

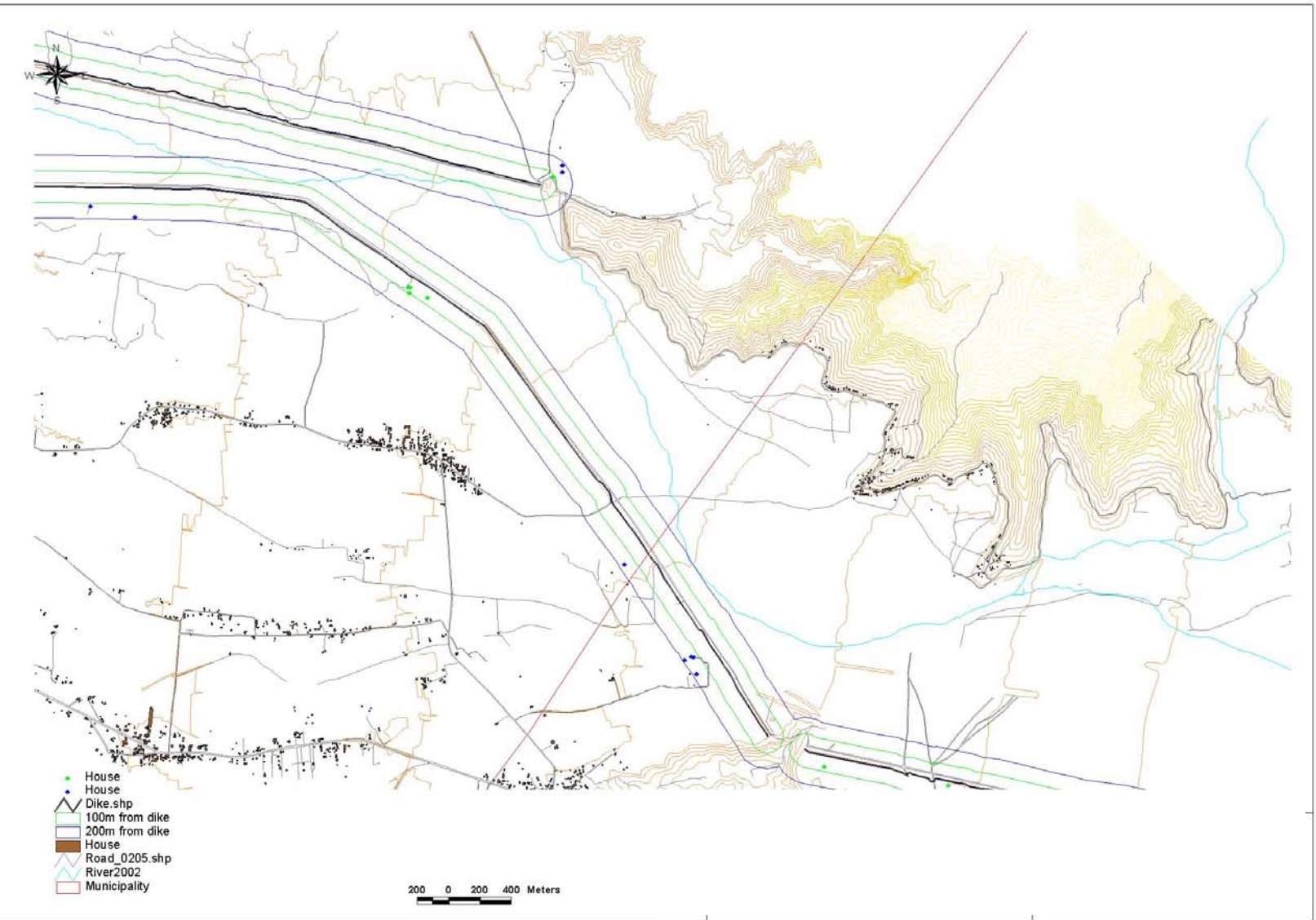
THE GOVERNMENT OF THE PHILIPPINES  
 THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

**The Study on Sabo and Flood Control for  
 Western River Basins of Mount Pinatubo  
 in the Republic of the Philippines**

JAPAN INTERNATIONAL COOPERATION AGENCY

**Figure 3.3.2 (1/3)**

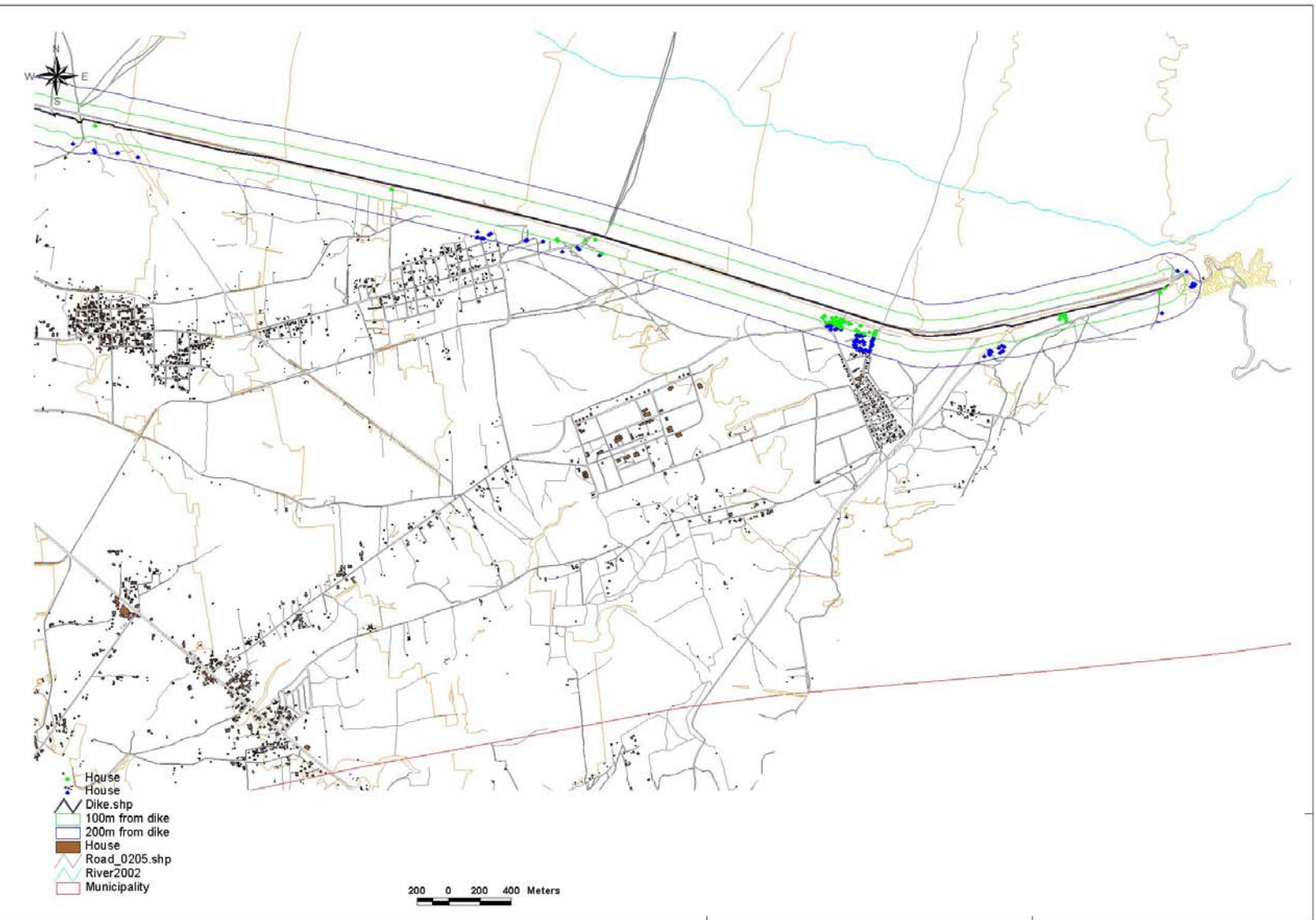
**Location Map of Directly Affected Households  
 along the Sto. Tomas River**



**Figure 3.3.2 (2/3)**

**Location Map of Directly Affected Households  
along the Sto. Tomas River**





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**Figure 3.3.2 (3/3)**

**Location Map of Directly Affected Households  
along the Sto. Tomas River**

*The Study on Sabo and Flood Control for Western River Basins of Mount Pinatubo  
in the Republic of the Philippines  
Final Report  
Supporting Report*

# **ATTACHMENTS**

## **Resettlement Plan**

**THE STUDY ON SABO AND FLOOD CONTROL  
FOR WESTERN RIVER BASINS OF MOUNT PINATUBO  
IN THE REPUBLIC OF THE PHILIPPINES**

**FINAL REPORT**

**SUPPORTING REPORT**

**ATTACHMENTS      RESETTLEMENT PLAN**

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## CHAPTER 1 SCALE OF IMPACT OF LAND ACQUISITION AND RESETTLEMENT

The study team has identified 89 potential PAPs (number of households) at the end of January 2003, and 106 potential PAPs at the end of May 2003. These PAPs will be losing land, structures and other assets and income. In Table 1.1.1 below presents the number of potential PAPs at the end of January 2003.

Figure 1.1.1 to Figure 1.1.5 shows the locations maps of project affected households to be caused by the priority structure measures (as of the end of January 2003).

### 1.1 Socio-Economic Situation of PAPs

#### 1.1.1 Municipality of San Marcelino

The total population of the potential PAPs is at 155 at the end of January 2003. There is a slight variation between the male and female population at 53% and 48% respectively. The population is quite young since more than a third (36%) belongs to ages 12 and below followed by those who are between 13-30 at 32%. Under a quarter are household members between 31-40 years of age. Only a small percentage (12%) falls under the age bracket of 51 years old and above.

There is a very slight variation between graduates and undergraduates for each level. For elementary levels, undergraduates and graduates are both at 19% while high school graduate are a bit higher (16%) than those who stated that they did not graduate from high school at 13%. At the college level, undergraduate and graduate members are both at 4%. The remaining household members are either at pre-education age (below 6) at 22% and those that did not provide any information (4%).

In terms of household size, 56% have members between 4 and 6 members while more than a third (36%) has household members with less than 3 members in the family. Eight percent belong to households who have more than 7 family members.

Only 22% of the household members have sources of income/occupation. Ten percent of the population belongs to the non-formal sector<sup>1</sup> while the remaining households derive their income from agriculture, small business and construction/industry. The majority of the population, 43%, are students and dependents. More than a third (35%) did not provide information.

The income of these PAPs are very low. Almost two-thirds (60%) earn less than PhP 3,000 per month. Majority (95%) of the potential PAPs stated that their present source of income is not enough to support their family. Of the 95%, 72% stated that they have family debts.

The potential affected lands in San Marcelino are used mostly for residential purposes (95%). However, potential PAPs stated that the lands are mostly government-owned (95%). Only 13% of potential claimed that they have other land while 67% stated that they do not own any other land. Those who did not state any land ownership is at 20%.

Unemployment, lack or no of source livelihood, lack of potable water and food shortage are the problems presently encountered by these PAPs. Common illnesses encountered in the area are malaria, diarrhea, cold and fever.

