

*The Study on Comprehensive Disaster Prevention  
around Mayon Volcano*

**SUPPORTING REPORT (2)**

*(Part II: Feasibility Study)*

**XXIV : Cost Estimate**

**SUPPORTING REPORT (2) - XXIV  
COST ESTIMATE**

**Table of Contents**

	<u>Page</u>
1. CONSTITUTION OF PROJECT COST .....	XXIV - 1
1.1 Construction Cost.....	XXIV - 1
1.2 Government Administration Cost .....	XXIV - 1
1.3 Engineering Services Cost .....	XXIV - 2
1.4 Land Acquisition Cost .....	XXIV - 2
1.5 Contingencies.....	XXIV - 2
2. CONDITION OF COST ESTIMATE .....	XXIV - 3
2.1 Basic Condition of Cost Estimate .....	XXIV - 3
2.2 Local and Foreign Currency Portions .....	XXIV - 4
3. COST ESTIMATE BY SUBPROJECT .....	XXIV - 5
3.1 Yawa River System Sabo Project.....	XXIV - 5
3.2 Legazpi City Urban Drainage Project.....	XXIV - 5
3.3 Forecasting and Warning System Strengthening Project.....	XXIV - 6
3.4 Evacuation System Strengthening Project.....	XXIV - 6
3.5 Resettlement Site Development Project.....	XXIV - 7
4. OPERATION AND MAINTENANCE COST ESTIMATE .....	XXIV - 7
4.1 Yawa River System Sabo Project.....	XXIV - 7
4.2 Legazpi City Urban Drainage Project.....	XXIV - 7
4.3 Forecasting and Warning System Strengthening Project.....	XXIV - 7
4.4 Evacuation System Strengthening Project.....	XXIV - 8
4.5 Resettlement Site Development Project.....	XXIV - 8
5. SUPPORTING PROGRAM FOR CAPABILITY BUILDING .....	XXIV - 8
6. SUMMARY OF ESTIMATED PROJECT COST .....	XXIV - 9
6.1 Total Project Cost.....	XXIV - 9
6.2 Disbursement Schedule.....	XXIV - 9

## List of Tables

	<u>Page</u>
Table XXIV 1.1 Breakdown of Administration .....	XXIV-10
Table XXIV 1.2 Breakdown of Engineering Services Cost .....	XXIV-11
Table XXIV 1.3 Assessment of Net Income/Lease Charge for Land Acquisition of Yawa River System Sabo Project .....	XXIV-14
Table XXIV 1.4 Calculation of PV (Present Value) during the period of 30 years for Land Acquisition .....	XXIV-15
Table XXIV 3.1 Breakdown of Construction Cost for Yawa River System Sabo Project .....	XXIV-16
Table XXIV 3.2 Breakdown of Construction Cost for Legazpi City Urban Drainage Project .....	XXIV-17
Table XXIV 3.3 Breakdown of Construction Cost for Forecasting and Warning System Strengthening Project .....	XXIV-18
Table XXIV 3.4 Breakdown of Construction Cost for Evacuation System Strengthening Project .....	XXIV-19
Table XXIV 3.5 Breakdown of Construction Cost for Resettlement Site Development Project .....	XXIV-20
Table XXIV 3.6 Breakdown of Water Supply System for Resettlement Site Development Project .....	XXIV-21
Table XXIV 3.7 Breakdown of Power Supply System for Resettlement Site Development Project .....	XXIV-22
Table XXIV 3.8 Breakdown of Community Facility for Resettlement Site Development Project .....	XXIV-23
Table XXIV 3.9 Breakdown of Road & Site Clearance for Resettlement Site Development Project .....	XXIV-25
Table XXIV 4.1 Breakdown of O/M for Yawa River System Sabo Project .....	XXIV-26
Table XXIV 4.2 Breakdown of O/M for Legazpi City Urban Drainage Project .....	XXIV-26
Table XXIV 4.3 Breakdown of O/M for Forecasting and Warning System Strengthening Project .....	XXIV-27
Table XXIV 4.4 Breakdown of O/M for Evacuation System Strengthening Project ..	XXIV-27
Table XXIV 4.5 Breakdown of O/M for Resettlement Site Development Project ....	XXIV-27
Table XXIV 5.1 Breakdown of Cost Estimate for Supporting Program .....	XXIV-28
Table XXIV 6.1 Annual Disbursement Schedule .....	XXIV-29

**SUPPORTING REPORT (2) - XXIV**  
**COST ESTIMATE**

**1. CONSTITUTION OF PROJECT COST**

Project cost comprises 1) Construction cost, 2) Government administration cost, 3) Engineering services cost, 4) Land acquisition cost, 5) Physical contingency, and 6) Price contingency. The components of each cost are given as follows:

**1.1 Construction Cost**

The construction cost is estimated by multiplying work quantity and unit price in principle, except for lump sum items such as preparatory works. The work quantity is estimated based on project layout, outline dimensions of structures, and proposed capacities of the facilities. The unit price of each work item is determined by referring to the unit price obtained from DPWH and the recent bidding data of similar projects in Philippines.

(1) Unit Price

The unit price is composed of two parts, 1) the direct cost consisting of the labor cost, material cost, and equipment expenses, 2) the indirect cost consisting of overhead expenses, unforeseen contingencies, miscellaneous expenses, and contractor's profit, pursuant to the Department Order (DPWH) No.30.

(2) Preparatory Works

The preparatory works cover the contractor's preparation works such as temporary buildings with water and power supply system, temporary access road to the sites, dewatering works, and relocation works of obstacles. The cost for preparatory works is estimated at 5% of the total construction cost.

