law, enacted before the end of the century, recognizes, protects and promotes all the rights of the indigenous cultural communities (ICCs) and the indigenous peoples (IPs) within the framework of national unity and development. It declares, as a matter of policy, the recognition of the inherent dignity and equal and inalienable rights of all Filipinos as the foundation of freedom, justice and peace. It states that the rights of the ICCs/IPs as universal, indivisible, interdependent and interrelated.

(1) Act No. 8371 (Indigenous People Rights Act of 1997)

The Philippines is composed of a diversity of culture and indigenous peoples. This law spells out how recognition, protection and promotion of the rights of Indigenous Cultural Communities (ICCs) and Indigenous Peoples (IPs) can be realized through the operating principles of cultural diversity, consensus and peace-building, cultural integrity, human dignity subsidiarity, solidarity and total human development, as well as through transparency and capacity building. This

law provides for mechanisms to consider all these principles in the formulation of policies and development plans for ICCs/IPs.

(2) Implementing Rules and Regulations (IRR) for RA 8371

This IRR provides the clear definition of such terms as ancestral domain, ancestral lands, communal claims, native title customary laws, customs and practices, natural resources, ICCs/IPs, among others. The more pertinent provisions are the definition of “ancestral domains” and “free and prior informed consent.” The former refers to all areas generally belonging to the ICC/IPs, subject to property rights within ancestral domains already existing, as circumscribed in Rule II, Section 1a:

“ . . . It shall include ancestral lands, forests, pasture, residential, agricultural and other lands . . . hunting grounds; burial grounds; worship areas; bodies of water; mineral and other natural resources; and lands which may no longer be exclusively occupied by ICCs/IPs, but from which they traditionally had access to, for their subsistence and traditional activities, particularly home ranges of ICCs/IPs who are still nomadic and/or shifting cultivators.”

The latter or “free and prior informed consent” refers to the consensus of all members of the ICC/IPs that must be sought for any policy, program, project or activity. The obligations of the project proponent are spelled out in Section 6, 7 and 8 of Rule IV: Right to Self-Governance and Empowerment. The more pertinent provision is shown below:

“Submit to the IP community and the NCIP (National Commission on Indigenous Peoples) in a language understandable to the concerned an Environmental and Socio-cultural Impact Statement, detailing all the possible impact of policy, program, project or activity upon the ecological, economic, social and cultural aspect of the community as a whole. Such document shall clearly indicate how adverse impacts can be avoided or mitigated.”

H2.3 Resettlement Framework for the Development of Water Resources for Metro Manila

This project concerns the development of water resources, one of the most vital among the country’s natural resources, necessitating a review of the specific legal frameworks for water resources development, particularly for Metro Manila. The Metropolitan Waterworks and Sewerage System (MWSS), which was created by Republic Act 6234 in 1971, has the exclusive control and supervision over all sources of water supply, such as rivers and streams for waterworks purposes. Hereunder are other laws, proclamations, executive orders, and administrative orders that make up the legal basis for this water resources development project:

(1) Executive Order No. 33 (1904) as amended by Executive Order Nos. 14 and 16, Series of 1915

This reserved certain portions of the public domain otherwise described as the Marikina Reserve and Angat Water Reserve for water supply and the development of waterpower.

(2) Proclamation No. 391 (1968)

This concluded the operation of Proclamation No. 505, dated December 4, 1965, which established the Angat Watershed Reservation, or certain portions thereof located in Norzagaray and San Jose, Bulacan; and Montalban, Rizal and declared the same as a forest and watershed reserve under the administration and control of the Director of Forestry and the General Manager of the National Waterworks and Sewerage Authority who shall jointly have the authority to regulate the use and occupation of the said water forest reserve, cutting, collection and removal of timber and other forest products in accordance with forest laws and regulations.

(3) Proclamation No. 573 (1969)

This declared portions of the Rizal Resettlement Project as part of the Kaliwa River Forest Reserve and Dam Reservoir.

(4) Memorandum Order No. 725 (19 May 1981)

This provided for the creation of a 10-member Inter-Agency Committee to formulate and adopt a work plan for the development of a resettlement site that would accommodate families affected or displaced by the Laiban Dam component of the MWSP III of the MWSS. It recognized that the full development of the Kaliwa River Basin could be only realized if the settlers within the proposed reservoir area are relocated in a smooth, orderly and peaceful manner to a suitable place. Said Inter-Agency Committee immediately endorsed in 1983, the proclamation of a specific relocation site, whereby Presidential Proclamation No. 2480 was eventually issued in 1986. It also approved on 21 October 1983 the Master Conceptual Plans for the Relocation Site in San Ysiro, San Jose, Antipolo, Rizal.

(5) Presidential Proclamation No. 2480, (29 January 1986)

This designated San Ysiro Valley, San Jose, Antipolo as the relocation site for the settlers who may be displaced by the Laiban Dam (MWSP III), pursuant to Memorandum Order 725 of 1981. It also reserved 4,424 hectares of the Marikina Watershed Reservation in San Ysiro Valley for resettlement purposes.

(6) Executive Order 407 (1990)

Declared the 1,507 hectares titled to MWSS and 2,917 hectares of government land in the Marikina Watershed Reservation as part of the Special Resettlement Project for the Laiban Dam component of the MWSP III.

(7) Memorandum of Agreement among MWSS, DENR and DAR (1 December 1993)

The three agencies agreed that the 4,424 hectares resettlement area, which already includes the 1,507 hectares titled to MWSS, be declared as a Special Resettlement Project, specifically for the resettlement of the settler-families to be affected by the implementation of the Laiban Dam Project. It also delineated the specific responsibilities of each of the agencies that were signatories to this MOA.

(8) Memorandum Order No. 10 (5 August 1998)

This mandates the MWSS to immediately resume the implementation of MWSP III, or the Laiban Dam Project because of the urgent need for water in Metro Manila by 2006.

H3 Review of the Social Dimension of Previous Studies

A thorough review of previous development project studies, with emphasis on the social dimensions, was made. These studies, either for water resources, hydropower or environmental projects, provided different perspectives as well as the points of convergence on the predominant social issues. The major studies referred to are the *Kanan B-1 Hydroelectric Power Project, Environmental Impact Statement*, 1994 (Ref. 1), *Manila Water Supply III Project Review*, 1997 (Ref. 2); the *Kaliwa Watershed Development and Management Plan*, 1999 (Ref. 3); the *Laiban Dam Project Final Report and Sub-Appendices*, August 2000 (Ref. 4); the *Inventory of Needs, Problems and Proposed Solutions of Families Affected by the Proposed Laiban Dam Project*, October 2000 (Ref. 5); the *Pre-Feasibility Study for the Agos River Multi-Purpose Development*, May 2001 (Ref. 6); and the *Environment Survey for Phase I: Initial Environment Examination*, July 2001, conducted for the Water Resources Development for Metro Manila (Ref. 7). All the studies were utilized as baseline updates in the sense that conditions have changed since the studies were prepared and now that this master plan is in progress.

In conjunction with the other studies mentioned was a detailed review of other pertinent documents in the form of minutes of meetings, board resolutions, office memoranda in the possession of the MWSS. Personal interviews were conducted with MWSS officers, recently retired officers of the MWSS who had handled, as well as supervised the resettlement and compensation aspects of the Laiban Dam project from the very beginning; and MWSS project consultants. All these interviews provided deeper and invaluable insights and a better appreciation of the gravity of the resettlement issues and their attendant sub-issues not usually afforded from secondary data.

H3.1 Major Data Collected on Social Issues Pertaining to the Study Area

The major studies reviewed are hereby presented by the year these were prepared, from the least recent to the most recent. From this backdrop, the flow of data, applicable findings and issues and their proposed mitigation can be better appreciated.

(1) Kanan B1 Hydroelectric Power Project, EIS (1994)

The EIS of the Kanan B1 Hydroelectric Power Project was prepared by Madecor and Environmental Primemovers of Asia, Inc for the National Power Corporation in 1994. A significant contribution of this EIS to this master plan is the demographic, economic and social service characteristics of the study Barangays, Pagsangahan and Mahabang Lalim in General Nakar, plus Magsaysay in Infanta, which includes a detailed description of the Dumagats, IPs that inhabit the Kanan and Kaliwa River watersheds. Another is on the pertinent information obtained from two perception surveys undertaken in the three Barangays where the respondents were rated on their awareness of the hydropower project, their endorsement of it, and their

immediate and long-term concerns. Among the other relevant findings of this EIS are:

- (a) There are active non-government, peoples and community organizations in the study areas, but the operation of these organizations are on the municipal level and have not reached the Barangays Pagsangahan and Mahabang Lalim, except for Barangay Magsaysay.
- (b) There are also Dumagat organizations; but these represent mostly the IPs in the coastal areas and not those in the settled around the watersheds.
- (c) The Dumagat is not the only IP in the study Barangays; there are also a few Tinggians in Lagmak, and Remontados, who are part-Dumagat.
- (d) Royalties are expected to be awarded to the cultural communities from the project for every kilowatt-hour generated, as was done in the Apo Geothermal Project.
- (e) Displacement of the Dumagat is a sure consequence of the implementation of the Kanan Project resulting to their economic, social and cultural stress.

The predominant indigenous peoples are the Dumagats, resettled mostly in Barangay Pagsangahan, particularly in the northern Sitios of Matatio, Lagmak, Ilamban, as well as in Banao and Patalac; but only a few are settled in Barangay Mahabang Lalim. For their livelihood, the Dumagats rely mainly on forest resources such as rattan vines or almaciga resin, and also collect edible and medicinal plants, and wildlife. The early Dumagats were nomadic; but are now semi-sedentary.

It is the group's headman who is consulted and is the sole authority on matters concerning expropriation of land, properties, livelihood and other various issues. One of these critical concerns is the impending inundation of their ancestral lands, which they object to. They feel government must find alternate resettlement sites, if not, at least provide alternative livelihood opportunities and a reservation area for them to be able to maintain their way of life and cultural identity. For those IPs not living in areas to be inundated, they would be losing a big area where they gather forest products, do wildlife hunting, and river fishing.

Archaeological sites were discovered at the proposed dam site of the hydropower project, about 13 km west of General Nakar, near the junction of the Kanan and Matatio Rivers, such as 12 burial sites in the area to be inundated. Other sites of cultural value were three natural rock formations that are believed enchanted somewhere by the Mayabiga to Lagmak River junction, another was one kilometer west of Lunggoy, and still another was one kilometer west of Lamigan River. Tigbak is also one place of historic significance to the Dumagats.

The key environmental protection measures proposed are the implementation of NPC Resettlement Action Plan (RAP) and the continuation of the Strategic Communication Program for another two years while the RAP is in full swing. The RAP is based on NPC's official policies on resettlement which views true

resettlement as the integration of the physical aspects of development with economic and social aspects. This fusion and balance among all aspects of development will ultimately provide a satisfactory habitat for those who have been displaced or involuntarily removed from their former living and working environments.

(2) The Manila Water Supply III Project Review (1997)

In 1997, Electrowatt Engineering in association with Renardet S. A. undertook a review of the Manila Water Supply III project. Volume 6 of the Final Report is entitled “Relocation Status,” which provides a summary of the actions undertaken by MWSS from the 1983 up to 1997 in terms of relocating the residents of the seven Barangays identified to be inundated by the Laiban Dam. In reviewing the components of the MWSS Relocation Program, the following relevant issues can be derived:

- (a) While there is a change in socio-economic survey parameters undertaken in 1982, such as household composition, educational status and income, the more significant change after 15 years is the attitude of the affected residents toward the project. The MWSP III review claimed that the attitude of the residents have moved from positive to indifferent, and in many cases, even negative.
- (b) Asset inventory survey, which is the land occupancy and above ground improvements recorded from 1982-1985, and another in 1987, is outdated.
- (c) Compensation of properties and above-ground improvements, which has not been completed, have become unrealistic, while the current Schedule of Values in use was declared by the PAFs as unfair and arbitrary.
- (d) Land acquisition at the Kaliwa Watershed is proceeding very slowly, if at all. In addition, land prices have dramatically gone up since the start of the valuation in 1984 to 1994, when MWSP III started paying the titled properties in accordance with MWSS Board approved price range.
- (e) Population census in the relocation site in San Ysiro was done in 1983, 1985 and 1993; but the census revalidation survey in 1995 was stopped by a growing number of settlers-oppositors. Meanwhile, the number of squatters in the relocation site is increasing. Leftist elements have also been influencing both relocatees and settlers into rejecting relocation programs and services.
- (f) Survey for home-lot monumenting and the actual tillage survey, which are preparatory work prior to land distribution, were stopped due to opposition from settlers or occupants of San Ysiro.
- (g) There were also administrative observations, such as non-continuous allocation of funds for program implementation on relocation; changes in committee chair and membership leading to modifications in major relocation policies; lack of staff to implement approved services, among others.

- (h) Community organizing (CO) and community development (CD) work had played a vital role in keeping the frame of mind of all relocatees open to the relocation processes, programs and services. Public relations work was also provided the relocatees with a chance to be kept informed of what was happening. But all these support activities were stopped in 1989 with the deferment of the Laiban dam project.