Houses are all one-storey and one-room structures. Only a third of the total PAPs are connected to the local power grid.

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<sup>1</sup> Non-formal sectors are street vendors, shoeshine man, laundry man/woman, etc.



Seventy two percent of the respondents claimed that they are not aware of the study. Majority (78%) stated that it will be difficult for them to find alternative land and rebuild their houses if they will be required to move and/or clear the area. Sixteen percent claimed that they will be separated from their relatives while some 7% expressed that their main source of regular income will be lost.

Almost all (96%) opted for land-for-land arrangements and hoped that the project will build the houses for them.

### **1.1.2 Municipality of San Narciso**

The 21 potential PAPs are composed of 81 household members. More than half (57%) belongs to the male population.

Thirty seven percent of the population has no formal education. Graduates of elementary and high school levels exceed those who are elementary and high school undergraduates. At the college level, the percentage of college graduates and undergraduates are the same. Some 10% did not provide data on their educational attainment.

Fifty percent of these households have household members between 4 and 6 followed by those with less than 3 family members at 45%. The remaining 5% are members who have more than 7 household members.

Sixty four percent have no information on their sources of income. Only 22% of the population is considered economically active. These potential PAPs belong to the agriculture sector (10%), non-formal sector (9%), government (3%) and private sectors (3%).

Due to the low percentage of members with sources of income, the income level is very low. Almost all (90%) have income less than Php3000 per month and these PAPs responded that their present income are not enough to support a family and they even have family debts.

The major land use of the potentially affected land is residential. A quarter of these PAPs claimed that they own the potentially affected land. Almost half (45%) stated that they rent the land. However, the owners of these lands were not provided. Majority of these PAPs claimed that they have no other land while the 3 PAPs (15%) stated that they own land within the municipality.

Most (80%) of the houses were built five years ago or earlier. These houses are 1-storey type of houses. More than two-thirds (69%) use kerosene as their main source of power.

No source of livelihood, unemployment and lack of potable water are the major problems of these PAPs. Cold, fever, diarrhea and malaria are common illnesses in the barangays.

### **1.1.3 Municipality of San Felipe**

One household has been identified as a potentially affected household. The household is composed of a married couple who are both more than 61 years of age. One is a high school graduate while the other member graduated from elementary. They stated that their main source of income is derived from agriculture. They also stated that their main problem is lack of irrigation. They claimed that their income, ranging from P2500-3000 per month, is sufficient to support themselves.

Their house was built five years ago and they stated that they own the land where their house is built. The potential AP claimed that they have other land within the same municipality. The structure is made of Galvanized iron (GI) sheets. The household's main source of fuel for illumination is kerosene.

The household is not aware of any study. They said that if they will be affected, it will be difficult for

them to find alternative land and house and that their source of income will be affected. They prefer that the project will provide them replacement land and that the house will be built for them within the same barangay. They agreed that they will move if they get proper compensation. In terms of project benefits, they stated that they do not find any benefit from the project.

#### **1.1.4 Municipality of Botolan**

The total population of the PAPs is at 141. The female population outnumbers the male population at 60%. The distribution of age groups are closely scattered almost evenly: 28% for those who fall within the 13-30 age bracket followed by those who are within 31-50 at 26%. Twenty five percent are those who are below 12 years of age. The remaining population who are more than 51 years old is at 21%.

Households who have members between four and six are at 50%. Those who are less than three members in the family and families who have more than seven family members are both at 25%.

In terms of age differences between male and female population, there are more males who are between 31-50 years old. In terms of education, almost half of the populations are undergraduates (44%). Of the 63% who provided information on the occupation/source of income, only a small proportion (18%) of these households are considered economically active or who have major sources of income derived from agriculture, small business/trade, non-formal sectors.

For the 29 potential PAPs, 35% earn less than Php3000/month while the remaining 65% stated that they earn more than Php3000/month. About 61% of these households expressed that their income is not sufficient and they have family debts.

The primary problems in their respective barangays, according to these households, are no source of livelihood and unemployment. For health issues, the major illnesses are malaria, fever and flu.

Of the 29 potential PAPs that will be affected by the Project, only three PAPs (11%) stated that they have other land. Twenty nine percent did not provide information.

PAPs who have constructed their houses less than five years ago are at 50%. Thirty two percent stated that their houses were built between 6-12 years ago. Some 12% claimed that they settled in the area between 13-20 years ago. Houses are all 1-storey structures with about 1-2 rooms (65%). About 56% of the households derive their electricity from the local power grid.

The information on the proposed dike construction study is very low. Three quarters of the households stated that they are not aware of the study. Potential problems perceived by these households if the project pushes through are loss of regular income and problem in acquiring alternative land and house. In terms of compensation, they prefer land-for-land arrangements and provision of housing / resettlement (50%) over cash payment (45%). Those who opted for cash compensation will find their own alternative land and housing (67%) while others plan to start their own business (33%). Majority (75%) expressed their agreement to move if compensated properly.

In terms of project benefits, 36% stated that they will not benefit from the project. Thirty three percent claimed that they will be able to find work if the project pushes through.

## **1.2 Loss of Land and Other Assets**

### **1.2.1 Affected Land**

An estimated 19.5 hectares of land will be potentially affected by the dike construction. The areas to be

affected by the proposed project have been measured by the study team using Global Positioning System (GPS) and pacing (100 m from centerline of the existing dike/proposed bridge) without the benefit of the detailed engineering design. For the proposed bridge construction, no PAPs were identified during the survey.

Data on the ownership of land was based only on interviews with potentially affected persons. In Table 1.2.1, 45% stated that the land is owned by the government. Only about 17% declared that they own the land. Land renters are at 27%. However, for rented properties, the owners of the land were not provided by the respondents. A small proportion of respondents (11%) did not provide any data on land ownership.

During detailed design and revision of this RP, the project will ensure that the impacts on the land will be minimized by making available options as possible. The Resettlement Team will carry out extensive investigations to verify the information gathered from this study by meeting with the PAPs and obtain copies of land titles, tax declarations and other relevant documents (purchase agreements, lease agreements). The resettlement team will also meet with the Bureau of Internal Revenue, Municipal / Provincial Offices to check the necessary documents in terms of land ownership. This approach will allow the Project to finalize the list of eligible landowners, compensate the PAPs as per their entitlement matrix and provide necessary assistance to those landless PAPs who will be left with little residual land or losing the entire land because of the project.

### **1.2.2 Affected Houses and Structures**

Seventy-nine houses were identified during the census and inventory of losses. Under half (43%) of the houses were made out of makeshift materials such as cogon, buho and bamboo. Thirty percent are permanent structures (galvanized iron sheets and concrete walls) while more than half or 26% are considered semi-permanent houses due to the use of combined wood and concrete for walls and GI sheets/cogon for roofing materials. Table 1.2.2 shows the details of the potentially affected houses.

For structures, 3 business establishments, 9 rest houses, 3 kitchens, 6 toilets, one storage room, 6 pigpens and 4 deep wells were also identified and will be potentially affected.

### **1.2.3 Affected Trees**

Based on initial estimates, about 2,596 various types of trees will be affected by the proposed project. Table 1.2.3 shows types and numbers of the affected trees.

### **1.2.4 Loss of Business Establishments**

In Barangay Porac, Botolan, one restaurant and one small store will be required to relocate. In Barangay Crael, one videoke bar has been identified that will also be potentially affected.

## CHAPTER 2 PROJECT POLICIES AND ENTITLEMENTS

The principles and policies set out in this RP will guide the project in the RP implementation. Apart from minimizing land acquisition and resettlement, the principles and objectives of the Project are to ensure that all PAPs and host communities will be consulted during the RP design and implementation, compensated for all losses at replacement cost/current market value and provided with rehabilitation measures in order to assist PAPs to improve, or at least maintain, their pre-project standard of living and income earning capacity.

The principles and objectives of this RP have been built upon the existing laws and legislations of the Government of the Philippines (GOP) ADB's Policy on Involuntary Resettlement (1995); and World Bank's Operational Policy and Bank Policy (OP and BP) 4.12 (December 2001) on Involuntary Resettlement, Indigenous Peoples Operational Directives 4.10 (Draft-June 1999), and Cultural Property Operational Policies 4.11.

If there are any gaps between the Funding Agency and the Government policy on land acquisition and resettlement, the policy of the Funding Agency supersedes.

### 2.1 Legal Framework

#### 2.1.1 Bill of Rights of the Constitution of the Republic of the Philippines

*Article III, Section 1:* 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.

*Article III, Section 9:* Private property shall not be taken for public use without just compensation.

#### 2.1.2 Executive Order 1035 (Series of 1985)

The Procedures and Guidelines for the Expeditious Acquisition by the Government of Private Real Properties or Rights Thereon for Infrastructure and Other Government Development Project, otherwise known as EO 1035 series of 1985 defines just compensation as acquiring the property and its improvements through negotiated sale at the current and fair market price as declared by the owner or administrator of the land, or such current and fair market value as determined by the assessor, whichever is lower prior to the negotiation.

EO 1035 further provides for the “financial assistance to displaced tenants/occupants which is equivalent to the value of the gross harvest for one year on the principal and secondary crops of the area acquired, based on the average annual gross harvest for the last three (3) preceding crop years but not less than ₱15,000 per hectare”.

#### 2.1.3 Executive Order 228 (July 1997)

EO 228 states that when the government acquires agricultural land, the landowner is exempt from the capital gains tax on the compensation paid. In addition, other expenses and fees accrued in property transfer will be paid by the acquiring government.

#### **2.1.4 Republic Act 7160**

R.A. 7160 also known as the Local Government Code of 1991 provides for the right of the LGU to exercise the power of eminent domain in obtaining privately owned property for public purposes.

#### **2.1.5 Republic Act No. 8371**

R.A. 8371 also known as Indigenous Peoples Rights Act of 1997 recognizes, protects and promotes the rights of indigenous cultural communities/indigenous people, creating a national commission of indigenous people, establishing implementing mechanisms, appropriating funds thereof, and for other purposes.

#### **2.1.6 Republic Act 8974**

R.A. No. 8974 facilitates the acquisition of right-of-way, site or location for National Government Infrastructure Projects and for other purposes.

#### **2.1.7 Urban Development and Housing Act of 1992 (RA 7279 or UDHA)**

The Urban Development and Housing Act of 1992 (UDHA) provides the legal framework in relation to resettlement of underprivileged and homeless citizens. This law outlines the mechanisms, procedures for community participation, entitlement to socialized housing, penalties for violation, organizational set-up and accountability based on the following declared policies and objectives:

- Upliftment of the conditions of the underprivileged and homeless citizens in urban areas and resettlement areas by making available to them decent housing at affordable cost, basic services, and employment opportunities;
- Provision for the rational use and development of urban land;
- Adoption of workable policies to regulate and direct urban growth and expansion;
- Provision for an equitable tenure system that shall guarantee security of tenure to program beneficiaries but shall respect the rights of small property owners and ensure the payment of just compensation;
- Encouragement of more effective people's participation in the urban development process; and
- Improvement of the capability of local government units in understanding urban development and housing program and projects.