**1.2 Government Administration Cost**

Government administration cost comprises mainly salary cost, equipment cost, and office running and maintenance cost. The cost is estimated based on the implementation schedule of each project. Breakdown of government administration cost for each project is given in Table XXIV 1.1.

### **1.3 Engineering Services Cost**

The engineering services cost comprises mainly remuneration, transportation cost, and office running cost. The cost is estimated based on the implementation schedule of each project. Breakdown of engineering services cost for each project is given in Table XXIV 1.2.

### **1.4 Land Acquisition Cost**

The cost covers the land acquisition of 1) the sand pocketing area including construction area of sabo dam and training dikes, and 2) the construction area of channel improvement and pump drainage.

For the urban drainage project, the cost is estimated by using the latest zonal land market value of affected area.

On the other hand, for the sand pocketing area, there seems to be no land market value in the area. Therefore, the cost is determined by the following manner:

- (1) Assessment of annual net income based on the productivity for each agricultural field, and calculation of present value during the period of 30 years for the annual net income.
- (2) Calculation of present value during the period of 30 years for lease charge for each agricultural field.
- (3) Selection of lower value by comparison of the above two present values.

The details of above assessment and calculation are given in Table XXIV 1.3 and 1.4, respectively. It should be noted that the cost for the sand pocketing area will be examined in detail in the implementation stage of the project.

### **1.5 Contingencies**

The contingencies required for the project budgeting comprise 1) physical contingency to cover unforeseen changes of physical conditions and 2) price contingency to compensate future price escalation.

The rates of physical contingency is estimated at 10% of the total cost for construction cost, government administration cost, engineering services cost, and land acquisition cost.

The price contingency is estimated with the assumed price escalation rate of 2.34% per annum for foreign currency portion and 7.85% per annum for local currency portion. The rate of 2.34% is derived from the latest projection of MUV (Manufacturing Unit Value in G-5 countries) during 1999 to 2005 indicated

by World Bank, while the rate of 7.85% is the average escalation rate of consumer prices during ten years in Philippines indicated by IMF.

## 2. **CONDITION OF COST ESTIMATE**

### 2.1 **Basic Condition of Cost Estimate**

The project cost is estimated with the following basic conditions and assumptions.

#### (1) Base Year

The cost estimate is based on the price level as of December 1999.

#### (2) Exchange Rates

Exchange rates used in the cost estimate are as follows:

US\$ 1.0 = PHP 40.0 = ¥105.0

#### (3) Value Added Tax

Value Added Tax (VAT) is not included in the cost estimate.

#### (4) Construction Schedule

The periods of detailed design, selection of contractor, and construction works for each project is summarized below.

**Summary of Implementation Schedule**

Project Name	(Unit: year)		
	Detailed Design	Selection of Contractor	Construction Works
1. Yawa River System Sabo Project	1.25	1.00	2.50
2. Legazpi City Urban Drainage Project	1.25	1.00	2.50
3. Forecasting and Warning System Strengthening Project	1.00	1.00	2.00
4. Evacuation System Strengthening Project	1.00	0.50	2.00
5. Resettlement Site Development Project	1.00	0.50	2.00

#### (5) Implementation Agency

The construction works for each project will be executed by the following implementation agency.

**Summary of Implementation Agency**

Project Name	Implementation
	Agency
1. Yawa River System Sabo Project	DPWH
2. Legazpi City Urban Drainage Project	DPWH
3. Forecasting and Warning System Strengthening Project	
Monitoring system of volcanic activities	PHIVOLCS
Monitoring system of flood and mud flow	DPWH
Warning system	OCD
Repeater station system	DPWH
Inter-agency disaster mitigation network	OCD
4. Evacuation System Strengthening Project	
Evacuation center	DPWH
Emergency shelter	LGUs
Livestock Sanctuary	LGUs
5. Resettlement Site Development Project	
Banquerohan	Legazpi
Anislag	Daraga

**2.2 Local and Foreign Currency Portions**

The cost estimate is made in local and foreign currency portions. The classification of local currency portion and foreign currency portion is as follows:

(1) Local Currency Portion

The local currency (L.C.) portion covers cost of all labor costs, locally available materials, inland transportation for materials to be imported, government administration, local consultant fee, land acquisition, and contingencies for local portion.

(2) Foreign Currency Portion

The foreign currency (F.C.) portion covers cost of materials and facilities to be imported, depreciation of construction equipment, foreign consultant fee, and contingencies for foreign portion.

### 3. COST ESTIMATE BY SUBPROJECT

#### 3.1 Yawa River System Sabo Project

The project cost is summarized below.

##### Project Cost for Yawa River System Sabo Project

(Unit: million PHP)

Description	F.C.	L.C.	Total
1. Construction Cost	164.4	547.9	712.3
2. Government Administration Cost	-	15.5	15.5
3. Engineering Services Cost	144.4	13.3	157.7
4. Land Acquisition	-	35.3	35.3
5. Physical Contingency	30.9	61.2	92.1
<b>Subtotal (1 - 5)</b>	<b>339.7</b>	<b>673.2</b>	<b>1,012.9</b>
6. Price Contingency	38.1	318.7	356.8
<b>Total</b>	<b>377.8</b>	<b>991.9</b>	<b>1,369.7</b>

Breakdown of the above construction cost is given in Table XXIV 3.1.

#### 3.2 Legazpi City Urban Drainage Project

The project cost is summarized below.