The project review prepared a new Four-Year Implementing Schedule for Relocation Activities and recommended proper monitoring of its implementation. It also recommended that a “massive information campaign be undertaken for relocatees to accept the updated relocation and resettlement packages.”

(3) The Kaliwa Watershed Development and Management Plan (1999)

This is the water resources development project-watershed management improvement component of the Kaliwa Water Development and Management Plan for the provinces of Rizal and Quezon, prepared by Resources, Environment and Economics Center for Studies (REECS) in 1999. On the social dimension aspect, the report provided an updated profile of the seven Barangays communities in the Kaliwa Watershed. These Barangays – Sta. Ines, Cayabu, Laiban, Mamuyao, Sto. Nino, Tinucan and San Andres – which are the same ones covered by the Laiban Dam project and for this master plan study.

Updated were the social parameters such as population and its sub-components, employment, educational attainment, health and nutrition, and population program. Of particular interest is the category “others,” where one of the main problems of the communities was “uncertainty of MWSS status.” The institutional dimension parameters included educational, health and credit facilities, market availability, infrastructure such as roads, communications and transportation facilities, water and electricity. Other parameters in the profile were the environment and accessibility. The maps included the land status, regulatory map and the administrative boundaries’ map showing the locations of the Barangays in the Kaliwa watershed.

(4) Laiban Dam Project (August 2000)

This study, completed in August 2000, was conducted by Gutteridge Haskins and Davey Pty Ltd. (GHD) et al. Its goal was to present the Laiban dam project to major stakeholders, the financial markets and authorities and get it off the drawing board at the earliest possible time because of the urgency for the need of water in Metro Manila by 2006, which the Laiban dam could satisfy. In this connection, it recommended for the update of the 1986 MWSP III ECC, which had already lapsed, either to supplement the original one or to prepare a new one altogether embodying the requirements within the purview of the environmental analysis of DENR and the World Bank. Among these are a Public Consultation Program and a Resettlement Plan that must meet complete social and political acceptance.

The study provided updated estimates on the required investment for the entire project works based on year 2000 prices, to include other important requirements as

land acquisition and resettlement, with detailed sub-items for resettlement. Estimated costs are shown below.

Estimated Cost of Resettlement for Laiban Dam Project at Year 2000 Prices

ITEMS	OPTION 1 PHP '000	OPTION 2 PHP '000
Resettlement Cost including Land Acquisition and Site Development	1,967,838	1,967,838
Right of Way Cost	59,400	59,400
Right of Way Cost for Treatment Plants	808,500	808,500
Right of Way Cost for Distribution System	1,666,500	165,000
Site Relocation Consulting	36,000	36,000
Right of Way Consulting	25,416	25,416

Source: Laiban Dam Project, GHD et al, 2000.

The study believed that the Laiban dam project derived part of its feasibility from the planned resettlement program by the MWSS for the identified PAFs. It recommended the immediate formation of a Resettlement Task Force to oversee the resumption of resettlement processes. It also recommended that the WB's Operational Directive on Involuntary Resettlement be utilized as the guide in the preparation of a resettlement plan, which must be concurrently implemented with the EIS process.

(5) The UPSARDFI Study (October 2000)

The latest study with considerable significance on this master plan is the social environment survey commissioned by MWSS to the UP Social Action and Research for Development Foundation, Inc (UPSARDFI). It investigated the perceptions of the project-affected families' and their demand with regard to resettlement. The survey attempted to ascertain (1) the number of people in the seven affected communities; (2) their perceptions; (3) their needs for compensation; (4) their choice of relocation site; (5) the facilities and services needed prior to relocation and in the relocation site; (6) their intention to participate in the project; and (7) to use the information gathered from the survey as MWSS' input at drawing up options with regard to compensation schemes and alternate resettlement sites for the project affected communities.

Out of possibly 2,577 respondents/families, 2,248, or 98% were actually surveyed. A thorough review of the survey findings was made, and the relevant highlights of the survey have been derived as follows:

- (a) There are 2,577 coming from seven mountain Barangays – Cabayu, Mamuyao, Sto. Nino, Tinukan, San Andres, Sta. Ines and Laiban.
- (b) Of those surveyed, 17% are indigenous persons.
- (c) Although close to 99% of those surveyed expressed knowledge of the Laiban Dam Project, and the inevitability of giving up their properties and their way of life for development, only around 30% approved of the project.
- (d) Around 32% have received monetary payment from the MWSS; but 97% of this number believed that compensation given was insufficient.

- (e) Almost 99% of the respondent-PAFs prefer the lump sum method of compensation.
- (f) A high 85% is willing to transfer or leave their homes; but this “willingness” is a realization that there is no choice left.
- (g) There are conflicting responses to where the relocation site should be – either in San Ysiro (Antipolo), Palayang Bayan, (Tanay), or Famy (Laguna). But 76% prefer to be relocated within Tanay.
- (h) The respondent-PAFs want the relocation site to have the basic requirements for a livable community life, such as water supply, electricity and transportation.
- (i) The respondent-PAFs also placed equal importance to social and institutional support systems, such as schools, health centers, telecommunications, recreational facilities and livelihood opportunities.
- (j) The respondent-PAFs hold negative perceptions on San Ysiro as the relocation site, mostly due to its state of its development.
- (k) On the other hand, the existing resident-settlers of San Ysiro also have negative attitudes towards welcoming the PAFs who would be resettled in their Sitio.
- (l) In addition to the 17% IPs from the seven Barangays surveyed, identified IPs come from Barangay Lumutan (General Nakar, Quezon). A little over 70% of the inhabitants of Lumutan are IPs, whose social and economic life will be affected with the inundation of Sta. Ines. This brings the total number of IPs to be affected by the Laiban dam project to approximately 607.

The recommendations contained in the survey were categorized to cover four broad “thematic” issues – displacement, social development programs and services, resettlement planning, and legal aspects of land acquisition and compensation.

(6) Pre-feasibility Study for the Agos River Multi-Purpose Development (May 2001)

This study was performed by EDCOP for the MWSS in order to tap the vast potentials of the Agos River for water supply, as well as for hydropower, irrigation and flood control. Integrated into the Recommended Scheme of Development were the individual elements of different schemes “analyzed in the Pre-Feasibility stage based on preliminary costs and economic parameters.” While attention to the social parameters may not have been one of the focal points of the pre-feasibility study, it nevertheless considered in its alternatives freeing or allowing the inundation of Barangay Daraitan. The design alternatives, therefore, considered a low dam where around 300 households in Daraitan would be affected; or a high dam where the entire Barangay will be submerged.

The study foresees that the high dam will be implemented only in the next 10-15 years. It views the impending resettlement of people as bringing about “financial

implications” by increasing project costs by about 10%. It however anticipates social and political opposition to the planned development that must be addressed.

H3.2 The Initial Environment Examination

An Environmental Survey for Phase I (Initial Environment Examination) of this water resources development project was undertaken by MADECOR Environmental Management Systems, Inc. The aims of the IEE were to identify the natural and social environmental problems and issues on the water resources development and water conveyance schemes for this master plan study and to carry out screening and scoping of the environmental items for each of the schemes. In addition, a field survey was undertaken, including a hearing survey for the three study municipalities – Infanta, General Nakar and Tanay – as well as for Barangay Daraitan, which is located in the middle reach of Kaliwa River where the Kaliwa Low Dam and the Agos Dam are proposed.

(1) The Areas to be Affected by the Water Resource Development Schemes

The IEE identified the study Barangays for the water resources development schemes covering 13 rural Barangays belonging to the municipalities of Tanay, in Rizal and Infanta and General Nakar in Quezon.

(a) The Communities Directly Affected by the Water Development Schemes

There are 10 Barangays that host Sitios or clusters of households, which would be directly affected by three out of five water resources development schemes. This means the actual displacement of residents in these areas where a comprehensive resettlement and relocation plan has to be formulated by the implementing agency.

For the Laiban Dam, the directly affected communities are Barangays Sta Ines, Cayabu, Mamuyao, Sto. Nino, Tinucan, San Andres and Laiban, all in the municipality of Tanay (Rizal). For the Agos Dam, the directly affected communities are Barangay Daraitan, Tanay; Sitios Queborosa, Binaladobol, Kimatangan and Kakawayan, all in Barangay Magsaysay, municipality of Infanta (Quezon); and Sitios Bagkoy, Nigu, Yokyok, Kawayan, Querosop, and Madulas, all in Barangay Pagsangahan, General Nakar, (Quezon).¹ For Kanan B1 Dam, the directly affected community is Sitio Lagmak, Barangay Pagsangahan in General Nakar (Quezon).

(b) Communities Indirectly Affected by Water Development Schemes

There are also other communities that would be affected, albeit indirectly, by the various water development schemes. For the Laiban Dam, the inundation of the lower portions of the seven Barangays would restrict the movement of the Dumagats from reaching Barangay Lumutan, with whom their livelihood is intertwined.

¹ For the Agos dam, a total of 19 sitios are directly affected (9 in Brgy. Magsaysay, 1 in Brgy. Mahabang Lalim and another 9 in Brgy. Pagsangahan) as a result of the EIA Study carried out in the Feasibility Study stage (2202).

There is also Sitio San Ysiro, Barangay San Jose, Antipolo, which has been proclaimed the resettlement site for the residents affected by the proposed Laiban Dam. For Kanan B1 Dam, two communities where the Dumagats have ancestral domain claims and may have settlements are portions of Mahabang Lalim and Pagsangahan.

(c) Anticipated Social Impacts

i) Indigenous People, Historical Sites and Cultural Heritage

With the identified water resources development schemes come socio-cultural disturbance and stress, and the deterioration of the way of life of the indigenous people. The IEE identified all schemes to have definite socio-cultural impacts on the IPs because of the destruction of certain cultural heritage and historical sites, a definite change in lifestyle and limited access to ancestral domain and resources.

The Kanan B1 Dam will inundate a pre-World War II foundation of an early house, Dumagat burial sites, and a historical site located at Tigbak. The Agos and the Kaliwa Low Dams, on the other hand, will bring about the inundation of “tinipak” and caves along the Kaliwa River. This will mean the loss of the worship place for the Dumagats, who hold their sacred rites along the lower portion of the Kaliwa River. All these will result to cultural erosion because IP settlements, parts of their ancestral land and their place of worship will be inundated.

While no historical site or cultural heritage was identified to be affected by the development of the Laiban Dam, the effects of cultural erosion will more visible in terms of loss of interaction of the Dumagats from Lumutan with the seven affected Barangays.

ii) Changes in Lifestyle

The displacement of people brought about by development projects is inevitable. Even if the affected people are resettled, and no matter how “ideal” the resettlement site may be, changes in lifestyles will surely occur. According to the IEE, Kanan 1 and 2 and Kanan B1 schemes do not present any large displacement; but the other schemes will. Displacement always brings about a change in the lifestyle of the affected people and their communities because the living and working conditions in resettlement sites will be different from what they had been used to. The degree of change, however, would largely depend on the careful planning and selection of the relocation sites, where these must have similar environmental conditions with the original settlements.

Change in lifestyle will also be brought about by the changes in the project affected families’ access to resources. The displaced population will find themselves in a new community and would have to compete with the host community’s residents for the available resources within the area.

iii) Conflict among Local Residents

Conflict will occur when local residents will compete with one another for the scarce resources available to the community. One example may be employment. While some people may gain temporary employment with the implementation of the project, others may not. There could also be differing perspectives of the people on the project that may bring about a polarization in the community. Making matters worse would be the wrong insinuations on the project of some people who only are concerned with advancing their own self-serving agenda.

(2) The Study Areas for the Water Conveyance Schemes

(a) The Areas Directly Affected by the Water Conveyance Schemes and the Anticipated Social Impacts

The six water conveyance schemes (WCS) cover the towns of Tanay, Baras, Morong, Binangonan, Angono, Teresa, Taytay and Antipolo in Rizal, as well as portions of Metro Manila. As shown in the table, the schemes have anticipated social impacts on right of way, land acquisition, and the displacement and resettlement of an undetermined number of families that would directly be affected by the water conveyance.

Directly Affected Communities for Each Water Conveyance Scheme

WCS	DIRECTLY AFFECTED AREAS	ANTICIPATED SOCIAL IMPACTS (RESETTLEMENT)
WCS-1	Barangay Laiban, Mt. Kimunay (of Marikina Watershed), Mt. Bilid-biran, and Mt. Tanauan, Antipolo City, Taytay	<ul style="list-style-type: none"> Right of way through middle class subdivisions in Antipolo. Acquisition of agricultural lands in Tanay.
WCS-2	Tanay (Marcos Highway-Daraitan Junction, Sitio Agoho, Sampaloc) Laguna de Bay, Metro Manila	Right of way through Sitio Agoho, Sampaloc.
WCS-3	Tanay (Marcos Highway-Daraitan Junction, Sitio Agoho, Sampaloc), Barangays San Guillermo and Prinza, Morong and Angono	<ul style="list-style-type: none"> Right of way through Sitio Agoho, Sampaloc; middle to upper class households in Barangays San Guillermo and Prinza; residential, commercial and institutional establishments along Tanay National Highway Acquisition of agricultural and residential lands in Tanay, Baras, Morong, Binangonan and Angono.
WCS-4	Tanay (Marcos Highway-Daraitan Junction, Barangay Cuyambay), Morong, Teresa, Antipolo City, Taytay	<ul style="list-style-type: none"> Right of way through Tanay, Morong, Teresa, Antipolo City, Taytay Acquisition of agricultural lands in Morong, Taytay
WCT-1	Barangays Pagsangahan and Limutan, General Nakar	Potential displacement of a few households at Kanan River inlet and Kaliwa River outlet in Barangay Pagsangahan, General Nakar.
WCT-2	Barangay Pagsangahan, Kanan River intake, Kaliwa River outlet	Potential displacement of a few households at the Kanan River inlet and the Kaliwa River outlet.