#### **2.1.8 Draft National Resettlement Policy**

This draft policy would address the inadequacy of existing legal provisions in other GOP laws. If approved, it would provide a full compensation and rehabilitation at essentially the same level required under the ADB and World Bank's Policy on Involuntary Resettlement.

### **2.2 Project Principles and Objectives**

To address the land acquisition and resettlement issues for this Project, the basic principles and objectives are:

- Acquisition of land and other assets, and resettlement of people will be minimized as much as possible.
- Lack of formal legal rights to the assets lost will not prevent PAPs from compensation and rehabilitation measures.
- The census or inventory of losses to be carried out will represent the cut-off date for eligibility.
- The loss of land and other assets will be compensated at replacement cost or current market value at the time of compensation.
- PAPs, host population and various stakeholders (such as LGUs, government agencies, NGOs, POs) will be regularly consulted as early as project planning and throughout the duration of the Project. The project policy and entitlements will be made available to PAPs to maintain transparency and avoid confusion and apprehension. Stakeholder participation will be encouraged.
- PAPs that fall under the vulnerable groups will be provided with special assistance to minimize resettlement effects.
- PAPs will not be left with residual land that is inadequate to rebuild their houses or sustain their current standard of living.
- Existing cultural and religious practices will be respected and, to maximum extent practical, preserved.
- The previous level of community services and resources will be improved after resettlement.
- There will be effective mechanisms for hearing and resolving grievances during the implementation of the Resettlement Plan.
- The compensation, resettlement and rehabilitation activities will be satisfactorily completed before a No-Objection from the funding agency will be provided for award of contract of civil-works.
- The Executing Agency (EA) will see that institutional arrangements are in place to ensure effective and timely design, planning, consultation and implementation of the land acquisition, compensation, resettlement, and rehabilitation program.
- Where a host community is affected by the resettlement of others into that community, the host community will be involved in any resettlement planning and decision-making. All attempts will be made to minimize the adverse impacts of resettlement upon host communities.
- Adequate budgetary support will be fully committed and made available to cover the costs of land acquisition and resettlement within the agreed implementation period. Clear budget commitments are required for critical activities such as formal detailed physical surveys and administrative functions associated with compensation and resettlement.
- Appropriate reporting, monitoring and evaluation mechanisms, will be identified and set in place as part of the resettlement management system.
- Construction activities will not commence until the required lands have been fully acquired and affected population appropriately compensated and relocated in accordance with the principles set out above.

### **2.3 Eligibility and Entitlement**

All PAPs who are identified during the official census, Inventory of Losses (IOL), and Detailed Measurement Surveys (DMS) are eligible for compensation under this RP. The Implementing Agency



(IA), together with the LGUs, PAPs and concerned groups will agree on the cut-off-date of eligibility. Local communities will be informed prior to the start of the said activities.

Persons who encroach the area after the above cut-off date will not be entitled to compensation or any other form of resettlement assistance.

## **2.4 Project Affected People (PAP)**

The project affected people (PAPs) include the following persons to be identified during census where there is land, property, asset acquisition or resettlement involved:

- a. Persons whose **agricultural, residential, or commercial land** is in part or in total affected (temporarily or permanently) by the Project;
- b. Persons whose **houses and other structures** are part or in total affected (temporarily or permanently) by the Project;
- c. Persons whose **businesses or source of income** are part or in total affected (temporarily or permanently) by the Project;
- d. Persons whose **crops (annual and perennial) and trees** are affected by the Project; and
- e. Persons whose **other assets** are part or in total affected (temporarily or permanently) by the Project.

## **2.5 Projects Impacts and Entitlements**

The Project will acknowledge the need for minimum land acquisition and displacement. As per the project policies and objective set out above, entitlements for each type of PAPs will depend on the nature and levels of impacts or losses that cannot be avoided by the project.

### **2.5.1 Temporary Loss of Agricultural, Residential or Commercial Land**

(I.e. loss of use of land for a period of less than one year e.g. during construction)

- a. No compensation for land if returned to original user. However, the Project will pay rent to PAPs during the temporary use of PAPs' land;
- b. Restoration of land to its previous or better quality by providing measures to improve land quality in cases of land being adversely affected;
- c. Cash compensation for loss of crops and trees at market prices and compensation for loss of net income from subsequent crops that cannot be planted for the duration of the lease; and
- d. If the disruption is more than one (1) year, PAPs have an option to (a) continue the temporary use arrangements or (b) sell affected land to the Project at full replacement cost.

### **2.5.2 Permanent Loss of Agricultural, Residential and Commercial Land**

#### Agricultural land

- a. Compensation will be through the provision of "land-for-land" arrangements of equal productive capacity of the lost land satisfactory to PAPs.
- b. If the impact on the land is more than 10 % of the total landholdings of PAPs, the PAPs may sell the land and opt for compensation in cash or kind (land-for-land) equivalent to the replacement cost at

current market value.

- c. Cash compensation for loss of crops and trees at market prices

#### Residential Land

- a. Compensation will be through the provision of "land-for-land" arrangements of equivalent size satisfactory to PAPs. The PAPs may opt to self-relocate or relocate at a resettlement site developed by the Project. Resettlement site development will be in consultation with PAPs. Basic facilities such as water supply, electricity and access roads will be developed by the project.
- b. Cash compensation for affected structures at full replacement cost without deduction for depreciation or salvageable materials. All PAPs are allowed to take with them the any salvageable materials after their respective properties have been acquired by the project.
- c. If the residential land and/or structure is partially affected by the Project and the remaining residential land is not sufficient to rebuild the residential structure lost, then at the request of the PAPs, the entire residential land and structure will be acquired at replacement cost without depreciation. The threshold of insufficient remaining residential land is to be determined based on the consultation with PAPs.
- d. Informal settlers occupying government / public land who have no other land will not be compensated for land but will be provided with financial assistance to buy replacement land.

#### Commercial Land

- a. Compensation will be through the provision of alternative business or commercial site of equal size and accessibility to customers satisfactory to PAPs.
- b. If the commercial land and/or structure is partially affected by the Project and the remaining commercial land is not sufficient to rebuild the commercial structure lost, then at the request of the PAPs, the entire commercial land and structure will be acquired at replacement cost without depreciation. The threshold of insufficient remaining commercial land is to be determined based on the consultation with PAPs.
- c. Cash compensation for the affected business structures at full replacement cost without deduction for depreciation or salvageable materials. All PAPs are allowed to take with them the any salvageable materials after their respective properties have been acquired by the project.
- d. Cash compensation for the loss of income during the transition period. The project will give sufficient time for PAPs to re-establish their businesses at the new sites before they are required to relocate. This will avoid any disturbance of business operations.

### **2.5.3 Houses and Structures**

- a. Cash compensation equivalent to replacement cost for materials and labor without deduction for depreciation and/or salvageable materials. All PAPs are allowed to take with them the any salvageable materials after their respective properties have been acquired by the project.
- b. Tenants renting houses/structures are entitled to three months' rent at prevailing market rate in the area. Tenants will also be assisted to identify alternative accommodation and transport allowance and transition allowance.

#### 2.5.4 Crops and Trees

- a. For annual crops, PAPs will be given two (2) months notice that the land on which their crops are planted will be used by the Project and that they must harvest their crops in time. If standing crops are ripening and cannot be harvested, PAPs will be compensated for the loss of the unharvested crops at current market value.

Compensation for affected crops and trees will be based on the current market values of the province or city where the affected land is located.

#### 2.5.5 Loss of Common Property Resources

- a. Affected land will be replaced in areas identified in consultation with affected communities and relevant organizations.
- b. Restoration of affected community/sacred buildings and structures to original or better condition. Relocation of community property resources will only take place after the project has fully acquired the affected properties and that replacement land has been identified.
- c. If income loss is expected (e.g. irrigation, community forest, income from fishpond), the affected communities will be entitled to compensation for the total production loss (over 3 years). This compensation should be used collectively for income restoration measures and/or new infrastructure.

#### 2.5.6 Compensation Package

This section presents the relocation options and compensation package for PAPs that will be directly affected by the Project and will be required to relocate on their own or to a project developed resettlement site. This package has been adopted from the resettlement policies and programs of the National Power Corporation.

- a. **IA-developed resettlement site.** The Project may develop a resettlement site for PAP. The PAP will be entitled to the following:
  - Residential lot
  - House
  - House differential (cost of affected house minus cost of IA house)
  - Disturbance compensation
  - Privilege to utilize resettlement facilities
  - Payment of affected agricultural land, crops/trees/plants
- b. **Disturbance Compensation** will be given to each relocating PAP. This will compensate for the loss of income during the time of relocation. The amount will be equivalent to the daily minimum wage in the project area multiplied by 60 days.
- c. **Financial Assistance** will be granted to relocating PAPs who opted to relocate on their own. The FA will allow relocating PAPs to purchase a residential lot in an amount to be approved by the IA management. The size of residential lot will be 200 sq.m. in rural areas, 120 sq.m in semi-urban areas and 90 sq.m. in highly urbanized areas.
- d. **Rehabilitation Assistance and Income Restoration Programs.** The potential PAPs have expressed the need for livelihood programs. During project implementation, rehabilitation assistance

and income restoration programs will be designed in close consultation with PAPs. The project will ensure that special assistance will also be provided to vulnerable PAPs who have no or lack family or social support. Government agencies or NGOs who are working in the area will be identified to work closely with the project and provide their expertise in designing and implementing rehabilitation and income restoration programs.

Table 2.5.1 has summarized the various type of losses, measures of compensation and rehabilitation for the losses.



the complaint can be elevated to a higher level (municipal or provincial) level. Each level will settle the issues within fifteen (15) days. A grievance officer from the project will attend all meetings and will ensure that PAPs are made aware of their rights to grievance. Assistance from the PAPs' family or friends will be allowed if PAPs lack writing skills and the ability to express themselves.

All grievances which were not resolved at the LGU or project level can be filed in the court.



## CHAPTER 4 RESETTLEMENT STRATEGIES

During RP implementation, this RP will be revised and finalized to reflect the total number of PAPs, their entitlements and compensation as per entitlement matrix and established replacement costs for all losses. In order to achieve this, the following strategies will be taken.

### 4.1 Deployment of Resettlement/Social Development Staff

One of the major constraints of RP implementation is the lack of qualified and competent staff in a project. Experience shows that the projects who have staff with no skills on consultation and public participation techniques, land acquisition and resettlement implementation and monitoring, social development, and grievance redresses are more likely to encounter problems or opposition towards the project, thus, cause project delays.

For this project, the project will engage highly qualified and trained staff for RP implementation. The personnel can be hired individually or engage a non-government organization to implement the RP.

### 4.2 Consultation and Participation Programs

The project will continue to conduct consultation and participation programs as stated in Section 3 of this report. The project will ensure that special assistance will be provided to vulnerable groups as they have special needs and concerns.

### 4.3 Replacement Cost Study

The project will carry out market rates studies for various types of losses to determine replacement cost. An independent real estate/market appraiser will be engaged by the Project to carry out the replacement cost activity and will establish and recommend replacement cost / market rates for the project. The established rates proposed by the independent appraiser, together with the vital documents obtained, will be forwarded to the project. The proposed rates will be reviewed and approved by the project representatives, LGUs and PAPs to maintain objectivity and transparency.