##### Project Cost for Legazpi City Urban Drainage Project

(Unit: million PHP)

Description	F.C.	L.C.	Total
1. Construction Cost	205.6	129.1	334.7
2. Government Administration Cost	-	10.6	10.6
3. Engineering Services Cost	62.2	8.7	70.9
4. Land Acquisition	-	15.7	15.7
5. Physical Contingency	26.8	16.4	43.2
<b>Subtotal (1 - 5)</b>	<b>294.6</b>	<b>180.5</b>	<b>475.1</b>
6. Price Contingency	35.4	83.4	118.8
<b>Total</b>	<b>330.0</b>	<b>263.9</b>	<b>593.9</b>

Breakdown of the above construction cost is given in Table XXIV 3.2.

### 3.3 Forecasting and Warning System Strengthening Project

The project cost is summarized below.

#### Project Cost for Forecasting and Warning System Strengthening Project

(Unit: million PHP)

Description	F.C.	L.C.	Total
1. Construction Cost	210.8	37.0	247.8
2. Government Administration Cost	-	9.8	9.8
3. Engineering Services Cost	51.7	7.3	59.0
4. Physical Contingency	26.3	5.4	31.7
<b>Subtotal (1 - 5)</b>	<b>288.8</b>	<b>59.5</b>	<b>348.3</b>
5. Price Contingency	33.8	25.3	59.1
<b>Total</b>	<b>322.6</b>	<b>84.8</b>	<b>407.4</b>

Breakdown of the above construction cost is given in Table XXIV 3.3.

### 3.4 Evacuation System Strengthening Project

The project cost is summarized below.

#### Project Cost for Evacuation System Strengthening Project

(Unit: million PHP)

Description	F.C.	L.C.	Total
1. Construction Cost	0.0	291.9	291.9
2. Government Administration Cost	-	9.1	9.1
3. Engineering Services Cost	34.4	6.2	40.6
4. Physical Contingency	3.4	30.7	34.1
<b>Subtotal (1 - 5)</b>	<b>37.8</b>	<b>337.9</b>	<b>375.7</b>
5. Price Contingency	3.3	127.4	130.7
<b>Total</b>	<b>41.1</b>	<b>465.3</b>	<b>506.4</b>

Breakdown of the above construction cost is given in Table XXIV 3.4.

### 3.5 Resettlement Site Development Project

The project cost is summarized below.

#### Project Cost for Resettlement Site Development Project

(Unit: million PHP)

Description	F.C.	L.C.	Total
1. Construction Cost	4.7	202.5	207.2
2. Government Administration Cost	-	9.1	9.1
3. Engineering Services Cost	37.3	6.3	43.6
4. Physical Contingency	4.2	21.8	26.0
<b>Subtotal (1 - 5)</b>	<b>46.2</b>	<b>239.7</b>	<b>285.9</b>
5. Price Contingency	4.0	90.0	94.0
<b>Total</b>	<b>50.2</b>	<b>329.7</b>	<b>379.9</b>

Breakdown of the above construction cost is given in Table XXIV 3.5. In addition, the breakdown of each lump sum item such as water supply system, power supply system, community facility and road network are given in Table XXIV 3.6 to 3.9 respectively.

## 4. OPERATION AND MAINTENANCE COST ESTIMATE

### 4.1 Yawa River System Sabo Project

The cost comprises common expenses for operation, maintenance of structures, and dredging works for sand pocket. The total cost is estimated at about 21.2 million PHP. Breakdown of the operation and maintenance cost is given in Table XXIV 4.1.

### 4.2 Legazpi City Urban Drainage Project

The cost comprises common expenses for operation and maintenance of structures. The total cost is estimated at about 3.2 million PHP. Breakdown of the operation and maintenance cost is given in Table XXIV 4.2.

### 4.3 Forecasting and Warning System Strengthening Project

The cost comprises common expenses for operation and maintenance of facilities. The total cost is estimated at about 25.9 million PHP. Breakdown of the operation and maintenance cost is given in Table XXIV 4.3.

#### 4.4 Evacuation System Strengthening Project

The cost comprises only maintenance cost of structures. The total cost is estimated at about 1.0 million PHP. Breakdown of the operation and maintenance cost is given in Table XXIV 4.4.

#### 4.5 Resettlement Site Development Project

The cost comprises only maintenance cost of structures. The total cost is estimated at about 0.7 million PHP. Breakdown of the operation and maintenance cost is given in Table XXIV 4.5.

### 5. SUPPORTING PROGRAM FOR CAPABILITY BUILDING

Among the eight supporting projects and programs described in Chapter XXIII, the following three supporting programs are designated as the components of capability building for cooperative members, Provincial Government staff, and City/Municipality and Barangay staff.

- (1) Organization and Strengthening of Multi-purpose Cooperatives with Micro-lending Components
- (2) Provincial Disaster Management System Strengthening
- (3) Community-based Disaster Management System Strengthening

The cost for capability building comprising of the above programs is summarized below.

**Cost for Capability Building**

Description	F.C.	L.C.	Total
(1) Organization and Strengthening of Multi-purpose Cooperatives with Micro-lending Components	130.4	6.0	136.4
(2) Provincial Disaster Management System Strengthening	130.4	67.2	197.6
(3) Community-based Disaster Management System Strengthening	34.3	8.8	43.1
Total	295.1	82.0	377.1

Breakdown of each of the above programs is given in Table XXIV 5.1.

## 6. SUMMARY OF ESTIMATED PROJECT COST

### 6.1 Total Project Cost

Total project cost for the priority projects with the supporting program is summarized below.