(b) The Water Conveyance Schemes' Effect on the Indigenous People

Dumagats are generally a nomadic people who roam the Sierra Madre mountain ranges where the Agos River basin is located. All the water

conveyance schemes, which originate from this area, are seen to disturb a part of the ancestral domain of the IPs at the intake; while only WCT-1 and 2 will disturb the ancestral domain at the outlet of the tunnel. This would result to some cultural erosion, as there would be limited access to their domain and resources. Cultural disturbance could also result from the influx of workers to the area, affecting the lifestyle of the Dumagats there.

(3) Hearing Surveys

The hearing surveys conducted were actually interviews with key informants from the three study municipalities. A separate survey was done in Barangay Daraitan (Tanay). The key informant interviews provided an indicative level of acceptability or non-acceptability of the project. The key informants were composed of representatives from the LGUs, heads of the indigenous community and residents.

All the key informants admitted to knowing about MWSS plans of utilizing water from the Agos River and constructing either the Kaliwa Low, Kanan, Agos or Laiban dams. They said that even if they had grave concerns over the planned projects, they are helpless at stopping it because the government is known to push through with what it wants. Most of the residents engage in farming, logging, non-timber forest gathering and fishing. The problems or needs of the communities centered on sources of livelihood opportunities, accessibility (roads and bridge crossing), school and medical facilities.

It would be significant to note that the key informants from Tanay feel that if Daraitan will be directly affected by any water development plan, the people would reject it because it is a "well-off" Barangay. Residents interviewed, while unaware of the inundation of part or the whole of their Barangay, also voiced out the same opinion. A few looked forward to the possible employment that the construction of any of the dams would bring.

The community leaders of the Dumagats and the Remontados expressed concern over the loss of sources of livelihood, place of worship, and ecotourism sites.

H4 The Existing Conditions and Considerations in the Study Area

H4.1 General

This section will present the existing conditions or a factual narrative and description of the study areas per alternative scheme. It will also provide the considerations in the study area, or an evaluation of the schemes based on both the current conditions and what had happened in the past. The chronology of events and their rationale, and an analysis of past initiatives and actions become vital inputs and lessons for this study. The historical approach provides a basis for a better understanding and the formulation of the best development alternatives.

H4.2 Water Resource Development Alternatives and the Social Dimension

A description of the prevailing social environment of the project-affected communities will be presented for the water resource development alternatives, thus providing a broad baseline of the socio-economic conditions of affected persons, their resources, and their social institutions. The description of the current social dimension is important because: (1) It will constitute the basis of identifying the projects' social impacts; (2) It will provide the baseline against which incomes and standards of living of the PAPs can be appraised; and (3) It will be a vital and effective guide in designing effective resettlement plans and programs for the second phase of the study.

For this water resources development study, the communities found to be directly affected by each water development scheme have been identified. The location of the directly affected communities is shown in Figure G1.1 contained in Part-G of this Volume III.

Directly Affected Communities in Each Water Development Scheme

WDS	PROVINCE	TOWN	BARANGAY	SITIO
Kanan No. 1 and 2 (at FSL 300-310m)	Quezon	General Nakar	-	A settlement in upper watershed)
Kanan B1 Dam (at FSL 195m)	Quezon	General Nakar	Pagsangahan	Lagmak
Laiban –Dam (at FSL 270m)	Rizal	Tanay	Sta Ines Cayabu Mamuyao Sto. Nino Tinucan San Andres Laiban	
Kaliwa Low Dam (at FSL 133m)	-	-	-	-
Agos Dam ^{A/} (at FSL 159m)	Quezon	Infanta	Magsaysay	Cacawayan Pulang Lupa Pinlak Tigkay Toniko Himatangan Miyunod Querosep Queborosa Pangatloan Pagsangahan Proper Mabagkoy Sungko Neo Ke-balite Madulas Taramtam Tinipak Caway
Alternatively, (at FSL 195 m)	Rizal Quezon	Tanay Infanta	Daraitan Magsaysay	Entire Barangay All sitios mentioned above and other sitios located upland of these areas
		General Nakar	Mahabang Lalim Pagsangahan	Pangatloan and others still undetermined All sitios mentioned above and other sitios located upland of these areas

A/ Based on the EIA Study that was carried out in the Feasibility Study stage (2002)

- (1) The Laiban Dam Project
 - (a) Project Affected Communities
 - i) Directly Affected Areas

There are seven Barangays in the municipality of Tanay, Rizal that will be directly affected by the implementation of the Laiban Dam Project – Sta. Ines, Cayabu, Mamuyao, Sto. Nino, Tinucan, San Andres and Laiban. These

Barangays make up around 6.5% of Tanay's population of 78,096. The average household size stood at five to six members; while the annual growth rate was 3.44% over the past 10 years.

As shown, the official total population and number of households released by the National Statistics Office (NSO) in May 2000 for the seven affected Barangays vary greatly from figures on PAPs and PAFs taken by two project consultants, GHD et al. and UPSARDFI. This may be explained by the fact that in the Philippine setting, it is not unusual that a "household" can be made up of one or more "extended" families.

Project Affected Communities for Laiban Dam

<u>Barangay</u>	Total Pop 2000^A	Total No. HH^B	No. of PAPs	No. of PAFs
Barangay Sta Ines, Tanay	1,539	320		436
Barangay Cayabu, Tanay	323	68		126
Barangay Mamuyao, Tanay	651	146		228
Barangay Sto. Nino, Tanay	578	109		231
Barangay Tinucan, Tanay	398	86		270
Barangay San Andres, Tanay	498	122		324
Barangay Laiban, Tanay	1,076	240		633
TOTAL	5,063	1,091	12,560^C	2,248^D

A/ Population as of May 2000, NSO

B/ No. of Households as of May 2000, NSO

C/ According to the Laiban Dam Project, Final Report, by GHD et al, August 2000.

D/ As per the UPSARDFI Inventory done from May to July 2000, the number of PAFs is about 2,577; but only 2,248 respondents- family heads were interviewed.

ii) Indirectly Affected Areas

There are two other communities that will also be affected by the Laiban Dam, although indirectly. These are Lumutan, a Barangay of General Nakar, and Sitio San Ysiro, Barangay San Jose in Antipolo City. Lumutan's proximity to communities of Tanay, especially to that of Sta. Ines, has made that latter its economic and social partner. The pending inundation of Sta. Ines will surely disrupt Lumutan, which looks upon the former as a partner, a source of basic needs, and a market of some of its agricultural and forestry products. The profundity of the imminent dislocation of the residents Lumutan has been expressed in focus group discussions. This is particularly disturbing to the 70% nomadic IPs at Lumutan who are known to constantly move from place to place in search of livelihood.

San Ysiro, on the other hand, is the official resettlement site of the PAFs that would be relocated from the seven upland Barangays. It is located in a valley east of Metro Manila and can be reached via the Marcos Highway through a 14 km access road. There are original settlers in San Ysiro, giving rise to mutual apprehensions on the part of the San Ysiro residents and the relocatees at being accepted and eventually integrated in the host community.

(b) Socio-Economic Description

Among the 19 Barangays in Tanay, 10 are classified as rural, possessing a land area of 28,789 hectares; while the other nine, with a land area of 4,668 hectares, are urban. The communities directly affected by the Laiban Dam are rural (mountain) Barangays. Most of these Barangays can be reached by motor vehicle during the dry season; but are accessible only through the use of *bancas* during the rainy months.

Tagalog is the common dialect spoken by the majority of the residents; but some speak Bicolano, Cebuano and Ilocano. Majority are Roman Catholics; while some are Protestants, Iglesia ni Cristo or Aglipayan.

Close to 48% of Tanay's land area, or 15,658 hectares, is devoted to agriculture. The seven affected Barangays are the major producers of citrus, mango, banana and other fruit trees. Mango production alone accounts for 1,145 hectares. Other agricultural activities include livestock, poultry and fish production.

The UPSARDFI survey revealed that the occupation of 38% of the household heads is in agriculture, forestry and fishing. Around 35% is unemployed; while the rest work in the service industries, in clerical jobs, in professional and technical jobs, and as laborers. About half earn incomes in the vicinity of P5,000.00; around 30% earn from P5,000.00 to P10,000.00. Close to 13% has an earning capacity up to P20,000.00; while the rest claimed to earn more than that.

There are 30 schools in Tanay; majority of which are public schools. Of these, 22 are elementary; five secondary and three tertiary schools. Most of the residents are undergraduates; but are able to read and write. Other social institutions are police stations, fire stations, electric service by Meralco, a water district for urban Tanay and Levels I and II in the rural Barangays.

(c) Resettlement Issues

The resettlement issues in connection with the Laiban Dam could be better understood if one goes back to the chronology of events and activities undertaken in connection with MWSS's relocation and compensation plan and its implementation. While identifying each resettlement issue, a summary of past actions for the particular issue will be presented. In this way, the issues can be more exhaustively evaluated. (See Table H4.1 for the Chronology of Activities for the Laiban Dam).

- i) The actual number and classification of the PAFs in the seven Barangays, including those in San Ysiro are presently unknown. However, the figures supplied by the last two studies/surveys – the GHD Laiban Dam Project (2000) and the UPSARDFI Inventory (2000) – have not indicated nor provided the actual number and/or classification of PAFs.

Reasons: (a) There is no distinction between “household” or “PAF”. This causes discrepancies in the headcount for actual PAPs; (b) The UPSARDFI used the term “respondents” in their inventory/survey. This does not also translate to actual PAFs.

The GHD et al. Final Report stated that there are around 12,560 project-affected persons in the seven Barangays; while the UPSARDFI listed the respondents (family heads) to be 2,557, although only 2,248 were actually interviewed. To add to this discrepancy is the official population count of the NSO for the seven Barangays, which is 5,063 or 1,091 households. These conflicting figures were all released in the year 2000.

The importance of coming up with an accurate count of PAPs or PAFs cannot be overemphasized, this being a project that requires actual resettlement of people or families displaced by the project. On their factual classification would also hinge compensation, relocation and land acquisition costs. Thus, the only reference for the actual number and classification of PAPs is the original inventory done from 1982 to 1985, as shown below.

Number of Affected Settlers Per Barangay in the Original Inventory (1982-85)

Settlers' Classification	Lai ban	Mamu yao	Sto. Nino	S.And res	Sta. Ines	Caya bu	Tinu- kan	Total	% Ratio
Registered Titleholder ^A	13	49	7	1	18	78	10	176	10%
Tiller-allocatee ^B	20	68	51	1	83	6	50	339	20%
Rights-Buyer ^C	29	8	12	1	28	5	11	94	6%
Occupant ^D	247	95	128	95	61	15	54	695	41%
Dumagat/Katutubo ^E	93	50	21	55	171	3	0	393	23%
TOTAL	462	270	219	153	361	107	125	1,697	100%

A/ Holder of a Certificate of Title issued by the courts, the Bureau of Lands, Land Registration Authority, DENR, DAR..

B/ Settler to whom a certificate of allocation has been issued or whose application for agricultural settlement has been approved by the DAR.

C/ One to whom transfer rights from seller-allocatee have been made with the consent or approval of the administering agency.

D/ One having no justifiable/legal claim on the land occupied.

E/ Indigenous peoples who are recognized by the government as having ancestral domain rights over the area and do not possess legally delineated properties.

- ii) The price of land at the Kaliwa Watershed has steadily been going up, thereby increasing land acquisition costs for the Laiban Dam project.

Reasons: (a) Delays in land acquisition from 1988 to 1996 have naturally pushed land prices up; (b) The privatization of MWSS, together with the shift of project priorities to the Angat Water Supply Optimization Program, has put a stop to all acquisition activities for the Laiban Dam.

The land requirement for Laiban Dam is 9,000 hectares. To date, only 865 hectares have been acquired, all of which are titled lands. Still to be acquired are 3,793 hectares of titled lands, 1,003 hectares of big untitled lands, 283 hectares of small untitled lands and other government properties such as the Armed Forces of the Philippines, 236 hectares, Tanay Municipal

Government, 386 hectares, and the Rizal Provincial Government, 2,434 hectares.