Information that reflects replacement cost or market rates can be obtained from the following sources:

For current market values of land (residential, agricultural and commercial): (i) current selling/buying transactions in the area; (ii) BIR zonal valuation; (iii) government financial institutions such as Landbank and PNB and other commercial banks.

For replacement cost of houses and structures: (i) current cost of materials and labor from construction companies, suppliers and other transaction costs

For crops and trees: (i) DENR –Region Office – current schedule of values; (ii) vendor /suppliers of seedlings; (iii) National Power Corporation – Uniform Valuation of Crops/Plants/Trees, (iv) Department of Agriculture.

For loss of income: surveys will be carried out for small shop owners to determine the estimated income per month. Income tax receipts from businesses will also be used for determining the income of PAPs. For wage laborers, current monthly income in the municipality as determined by the Department of Labor and Employment (DOLE) will be used.

The established replacement cost or market values will be updated on an annual basis to reflect current

market rates.

#### **4.4 Official Census, Inventory of Losses and Detailed Measurement Survey**

The project will conduct the official census during project implementation (upon completion of the detailed design). Tagging of assets, using official stickers, will also be carried out during the inventory of losses and detailed measurement (IOL/DMS) survey. Photos of PAPs and his/her affected assets will be taken and will be recorded in the resettlement database for proper compensation and monitoring.

The project will make sure that PAPs are present during these activities. PAPs will be informed in writing or during public meetings on the proposed census schedule. They will be encouraged to participate during the said activity to maintain transparency. All PAPs will review and sign the census, IOL and DMS forms to confirm the assets that will be affected by the Project.

These activities will be done simultaneously with the replacement cost study. Upon the establishment of replacement cost/market values for the Project, the Project will apply these rates against the affected assets as per IOL/DMS records. The proposed rates will be presented to PAPs for acceptance. The project, during the presentation of entitlements, the methodology of establishing replacement costs will be explained to ensure PAPs that market values are applied.

#### **4.5 Verification of Land Titles and Relevant Land-Related Documents**

One of the major bottlenecks in implementing the land acquisition process is the availability of legal land titles and vital documents to confirm the validity of claims of the property owners. Unregistered deed of sales, fake land titles, absentee owners, unpaid real estate taxes and lack of manpower resources in the concerned government and line agencies delay the processing of documents. Thus, the project will carry out monthly coordination meetings among the project representatives, LGU offices and concerned line agencies to agree on time-bound action plans on how to address these issues in order to finalize the list of PAPs who are entitled to such claims.

#### **4.6 Conduct of Needs Assessment and Income Rehabilitation Programs**

During project implementation, needs assessment and design of income restoration programs will be carried out. The results will form the basis for designing the training and income restoration programs for PAPs. Coordination with government agencies implementing similar programs will be implemented. Funding for this activity will be prepared and included in the revised RP.

#### **4.7 Concept of Resettlement Plans of Action**

##### **A. Rationale**

The concept on possible resettlement plan of action was prepared based on actual interview survey carried out on the PAPs. In addition, local governments of concerned Municipalities, i.e. Botolan and San Marcelino, were also interviewed for obtaining their opinions. The total number of the households of the PAPs is 106 at the time of the end of May 2003. It should be noted that the number of PAPs would be changed at the time of project implementation. Therefore, details of the plan will have to be reviewed and revised as needed right before the project implementation, that is in the detailed design phase. However, the concept described here will still be applicable at the time of implementation.

Below are discussions on the possible options that the project proponent may select in implementing the

resettlement plan.

#### B. Existing Resettlement Sites

After the eruption of Mt. Pinatubo in 1991, thousands of people were displaced and several resettlement sites were developed by the Philippine government through the assistance of many agencies, local and international. At present, there are six resettlement sites that are initiatives of the government and non-government agencies. Table 4.7.1 presents these sites.

#### C. Possible Resettlement Sites

Also, three areas in two municipalities were identified as possible sites for resettlement for the people that will be affected by the project as identified by the local government units of San Marcelino and Botolan. These are presented in Table 4.7.2 below.

#### D. Possible Resettlement Plans of Action

##### (1) Option 1 – new Resettlement Site

A new resettlement site for the people that will be affected was considered in the feasibility study stage of the project. As discussed above, there are three areas that may be developed as resettlement sites. These can be further studied during the detailed design phase if it is both practical and economically viable to develop a new resettlement site.

##### (2) Option 2 – Absorb PAPs in the Existing Resettlement Sites

Option 2 is to absorb the people in the existing resettlement site as suggested by the concerned Municipalities. The following provides some details of the suggested site, that is Baquilan Resettlement Center. The most current conditions of the center are provided below.

##### Baquilan Resettlement Center

The Center is within a total distance of 7.5 km east of Botolan town proper with 753 households and a 3,704 total population. It is divided into 931 homelots with 110 m<sup>2</sup>/lot. Based on the existing size of homelots in Baquilan, about 170 households can be absorb for the PAPs affected by the project. At this moment, there are 106 households to be affected, thus all the PAPs could be absorbed if all of them will be willing to come to the Center. The Baquilan Resettlement Site was developed on a 317.6 hectare-land thru Presidential Proclamation No. 907 on May 1992.

- The resettlement site is intended for the Aeta nad non-Aeta families displaced by the eruption of Mt. Pinatubo.
- This resettlement site has a community plaza/playground, school building for elementary and secondary levels, a clinic, day care/feeding centers and a multi-purpose center.
- Water is sourced from 18 deepwell pumps.
- Aeta and Abullen are the two dominant ethnic groups in the resettlement site.
- There are six major religious affiliations in this resettlement area: Roman Catholic, Iglesia ni Cristo, Independent Church (Aglipay), Mormons, Methodist, and Born Again Christians
- Housing units provided by the task Force Pinatubo are made of indigenous materials like cogon and bamboo poles.
- The Medical Service Assistance Program – Department of health, an MPC Funded

Program provides health and services. The medical team is composed of only one midwife right now.

- There are 19 teachers for elementary school and 7 teachers for secondary school deployed by the DepEd servicing 767 students. School supplies, books and furniture are funded by MPC.
- The pre-eruption economic activity of the Aetas of Baquilan centered on marginalized farming, hunting and foraging for fruits and edible plants around the Zambales mountain range.
- The livelihood programs initiated in the resettlement were essentially focused on the provision of job opportunities in the agricultural and industrial sectors. Both the government and non-government organizations (NGO's) have provided financial assistance for various livelihoods projects such as emergency employment and interest-free financing for micro-enterprises.
- Farming is still the primary source of livelihood in the area, despite that lahar has retarded the productivity of the land previously planted with cash crops.
- Transition from farming to non-traditional economic activities is where all efforts should be focused. Lack of land rehabilitation and processing of agricultural crops.
- Figure 4.7.1 shows the most current conditions of residential and public facility arrangement.

### (3) Option 3 – Follow

The project has initially identified about 89 families that will be affected by the project at the time of January 31, 2003. Table 4.7.3 below shows the perceptions of the PAPs on the resettlement and compensation arrangements.

In the implementation of the resettlement plan, a lot of emphasis shall be given on the social perceptions of the people that will be affected. Thus, it is worthy to note that what the social survey conducted for the PAPs that will be affected by the project revealed.

The table above indicates that majority prefer a house for house arrangement (29.09%) over resettlement (19.09%). This might be an important input in deciding for the final action plan for the people. If this reflects the sentiment of the people, a new resettlement site is no longer warranted. Also, a great majority were willing to give way to the project as indicated by 78.65% of the respondents. It was also revealed that cash compensation is preferred so that they can purchase their own land and build a house as indicated by 70.97% of the respondents.

This option will ensure that all the affected people will be dealt with preferred arrangement thus providing negative reactions.

### (4) Suggested Option

Considering the various factors, it is suggested here that Option 3 will be selected as the best Resettlement Plan of Action to reflect the actual desires of the PAPs. The summary is as follows:

- 1) Cash compensation – about 22% of the PAPs
- 2) Land for land and house for house – about 57% of the PAPs
- 3) Resettlement to the existing Baquilan Resettlement Center – about 21% of the PAPs.

#### **4.8 Compensation Payment and Assistance during Relocation**

Upon completion of census, IOL and DMS and IA approval of rates recommended by the independent real estate/market expert, the project through its PMO will:

- a. Prepare individual “Project Compensation Form” which details all types of losses with their corresponding established compensation rates. This will also include all types of relocation assistance.
- b. Inform PAPs regarding payment schedule at least two (2) weeks in advance.
- c. Present to PAPs proposed compensation amount. Explain in detail PAPs’ rights and entitlements based on project policies and explain how compensation amount were calculated.
- d. Leave the “AP Compensation Form” to PAPs for further review and inform PAPs to decide and submit the form within fourteen (14) days.
- e. If compensation payment is acceptable to PAPs, process payment and inform PAPs of exact date of releasing payment. Checks will be issued under the name of both husband and wife.
- f. Effect compensation payment. Copies of compensation payment documents will be provided to PAPs. Copies will also be provided to Project Supervision Consultants and external agency for monitoring and reporting.
- g. Prepare and update regularly list of PAPs which contains entitlements and disbursement of payment (amount and date disbursed) made to the AP for proper recording and monitoring.
- h. Issue advance notification for land clearance upon receipt of compensation by PAPs. Schedule of relocation of PAPs will depend on the agreed relocation options.

##### **PAPs will:**

- a. Seek assistance from family members during the compensation process. PAPs will request for clarification and explanation, if there is any.
- b. Review carefully “Project Compensation Form” within fourteen (14) days. If proposed compensation is acceptable, PAPs will sign and return the compensation document to the project for processing. If PAPs are not satisfied with the proposed compensation payment or if there is disagreement between PAPs and IA, PAPs will file a complaint using the grievance process presented in this RP (Section 3).
- c. Request IA to reschedule payment if PAPs will not be available to claim compensation on the scheduled date, PAPs will request project staff to reschedule day of payment.
- d. Sign compensation documents and acknowledge receipt of compensation payment if all compensation documents are in order.
- e. Obtain one (1) copy of all compensation documents.
- f. Clear the area within the specified time in order for construction works to begin.

##### **LGUs/POs/NGOs will:**

- a. Witness payment process based on the schedule made by IA;
- b. Ensure that PAPs are aware of his/her rights and entitlements. Assist project staff in explaining resettlement objectives
- c. Document grievances if there’s any.
- d. Sign as witness to the compensation activity.

## **CHAPTER 5 IMPLEMENTATION ARRANGEMENTS**

### **5.1 Department Level (IA)**

The IA will have the over-all responsibility in the supervision, planning, implementation, monitoring of the Project.

### **5.2 Project Management Office and Resettlement Unit**

The PMO will supervise all planning, implementation and monitoring activities associated with the RP. The PMO will be headed by a Project Manager and composed of technical and administrative staff.

Resettlement-related issues will be the responsibility of the Resettlement Unit of the Project Management Office.