#### Summary of Project Cost

(Unit: million PHP)

Project Name	F.C.	L.C.	Total
1. Yawa River System Sabo Project	377.8	991.9	1,369.7
2. Legazpi City Urban Drainage Project	330.0	263.9	593.9
3. Forecasting and Warning System Strengthening Project	322.6	84.8	407.4
4. Evacuation System Strengthening Project	41.1	465.3	506.4
5. Resettlement Site Development Project	50.2	329.7	379.9
<b>Subtotal</b>	<b>1,121.7</b>	<b>2,135.6</b>	<b>3,257.3</b>
6. Supporting Program	295.1	82.0	377.1
<b>Total</b>	<b>1,416.8</b>	<b>2,217.6</b>	<b>3,634.4</b>

### 6.2 Disbursement Schedule

The following is the annual disbursement schedule of the priority projects during the period from 2000 to 2005 based on the implementation schedule of the priority Projects.

#### Annual Disbursement Schedule

(Unit: million PHP)

Year	Foreign Currency Portion	Local Currency Portion	Total
2000			
2001	110.4	28.2	138.6
2002	68.3	116.2	184.5
2003	217.1	643.6	860.7
2004	408.3	841.5	1,249.8
2005	317.6	506.1	823.7
<b>Total</b>	<b>1,121.7</b>	<b>2,135.6</b>	<b>3,257.3</b>

Detailed Annual Disbursement Schedule is given in Table XXIV 6.1.

**Table XXIV 1.1 Breakdown of Administration Cost**

Description	Unit	Quanti	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>Yawa River System Sabo Project</b>								
1) Salary cost								
- Detailed design stage, 5 staffs x 1.25 years	M/M	75	0	10,000	10,000	0.0	750.0	750.0
- Selection of Contractor, 7 staffs x 1 year	M/M	84	0	13,000	13,000	0.0	1,092.0	1,092.0
- Supervision stage, 15 staffs x 2.5 years	M/M	450	0	8,000	8,000	0.0	3,600.0	3,600.0
2) Equipment cost								
- Procurement of vehicle, 5 pick-ups (4 WD)	Unit	5	0	1,300,000	1,300,000	0.0	6,500.0	6,500.0
3) Office running and maintenance (30% of 1+2)	L.S.					0.0	3,582.6	3,582.6
<b>Total</b>						<b>0.0</b>	<b>15,524.6</b>	<b>15,524.6</b>
<b>Legazpi City Urban Drainage Project</b>								
1) Salary cost								
- Detailed design stage, 5 staffs x 1.25 years	M/M	75	0	10,000	10,000	0.0	750.0	750.0
- Selection of Contractor, 7 staffs x 1 year	M/M	84	0	13,000	13,000	0.0	1,092.0	1,092.0
- Supervision stage, 10 staffs x 2.5 years	M/M	300	0	8,000	8,000	0.0	2,400.0	2,400.0
2) Equipment cost								
- Procurement of vehicle, 3 pick-ups (4 WD)	Unit	3	0	1,300,000	1,300,000	0.0	3,900.0	3,900.0
3) Office running and maintenance (30% of 1+2)	L.S.					0.0	2,442.6	2,442.6
<b>Total</b>						<b>0.0</b>	<b>10,584.6</b>	<b>10,584.6</b>
<b>Forecasting and Warning System Strengthening Project</b>								
1) Salary cost								
- Detailed design stage, 5 staffs x 1 years	M/M	60	0	10,000	10,000	0.0	600.0	600.0
- Selection of Contractor, 7 staffs x 1 year	M/M	84	0	13,000	13,000	0.0	1,092.0	1,092.0
- Supervision stage, 10 staffs x 2 years	M/M	240	0	8,000	8,000	0.0	1,920.0	1,920.0
2) Equipment cost								
- Procurement of vehicle, 3 pick-ups (4 WD)	Unit	3	0	1,300,000	1,300,000	0.0	3,900.0	3,900.0
3) Office running and maintenance (30% of 1+2)	L.S.					0.0	2,253.6	2,253.6
<b>Total</b>						<b>0.0</b>	<b>9,765.6</b>	<b>9,765.6</b>
<b>Evacuation System Strengthening Project</b>								
1) Salary cost								
- Detailed design stage, 5 staffs x 1 years	M/M	60	0	10,000	10,000	0.0	600.0	600.0
- Selection of Contractor, 7 staffs x 0.5 year	M/M	42	0	13,000	13,000	0.0	546.0	546.0
- Supervision stage, 10 staffs x 2 years	M/M	240	0	8,000	8,000	0.0	1,920.0	1,920.0
2) Equipment cost								
- Procurement of vehicle, 3 pick-ups (4 WD)	Unit	3	0	1,300,000	1,300,000	0.0	3,900.0	3,900.0
3) Office running and maintenance (30% of 1+2)	L.S.					0.0	2,089.8	2,089.8
<b>Total</b>						<b>0.0</b>	<b>9,055.8</b>	<b>9,055.8</b>
<b>Resettlement Site Development Project</b>								
1) Salary cost								
- Detailed design stage, 5 staffs x 1 years	M/M	60	0	10,000	10,000	0.0	600.0	600.0
- Selection of Contractor, 7 staffs x 0.5 year	M/M	42	0	13,000	13,000	0.0	546.0	546.0
- Supervision stage, 10 staffs x 2 years	M/M	240	0	8,000	8,000	0.0	1,920.0	1,920.0
2) Equipment cost								
- Procurement of vehicle, 3 pick-ups (4 WD)	Unit	3	0	1,300,000	1,300,000	0.0	3,900.0	3,900.0
3) Office running and maintenance (30% of 1+2)	L.S.					0.0	2,089.8	2,089.8
<b>Total</b>						<b>0.0</b>	<b>9,055.8</b>	<b>9,055.8</b>