History Land Acquisition for Kaliwa Watershed

Year	Area Acquired	Acquisition Cost	Ave. Unit Cost	Remarks
1988 - 1991	81.4956 hectares	P 0.68 M	P0.84 /sqm	Paid to DAR Titled property owners, as established by MWSS Valuation Committee. Cost of above ground improvements was paid separately per MWSS Board Res. # III-S1984.
1992 ^{A/}	410.7138	31.21	7.60	Acquisition of Cancio et al. Properties in accordance with Guidelines for Appraisal of Private Lands (non-DAR titled) as per MWSP III Appraisal Committee, approved by MWSS Board Res. # 33-89.
1993	93.8922	1.61	1.68	New appraisal work was undertaken and report was forwarded to Prov'l Assessor (Rizal) and DOF for review. MWSP III Appraisal Committee continued to pay P1.68/sqm to those willing to accept price.
1994	79.8681	5.42	6.79	Acquisition of titled properties under new price schedule approved by MWSS Board Res. # 09-94. ^{/B}
1995	198.9719	16.16	8.12	Deferred on the latter part of 1995 due to Senate Blue Ribbon inquiry on the increase of acquisition price from P0.84 to a high P10.00.
1996				With the privatization of MWSS, all land acquisition works have not resumed pending implementation of the Laiban Dam project.
TOTAL	864.8505			

A/ MWSS started receiving letters from property owners declining the prices of P0.84/ sqm, offering instead prices ranging from P5.00 to P60.00/sqm, including a Barangay resolution from titled property owners asking for a common price of P13.00/sqm.

B/ Each lot was inspected for terrain configuration before applying the approved cost schedule, to arrive at an average cost, which is the appraised value to be used as the ceiling cost during negotiation. Four approaches were utilized to arrive at the average cost: P10.66/sqm under the Market Data approach; P16.36/sqm under the Income approach, P10.72/sqm for modified DAR Formula and P25.31 under the DOF Formula.

- iii) From the very start, the relocation site at San Ysiro, Antipolo was inadequate to resettle the original relocatees from the seven Barangays. The additional 1,000 hectares provided by DAR in Famy, Laguna have since, too, become inadequate for the 250 relocatees who originally chose to be resettled there.

Reasons: (a) The number of settlers in San Ysiro has increased from 1983-1985 when the inventory was first made, up to the year 2000, when the latest inventory was retaken; (b) The resettlement sites have been encroached by squatters and illegal settlers; (c) The number of PAFs from the seven Barangays has also increased, as the original relocatees have with them their extended family members; (d) According to MWSS, the additional relocation site at Famy, then offered by DAR, is already congested, and, as of this time, cannot accommodate relocatees from the seven Barangays.

Survey of Families at San Ysiro, San Jose, Antipolo (From 1983-2000)

Agency	Year	PAFs	Remarks
MWSS Census	1983	145	Actual number
MWSS Inventory	1985	187	Actual number
DAR Survey	1993	500	Stopped due to oppositors
MWSS/DAR/DENR/LGU	1995	-	Not revalidated due to oppositors
UPSARDFI Inventory	2000	501	Survey respondents; not actual PAFs

The displacement of PAFs in the seven Barangays necessitates a relocation site or sites that could accommodate the relocatees. The relocation site becomes a host community. It must be willing to accept the relocatees so that integration between the two can proceed smoothly. According to the UPSARDFI survey, the residents of San Ysiro harbor negative feelings toward welcoming the PAFs who would be resettled in their community. This can also be a reasonable conclusion as can be gleaned from the past actions of the oppositors that disrupted and even stopped an earlier survey and its revalidation in 1993 and 1995, respectively.

- iv) Site development activities at San Ysiro have not been completed; while in Famy, site planning and development have not even been brought to the drawing board.

Reasons: (a) Although there have been preparatory works for San Ysiro, actual site development is far from complete due to lack of funds and a clear resolve by the MWSS to pursue resettlement and relocation; (b) Lack of funds to pursue the social activities for Laiban Dam project, also impeded the start up of Famy's development as an additional resettlement site.

The reluctance of the families to transfer to the official relocation site is because of the actual status of the site itself. The UPSARDFI survey reveals that the relocatees want San Ysiro, or any resettlement site for that matter, to have such basic requirements as water supply, electricity and transportation, as well as social and institutional support systems such as schools, health centers, telecommunications and recreational facilities and livelihood opportunities.

- v) The current compensation plan is no longer acceptable to the PAFs.
- Reasons: (a) The deferment-suspension-resumption cycle in the payment of compensation, due to changes in the priorities of MWSS and the national leadership has resulted to an outdated compensation schedule; (b) Leftist ideological instigators have co-mingled with the original San Ysiro settlers as well as the PAFs who have yet to be resettled prompting both to oppose the Laiban Dam Project.

History of Compensation at Kaliwa Watershed

Date	Quantity	Cost (PM)	% Physical Acc.	Activities/Events
Feb 1983	-	-	-	Creation of MWSS Valuation Committee that recommended values of compensable properties to Inter Agency Committee.
1982-85	1,697 PAFs (2,554 claims)	83.42	-	Asset Inventory according to Schedule of Values established by the MWSS Valuation Committee. ^{/A}
1986-89	415 PAFs (627 claims)	10.42	25%	MWSS paid PAFs 40% as partial payment to those who opted to be relocated and 100% to those preferring buyout. ^{/B}
Dec 1989	-	-	-	Deferment of Laiban Dam Project under MWSS Board Res. # 195-89.
1990-95	818 PAFs (1,235 claims)	16.40 ^{/C} 45.42 ^{/D}	48%	MWSS Board Res. # 30-90 and 274-90 approved budget for the 60% and unpaid 40% and 100% for buyout. ^{/E}
Feb 1996	-	-	-	All above-ground payments were suspended in compliance with Memo from Administrator dated 24 Jan 1996. ^{/F}
1996 to present	-	-	-	Payments again suspended due to privatization of MWSS; have not been resumed.
TOTAL	1,233 PAFs (1,862 claims)	72.24	72%	From the original Inventory made. Does not include the new settlers/claimants.

A/ PAF's land occupancy and above ground improvements (fruit trees and dwelling units were inventoried. Claims were subdivided into home lots and farm lots improvements, hence one PAF could have one or more claims depending on the number of lots occupied.

B/ MWSS policy stated that for relocatees, an initial payment of 40% of total cost of improvements will be made and the remaining 60% will be paid upon physical transfer to the relocation site.

C/ 40% payment for relocatees who have not yet received initial payments.

D/ 60% payment for relocatees requesting for immediate payment, including 100% for buyout scheme.

E/ MWSS fast tracked payments to the relocatees because the DOF was then reviewing a new schedule of values proposed by the DA, about three to four times higher than the 1981 schedule.

F/ The directive was to conduct new inspection and verification and to certify in writing the accuracy and truthfulness of the contents of the Inventory and Improvements. It was observed that no MWSS representative was around when inspection and verification were made; inventory was only signed by claimant, Barangay Chairman, COA and DAR.

(d) Indigenous People

The effect of the pending inundation of the seven Barangays to the indigenous people of Lumutan is in the loss of close human interaction with their social and economic partners and of the lands where they roam and get their resources. Seventy percent of Lumutan's population is either Dumagat or Remontado. This number is in addition to the 17% IPs coming from the directly seven affected Barangays. These IPs engage in marginal agriculture such as, swidden farming, rattan farming and hillside farming. Other activities include coal production, wood gathering, hunting, and even logging, which are their sources of income. According to the UPSARDFI, the total number of IPs to be affected by the Laiban Dam is now around 607.

(2) The Agos Dam

(a) Project Affected Communities

As a result of the Environmental Impact Assessment (EIA) Study carried out in the Feasibility Study stage in 2002, there are 3 Barangays that would be directly affected by the development of the Agos Dam – Barangays Magsaysay in Infanta, Mahabang Lalim and Pagsangahan in General Nakar, all in the province of Quezon. To be directly affected by the implementation of the Agos Dam at elevation 159 m (FSL) are around 174 households of these Barangays.

Project Affected Communities for Agos Dam at Elevation 159

<u>Barangay and/or Sitio</u>	No. of PAPs	No. of PAFs
Sitio Cacawayan, Barangay Magsaysay, Infanta	50	12
Sitio Pulang Lupa, Barangay Magsaysay, Infanta	66	16
Sitio Pinlak, Barangay Magsaysay, Infanta	18	2
Sitio Tigkay, Barangay Magsaysay, Infanta	8	5
Sitio Toniko, Barangay Magsaysay, Infanta	2	1
Sitio Himatangan, Barangay Magsaysay, Infanta	35	9
Sitio Miyunod, Barangay Magsaysay, Infanta	118	20
Sitio Querosop, Barangay Magsaysay, Infanta	8	4
Sitio Queborosa, Barangay Magsaysay, Infanta	55	9
Sitio Pangatloan, Barangay Mahabang Lalim, General Nakar	28	3
Sitio Pagsangahan Proper, Barangay Pagsangahan, General Nakar	103	20
Sitio Mabagkoy, Barangay Pagsangahan, General Nakar	124	24
Sitio Sungko, Barangay Pagsangahan, General Nakar	25	5
Sitio Neo, Barangay Pagsangahan, General Nakar	46	10
Sitio Ke-Balite, Barangay Pagsangahan, General Nakar	71	12
Sitio Madulas, Barangay Pagsangahan, General Nakar	39	6
Sitio Taramtam, Barangay Pagsangahan, General Nakar	55	10
Sitio Tinipak, Barangay Pagsangahan, General Nakar	10	2
Sitio Caway, Barangay Pagsangahan, General Nakar	25	4
TOTAL	886	174

(b) Other Project Affected Communities

Site reconnaissance by helicopter indicates that there may be a few clusters of households that may be directly affected by the Agos Dam's afterbay weir structure.² The number, however, cannot be determined as of yet; but will be ascertained if this study proceeds to the feasibility stage.

(c) Socio-Economic Description

i) Barangay Daraitan, Tanay³

Barangay Daraitan, with total population of 3,202, comprising 617 households, makes up 4.1% of the entire municipal population of Tanay based on the May 2000 NSO Census. The Barangay has a growth rate of 4.94% and an average family size of 5-6 members.

² The Feasibility Study has deferred the development of Afterbay Weir, nonetheless, the EIA Study has identified 12 households that are to be affected by the weir.

³ Residents of Barangay Daraitan are not directly affected, however, being situated at the backwater of the proposed reservoir, necessary compensation for their inconveniences has to be taken into account.

Barangay Daraitan is situated on the northeast, about 29 kms from the town proper. Although the area is also claimed by Barangay Pagsangahan, General Nakar, Quezon, the voting population of Daraitan is registered with Tanay. Trails along the Kaliwa River make Daraitan the best access to and from Sitio Cayabo, General Nakar and Sito Queborosa, Magsaysay, Infanta.

The majority of the residents in Barangay proper belong to the middle income class, thus are better off than the nearby Barangays. This is also evident in the number of concrete houses in the area. They own at least a 400 sq.m. residential land, plus farm lots granted under the Comprehensive Agrarian Reform Program. The monthly income of each household ranges from P4,000.00 to 20,000.00; while the average monthly expenditure is from P2,000.00 to P5,000.00.

About 80% of the population depends on agriculture as the source of livelihood; while the rest depend on occasional and regular employment. Farm lots range on the average from 2 to 5 hectares. Major agricultural products include citrus (*dalanghita*) and mango. In Tanay, citrus has the highest production yield, about 71,300 MT, most of which is produced in Daraitan. Minor agricultural products include vegetables, root crops and palay, normally grown in *kaingin* areas. A few households are engaged in charcoal making, or *pag-uuling*. Others are into livestock raising, including cows, carabaos, pigs and goats. Women keep themselves busy by accepting sewing, laundering and weeding jobs.

Major social services available in Daraitan include the following: two health centers staffed by a nurse and midwife at least once a week; a primary and a secondary school; road networks accessible to big trucks or four-wheel drive vehicles through a six km rough road; transportation services through jeepneys available thrice daily; water supply managed by the Barangay; and electricity supplied by three private operators at a rate of P350.00 per month.

Daraitan is also the host of three of the major tourist spots in Tanay, which are being readied for ecotourism development. These are the Daraitan Church Ruins, the Tinipak and Daraitan Caves, and the Daraitan River, a place of worship for the Dumagats and Remontados.

ii) Barangay Magsaysay, Infanta (Nine Sitios)

According to the NSO May 2000 Census, the total population of Magsaysay is 280, or 54 households, a mere 0.54% of the population of Infanta, Quezon. The Barangay is accessible through an all-weather road that connects the entire stretch of the Barangay settlement area with the provincial highway. Regular jeepney service is available to and from the poblacion of Infanta.

There are nine Sitios in Magsaysay that would directly be affected by the Agos Dam: Cacawayan, Pulang Lupa, Pinlak, Tigkay, Toniko, Himatangan, Miyunod, Querosop and Queborosa with about 360 PAPs or 78 households.

The estimated number of PAPs/PAFS is more than the NSO population/household count for Barangay Magsaysay.

Sitio Queborosa is located upstream the Kaliwa River. It can be reached from Daraitan by foot in two to three hours; through Magsaysay in four hours, or from Barangay Santiago, Sta. Maria, Laguna in three hours.