The Resettlement Unit will be headed by a Resettlement Officer with 3 to 4 resettlement/ social development staff who will be responsible for the day-to-day management of RP implementation and monitoring. Resettlement planning or preparation of time-bound action plans pertaining to resettlement activities will be conducted in consultation with the PMO, project consultants, PAPs and other concerned groups.

The Resettlement Officer must have academic background on social sciences and have work experience with projects addressing land acquisition and resettlement issues. He/She must have good communications skills and familiar with resettlement and rehabilitation, social safeguards policies of the funding agencies.

The roles and responsibilities of the Resettlement Unit are, but not limited, to the following: (i) hold consultation meetings with the PAPs and various stakeholders; (ii) encourage community participation from project planning, implementation to monitoring; (iii) conduct census, inventory and detailed measurement surveys; (iv) establish database of PAPs on socio-economic, physical losses, and income; (v) determine the current market values or replacement cost for all kinds of losses; (vi) update RP and allocate necessary RP budget; (vii) act as grievance officers; (viii) carry out resettlement site development planning in consultation with PAPs; (ix) provide assistance to PAPs during compensation and relocation; (x) provide training to LGUs on RP planning and implementation; (xi) prepare report regularly on progress and outstanding issues; (xii) document all resettlement-related activities; and (xiii) monitor all RP activities (ix) conduct semi-annual resettlement audits (xi) prepare terms of reference of the external monitoring team and facilitate appointment.

Resettlement Audit Reports prepared by the RU will be submitted to the PMO for verification and certification. These reports will be submitted to the external (independent) monitoring team for their independent verification of resettlement data.

### **5.3 Local Government Units**

The LGUs must be consulted as early as project preparation and their participation is very fundamental in the successful planning and implementation of the project. For resettlement matters, the LGUs will (i) participate in the conduct of consultation, information campaign, census and social surveys; (ii) act as grievance officers and ensure that grievance are resolved; (iii) assist PAPs during the negotiation and compensation process; (iv) certify the list of PAPs and sign compensation documents; (v) monitor and register new settlers in the area. The LGUs will be responsible for informing residents and new settlers not to construct houses/ structures in the project site; (vi) work closely with PMO and RU in establishing



compensation prices for land, structures, crops and other fixed assets; validating tenure status of land and structure; identification of replacement land or land to be developed as resettlement sites; (vii) coordinating resettlement activities with other agencies; and (viii) maintain record of all public meetings, grievances, and actions taken to address complaints and grievances.

#### **5.4 Project Consultants**

Project Supervision/Management Consultants must have one (1) resettlement/social development expert to assist and guide the project staff in the implementation of the RP. During project implementation, the resettlement/social development expert will provide formal and on-the-job training to project staff and groups involved in the project. His/Her tasks will be, but not limited to the following: (i) establish and implement a Centralized Resettlement/Social Development Management System using the Computerized Management Information System (MIS); (ii) conduct resettlement audit of compensation payments; (iii) review and assess the level of assistance provided or being provided to PAPs and present major constraints/limitations of the delivery of assistances and provide recommendations or time-bound strategies on how these issues should be addressed; (iv) guide and assist the project staff to properly implement and monitor the progress of resettlement activities; (v) assess the organizational and staffing requirements of the PMO and propose additional staff if necessary. (vi) Provide formal and on-the-job training to LARD and RU on resettlement-related activities such as ADB and WB Resettlement and Rehabilitation (R&R) Policies, R&R planning, implementation and monitoring and evaluation guidelines/strategies, consultation and stakeholder participation, negotiation, grievance redressals, report writing; (vii) establish and/or improve procedures for the prompt planning and implementation of relocation activities and planning, development and hand over of resettlement sites and issuance of land titles; (viii) establish and implement procedures for the prompt implementation of corrective actions and the resolution of grievances; and (ix) establish and/or improve procedures for the prompt implementation of income restoration programs for PAPs.

#### **5.5 Non-Government Organizations**

There are a number of NGOs who have been engaged by development projects in implementing resettlement and rehabilitation programs not only for multilateral funded-projects but by government-funded projects as well. The NGOs who have detailed knowledge of the areas they work in, familiar with participatory rural appraisal techniques, useful means of finding out the needs of the relatively inaccessible or poorer groups of the population, experience at the barangay levels in income generation projects, and efficiency in credit disbursement and realization will be considered by the project to assist in the implementation of consultation, participation and awareness programs and income generation programs for the project.

## **CHAPTER 6      IMPLEMENTATION SCHEDULE**

Revision of the RP will commence upon the completion of detailed design. Therefore, extensive consultation and participation programs will be carried throughout the duration of the project. Upon the completion of the final RP, the RP will be reviewed by the funding agency to ensure that it is prepared in accordance with the resettlement policy of the funding agency. Table 6.1.1 is the proposed schedule.

## CHAPTER 7 MONITORING AND EVALUATION

### 7.1 Internal Monitoring

Internal monitoring will be the full responsibility of the IA through the Project Management Office. Monitoring activities will be carried out throughout the implementation of the RP. It involves periodic checking to determine whether activities are carried out according to the RP and as scheduled. Activities to be monitored pertaining to RP implementation are (i) progress of land acquisition (ii) RP activities. The objectives of the monitoring are to (i) to ensure that the standard of living of PAPs are restored or improved; (ii) to monitor whether the overall project and resettlement objectives are being met; (iii) to assess if rehabilitation measures and compensation are sufficient; (iv) to identify problems or potential problems; and (v) to identify methods of responding immediately to mitigate problems.

The range of activities to be monitored include consultation and participation program activities, land acquisition and transfer procedures, disbursement of compensation and assistance, construction of replacement houses/structures by the displaced PAPs, re-establishment of households and business enterprises, rehabilitation of income levels, and social development. Table 7.1.1 shows the monitoring and evaluation indicators

Monthly coordination meetings to be participated in by the project staff, LGUs, project consultants, PAP representatives, concerned line agencies and local groups will be carried out for reporting of responsibilities and reach agreements/recommendations on issues/problems encountered during RP implementation.

Monthly Progress Reports will be prepared by the PMO and will be submitted to the IA and funding agency.

The funding agency will conduct its own monitoring during project missions and by review of progress and monitoring reports of IA and Project Consultants.

### 7.2 External (Independent) Monitoring and Evaluation

An external (independent) monitoring and evaluation team will carry-out the monitoring and evaluation (M&E) of land acquisition and resettlement activities for the project. The team will have members who are trained and skilled in data base management, interview technique, social and economic/finance.

The main objectives of an external monitoring and evaluation is to review RP implementation and assess the achievement of resettlement objectives, the changes in living standards and livelihoods, restoration of the economic and social base of the affected people, the effectiveness, impact and sustainability of entitlements, the need for further mitigation measures if any, and to learn strategic lessons for future policy formulation and planning.

The M&E Team will:

- Verify internal monitoring systems and findings
- Conduct resettlement audit to ensure that PAPs were properly compensated as per entitlement matrix
- Assess whether resettlement objectives have been met; specifically, whether livelihoods and living standards have been restored or enhanced;
- Assess resettlement efficiency, effectiveness, impact and sustainability, drawing lessons as a guide to future resettlement policy making and planning; and

- Ascertain whether the resettlement entitlements were appropriate for meeting the objectives, and whether the objectives were suited to conditions of project affected people (PAPs).
- Evaluate achievements and impacts related to over-all implementation of the RP.

The database of the consultant is not a substitute for the database maintained by the project. The consultant will maintain an independent database that is compatible to the database system of the project.

The M&E Team will be hired during the RP implementation. M&E Reports will be submitted to the IA and funding agency. The M&E reports will cover the following:

- Whether the resettlement activities have been completed as planned and budgeted
- The extent to which the specific objectives and the expected outcomes/results have been achieved and the factors affecting their achievement or non achievement
- The extent to which the overall objective of the Resettlement Plan and the desired impact of improving living standards, income earning capacity and production levels or at least restoring them to pre-project levels, have been achieved and the reasons for achievement / non achievement.
- Major lessons learned
- Key risk factors
- Recommendations

## CHAPTER 8 RESETTLEMENT BUDGET

The resettlement budget for this study only covers affected assets (land, structures and trees). During detailed design, the project will take the responsibility in providing sufficient funds required for consultation and participation programs, training and income restoration activities, acquisition of replacement land and resettlement site development, administrative and operational expenses and contingencies in order to finalize the RP.

The estimated costs below are based on the studies conducted for the 89 PAPs. Computations are done based on replacement costs / current market value. The costs applied in this RP will be updated and finalized upon the completion of the official replacement cost study. The established rates will be adjusted on an annual basis to reflect current market prices.

### 8.1 Affected Land

The total cost for affected land is estimated at PhP 45,418,244. The study team obtained data from the Bureau of Internal Revenue for the zonal valuation of land and based on village-wise information (buying/selling rates in the area) gathered during the preliminary replacement study activities. The study team interviewed the barangay captains, representatives from the affected and not-affected persons of the barangay.

Based on the figures in Table 8.1.1, the average rate from the selling/buying rate will be applied for this project to ensure that current market values for each type of land are reflected. In addition, the project only considered the total affected areas from those PAPs who claimed ownership to land and those who stated that they rent the land. During project implementation, the project will verify land ownership upon completion of detailed design. This approach will enable the project to compensate in full by paying in cash or land-for-land arrangements for those PAPs who have legal titles to land as stated in the entitlement matrix. For landless PAPs, the project will be provided them with replacement land, financial assistance and additional rehabilitation measures. The total area and location of replacement will be determined during detailed design where extensive consultation will take place.

### 8.2 Affected Houses and Structures

The costs applied for potentially affected houses and structures are at full replacement cost without deduction for depreciation and/or salvageable materials. Costs of construction materials were derived from the concerned municipalities. In addition, labor and other transaction costs were applied.

The total estimated cost for the 89 houses is at PhP 5,864,766.

For structures, there are 3 commercial business establishments, 9 rest houses, 3 kitchens, 6 toilets, one storage, 6 pigpens and 4 deep wells identified during the inventory of losses.

The total cost for these structures is estimated at PhP 1,321,688.

### 8.3 Affected Trees

The rates applied for trees are based on village-wise information and the 1998 uniform valuation adopted by NPC for their Luzon projects. These rates will need to be verified and adjusted based on the age and current market value of each tree. The rates provided below are only for budget purposes since the ownership, age and values were provided by PAPs themselves and need to be assessed by an

independent appraiser. Loss of crops will be identified during detailed design.

The total estimated amount is at PhP 15,905,138.

Breakdown of types of trees and estimated value is found in Annex 3.

**8.4 Disturbance Compensation**

For the 89 PAPs that will be required to relocate, an amount of PHP 13,500 per family (PhP225 per day multiplied by 60 days) will be provided to cover relocation expenses or loss of income during relocation. PAPs will be assisted during relocation and will be entitled to other rehabilitation assistance which will be determined during project implementation.