**Table XXIV 1.2 Breakdown of Engineering Services Cost (1/3)**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>Yawa River System Sabo Project</b>								
1. Detailed design stage								
1) Remuneration								
- Foreign expert	M/M	55	950,000	0	950,000	52,250.0	0.0	52,250.0
- Local expert	M/M	55	0	15,000	15,000	0.0	825.0	825.0
2) Transportation								
- International air fare	round	10	50,000	0	50,000	500.0	0.0	500.0
- Domestic air fare	round	10	0	1,500	1,500	0.0	15.0	15.0
- Vehicle rental charge, 3 units/day	unit/day	1,125	0	2,000	2,000	0.0	2,250.0	2,250.0
3) Office running cost (5% of 1))	L.S.					0.0	2,653.8	2,653.8
<b>Total of D/D Stage</b>						<b>52,750.0</b>	<b>5,743.8</b>	<b>58,493.8</b>
2. Construction supervision stage								
1) Remuneration								
- Foreign expert								
Project Manager	M/M	30	950,000	0	950,000	28,500.0	0.0	28,500.0
Deputy/ Design Engineer	M/M	30	950,000	0	950,000	28,500.0	0.0	28,500.0
Guidance Engineer (Civil)	M/M	30	950,000	0	950,000	28,500.0	0.0	28,500.0
Guidance Engineer (Const. Equipment)	M/M	6	950,000	0	950,000	5,700.0	0.0	5,700.0
2) Transportation								
- International air fare	round	8	50,000	0	50,000	400.0	0.0	400.0
- Domestic air fare	round	8	0	1,500	1,500	0.0	12.0	12.0
- Vehicle rental charge, 2 units/day	unit/day	1,500	0	2,000	2,000	0.0	3,000.0	3,000.0
3) Office running cost (5% of 1))	L.S.					0.0	4,560.0	4,560.0
<b>Total of S/V Stage</b>						<b>91,600.0</b>	<b>7,572.0</b>	<b>99,172.0</b>
<b>Grand Total</b>						<b>144,350.0</b>	<b>13,315.8</b>	<b>157,665.8</b>
<b>Legazpi City Urban Drainage Project</b>								
1. Detailed design stage								
1) Remuneration								
- Foreign expert	M/M	30	950,000	0	950,000	28,500.0	0.0	28,500.0
- Local expert	M/M	30	0	15,000	15,000	0.0	450.0	450.0
2) Transportation								
- International air fare	round	5	50,000	0	50,000	250.0	0.0	250.0
- Domestic air fare	round	5	0	1,500	1,500	0.0	7.5	7.5
- Vehicle rental charge, 2 units/day	unit/day	750	0	2,000	2,000	0.0	1,500.0	1,500.0
3) Office running cost (5% of 1))	L.S.					0.0	1,447.5	1,447.5
<b>Total of D/D Stage</b>						<b>28,750.0</b>	<b>3,405.0</b>	<b>32,155.0</b>
2. Construction supervision stage								
1) Remuneration								
- Foreign expert	M/M	35	950,000	0	950,000	33,250.0	0.0	33,250.0
- Local expert	M/M	40	0	15,000	15,000	0.0	600.0	600.0
2) Transportation								
- International air fare	round	3	50,000	0	50,000	150.0	0.0	150.0
- Domestic air fare	round	3	0	1,500	1,500	0.0	4.5	4.5
- Vehicle rental charge, 2 units/day	unit/day	1,500	0	2,000	2,000	0.0	3,000.0	3,000.0
3) Office running cost (5% of 1))	L.S.					0.0	1,692.5	1,692.5
<b>Total of S/V Stage</b>						<b>33,400.0</b>	<b>5,297.0</b>	<b>38,697.0</b>
<b>Grand Total</b>						<b>62,150.0</b>	<b>8,702.0</b>	<b>70,852.0</b>