In Sitio Queborosa, 75% of the population depends on agriculture for their livelihood; while the remaining 25% depend on other sources such as logging and hunting. The major agricultural crops are fruit trees such as citrus (*dalanghita*), mango, guyabano, coconut, as well as vegetables and root crops. The annual income of each household ranges from P5,000.00 to P10,000.00. It can be assumed that the other three Sitios may be similarly situated. Around 30% of the population in Queborosa is Remontados.

The school in Queborosa, with a capacity of 50 pupils had closed down three years ago because no teacher had been assigned there. Thus, students have to go to Daraitan, Saksay (Infanta) and General Nakar for educational requirements.

The rest of the Sitios is visited by a midwife only once a month since accessibility is only by foot trails. There is no electricity. Domestic water sources are springs. The river is normally used for bathing and washing.

iii) Barangay Pagsangahan, General Nakar (9 Sitios)

Barangay Pagsangahan has a population of 2,037 or 8.6% of the total population of the municipality of General Nakar of 23,678. Nine Sitios in Pagsangahan that would be directly affected by the Agos Dam are Pagsangahan Proper, Mabagkoy, Sungko, Neo, Ke-Balite, Madulas, Taramtam, Tinipak and Caway. The population count in these Sitios is 498 PAPs or about 93 households.

Pagsangahan is a long narrow Barangay along the west side of the Kanan River. Access to this Barangay is through a *banca* ride along the river. Navigation becomes difficult during summer months when the river water level is low; thereby hampering the mobility of the residents. There are no roads except for foot trails that link some of the Sitios.

An uneven area distribution among the 19 Barangays in General Nakar exists, with Pagsangahan accounting for close to 37% of the total land area of the municipality. General Nakar is the largest municipality in the province of Quezon, and one of the biggest in the country, but about 40% of its vast areas is reserve. About 42% belongs to the national park; while 18% belongs to the Dumagat Ancestral Domain.

iv) Barangay Mahabang Lalim, General Nakar (1 Sitio)

Mahabang Lalim, a Barangay located on the east side of the Kanan River, has a total population of 676 or 108 households, as per NSO (May 2000). This translates to around 2.86 % of the total population of the municipality

of General Nakar. Only Sitio Pangatloan is to be directly affected by Agos Dam with 28 PAPs or 3 PAFs.

(d) Resettlement Issues

The implementation of Agos Dam at elevation of 159 meters would mean the displacement and subsequent resettlement of about 174 PAFs in Brgys. Magsaysay, Pagsangahan and Mahabang Lalim. Resettlement is, therefore, considered large scale, that is, when applying the definition of the World Bank and JBIC.

The immediate action would, therefore, be to design a comprehensive and feasible resettlement action plan (RAP) for the displaced PAFs.

The hearing survey conducted in Barangay Daraitan reveals that the residents are not only hesitant but are also resistant to the idea of leaving the Barangay for any project-related development. This obstinacy stems from the negative perceptions and observations of what had happened to the neighboring Tanay communities when the Laiban Dam's implementation was suspended. In addition to this would be the requirement to resettle IPs who inhabit the project-affected areas in accordance with the provisions of the Indigenous Peoples Act of 1997.

(e) Indigenous People

The hearing survey gave conflicting number of IPs in Daraitan; but the IP chieftain maintains the number of IPs in Daraitan to being around 200, with a family size of 6-7 members. There are about 30 Remontado families who have settled in Daraitan. The Remontados are no longer nomadic, as the Dumagats generally are, although they still depend on the forest for livelihood. They also consider the Daraitan River as a sacred place of worship. Around 500 "Espiritistas", a cult whose belief centers on the spirit world, gather by the river during Holy Week from various places.

The IPs of Sitio Queborosa are also mostly Remontados, or half-Dumagats. However, those found in the other Sitios of Barangay Magsaysay (Infanta) and Barangay Pagsangahan (General Nakar) are a mix between Remontados and full Dumagats. The loss of tribal grounds and culture among the Remontados and Dumagats will result to cultural erosion due to limited access to their ancestral domain and resources.

(3) Kaliwa Low Dam

There are two schemes under the Kaliwa Low Dam – one using the Kaliwa Low Dam as a temporary structure in tandem with the implementation of Agos Dam and another utilizing the Kaliwa Low Dam as a permanent structure with water elevation 133 meters, plus four meters for free board.⁴ Under both scenarios, there is no resettlement issue, as the dam height is seen not to directly affect any community.

⁴ The scheme of Kaliwa Low Dam-Agos Dam was selected in the F/S.

(4) Kanan B1 Dam

The community directly affected by the proposed implementation of the Kanan B1 Dam is Sitio Lagmak of Barangay Pagsangahan, General Nakar. According to the EIA of Kanan B1, there are around 25 Dumagat families within the area of the proposed dam's reservoir who stand to lose a part of their ancestral domain, their hunting and foraging area, including access to resources for their daily subsistence.

(5) Kanan No.1 and Kanan No.2 Dams

No firm information is available with regard to the number of PAFs in the reservoir area of the Kanan No.1 Dam (FSL 300 m) and Kanan No.2 Dam (FSL 310 m). NAMRIA 1:50,000 map shows a settlement area in the upper reach of the Kanan mainstream, which is situated at altitude ranging from EL. 240 m to 280 m. The map indicates the existence of a number of housings, paddy field (about 15 ha on map) and scrub land in relatively mild-sloped area (about 30 ha). On a basis of "order-of magnitude" estimate, it is assumed that there would be at least 100 PAFs in the area.⁵

(6) Kanan Low Dam

This scheme is proposed in the Development Scenario E (See Supporting Report Part-E). The dam is located in the middle reach of the Kanan River, about 1 km downstream of Kanan B1 damsite. Since the scheme is a low dam construction in isolated area, it is foreseen that there will be no settlements to be relocated.

(7) Laiban Low Dam

This scheme is proposed in the Development Scenario H. Preliminary design contemplates that full supply level (FSL) is 203.0 m and the dam crest elevation 213.3 m. Construction work will require to relocates about 100 housings presently residing on the right bank of the damsite. Further, it is estimated that reservoir will inundate a few settlements including a village located just upstream of the Limutan-Letatin confluence. The number of relocation is conservatively estimated to be around 100. Therefore, the total number of PAFs is roughly 200.

H4.3 Water Conveyance Schemes

The water conveyance schemes, in general, will pass through both urban and rural areas. These urban areas are generally low-middle to upper-middle class subdivisions or self-contained villages; sometimes densely populated residential, commercial and institutional lands. The rural areas are the agricultural lands, grass and shrub lands, hills and mountain slopes.

The water conveyance schemes, therefore, will have address the right of way (ROW) issues and its attendant sub-issues in the highly urbanized areas. The right of way for the water conveyance pipelines sees its greatest and gravest social

⁵ The EIA Study confirmed the existence of these housings, but are considered as temporary structures. These are primarily used as a place to rest during the dry season when some agricultural activities are taking place in the area.

impact when displacement of residents and dislocation of commercial and industrial establishments become inevitable. Another social impact is the disruption of the way of life of the people, institutions and businesses. In either traversing or running parallel to busy road nets, the laying of conveyance pipelines will add to traffic congestion, thereby producing more distress to the already harassed commuters. The social acceptability of said plan would have to be worked on.

An attempt was made to count the number of housings to be relocated on aerial photographs of 1:30,00 scale (1995) and/or 1:15,000 scale (1999-2000).

(a) Laiban-Pantay-Taytay Waterway (WCS-1)

This waterway is to convey water from Laiban reservoir to Taytay service reservoir (associated with Development Scenarios A and F). Total length is 23.8 km, consisting of 14.0 km of tunnel portion (3 tunnels), 9.2 km of pipeline portion (2 pipelines), and powerhouse and water treatment plant in the remainder length.

The estimated number of buildings to be relocated is roughly 330 small buildings (presumably, residential and commercial uses) and 20 relatively large buildings (presumably, agricultural and industrial facilities such as factories, warehouses and green houses).

(b) Kaliwa-Abuyod-Angono Waterway (WCS-4)⁶

This waterway is to convey water from Kaliwa Low Dam to Angono service reservoir (associated with Development Scenarios B, C, D, E and G). Total length is 39.0 km, consisting of 34.1 km of tunnel portion (2 tunnels), 3.5 km of pipeline portion (1 pipeline), and powerhouse and water treatment plant in the remainder length. The pipeline length is shortest among the three conveyance waterway plans (Waterways (a)-(c)).

The estimated number of buildings to be relocated is roughly 50 small buildings and 10 relatively large buildings.

(c) Laiban-Tanay-Angono Waterway (WCS-5)

This waterway is to convey water from Laiban Low Dam to Angono service reservoir (associated with Development Scenario H). Total length is 33.4 km, consisting of 24.2 km of tunnel portion (3 tunnels), 9.2 km of pipeline portion (1 pipeline), and powerhouse and water treatment plant in the remainder length.

The estimated number of buildings to be relocated is roughly 70 small buildings and 50 relatively large buildings.

(d) Kanan-Laiban Transbasin Tunnel (WCT-2)

This waterway is to transfer water from the reservoir of Kanan No.2 Dam to Laiban reservoir through a transbasin tunnel of 14.5 km long, which is included in the

⁶ The proposed facilities have been re-aligned and referred to as the Kaliwa-Taytay Waterway in the F/S. The Waterway will convey water from Kaliwa Low Dam to Taytay and Antipolo service reservoirs. The total number of PAFs is 222 or 1,070 PAPs. This is the preferred scheme based on the F/S.

plans of Development Scenarios A, D, F and H. The tunnel is laid out in forest area in its entire length. There will be no PAFs directly affected by construction of the tunnel.

The tunnel construction involves the construction of access road from the Laiban Dam to the tunnel inlet for about 40 km in length. This may require the relocation of housings. It is assumed that number of relocation will not be more than 20 housings.

(e) Kanan-Kaliwa Transbasin Tunnel (WCT-1)

This waterway is to transfer water from Kanan Low Dam to Kaliwa Low Dam through a transbasin tunnel of 16.2 km long, which is included in the plan Development Scenario E. The tunnel is laid out in forest area in its entire length. There will be no PAFs directly affected by construction of the tunnel.

Nevertheless, for a conservative estimate, it is assumed that there will be about 10 housings to be relocated due to construction of access roads to the tunnel inlet and outlet.

H5 Proposed Resettlement Plan

H5.1 General Criteria

In considering the schemes for water resources development, the displacement of people is unavoidable. Thus, it follows that the single most important social criterion in weighing the alternative schemes would be the number of people to be displaced by the planned water resources development. The number of displaced people has a direct effect on resettlement and compensation costs, not to mention the intangible social repercussions related to actual displacement such as, but not limited to, loss of assets, livelihood, changes in lifestyle, economic and social stress, cultural disturbance and erosion, and other physical traumas. Of the five water resources schemes, there are two schemes where potential displacement is inevitable: the Laiban and the Agos Dams.

H5.2 Water Resources Development Scheme

(1) Laiban Dam

The implementation of the Laiban Dam will mean restarting a resettlement process that had started in 1982, or some 20 years ago. Conditions then and now have changed dramatically. The passage of time brought in changing thrusts and priorities that put the Laiban Dam either in the limelight or in the back burner. This shift in the priorities of the MWSS transformed the attitude of the project-affected communities and their families toward the MWSS to a negative or combatant stance. The once smooth relationship had become almost irreparably damaged. Now comes a “different” MWSS, as a result of privatization, with newer directions in terms of the Laiban Dam’s being re-considered for implementation.

While it may seem that the problems and issues raised on the Laiban Dam have remained constant through the years, its severity has intensified. It would be too simplistic to think that one can take off exactly from where the Laiban Dam’s relocation and implementation left off. To be re-formulated is a “Resettlement Action Plan for the Laiban Dam Project” that must find social, cultural, economic and political acceptability from all identified stakeholders, particularly those adversely affected. It should be a detailed plan, complete with a schedule/timetable, and budget requirements. According to the World Bank’s Operational Directive on Involuntary Resettlement, the Plan must be built around a “development strategy and package aimed at improving or at least restoring the economic base of those relocated.”

In re-enumerating the issues, specific countermeasures are also offered. But all these must be taken only as a part of the proposed re-formulated Resettlement Action Plan.

- i) The actual number and classification of the PAFs in the seven Barangays, including those in San Ysiro are presently unknown. The last two

studies/surveys did not indicate nor provide the actual number and/or classification of PAFs.

It is equally basic and important, at this point, that a totally new survey/inventory must be undertaken to ascertain the actual number and classification of PAFs in the seven affected Barangays, including those in San Ysiro, and in other resettlement sites to be officially designated. The conduct of and the procedures for the new survey/inventory must be similar to the manner it was originally undertaken, with 100% enumeration. This means that the survey activities can only be resumed after a series of dialogues with the PAFs has been successfully conducted.

The new survey/inventory must use the original inventory as the take-off point, since it was the very basis of the compensation paid out by the MWSS to the identified relocatees. What we are simply saying here is that there must be a distinction between the original relocatees and the additional ones; and these additional ones must be inventoried and classified, as well. It is proposed that the survey/inventory and classification of the additional PAFs be completed within one year.