The total cost is at PhP1,066,500

**8.5 RP Estimated Cost**

The total estimated cost for the 89 PAPS is PhP 69,576,316

The total estimated cost for the 106 PAPS is PhP 82,866,200

*The Study on Sabo and Flood Control for Western River Basins of Mount Pinatubo  
in the Republic of the Philippines  
Final Report  
Supporting Report*

## **Tables**

**Table 1.1.1 Number of Households to be Resettled due to the Structure Measures  
(as of the end of January 2003)**

Municipality	Barangay	Right Dike	Left Dike	Total Population
<b>STO. TOMAS</b>				
San Marcelino	San Rafael	0	38	155
	Rabanes	0	1	
San Narciso	Alusius	0	6	81
	San Pascual	0	4	
	Paite	10	0	
San Felipe	Manglicmot	1	0	2
<b><i>SUB-TOTAL</i></b>		<b><i>11</i></b>	<b><i>49</i></b>	
<b>BUCAO</b>				
Botolan	Porac	0	18	141
	Carael	1	0	
	San Juan	10	0	
<b><i>SUB-TOTAL</i></b>		<b><i>11</i></b>	<b><i>18</i></b>	
<b>TOTAL</b>		<b>22</b>	<b>67</b>	<b>379</b>



**Table 1.2.1 Summary of Affected Land Area and Ownership (1/2)**

**MUNICIPALITY OF BOTOLAN**

	BRGY. PORAC		BRGY. CARAEL		BRGY. SAN JUAN		TOTAL	
	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area
Owner	5	23,240.00	1	19,000.00	3	2,600.00	9	44,840.00
Renter	5	23,076.00	0	-	6	50,700.00	11	73,776.00
Government	1	1,000.00	0	-	0	-	1	1,000.00
No data	7	-	0	-	1	-	8	-
<b>TOTAL</b>	<b>18</b>	<b>47,316.00</b>	<b>1</b>	<b>19,000.00</b>	<b>10</b>	<b>53,300.00</b>	<b>29</b>	<b>119,616.00</b>

**MUNICIPALITY OF SAN MARCELINO**

	BRGY. SAN RAFAEL		BRGY. RABANES		TOTAL	
	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area
Owner	0	-	1	19,000.00	1	19,000.00
Renter	0	-	0	-	-	-
Government	38	17,164.00	0	-	38	17,164.00
No data	1	-	0	-	1	-
<b>TOTAL</b>	<b>39</b>	<b>17,164.00</b>	<b>1</b>	<b>19,000.00</b>	<b>39</b>	<b>36,164.00</b>

**MUNICIPALITY OF SAN FELIPE**

	BRGY. MANGLICMOT		TOTAL	
	PAPs	Affected Area	PAPs	Affected Area
Owner	1	19,000.00	1	19,000.00
Renter	0	-	-	-
Government	0	-	-	-
No data	0	-	-	-
<b>TOTAL</b>	<b>1</b>	<b>19,000.00</b>	<b>1</b>	<b>19,000.00</b>

**Table 1.2.1 Summary of Affected Land Area and Ownership (2/2)**

**MUNICIPALITY OF SAN NARCISO**

	BRGY. ALUSIUS		BRGY. PAITE		BRGY. SAN PASCUAL		TOTAL	
	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area
Owner	1	5,000.00	1	100.00	3	7,000.00	5	12,100.00
Renter	3	900.00	9	768.00	1	5,000.00	13	6,668.00
Government	1	900.00	0	-	0	-	1	900.00
No data	1	-	0	-	0	-	1	-
	6	6,800.00	10	868.00	4	12,000.00	20	19,668.00

**(continuation)**

ALL AREAS	TOTAL	
	PAPs	Affected Area
Owner	16	94,940
Renter	24	80,444.00
Government	40	19,064.00
No data	10	-
	89	194,448.00

**Table 1.2.2 Potentially Affected Houses by Barangay/Municipality (1/3)**

No	Last Name	First Name	Floor Area (ft <sup>2</sup> )	Floor Area (m <sup>2</sup> )	Materials Wall	Materials Roof	Year	Type of House
<b>MUNICIPALITY OF BOTOLAN</b>								
<b>BRGY. PORAC</b>								
1	Agulto	Manuel	720.0	66.92	concrete	GI sheets	1999	Permanent
2	Balangon	Jose	225.0	20.91	Wood	GI sheets	2001	Semi-Permanent
3	Balangon	Rosemarie	960.0	89.23	concrete	GI sheets	1996	Permanent
4	Balangon	Juanita	240.0	22.31	Buho	GI sheets	1991	Semi-Permanent
5	Cabigao	Amelia						
6	Del Rosario	Nestor	540.0	50.19	concrete	GI sheets		Permanent
7	Diago	Esperanza	300.0	27.89	concrete	GI sheets	1997	Permanent
8	Dilag	Raquel	225.0	20.91	concrete	GI sheets	1991	Permanent
9	Doble	Manuel						
10	Flores	Pedro	80.0	7.44	Cogon	Cogon	2001	Makeshift
11	Fulgar	Mario	384.0	35.69	Buho	GI sheets	1992	Semi-Permanent
12	Milon	Bonifacio Jr.	100.0	9.30	Wood	GI sheets	1992	Semi-Permanent
13	Panganiban	Angelito	216.0	20.08	Buho	GI sheets	1997	Semi-Permanent
14	Pelayo	Lopez	80.0	7.44	Buho	sawali	1999	Makeshift
15	Rabaca	Vivian	120.0	11.15	Buho	Cogon	2002	Makeshift
16	Sahagun	Eduardo	400.0	37.18	concrete	GI sheets	1998	Permanent
17	Salazar	Norinaldo	200.0	18.59	Wood	GI sheets	1999	Semi-Permanent
18	Sangalang	Nenita	256.0	23.80	concrete	GI sheets	2002	Permanent
	<b>SUB-TOTAL</b>	<b>16</b>	<b>5,046.0</b>	<b>469.03</b>				
<b>BRGY. CARAEL</b>								
1	De San Juan	George	1,200.0	111.54	concrete	Steel	1984	Permanent
	<b>SUB-TOTAL</b>	<b>1</b>	<b>1,200.0</b>	<b>111.54</b>				
<b>BRGY. SAN JUAN</b>								
1	Adriano	Merlie	360.0	33.46	concrete	GI sheets	2002	Permanent
2	Basa	Sonny	400.0	37.18	concrete	GI sheets	1999	Permanent
3	Dejacto	Elmer	120.0	11.15	Buho	Cogon	1999	Makeshift
4	Dejacto	Ruben	80.0	7.44	Buho	Cogon	1997	Makeshift
5	Devillena	Ann	360.0	33.46	concrete	GI sheets	1987	Permanent
6	Dolandolan	Rey	64.0	5.95	Buho	GI sheets	1999	Semi-Permanent
7	Ramos	Abraham	180.0	16.73	Bamboo	GI sheets	2001	Semi-Permanent
8	Raquel	Lerma	144.0	13.38	Buho	Cogon	2002	Makeshift
9	Sta. Maria	Mailene	1,500.0	139.43	Cogon	Cogon	1989	Makeshift
	<b>SUB-TOTAL</b>	<b>9</b>	<b>3,208.0</b>	<b>298.19</b>				
	<b>TOTAL</b>	<b>26</b>	<b>9,454.0</b>	<b>878.76</b>				
<b>MUNICIPALITY OF SAN MARCELINO</b>								
<b>BRGY. SAN RAFAEL</b>								

**Table 1.2.2 Potentially Affected Houses by Barangay/Municipality (2/3)**

No	Last Name	First Name	Floor Area (ft <sup>2</sup> )	Floor Area (m <sup>2</sup> )	Materials Wall	Materials Roof	Year	Type of House
1	Andres	Emer	231.0	21.47	Wood	GI sheets	2001	Semi-Permanent
2	Antonio	Vivian	144.0	13.38	GI sheets	GI sheets	2002	Semi-Permanent
3	Apeleña	Gladelia	140.0	13.01	Wood	Cogon	2002	Semi-Permanent
4	Aquino	Miguel	64.0	5.95	Buho	Cogon	2002	Makeshift
5	Arina	Arlene	80.0	7.44	Buho	nipa	2002	Makeshift
6	Asencio	Warlito	120.0	11.15	Wood	Cogon	2002	Semi-Permanent
7	Badar	Reynaldo	99.0	9.20	Bamboo	Cogon	2000	Makeshift
8	Badar	richard	64.0	5.95	Wood	Cogon	2003	Semi-Permanent
9	Bangan	Linda	300.0	27.89	Cogon	Cogon	2002	Makeshift
10	Baruña	Margarita	150.0	13.94	concrete	Cogon	1998	Permanent
11	Basia	Dominador						
12	Basila	Rene	960.0	89.23	concrete	Steel	2001	Permanent
13	Beltran	Aida	63.0	5.86	Buho	Cogon	2002	Makeshift
14	Cariño	Thelma	49.0	4.55	Cogon	Cogon	2003	Makeshift
15	Dalit	Teresita	120.0	11.15	Cogon	Cogon	1999	Makeshift
16	de Guzman	Susan	100.0	9.30	Buho	Cogon	2002	Makeshift
17	de San Juan	Marivic	80.0	7.44	Buho	Cogon	2002	Makeshift
18	dela Cruz	Imelda	320.0	29.74	Buho	GI sheets	2002	Semi-Permanent
19	dela Cruz	Marlon	56.0	5.21	Buho	GI sheets	2002	Semi-Permanent
20	Dela Victoria	Vito	224.0	20.82	concrete	GI sheets	2003	Permanent
21	Domingo	Teodoro						
22	Domingo	Virginia						
23	Esteban	Arsenio	120.0	11.15	Buho	GI sheets	2001	Semi-Permanent
24	Faustino	Rowena	180.0	16.73	concrete	GI sheets	2002	Permanent
25	Flores	Leonora	256.0	23.80	concrete	GI sheets	2003	Permanent
26	Hipolito	Pepito	90.0	8.37	Wood	Cogon	1998	Semi-Permanent
27	Jose	Susana	480.0	44.62	concrete	GI sheets	2002	Permanent
28	Lorenzo	Vilma	340.0	31.60	concrete	GI sheets	1990	Permanent
29	Luna	Medy	80.0	7.44	Buho	Cogon	2002	Makeshift
30	Ocampo	Leo	80.0	7.44	Wood	Cogon	1999	Semi-Permanent
31	Oliva	Erning	56.0	5.21	Bamboo	Cogon	2002	Makeshift
32	Oliva	Marcelino	140.0	13.01	Buho	GI sheets	1998	Semi-Permanent
33	Solomon	Rosita	80.0	7.44	Cogon	Cogon	2002	Makeshift
34	Supilanas	Rosita	475.0	44.15	concrete	GI sheets	2003	Permanent
35	Supilanas	Jimmy						
36	Tiglao	Bernido	168.0	15.62	Buho	Cogon	2002	Makeshift
37	Urbano	Zoilo	500.0	46.48	concrete	GI sheets	2000	Permanent
38	Valderama	Ferdinand	120.0	11.15	Wood	Cogon	2002	Semi-Permanent
	<b><i>SUB-TOTAL</i></b>	<b>34</b>	<b>6,529.0</b>	<b>606.87</b>				