**Table XXIV 1.2 Breakdown of Engineering Services Cost (2/3)**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>Forecasting and Warning System Strengthening Project</b>								
1. Detailed design stage								
1) Remuneration								
- Foreign expert	M/M	24	950,000	0	950,000	22,800.0	0.0	22,800.0
- Local expert	M/M	24	0	15,000	15,000	0.0	360.0	360.0
2) Transportation								
- International air fare	round	4	50,000	0	50,000	200.0	0.0	200.0
- Domestic air fare	round	4	0	1,500	1,500	0.0	6.0	6.0
- Vehicle rental charge, 2 units/day	unit/day	600	0	2,000	2,000	0.0	1,200.0	1,200.0
3) Office running cost (5% of 1))	L.S.					0.0	1,158.0	1,158.0
<b>Total of D/D Stage</b>						<b>23,000.0</b>	<b>2,724.0</b>	<b>25,724.0</b>
2. Construction supervision stage								
1) Remuneration								
- Foreign expert	M/M	30	950,000	0	950,000	28,500.0	0.0	28,500.0
- Local expert	M/M	50	0	15,000	15,000	0.0	750.0	750.0
2) Transportation								
- International air fare	round	3	50,000	0	50,000	150.0	0.0	150.0
- Domestic air fare	round	3	0	1,500	1,500	0.0	4.5	4.5
- Vehicle rental charge, 2 units/day	unit/day	1,200	0	2,000	2,000	0.0	2,400.0	2,400.0
3) Office running cost (5% of 1))	L.S.					0.0	1,462.5	1,462.5
<b>Total of S/V Stage</b>						<b>28,650.0</b>	<b>4,617.0</b>	<b>33,267.0</b>
<b>Grand Total</b>						<b>51,650.0</b>	<b>7,341.0</b>	<b>58,991.0</b>
<b>Evacuation System Strengthening Project</b>								
1. Detailed design stage								
1) Remuneration								
- Foreign expert	M/M	12	950,000	0	950,000	11,400.0	0.0	11,400.0
- Local expert	M/M	24	0	15,000	15,000	0.0	360.0	360.0
2) Transportation								
- International air fare	round	3	50,000	0	50,000	150.0	0.0	150.0
- Domestic air fare	round	3	0	1,500	1,500	0.0	4.5	4.5
- Vehicle rental charge, 2 units/day	unit/day	600	0	2,000	2,000	0.0	1,200.0	1,200.0
3) Office running cost (5% of 1))	L.S.					0.0	588.0	588.0
<b>Total of D/D Stage</b>						<b>11,550.0</b>	<b>2,152.5</b>	<b>13,702.5</b>
2. Construction supervision stage								
1) Remuneration								
- Foreign expert	M/M	24	950,000	0	950,000	22,800.0	0.0	22,800.0
- Local expert	M/M	30	0	15,000	15,000	0.0	450.0	450.0
2) Transportation								
- International air fare	round	2	50,000	0	50,000	100.0	0.0	100.0
- Domestic air fare	round	2	0	1,500	1,500	0.0	3.0	3.0
- Vehicle rental charge, 2 units/day	unit/day	1,200	0	2,000	2,000	0.0	2,400.0	2,400.0
3) Office running cost (5% of 1))	L.S.					0.0	1,162.5	1,162.5
<b>Total of S/V Stage</b>						<b>22,900.0</b>	<b>4,015.5</b>	<b>26,915.5</b>
<b>Grand Total</b>						<b>34,450.0</b>	<b>6,168.0</b>	<b>40,618.0</b>

**Table XXIV 1.2 Breakdown of Engineering Services Cost (3/3)**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>Resettlement Site Development Project</b>								
1. Detailed design stage								
1) Remuneration								
- Foreign expert	M/M	15	950,000	0	950,000	14,250.0	0.0	14,250.0
- Local expert	M/M	25	0	15,000	15,000	0.0	375.0	375.0
2) Transportation								
- International air fare	round	3	50,000	0	50,000	150.0	0.0	150.0
- Domestic air fare	round	3	0	1,500	1,500	0.0	4.5	4.5
- Vehicle rental charge, 2 units/day	unit/day	600	0	2,000	2,000	0.0	1,200.0	1,200.0
3) Office running cost (5% of 1))	L.S.					0.0	731.3	731.3
<b>Total of D/D Stage</b>						<b>14,400.0</b>	<b>2,310.8</b>	<b>16,710.8</b>
2. Construction supervision stage								
1) Remuneration								
- Foreign expert	M/M	24	950,000	0	950,000	22,800.0	0.0	22,800.0
- Local expert	M/M	30	0	15,000	15,000	0.0	450.0	450.0
2) Transportation								
- International air fare	round	2	50,000	0	50,000	100.0	0.0	100.0
- Domestic air fare	round	2	0	1,500	1,500	0.0	3.0	3.0
- Vehicle rental charge, 2 units/day	unit/day	1,200	0	2,000	2,000	0.0	2,400.0	2,400.0
3) Office running cost (5% of 1))	L.S.					0.0	1,162.5	1,162.5
<b>Total of S/V Stage</b>						<b>22,900.0</b>	<b>4,015.5</b>	<b>26,915.5</b>
<b>Grand Total</b>						<b>37,300.0</b>	<b>6,326.3</b>	<b>43,626.3</b>