- ii) The price of land at the Kaliwa Watershed has steadily been going up, thereby increasing land acquisition costs for the Laiban Dam project.

Land acquisition costs must not only be updated using actual values for the year 2001; but must also be completed at the earliest possible time. In doing so, MWSS can secure the area from further incursions of illegal settlers or squatters. Below is the recommended schedule for land acquisition.

Proposed Schedule of Land Acquisition at Kaliwa Watershed

Year	Area (HAs)	Acquisition Cost (P/M) ^A	Ave. Unit Cost (P/Sqm)	Remarks
1988-1995	865	55.08		Titled lands already acquired.
Year 1	334	33.40	10.00	Titled lands negotiated; but subject to landowners' confirmation and approval of Board.
Sub-Total	1,386 1,720	235.62 352.41	17.00	Titled lands.
Year 2	2,073	352.41	17.00	Big parcels of titled lands.
	1,003	81.42	8.10	Big parcels of untitled lands (De Villena property; negotiated but for Board approval)
Sub-Total	283 3,359	8.49 442.14	3.00	Small parcels of untitled lands.
Year 3	236	7.08	3.00	Armed Forces of the Philippines
	386	11.58	3.00	Tanay Municipal Government
	2,434	73.02	3.00	Rizal Provincial Government
Sub-Total	3,056	91.68		
TOTAL	9,000	858		

A/ Updated using 2001 cost.

- iii) The relocation sites at San Ysiro, Antipolo and Famy, Laguna are inadequate to resettle the original and additional relocatees from the seven

Barangays. Alternative resettlement sites must be found and/or acquired taking into consideration the wishes of the PAFs.

- iv) The site development activities at San Ysiro have not been completed; while in Famy, these have not even started. Site development at San Ysiro must be continued to make it suited for actual resettlement. The feasibility of site development in Famy must be looked into; if not alternative resettlement sites within Tanay should be proposed.
- v) The current compensation plan is no longer acceptable to the PAFs. There is a need to update compensation plan but this must be done together with PAFs. The UPSARDFI survey shows that almost all (97%) of the respondents believed that the compensation given was insufficient. Also, the respondents preferred to be compensated through the lump sum method.

The five issues enumerated above are inter-related. They were brought up by the relocatees during the course of the UPSARDFI study. According to the UPSARDFI survey, 76% of the respondents wants to be resettled in Tanay, a logical choice politically, culturally and socially. Being in the same municipality would also allow for a better chance of being accepted by and integrating with the host community. Thus, serious efforts must be exerted by MWSS in locating other resettlement sites such as Palayang Bayan in Tanay, often mentioned by the relocatees.

Table H5.1 indicates the cost of relocating and compensating the remaining original and “additional” PAFs. In the table, Site 1 refers to San Ysiro, the designated resettlement site. Site 2 is the additional relocation site needed to resettle those that can no longer be accommodated at San Ysiro.

A strategy being offered here is for MWSS to look for and acquire several small sites within Tanay, which would become “satellite resettlement sites” to San Ysiro. Each site could be made to accommodate the PAFs of one project-affected Barangay. In so doing, several other problems could be addressed: that of looking for one big site to accommodate all the PAFs, which, at this time is difficult to find; that of socio-cultural integration of the a big number of relocatees with an often-hostile host community and vice versa; that of massive dislocation impacts on the socio-economic, socio-cultural lives of the PAFs. By having “satellite resettlement sites,” the entire resettlement process can be broken down into technically and financially manageable packages. It could also have a positive impact to the PAFs, as they could be resettled together with their own co-Barangay members, thereby reducing sudden changes in lifestyles, cultural disturbance, and the stress that often accompanies relocation.

(2) Agos Dam

The resettlement issue for Agos Dam with the water elevation at 159 meters is the displacement of a number of PAPs/PAFs in Barangays Magsaysay, Pagsangahan and Mahabang Lalim.

The immediate action in mitigating the impact of displacement of PAFs for Agos Dam at elevation 159, would be to design a comprehensive and feasible resettlement action plan (RAP) for the displaced residents within the dam reservoir using the guidelines for involuntary resettlement of the World Bank and JBIC. The displacement of Dumagats and Remontados must also be addressed according to the provisions of the Indigenous People Rights Act of 1997.⁷

The feasibility of relocating the 174 PAFs on higher ground, but still within the reservoir's watershed area, may be a viable option worth studying. This would mitigate the impact of dislocation because the resettlement site would still be within the same familiar confines. Some of the PAFs may also be utilized as "watershed protectors" around the dam's reservoir. Barangay Daraitan also stands to benefit if the dam's water level is at 159 meters, as the residential area of the Barangay will not be submerged. Preliminary estimate of relocation and compensation costs for the case of FSL 159 m is shown in Table H5.1.

To mitigate the impact of displacement of PAFs for Agos Dam at elevation 195, a Resettlement Action Plan (RAP) must be prepared with a lead time of about five years before actual implementation or construction of the dam in consultation with, and participation of, the PAPs in such areas as: the conduct and verification of socio-economic surveys, full disclosure to PAPs on impacts and entitlements, selecting and designing resettlement sites, designing and implementing income restoration programs, preparation of the resettlement implementation schedules, establishing grievance mechanisms and monitoring implementation. The estimate of relocation and compensation costs for the case of FSL 195 m is shown in Table H5.1.

Another relocation strategy would be to resettle the dislocated PAFs within the same municipality where their Barangays belong. This could find better acceptability socio-culturally and politically from the PAFs and from their formal and informal leaders.

(3) For Kanan B1 Dam

The Kanan B1 would displace around 25 Dumagat PAFs. Their displacement is governed by Sections 6-8 of Rule IV of the Indigenous People Rights Act of 1997, where a Socio-Cultural Impact Statement must be complied with and submitted to the IP community and the NCIP. A preliminary estimate of relocation and compensation cost is shown in Table H5.1.

(4) Kanan No.1 and No.2 Dams

People residing at a settlement in the upper watershed would presumably Dumagat PAFs (subject to confirmation in further study). In such case, a procedure same as for the Kanan B1 Dam will be effected for the Kanan No.1 and No.2 Dams as well. A preliminary estimate of relocation and compensation cost is shown in Table H5.1.

⁷ A Resettlement Plan (RP) has been prepared to cover the 174 PAFs in the Agos Dam/Reservoir and the 222 PAFs of the waterway facilities during the EIA Study carried out in the F/S stage (2002).

(5) Identified Social Impacts and Their Mitigation

(a) Impact on IPs, Historical Sites and Cultural Heritage and Their Mitigation

The five dam schemes will bring about a certain destruction of cultural heritage and historical sites, a change in lifestyle and limited access to ancestral domain and resources for the ICCs/IPs. While the inundation of a pre-World War II foundation of an early Dumagat house, the identified historical site at Tigbak, and the “Tinipak” and caves along the Kaliwa River may be irreversible; these historical sites can be well documented for the future Dumagat generations. The Dumagat burial grounds must be relocated to another site.

A series of consultations with the Dumagat chieftains and their people, as well as with the half-Dumagats or Remontados must be undertaken, to assess the full extent of their cultural erosion and socio-economic dislocation. This will also provide the best opportunity in planning together with the affected IPs how to better mitigate the limited access to ancestral domain and resources that the dam project will bring.

(b) Changes in Lifestyle and Conflicts among Local Residents and Their Mitigation

There are three countermeasures suggested to lessen the impact of the displacement of and conflicts among the PAPs/PAFs. First would be to make the resettlement planning process as participatory as it can be, where all the stakeholders can provide vital inputs into the plan itself, not merely limited to resettlement site selection. Second would be to set up structures or institutional arrangements, and a mechanism aimed at providing income generating and livelihood opportunities to the PAPs/PAFs in coordination and partnership with NGOs, the private sector and the government. Third, in conjunction with the participatory and community development (CD) processes, should be the implementation of a strategic communications plan (SCP). The SCP is different from an Information-Education and Communications (IEC) program, or a Public Relations (PR) Plan, or even mere information dissemination, in that it focuses on clearly identified targets, and designs a communications package around these targets, rather than use mass media communications methods. The crafted SCP provides timely, accurate and relevant information strategically directed to the target publics, communicating to them the benefits of the development project, as well as the adverse effects, in a manner and language that is best understood and accepted by them. Part of the aims of the SCP is to counter disinformation and/or misinformation, which is expected to be floated by elements that would want to oppose the project or would like to use the PAPs for their own ends.

H5.3 Social Impacts of the Conveyance Schemes and Their Mitigation

Any of the conveyance schemes will have to deal with right of way issues that are very likely to dislocate residents in both rural and highly urbanized areas; commercial and industrial businesses and establishments along busy roadways. The Resettlement Action Plan to be formulated for the selected priority water development scheme must include a sub-section for those who would be displaced by the water conveyance pipelines. A social acceptability plan must be prepared; and for the traffic congestion that may result in laying pipelines along well-traveled highways, alternate routes must be presented. The SCP must also contain a specific campaign plan for affected motorists, residents, institutions and businesses.

H5.4 Resettlement and Compensation Plan for Phase II

(1) Studies Scheduled in Phase II

In the Phase II (feasibility study) of this Study, a resettlement and compensation framework plan for the proposed priority project will be prepared in relation to, and in consideration of, the following points:

- i) The PAPs/PAFs perceptions/demands for resettlement and compensation,
- ii) Ways for economic self-support of the people in the resettlement area,
- iii) The need to maintain the present way of life of the indigenous people who are to be affected by the project.

In this connection, the World Bank has issued “Operational Directive 4.30 on Involuntary Resettlement (March 2001)” to mitigate the adverse effect of large-scale displacement of people brought about by development projects; and Operational Directive 4.20, which deals with socio-cultural requirements and issues where indigenous people are affected. In general, the content and level of detail resettlement plans should normally include a statement of objectives and policies and should provide for the following:

1. Organizational Responsibilities
2. Community Participation and Integration with Host Populations
3. Socio-Economic Survey
4. Legal Framework
5. Alternative Site and Selection
6. Valuation of and Compensation for Lost Assets
7. Land Tenure, Acquisition and Transfer
8. Access to Training, Employment and Credit
9. Shelter, Infrastructure and Social Services
10. Environmental Protection and Management
11. Implementation Schedule, Monitoring and Evaluation

The Japan Bank for International Cooperation (JBIC), on the other hand, has issued the “Resettlement and Land Acquisition Plan”, spelling out the manner by which

development projects must address displacement of project affected people or PAPs.

1. Alternative plan
2. Baseline Information on Project Affected People and the Project Area
3. Legal Framework
4. Compensation Plan
5. Rehabilitation Plan
6. Participatory and Democratic Procedures
7. Institutional Capabilities
8. Timetable and Budget

Asian Development Bank (ADB) also issued the “Policy on Resettlement” to be considered in resettlement planning.

(2) Resettlement Plan in San Roque Multipurpose Dam Project

In the Phase II (feasibility study) of this Study, an examination of the resettlement and compensation procedures actually implemented in the San Roque multi-purpose dam project, and other successful Philippine models, will be made through collection of the relevant data and information from the concerned organizations and agencies. Some aspects of the resettlement plan in San Roque project are given below for reference.

The San Roque Multipurpose Project is a build, operate and transfer (BOT) scheme awarded to the San Roque Power Corporation. It will address the increasing power demand, irrigation and flood control downstream of the Agno River and water quality problems in Pangasinan and other nearby provinces. Its reservoir will create an ideal location for ecotourism as well as livelihood area for the affected families. Likewise, the project would create an estimated 2,000 new jobs during construction, which would bring about economic boom for northern Luzon.

The project is located in Barangays San Roque and San Felipe West, San Manuel and San Nicolas, all in the Province of Pangasinan. However, the tail end of the reservoir is located in barangays Ampucao and Dalupirip in Itogon, Province of Benguet.

The policy framework for resettlement pertains to the following important components: project design, the preparation of a resettlement action plan (RAP), the preparation of a watershed management plan, compensation and benefits for project affected persons of PAPs within existing laws and decrees, the participation of PAPs during pre-settlement/relocation plan preparation, resolution of conflicts, appeals, and grievance procedures, the implementation schedule and monitoring of the RAP, and the provision of working budget to ensure that the RAP can be satisfactorily implemented.

The original Resettlement Action Plan was prepared and approved by NPC in October 1995 for 316 relocatees. This plan was updated in May 1998, as a

consequence of the required additional working areas, which resulted to an additional 125 relocatees. In 1999, using the global positioning system (GPS), another 292 relocatees were found.

The four-point objectives of the RAP were: To resettle the families residing within the boundaries of the project site and access road; to restore the economic conditions of the affected families, or even improve it; to compensate fairly all damaged properties and resources lost and/or damaged; and finally, to develop a program that is socially and economically acceptable to the affected families, their LGUs, the NPC and the funding agency.

Phase II study will look into more detail to examine whether the experience in the San Roque project could be effectively applied to the Agos River Basin Project.