**Table 1.2.2 Potentially Affected Houses by Barangay/Municipality (3/3)**

No	Last Name	First Name	Floor Area (ft <sup>2</sup> )	Floor Area (m <sup>2</sup> )	Materials Wall	Materials Roof	Year	Type of House
<b>BRGY. RABANES</b>								
1	Obrero	Federico	100.0	9.30	Bamboo	Cogon	1954	Makeshift
	<b><i>SUB-TOTAL</i></b>	<b>1</b>	<b>100.0</b>	<b>9.30</b>				
	<b>TOTAL</b>	<b>35</b>	<b>6,629.0</b>	<b>616.2</b>				
<b>MUNICIPALITY OF SAN FELIPE</b>								
<b>BRGY. MANGLICMOT</b>								
1	Villanueva	Ramon	196.0	18.22	GI sheets	GI sheets	2001	Makeshift
	<b><i>SUB-TOTAL</i></b>	<b>1</b>	<b>196.0</b>	<b>18.22</b>				
	<b>TOTAL</b>	<b>1</b>	<b>196.0</b>	<b>18.2</b>				
<b>MUNICIPALITY OF SAN NARCISO</b>								
<b>BRGY. ALUSIUS</b>								
1	Almazan	Regino	150.0	13.94	concrete	GI sheets	1987	Permanent
2	Filipinas	Jane	168.0	15.62	concrete	GI sheets	2002	Permanent
3	Florendo	Marieta	168.0	15.62	Cogon	Cogon	1999	Makeshift
4	Fontillas	Jaime	150.0	13.94	concrete	Cogon	1998	Permanent
5	Gonzales	Christine	160.0	14.87	Buho	GI sheets	2000	Semi-Permanent
6	Ramos	Alfredo	168.0	15.62	concrete	GI sheets	1999	Permanent
	<b><i>SUB-TOTAL</i></b>	<b>6</b>	<b>964.0</b>	<b>89.6</b>				
<b>BRGY. PAITE</b>								
1	Arina	Rex	104.0	9.67	Cogon	Cogon	2002	Makeshift
2	Arina	Boy	50.0	4.65	Bamboo	Cogon	2003	Makeshift
3	Cabalic	Arthur	72.0	6.69	Buho	Cogon	2002	Makeshift
4	Cosme	Alboro	50.0	4.65	Buho	Cogon	2003	Makeshift
5	de Vera	Rose	104.0	9.67	Cogon	Cogon	2002	Makeshift
6	dela Cruz	Edwin	135.0	12.55		Cogon	2003	Makeshift
7	Pajayan	Wilson	42.0	3.90	Cogon	Cogon	2002	Makeshift
8	Pajayan	Willy	64.0	5.95	Cogon	Cogon	2002	Makeshift
9	Soria	Mariano	100.0	9.30	Buho	Cogon	2001	Makeshift
10	Soria	Mariano	80.0	7.44	Cogon	Cogon	2001	Makeshift
	<b><i>SUB-TOTAL</i></b>	<b>10</b>	<b>801.0</b>	<b>74.5</b>				
<b>BRGY. SAN PASCUAL</b>								
1	Cacuyog	Crisostomo						
2	Lacuesta	Remedios						
3	Madriaga	Bon	312.0	29.00	Cogon	Cogon	2002	Makeshift
4	Tadeo	Teddy						
	<b><i>SUB-TOTAL</i></b>	<b>1</b>	<b>312.0</b>	<b>29.0</b>				
	<b>TOTAL</b>	<b>17</b>	<b>2,077.0</b>	<b>193.06</b>				

**Table 1.2.3 Types and Numbers of Affected Trees**

Type of Trees	Age of Trees (years)								TOTAL
	Newly planted	<10	20-10	20-11	21-30	31-40	41-50	>51	
Agoho		40	65	-	-	-	-	100	205
Acacia		14	3	-	-	-	-	-	17
Mahogany		121	-	-	-	-	-	-	121
Eucalyptus		6	-	-	-	32	-	-	38
Banana	329	-	140	-	-	-	-	-	469
Mango	453	30	15	-	-	75	765	-	1,338
Bamboo	12	-	-	-	-	-	-	-	12
Tamarind	8	8	30	-	-	-	-	-	46
Camachile	2	-	-	-	-	-	-	-	2
Kamias	2	-	5	-	-	-	-	-	7
Guyabano	60	30	-	-	-	-	-	-	90
Papaya	5	10	-	-	-	-	-	-	15
coconut		12	2	-	-	-	-	-	14
Avocado	13	-	-	-	-	-	-	-	13
Dalanghita	13	-	-	-	-	30	-	-	43
Star Apple	23	10	20	-	-	-	-	-	53
Jackfruit	38	-	-	-	75	-	-	-	113
<b>TOTAL</b>									<b>2,596</b>

**Table 2.5.1 Compensation and Rehabilitation Measures**

Type of Loss	Entitled Persons	Compensation and rehabilitation measures	Implementation Issues
<b>I. LOSS OF LAND</b>			
<b>A. Temporarily Affected Agricultural, Residential or Commercial Land</b>	Legal owners or occupants identified during the census	Cash compensation for loss of income, standing crops and trees, and restoration of land to its previous or better quality by providing measures to improve land quality in cases of land being adversely affected (during construction).	If temporary disturbance is more than one (1) year, the PAPs have the option to sell the land to the Project at replacement cost or at current market value.
<b>B. Permanently Affected Agricultural, Residential or Commercial Land</b>	Legal owners or occupants identified during the census	As a priority, compensation will be through “land for land arrangements” satisfactory to PAPs. (For agricultural land – equal size and productive capacity; for residential land – equivalent size; and for commercial land – equal size and accessibility to customers.)	If the impact on the land is more than 10 % of the total landholdings of PAPs, the PAPs may sell the land and opt for compensation in cash or kind (land-for-land) equivalent to the replacement cost at current market value. The Project will develop resettlement site/s for relocating PAPs. PAPs will also have the option to relocate on their own.
<b>II. LOSS OF HOUSES &amp; OTHER STRUCTURES</b>			
<b>Affected Houses &amp; Structures</b>	Owners identified during the census  Tenants renting houses/structures	<ul style="list-style-type: none"> <li>• Cash compensation for affected houses and structures equivalent to replacement cost for materials and labor without deduction for depreciation and/or salvageable materials</li> <li>• Tenants renting structures are entitled to three months’ rent at prevailing market rate in the area and assistance to identify alternative accommodation and transport allowance and transition allowance</li> </ul>	All PAPs will be allowed to take with them salvageable materials after their properties have been acquired by the Project.
<b>III. LOSS OF CROPS AND TREES</b>			
<b>Crops and Trees</b>	Owner or person with customary usage right	For annual crops, PAPs will be given two (2) months notice that the land on which their crops are planted will be used by the Project and that they must harvest their crops in time. If standing crops are ripening and cannot be harvested, eligible PAPs can be compensated for the loss of the unharvested crops at current market value. For perennial crops and trees, PAPs will be compensated based on the current market value of the province or city where the affected land is located.	
<b>IV. LOSS OF COMMON PROPERTY RESOURCES</b>			
<b>Common Property Resources</b>	Affected communities or concerned government agencies	<ul style="list-style-type: none"> <li>• Restoration of affected community properties to at least previous condition; OR</li> <li>• Replacement in areas identified in consultation with affected communities and relevant authorities;</li> <li>• If income loss is expected (e.g. irrigation, community forest, community grazing land), the barangay is entitled to compensation for the total production loss (over 3 years).</li> </ul>	The compensation will be used collectively for income restoration measures and/or new infrastructure
<b>V. REHABILITATION ASSISTANCE</b>			
<b>Disturbance Compensation</b>	Relocating PAPs	The amount will be equivalent to the daily minimum wage in the project area multiplied by 60 days.	
<b>Financial Assistance</b>	PAPs who opted to relocate on their own	Financial Assistance will be provided in order for PAP to buy a residential lot.	The size of residential lot will be 200 m <sup>2</sup> in rural areas, 120 m <sup>2</sup> in semi-urban areas and 90 m <sup>2</sup> in highly urbanized areas.
<b>Rehabilitation Assistance and Income Restoration Programs</b>		The grant of rehabilitation assistance (e.g. livelihood programs, skills training, credit facilities) will depend on the needs and priorities of PAPs and will only be determined during project implementation.	The project will identify and coordinate with concerned line agencies and NGOs to assist in the design and implementation of such programs.

**Table 4.7.1 Existing Resettlement Sites**

Name	Location
<b>Upland Site</b>	
Loob Bunga Resettlement Site	Botolan, Zambales
Baquilan Resettlement Site	Botolan, Zambales
Cawag Resettlement Site	Subic, Zambales
Iram Resettlement Site	New Cabalan, Olongapo City
Damplay Salaza Resettlement Site	Palauig, Zambales
<b>Lowland Sites</b>	
Taugtog Resettlement Site	Botolan, Zambales
Balaybay Resettlement Site	Castillejos, Zambales
Tek-tek/Lalic Resettlement Site	San Felipe, Zambales

**Table 4.7.2 Relocation Sites Suggested by the Local Government Units**

Town	Relocation Area	Remarks
Botolan	a. Baquilan Resettlement Area	Able to accommodate about 150 households
	b. Boun Lawak (located at about 30 km east of Botolan town hall)	About 200 hectares or more will be available for resettlement, but access road will be needed.
San Marcelino	a. Provincial land adjacent to San Rafael	About 20 hectares will be available for resettlement. (see Note 1)
	b. Citio Macarang within Barangay Aglao	About 150 ha of land will be available for resettlement, if DENR would approve. (see Note 2)

Note :

- 1.The land adjacent to San Rafael is the land owned by the Western Luzon Agricultural College (WLAC). The provincial government is requesting about 20 ha of the land for resettlement use.
- 2.This is a forest land under DENR management. Use of this land has to be authorized by DENR.