**Table XXIV 1.3 Assessment of Net Income/ Lease Charge for Land Acquisition of Yawa River System Sabo Project**

LOCATION	RICE/LAND						RICE/COCAL		COCAL/ABACA		COCAL/HORT.		ABACA		HORTICULTURAL		TOTAL	
	IRRIGATED		NON-IRRIGATED		RICE/COCAL		COCAL/ABACA		COCAL/HORT.		ABACA		HORTICULTURAL		TOTAL			
	ha	PHP	ha	PHP	ha	PHP	ha	PHP	ha	PHP	ha	PHP	ha	PHP	ha	PHP		
<b>Sedimentation Basin No.1</b>																		
BOGNA, Legazpi City	15.9120	161,338	0.4860	4,928			49.2910	304,051	5.1000	33,463	25.8740	178,059			31.4730	568,291	128.1360	1,250,129
PAWA, Legazpi City	82.7370	838,904	4.2868	43,466	0.6058	3,737	2.2288	13,748			6.0708	41,778	0.6704	7,898	29.1108	525,638	93.3695	963,252
MABINIT, Legazpi City							59.5192	367,143									95.3712	942,457
RESERVATION (Included)																		
<b>Subtotal</b>	<b>98.6490</b>	<b>1,000,242</b>	<b>4.7728</b>	<b>48,393</b>	<b>0.6058</b>	<b>3,737</b>	<b>111.0390</b>	<b>684,942</b>	<b>5.1000</b>	<b>33,463</b>	<b>31.9448</b>	<b>219,836</b>	<b>0.6704</b>	<b>7,898</b>	<b>64.0949</b>	<b>1,157,327</b>	<b>316.8767</b>	<b>3,155,838</b>
<b>Sedimentation Basin No.2</b>																		
BUDIAO, Mun. of Daraga							55.1890	340,432									55.1890	340,432
SALVACION, Mun. of Daraga							9.6000	59,217			1.0000	6,882					10.6000	66,099
Mt-ISL, Mun. of Daraga							108.8000	671,131			0.9000	6,194					109.7000	677,324
<b>Subtotal</b>							<b>173.5890</b>	<b>1,070,780</b>			<b>1.9000</b>	<b>13,075</b>					<b>175.4890</b>	<b>1,083,856</b>
<b>Training Channel and Parallel Dikes</b>																		
BUDIAO, Mun. of Daraga	1.8550	18,809					4.0000	24,674									5.8550	43,483
MAIABOG, Mun. of Daraga	2.8000	28,390															2.8000	28,390
BUSAY, Mun. of Daraga	7.0000	70,976															7.0000	70,976
<b>Subtotal</b>	<b>11.6550</b>	<b>118,175</b>					<b>4.0000</b>	<b>24,674</b>									<b>15.6550</b>	<b>142,849</b>
<b>T O T A L</b>	<b>110.3040</b>	<b>1,118,416</b>	<b>4.7728</b>	<b>48,393</b>	<b>0.6058</b>	<b>3,737</b>	<b>288.6280</b>	<b>1,780,396</b>	<b>5.1000</b>	<b>33,463</b>	<b>33.8448</b>	<b>232,912</b>	<b>0.6704</b>	<b>7,898</b>	<b>64.0949</b>	<b>1,157,327</b>	<b>508.0207</b>	<b>4,382,542</b>

**2) Annual Lease Charge**

Total Area (ha) :	508.0207
Lease charge (PHP/ha/year) :	12,000
<b>Total Lease Charge (PHP) :</b>	<b>6,096,248</b>

**Table XXIV 1.4 Calculation of PV (Present Value) during the period  
of 30 years for Land Acquisition**

Period	Net Income (PHP/year)	Lease charge (PHP/year)
1	4,382,542	6,096,248
2	4,382,542	6,096,248
3	4,382,542	6,096,248
4	4,382,542	6,096,248
5	4,382,542	6,096,248
6	4,382,542	6,096,248
7	4,382,542	6,096,248
8	4,382,542	6,096,248
9	4,382,542	6,096,248
10	4,382,542	6,096,248
11	4,382,542	6,096,248
12	4,382,542	6,096,248
13	4,382,542	6,096,248
14	4,382,542	6,096,248
15	4,382,542	6,096,248
16	4,382,542	6,096,248
17	4,382,542	6,096,248
18	4,382,542	6,096,248
19	4,382,542	6,096,248
20	4,382,542	6,096,248
21	4,382,542	6,096,248
22	4,382,542	6,096,248
23	4,382,542	6,096,248
24	4,382,542	6,096,248
25	4,382,542	6,096,248
26	4,382,542	6,096,248
27	4,382,542	6,096,248
28	4,382,542	6,096,248
29	4,382,542	6,096,248
30	4,382,542	6,096,248
<b>PV</b>	<b>35,302,182</b>	<b>49,106,399</b>

**Table XXIV 3.1 Breakdown of Construction Cost for Yawa River System Sabo Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
1. Preparatory Works	%	5				7,147.8	23,821.3	30,969.1
2. Construction Works								
(1) Sand Pocketing Works								
1) Sabo dam								
Excavation	m <sup>3</sup>	98,175	72	48	120	7,068.6	4,712.4	11,781.0
Concrete facing	m <sup>3</sup>	30,120	450	2,050	2,500	13,554.0	61,746.0	75,300.0
Concrete, apron and vertical wall	m <sup>3</sup>	21,278	450	2,050	2,500	9,575.1	43,619.9	53,195.0
CSG	m <sup>3</sup>	72,400	72	328	400	5,212.8	23,747.2	28,960.0
2) Training dike, type A								
Excavation	m <sup>3</sup>	79,748	72	48	120	5,741.9	3,827.9	9,569.8
Gabion	m <sup>3</sup>	6,975	75	1,425	1,500	523.1	9,939.4	10,462.5
Concrete facing	m <sup>3</sup>	15,322	450	2,050	2,500	6,894.9	31,410.1	38,305.0
Boulder facing	m <sup>3</sup>	12,788	65	585	650	831.2	7,481.0	8,312.2
CSG	m <sup>3</sup>	151,125	72	328	400	10,881.0	49,569.0	60,450.0
3) Training dike, type B								
Excavation	m <sup>3</sup>	133,363	72	48	120	9,602.1	6,401.4	16,003.6
Embankment	m <sup>3</sup>	235,000	104	96	200	24,440.0	22,560.0	47,000.0
Gabion	m <sup>3</sup>	17,625	75	1,425	1,500	1,321.9	25,115.6	26,437.5
Coco fiber erosion control net with seed	m <sup>2</sup>	89,888	0	40	40	0.0	3,595.5	3,595.5
Concrete facing	m <sup>3</sup>	7,403	450	2,050	2,500	3,331.4	15,176.2	18,507.5
Boulder facing	m <sup>3</sup>	29,963	65	585	650	1,947.6	17,528.4	19,476.0
CSG	m <sup>3</sup>	207,388	72	328	400	14,931.9	68,023.3	82,955.2
4) Training dike, type C								
Excavation	m <sup>3</sup>	2,925	72	48	120	210.6	140.4	351.0
Embankment	m <sup>3</sup>	25,425	104	96	200	2,644.2	2,440.8	5,085.0
Gabion	m <sup>3</sup>	1,125	75	1,425	1,500	84.4	1,603.1	1,687.5
Coco fiber erosion control net with seed	m <sup>2</sup>	6,863	0	40	40	0.0	274.5	274.5
Boulder facing	m <sup>3</sup>	2,438	65	585	650	158.5	1,426.2	1,584.7
Subtotal (1)						118,955.1	400,338.3	519,293.4
(2) Channeling Works								
1) Training dike, CSG type								
Excavation	m <sup>3</sup>	137,775	72	48	120	9,919.8	6,613.2	16,533.0
Concrete facing	m <sup>3</sup>	4,125	450	2,050	2,500	1,856.3	8,456.3	10,312.5
Boulder facing	m <sup>3</sup>	27,638	65	585	650	1,796.5	16,168.2	17,964.7
CSG	m <sup>3</sup>	110,550	72	328	400	7,959.6	36,260.4	44,220.0
2) Training dike, general type								
Excavation	m <sup>3</sup>	21,525	72	48	120	1,549.8	1,033.2	2,583.0
Gabion	m <sup>3</sup>	2,775	75	1,425	1,500	208.1	3,954.4	4,162.5
Concrete, base	m <sup>3</sup>	833	450	2,050	2,500	374.9	1,707.7	2,082.5
Boulder facing	m <sup>3</sup>	2,563	65	585	650	166.6	1,499.4	1,666.0
Cobble stone filling	m <sup>3</sup>	1,883	90	210	300	169.5	395.4	564.9
Subtotal (2)						24,001.0	76,088.1	100,089.1
Total (1+2)						142,956.1	476,426.4	619,382.5
3. Miscellaneous Works	%	10				14,295.6	47,642.6	61,938.2
<b>Total Construction Cost</b>						<b>164,399.5</b>	<b>547,890.3</b>	<b>712,289.8</b>