Tables

Table H4.1 Chronology of Events and Activities for the Laiban Dam (1/2)

Inclusive Dates	Events/Activities	Quantity	Estimated Expenditures (Ph P M)
Aug 30, 1979	23 cms-water rights granted to MWSS by NWRC on Kaliwa River Watershed		
Dec 1979	Feasibility study for the Manila Water Supply Project III (Laiban Dam Project) was completed with the proposed dam located at Kaliwa River		
Jan 1980 to Dec 1989	Implementation of the Manila Water Supply Project (Laiban Dam Project) with the following activities:		
	a) Pre-Construction Activities	L.S.	28.08
	b) Detailed Engineering		
	▪ Headworks (dam, etc.)	L.S.	114.41
	▪ Relocation Site (partial)	L.S.	1.47
	Sub-total		115.88
	c) Initial construction works		
	▪ Construction of access road to proposed Laiban Dam-site plus a housing compound for MWSS Project Personnel;	L.S.	29.22
	▪ Construction of twin 9 m. diameter diversion tunnels	L.S.	170.43
	Sub-total		199.65
	d) Partial payment (40%) of affected land improvements	415 PAF (627 claims)	10.42
	e) Acquisition of lands to be affected by the Project:		
	▪ @ Kaliwa Watershed	51.15 has.	0.43
	▪ @ Pantay Treatment Plant	17.75 has.	0.93
	▪ Capitol Reservoir	2.42 has.	3.85
	Sub-total	71.32 has.	5.21
	f) Other activities:		
	▪ Creation of Inter-Agency Committee pursuant to Presidential Memo Order No. 725 for the smooth, orderly and peaceful relocation of affected families (May 19, 1981)		
	▪ Creation of MWSS Valuation Committee for the valuation of compensable properties (Feb.03, 1983)		
	▪ Engaged the services of Economic Development Foundation (EDF) for the site selection and physical development of the relocation site, community organization, surveys, formulation of socio-economic plans (1982–84)		
	▪ Asset Inventory Survey of the families' land occupancy and above-ground improvements (1982 – 1985)		
	▪ Issuance of Pres. Proc. No. 2480 reserving 4,424 has. of Marikina Watershed Reservation in San Ysiro Valley for resettlement purposes under the administration of MWSS (Jan. 29, 1986)		
	▪ MWSS Board of Trustees under Resolution No. 33-89 approved Guidelines for the appraisal of private lands affected by Project (Feb. 22, 1989)		

Table H4.1 Chronology of Events and Activities for the Laiban Dam (2/2)

Dec 1989	Deferment of Laiban Dam Project in lieu of other equally important water supply projects, as approved by the MWSS Board of Trustees under Resolution No. 195-89		
May 1996 to Feb 1997	Review study of Engineering and Design including Tender Documents for the Manila Water Supply Project III (Laiban Dam Project)		12.00
Jan 1980 to Feb 1997	Other Services Including Eng'g. & Admin. Interest During Construction		122.15 73.40
	TOTAL (as of June 1997)		689.46
Sept 1996 to July 1997	Transition period for MWSS privatization resulting to deferment of activities and the retirement of all the staff assigned to the Project.		
Mar 1997 to July 1998	Transfer of project responsibilities to the Office of the President (MARILAQUE) in view of MWSS privatization		
Aug 5, 1998	Issuance of Memorandum Order No. 10 by President Joseph Estrada mandating MWSS to immediately resume the implementation of Laiban Dam Project		
Sept 1998 to Sept 1999	Return of project responsibilities to MWSS from the Office of the President (MARILAQUE); Resumption of pre-construction activities as follows: a) Conducted inventories of all documents; b) Conducted consultation meetings with the Tanay and the seven affected barangays; c) Processing of the U.S. 1.0 Million Short-Term loan with PNB; d) Prequalification works for the hiring of consultancy services for the: ▪ Review/Update of financial, legal, institutional aspects of Laiban Dam Project; ▪ Study/survey of affected families by the Laiban Dam Project.		
Oct 6, 1999	Approval of the U.S. 1.0 Million Foreign Currency Denominated Unit (FCDU) Short Term Loan with the PNB to cover the immediate implementation of Laiban Dam Project		
Nov 1999 to March 2000	Pre-award and evaluation works for the hiring of consultancy services for Item d above.		
April 2000 to Sept 2000	Consultancy services work GHD and Partners for the review and update of financial, legal/institutional of Laiban Dam Project. Final Report recommended a Joint Venture scheme of implementation.		27.23
May 2000 to Oct 2000	Consultancy services work by UPSARDFI for the study/survey of affected families by the Laiban Dam Project. The consultant submitted its Final Report recommending that new compensation matrix, new resettlement plan be prepared.		3.64
Aug 15, 2000	Re-convening of the Inter-Agency Committee created under Presidential Memorandum Order No. 725 wherein the Committee agreed to amend M.O. # 725. The proposed amendment was submitted for approval by then President Estrada after being reviewed by the Office of the Government Corporate Counsel (OGCC), Contract Review No. 331.		
Oct 1999 to Dec 2000	Total Estimated Expenditures		30.87
	TOTAL EXPENDITURES (As of Dec.2000)		720.33

Table H5.1 Preliminary Estimate of Resettlement and Compensation Cost (1/3)

1. Laiban Dam

Cost of Resettlement and Compensation for Laiban Dam

Description	Unit	Site 1	Site 2	Total
Number of Families to be Relocated	PAF	1,640 ^A	1,438	3,078 ^F
Required Area of Relocation Site @ 2 hectare per PAF	hectares	4,424 ^B	2,876	7,300
Cost of Site Development @ 0.28 PhP M per ha.	PhP M	980 ^C	805.3	1,785.3
Cost of Compensation (land/improvements) @ 0.50 PhP M per PAF for Sites 1 and 2	PhP M	814.20 ^D	629.0 ^E	1,443.2

A/ Available home lots as per subdivision plan at San Ysiro.

B/ Area reserved under Proclamation No. 2480 (including Forest Reserve Area of 872 hectares).

C/ Original cost of P710 M (1996 cost) updated for CY 2001.

D/ Cost of remaining lands to be acquired (P803 M) plus cost of remaining unpaid settlers (P11.20M).

E/ Cost of compensation for the additional PAFs to be relocated is about 1,258.

F/ Number of PAFs as per latest inventory by UPSARDFI conducted from May-July 2000 is as follows: 2,577 in the seven directly affected Barangays, and 501 in San Ysiro.

2. Agos Dam

Resettlement and Compensation Cost for Agos Dam (FSL 159 m)^{A/}

	Unit	Site 1 ^B	Site 1 ^C	Total ^{D/}
Number of Families to be Relocated	PAF	81	93	174
Required Area of Relocation Site @ 0.37 hectare per PAF in Site 1 and 0.43 ha per PAF in Site 2	hectares	29.88	40.39	70.27
Cost of Site Development @ 8.70 PhP M per ha. in Site 1 and 7.44 PhP M per ha. in Site 2	PhP M	260.00	301.00	561.00
Cost of Compensation (land/improvements) @ 0.045 PhP M per PAF	PhP M	3.64	4.18	7.82

A/ Modified to reflect the result of the EIA Study carried out in the F/S stage.

B/ Relocation Site at Brgy. Magsaysay

C/ Relocation Site at Brgy. Mahabang Lalim

D/Excludes replacement cost for public/communal structures @ 1.60 PhP M and cost of Strategic Communication Plan @ 6.90 PhP M.

Resettlement and Compensation for Agos Dam (FSL 195 m)

Description	Unit	Site 1 ^A	Site 2 ^B	Site 3 ^C	Total
Number of Families to be Relocated	PAF	617	66	85	768
Required Area of Relocation Site @ 2 hectares per PAF	hectares	1,234	132	170	1,536
Cost of Site Development @ 0.28 PhP M per hectare	PhP M	340.46	36.42	46.90	423.78
Cost of Compensation (land and improvements) @ 0.85 PhP M per PAF for Site 1; and 0.50 PhP M per PAF for Sites 2 and 3.	PhP M	524.45	33.00	42.50	599.95

A/ Relocation Site 1 will be within Tanay.

B/ Relocation Site 2 will be within Brgy Magsaysay, Infanta, Quezon.

C/ Relocation Site 3 will be within Brgy Pagsangahan, General Nakar, Quezon.

Table H5.1 Preliminary Estimate of Resettlement and Compensation Cost (2/3)

3. Kanan B1 and Kanan No.1/No.2 Dams

Resettlement and Compensation Cost for Kanan B1 and Kanan No.1/No.2 Dams

Description	Unit	Kanan B1	Kanan No.1/No.2
Number of Families to be Relocated	PAF	25	100
Required Area of Relocation Site @ 2 hectare per PAF	hectares	50	200
Cost of Site Development @ 0.28 PhP M per ha.	PhP M	14.0	56.0
Cost of Compensation (land/improvements) @ 0.50 PhP M per PAF	PhP M	12.5	50.0

Note: Relocation site will be the vicinity of affected village

4. Low Dam Schemes (Kaliwa, Kanan and Laiban Low Dams)

Resettlement and Compensation Cost for Kaliwa, Kanan and Laiban Low Dams

Description	Unit	Kaliwa Low Dam	Kanan Low Dam	Laiban Low Dam
Number of Families to be Relocated	PAF	None	None	200
Required Area of Relocation Site @ 2 hectare per PAF	hectares	-	-	400
Cost of Site Development @ 0.28 PhP M per ha.	PhP M	-	-	112.0
Cost of Compensation (land/improvements) @ 0.50 PhP M per PAF	PhP M	-	-	100.0

Note: No relocation of households foreseen for Kaliwa and Kanan Low Dams

Relocation site for Laiban Low Dam will be the vicinity of affected village

5. Conveyance Waterways

Resettlement and Compensation Cost for Conveyance Waterways ^{A/}

Description	Unit	Waterway - 1	Waterway - 2	Waterway - 3
Number of Housings to be Relocated:				
- Residential/Commercial Housings	PAF	330	50	70
- Factories/Warehouses	No.	20	10	50
For Residential/Commercial Housings:				
Required Area of Relocation Site @ 2 hectare per PAF	hectares	660	100	140
Cost of Site Development @ 0.50 PhP M per ha.	PhP M	330.0	50.0	70.0
Cost of Compensation (land/improvements) @ 1.50 PhP M per PAF	PhP M	495.0	75.0	105.0
For Factories/Warehouses:				
Cost of Compensation @ 5.00 PhP M per No.	PhP M	100.0	50.0	250.0

Note: Waterway-1: Laiban-Pantay-Taytay Waterway

Waterway-2: Kaliwa-Abyodo-Angono Waterway

Waterway-3: Laiban-Tanay-Angono Waterway

Relocation Site will be the vicinity of affected village

A/ Costing for the Kaliwa-Taytay Waterway is presented in the Feasibility Study Report.

Table H5.1 Preliminary Estimate of Resettlement and Compensation Cost (3/3)

6. Transbasin Tunnels

Resettlement and Compensation Cost for Transbasin Tunnels

Description	Unit	Transbasin Tunnel-1	Transbasin Tunnel-2
Number of Families to be Relocated	PAF	20	10
Required Area of Relocation Site @ 2 hectare per PAF	hectares	40	20
Cost of Site Development @ 0.28 PhP M per ha.	PhP M	11.2	5.6
Cost of Compensation (land/improvements) @ 0.50 PhP M per PAF	PhP M	10.0	5.0

*Note: Transbasin Tunnel-1: Kanan-Laiban Transbasin Tunnel
Transbasin Tunnel-2: Kanan-Kaliwa Transbasin Tunnel
Relocation Site will be the vicinity of affected village*

Part-I

Organizational and Institutional Aspects

Part-I: ORGANIZATIONAL AND INSTITUTIONAL ASPECTS

Table of Contents

	<u>Page</u>
I1 Introduction	I-1

List of Figures

	<u>Page</u>
Figure I1.1 National Water Resources Board (NWRB) – Organization Chart	IF-1
Figure I1.2 Metropolitan Waterworks and Sewerage Systems (MWSS)– Organization Chart.....	IF-2

List of Appendices

	<u>Page</u>
Appendix I-1 Position of NWRB in Water Code of the Philippines	IA-1
Appendix I-2 Laguna Lake Development Authority (LLDA).....	IA-2
Appendix I-3 Agno River Basin Development Commission (ARBDC)	IA-3

Part I: ORGANIZATIONAL AND INSTITUTIONAL ASPECTS

I1 Introduction

This Part I contains figures and appendices related to organizational and institutional study other than those that are included in Chapter 10 of the main report of Master Plan (Volume II). All of these figures are referred to in the said chapter of Volume II.