**Table 4.7.3 Perception of the People on Compensation Arrangement**

Category	Number	Percent
Cash compensation	24	21.82
Land for land arrangement	31	28.18
House for house arrangement	32	29.09
Resettlement	21	19.09
Undecided	2	1.82
<b>Total</b>	<b>110</b>	<b>100</b>



**Table 6.1.1 Schedule of Activities for the Resettlement Plan**

<b>RP ACTIVITIES</b>	<b>Schedule</b>
<b>Revision of RP</b>	
Mobilize resettlement unit staff	Month 1
Conduct consultation and participation, public disclosure	Month 1 - till end of project
Set up Grievance Redress Mechanism	Month 2
Conduct of verification of PAPs /Official Census	Month 3-4
Conduct joint inventory of losses, detailed measurement surveys	Month 3-4
Engage independent appraiser to carry out replacement Cost Study	Month 3-4
Seek approval of established replacement costs	Month 4
Identification/planning of Resettlement Sites	Month 3-4
Conduct of training needs assessment	Month 3-4
Design rehabilitation and income livelihood programs	Month 3-5
Preparation of Compensation Package for PAPs	Month 5-6
Present compensation package to PAPs	Month 5-6
Finalize RP Budget	Month 6
Revision and Submission of Final RP to funding agency	Month 7
Approval of RP	Month 8
Process payment for PAPs	Month 9-13
Payment of compensation	Month 10-17
Conduct of training needs assessment	Month 10-12
Implement rehabilitation and income restoration programs	Month 12-20
Develop resettlement sites	Month 10-22
Assist in the relocation of PAPs	Month 12-22
Monitoring and Evaluation	Month 1 on a monthly basis
Reporting	Month 3 on a quarterly basis

**Table 7.1.1 Internal Monitoring and Evaluation Indicators (1/2)**

Type	Indicator	Examples of Variables
<b>PROCESS INDICATOR</b>	Staffing	<ul style="list-style-type: none"> <li>• Number of IA-PMO staff and job function</li> <li>• Number of concerned LGU and line agency representatives members and job function</li> <li>• Number of staff from Project Consultants</li> <li>• Number of staff and job function from external monitoring team</li> </ul>
	Consultation, Participation, and Grievance Resolution	<ul style="list-style-type: none"> <li>• Number of consultation and participation programs held with various stakeholders</li> <li>• Number of PAP, project staff and LGU representatives and number of meetings held</li> <li>• Grievances by type and resolution</li> <li>• Number of grievances filed and resolved in court</li> <li>• Number of NGOs/POs participating in the project</li> </ul>
	Procedures in Operation	<ul style="list-style-type: none"> <li>• Census and asset verification/quantification procedures in place</li> <li>• Effectiveness of compensation delivery system</li> <li>• Coordination between project office and other line agencies</li> </ul>
<b>OUTPUT INDICATOR</b>	Acquisition of Land	<ul style="list-style-type: none"> <li>• Area of agricultural land acquired</li> <li>• Area of residential land acquired</li> <li>• Area of commercial land acquired</li> <li>• Area of communal/government land acquired</li> <li>• Number and area of replacement land acquired</li> <li>• Number of land transfers made to APs for replacement land</li> <li>• Number of resettlement sites developed after acquisition</li> </ul>
	Houses and Structures	<ul style="list-style-type: none"> <li>• Number, type and size of private houses/structures acquired</li> <li>• Number, type and size of community buildings acquired</li> <li>• Number, type and size of government/public buildings acquired</li> <li>• Number of resettlement sites developed</li> <li>• Number of basic infrastructures are resettlement sites provided</li> </ul>
	Trees and Crops	<ul style="list-style-type: none"> <li>• Number and type of private trees acquired</li> <li>• Number and type of government/community trees acquired</li> <li>• Number and type of crops acquired</li> <li>• Crops destroyed by area, type and number of owners</li> </ul>
	Compensation and Rehabilitation	<ul style="list-style-type: none"> <li>• Number of PAPs compensated</li> <li>• Number of delivery of entitlements</li> <li>• Number of replacement houses constructed by PAPs</li> <li>• Number of replacement business establishments constructed by PAPs</li> <li>• Number of owners requesting assistance for additional replacement land</li> <li>• Suitability of entitlements to PAPs as per RP objectives</li> <li>• Amount disbursed for affected land</li> <li>• Amount disbursed for replacement land / resettlement sites</li> <li>• Amount disbursed for basic infrastructures in resettlement sites</li> <li>• Amount disbursed for affected houses</li> <li>• Amount disbursed for business/commercial establishments</li> </ul>
		<ul style="list-style-type: none"> <li>• Amount disbursed for restoration of Community Property Resources and/or loss of community income</li> <li>• Amount disbursed for trees and crops</li> <li>• Amount disbursed for financial/rehabilitation assistance</li> <li>• Amount disbursed for training and capacity building</li> <li>• Fee paid to external monitoring team</li> </ul>
	Reestablishment of Community Resources	<ul style="list-style-type: none"> <li>• Number of community buildings repaired or replaced</li> <li>• Number of basic services such as electricity, water supply, roads, sanitation and drainage provided</li> </ul>

**Table 7.1.1 Internal Monitoring and Evaluation Indicators (2/2)**

Type	Indicator	Examples of Variables
<b>IMPACT INDICATOR</b>	Household Earning Capacity	<ul style="list-style-type: none"> <li>• Employment status of economically active members</li> <li>• Diversified opportunities available</li> <li>• Landholding size, area cultivated and production volume, by crop</li> <li>• Increased productivity</li> <li>• Changes to livestock ownership – pre- and post disturbance</li> <li>• Changes to income-earning activities (agriculture) – pre- and post disturbance</li> <li>• Changes to income-earning activities (off-farm) – pre- and post disturbance</li> <li>• Amount and balance of income and expenditure</li> </ul>
	Changes to Status of Women	<ul style="list-style-type: none"> <li>• Improved status in decision-making</li> <li>• Improved health</li> <li>• Participation in community-based programs</li> <li>• Participation in project/construction activities</li> <li>• Participation in income restoration/business enterprises</li> <li>• Diversified opportunities available</li> </ul>
	Changes to Status of Children	<ul style="list-style-type: none"> <li>• Improved school attendance rates (male/female)</li> <li>• Improved health</li> </ul>
	Settlement and Population	<ul style="list-style-type: none"> <li>• Growth in number and size of settlements</li> <li>• growth in market areas</li> <li>• Increased basic facilities (water, electricity, schools, health centers, roads)</li> <li>• Influx of illegal settlers/squatters</li> </ul>

**Table 8.1.1 Estimated Cost of Affected Land**

**MUNICIPALITY OF BOTOLAN**

	BRGY. PORAC		BRGY. CARAEL		BRGY. SAN JUAN		TOTAL	
	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area
Owner	5	2,480	1	19,000	3	5,000	9	26,480
Renter	5	1,999	0	-	6	27,429	11	29,428
Total Area	10	4,479	1	19,000	9	32,429	20	55,908
Cost/sq.m. (P)		300		750		125		1,175
Total Cost		1,343,700		14,250,000		6,662,500		34,807,300

**MUNICIPALITY OF SAN MARCELINO**

	BRGY. SAN RAFAEL		BRGY. RABANES			TOTAL	
	PAPs	Affected Area	PAPs	Affected Area		PAPs	Affected Area
Owner	0	-	1	19,000		1	19,000
Renter	0	-	0	-		-	-
Government	38	-	0	-		38	-
No data	1	-	0	-		1	-
	39	-		19,000		39	19,000

**MUNICIPALITY OF SAN FELIPE**

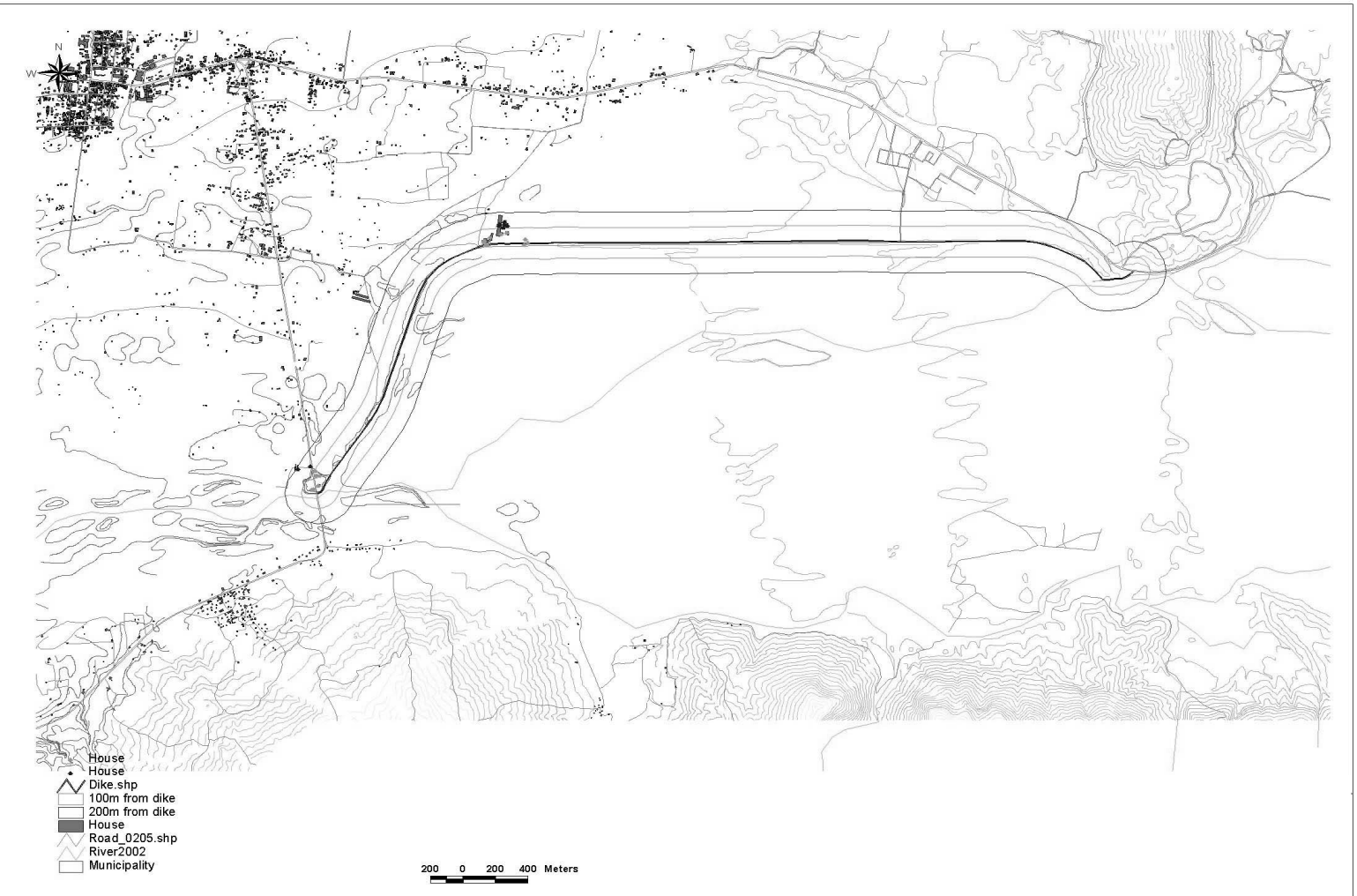
	BRGY. MANGLICMOT				TOTAL	
	PAPs	Affected Area			PAPs	Affected Area
Owner	1	19,000			1	9,000
Renter	0	-			-	-
Government	0	-			-	-
No data	0	-			-	-
	1	19,000			1	9,000

**MUNICIPALITY OF SAN NARCISO**

	BRGY. ALUSIUS		BRGY. PAITE		BRGY. SAN PASCUAL		TOTAL	
	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area	PAPs	Affected Area
Owner	1	-	1	-	3	-	5	-
Renter	3	-	9	-	1	-	13	-
Government	1	-	0	-	0	-	1	-
No data	1	-	0	-	0	-	1	-
	6	-	10	-	4	-	20	-

*The Study on Sabo and Flood Control for Western River Basins of Mount Pinatubo  
in the Republic of the Philippines  
Final Report  
Supporting Report*

## **Figures**



THE GOVERNMENT OF THE PHILIPPINES  
 THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS  
**The Study on Sabo and Flood Control for  
 Western River Basins of Mount Pinatubo  
 in the Republic of the Philippines**  
 JAPAN INTERNATIONAL COOPERATION AGENCY

**Figure 1.1.1**  
**Location Map of Project Affected Households  
 in the Buciao River Dike System**