Figures

Chairman: Secretary of Environment and Natural Resources
 Vice Chair: Secretary of Socio-Economic Planning
 Members: Secretary of Justice
 Secretary of Finance
 Secretary of Health
 Director, Natural Hydraulic Research Center (NHRC)
 University of the Philippines
 Executive Director, NWRB Secretariat

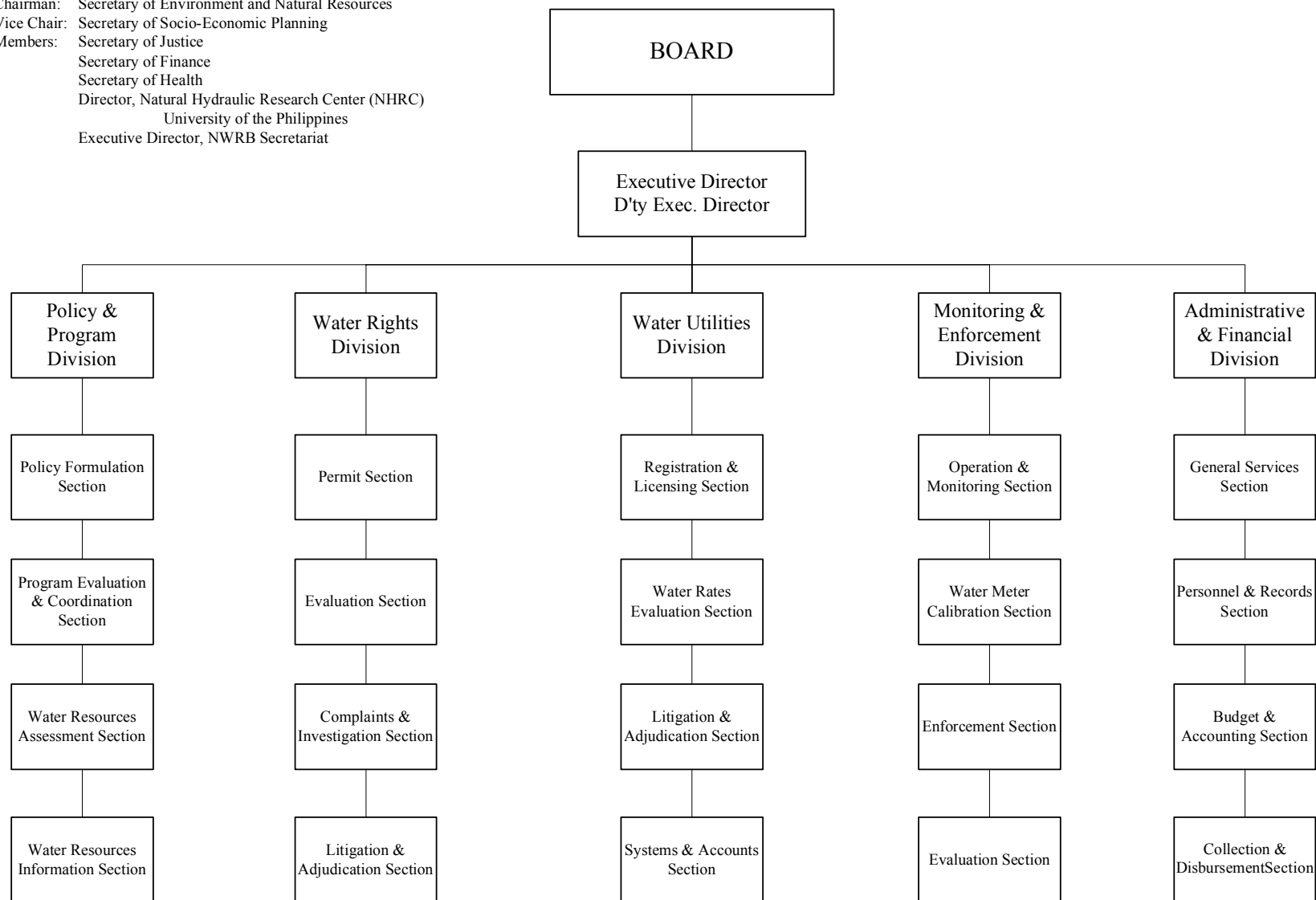
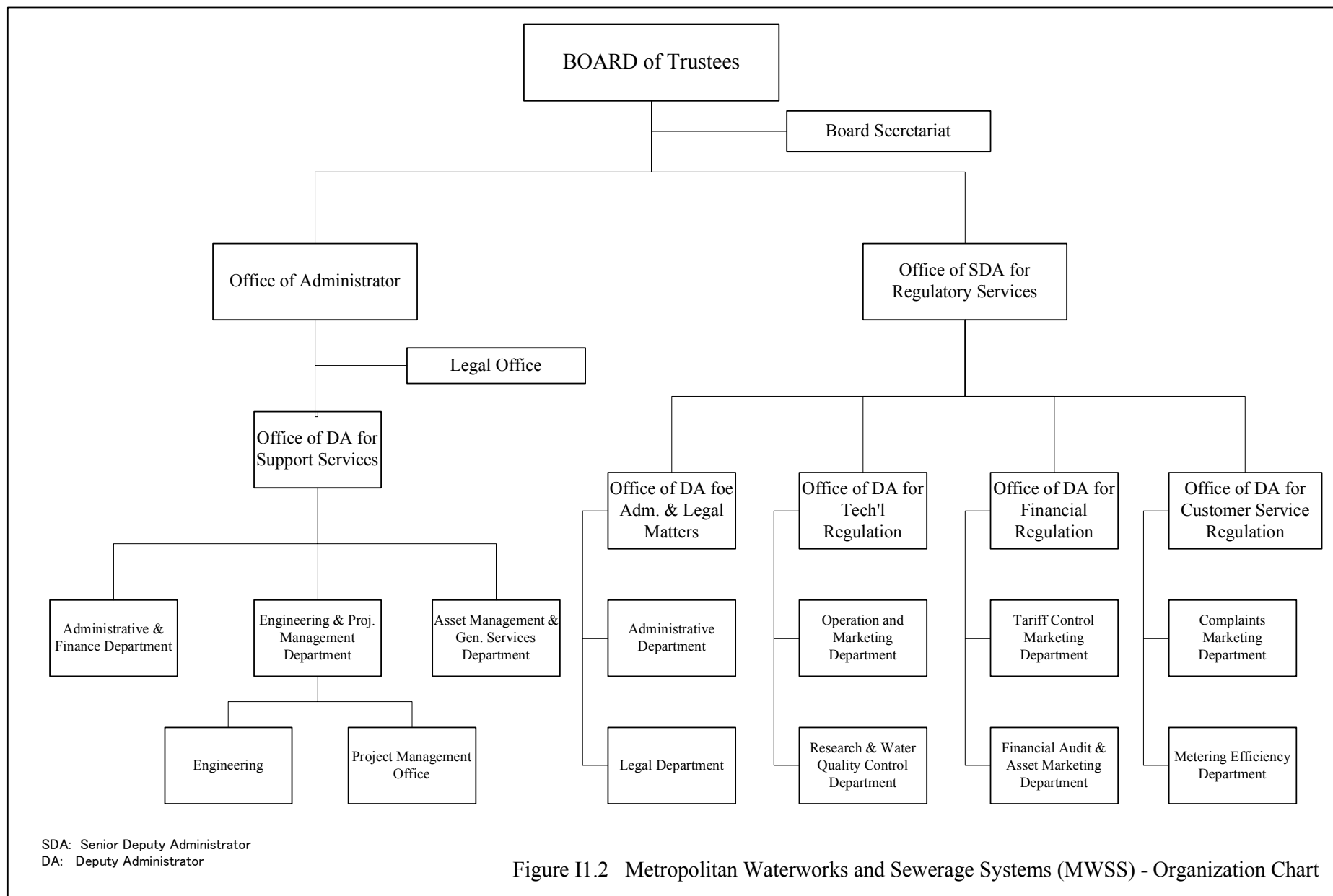


Figure II.1 National Water Resources Board (NWRB) - Organization Chart



Appendices

Position of NWRB in the Water Code of the Philippines

The Water Code of the Philippines is the basic water law of the Philippines. It is based on the principle that all waters belong to the State. The State may allow the use or development of water by administrative concession, but the utilization, development, conservation and protection of water resources shall remain within the control of and regulation of government. (National Water Resources Council in this Code was renamed later to National Water Resources Board.)

The objectives of the Water Code are:

- 1) To establish the basic principles and structural framework relating to the appropriation, control, conservation and protection of water resources to achieve their optimum development and efficient use to meet present and future needs;
- 2) To define the scope of the rights and obligations of water users and provide for the protection and regulation of such rights;
- 3) To institute a basic law to govern the ownership, appropriation, utilization, exploitation, development, conservation and protection of water resources and rights to land related thereto; and
- 4) To identify the administrative agencies that will enforce the Code.
(NWRB is placed on its superstructure)

The underlying principles of this Code are stipulated in Art. 3 of the Code as follows:

- 1) All waters belong to the State.
- 2) All waters that belong to the State can not be the subject of acquisitive prescription.
- 3) The State may allow the use or development of waters by administrative concession.
- 4) The utilization, exploitation, development, conservation and protection of water resources shall be subject to the control and regulation of the government through the National Water Resources Council (now NWRB).
- 5) Preference in the use and development of waters shall consider current usage and be responsive to the changing needs of the country.

In addition, mandate and power of NWRB is clearly mentioned in Art. 79 as follows:

Art.79 The administration and enforcement of the provisions of this Code, including the granting of permits and the imposition of penalties for administrative violations hereof are hereby vested in the Council, andthe Council is hereby empowered to make all decisions and determinations provided in this Code.

Laguna Lake Development Authority (LLDA)

(1) History

The Laguna Lake Development Authority (LLDA) was organized in 1966 by virtue of RA 4850 as a quasi-government with regulatory and proprietary functions. By virtue of PD 813 in 1975, and EO 927 in 1983, its powers and functions were further strengthened to include environmental protection and jurisdiction over surface waters of the lake basin. In 1993, the administrative supervision over LLDA was transferred to DENR through EO 149.

(2) LLDA's mandate

- i) To lead, promote and accelerate the development and balanced growth of the Laguna de Bay within the context of national and regional plans and policies for social and economic development;
- ii) To carry out the development of the basin with due regard and adequate provision for environmental management and control, preservation of the quality of human life and ecological systems; and
- iii) To prevent undue ecological disturbances, deterioration and pollution.

(3) Management and Operation

A Board of Directors, composed of ten members representing the central and local government units and private sector, serves as the highest policy making body of LLDA. It is specifically tasked to formulate, prescribe, amend and repeal policies, rules and regulations to direct the corporate affairs and conduct of business of the Authority.

LLDA Board of Directors:

Chairman:	Governor of Laguna Province
Vice Chairman:	DENR
Member:	Office of the President
	NEDA
	Province of Rizal
	Private Investors Group
	Mayors' League of Laguna (2 persons)
	General Manager of LLDA

LLDA management and operation are carried out through its Technical, Administrative and Corporate Management Divisions under the direct supervision of the General Manager. LLDA's staff component includes group of professionals in such field as limnology and environmental management, especially water quality, monitoring, pollution control, hydrology, water/waste water analysis, regional development planning, resource economics, community development, public information and forestry among others.

Agno River Basin Development Commission (ARBDC)

(1) History

The Agno River Basin Development Commission was established in 1977 by virtue of EO 442. The Agno River is the 5th largest river in the country. After the Luzon earthquake of 1990, the basin faced imminent threat of destruction caused by soil-erosion, river siltation and sedimentation. And the need to create a body that will coordinate all phases of planning, design, construction and implementation of various siltation mitigation projects was identified. It was concluded that the most appropriate geographical entity for the holistic approach in water resources planning and management is an inter-agency Commission for the development of the Agno River Basin. It was created under the Office of the President as an inter-agency Commission.

(2) Mandate of the Commission

- i) To develop a comprehensive master plan for the integrated economic, social and physical development of the Basin;
- ii) To implement development projects in coordination with existing line agencies;
- iii) To coordinate and monitor all planning, studies, design and implementation of various programs and projects for the development of the Agno River Basin;
- iv) To initiate, receive and recommend project proposals for the development, preservation and management of the basin's natural resources;
- v) To coordinate soil erosion control, river siltation mitigation, flood control, both structural and non-structural measures, as well as other aspects of infrastructure and land development projects among concerned government agencies;
- vi) To establish a functional basin information and database system;
- vii) To receive grants, technical assistance and other forms of development support from foreign and local donor agencies; and
- viii) To call upon any government agency, office, or bureau for assistance in the discharge of its functions and responsibilities

(3) Management and Operation

A Board of Directors, composed of 19 members representing the central and local government units and private sector, serves as the highest policy making body of the Agno River Basin Development Commission. The Commission has an Executive Director with the rank of Undersecretary who manages its day-to-day operations.

Board of Directors of the Commission:

Chairman: Secretary of DENR
Co-Chairman: Secretary of DOE
Vice-Chairman: Governor of Provinces of Pangasinan and Benguet

Members:

- Secretary of DPWH
- Secretary of DTI
- Secretary of Tourism
- Secretary of DILG
- Secretary of DA
- Secretary of DAR
- Director General of NEDA
- Presidential Assistant of Office of the President
- President of NPC
- Administrator of NIA
- Director of PAGASA
- Executive Director of Office of Northern Cultural Communities
- Executive Director of NWRB
- Administrator of Office of Civil Defense
- Regional Directors of Philippine National Police, Region I and CAR
- Two representatives each from the provinces of Pangasinan and Benguet, from the non-government/people's organizations