**Table XXIV.3.2 Breakdown of Construction Cost for Legazpi City Urban Drainage Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
1. Preparatory Works	%	5				8,940.6	5,611.4	14,551.9
2. Construction Works								
(1) Macabalo River								
1) River Improvement								
Excavation	m <sup>3</sup>	36,400	72	48	120	2,620.8	1,747.2	4,368.0
Embankment	m <sup>3</sup>	4,840	104	96	200	503.4	464.6	968.0
Riprapping	m <sup>2</sup>	23,750	33	297	330	783.8	7,053.8	7,837.5
2) Pump Drainage								
Embankment	m <sup>3</sup>	16,000	104	96	200	1,664.0	1,536.0	3,200.0
Reinforced concrete	m <sup>3</sup>	6,700	450	4,550	5,000	3,015.0	30,485.0	33,500.0
RC pile	m	3,900	160	1,440	1,600	624.0	5,616.0	6,240.0
Horizontal shaft pump, Q=3.0m <sup>3</sup> /s	set	2	6,120,000	1,080,000	7,200,000	12,240.0	2,160.0	14,400.0
Horizontal shaft pump, Q=2.0m <sup>3</sup> /s	set	2	4,080,000	720,000	4,800,000	8,160.0	1,440.0	9,600.0
Diesel engine, 325ps - 1,000rpm	set	4	5,100,000	900,000	6,000,000	20,400.0	3,600.0	24,000.0
Mechanical rake	set	1	17,000,000	3,000,000	20,000,000	17,000.0	3,000.0	20,000.0
Electrical facilities for auxiliary	L.S.	1	-	-	-	3,570.0	630.0	4,200.0
Diesel engine for auxiliary equipment	set	2	1,275,000	225,000	1,500,000	2,550.0	450.0	3,000.0
Auxiliary pump and auxiliary facilities	L.S.	1	-	-	-	1,487.5	262.5	1,750.0
Cable and miscellaneous materials	L.S.	1	-	-	-	2,380.0	420.0	2,800.0
Control panel	set	1	1,700,000	300,000	2,000,000	1,700.0	300.0	2,000.0
Day oil tank, 2.0 ton	ton	2.0	212,500	37,500	250,000	425.0	75.0	500.0
Track crane, 20 ton class	set	1	4,335,000	765,000	5,100,000	4,335.0	765.0	5,100.0
Flood Gate	set	5	4,087,650	721,350	4,809,000	20,438.3	3,606.8	24,045.0
3) Retention Pond								
Excavation	m <sup>3</sup>	434,413	72	48	120	31,277.7	20,851.8	52,129.6
Embankment	m <sup>3</sup>	5,127	104	96	200	533.2	492.2	1,025.4
Riprapping	m <sup>2</sup>	3,198	33	297	330	105.5	949.8	1,055.3
Subtotal (1)						135,813.1	85,905.7	221,718.8
(2) Tibu River								
1) River Improvement								
Excavation	m <sup>3</sup>	1,503	72	48	120	108.2	72.1	180.4
Embankment	m <sup>3</sup>	437	104	96	200	45.4	42.0	87.4
Riprapping	m <sup>2</sup>	9,178	33	297	330	302.9	2,725.9	3,028.7
2) Pump Drainage								
Embankment	m <sup>3</sup>	4,600	104	96	200	478.4	441.6	920.0
Reinforced concrete	m <sup>3</sup>	3,200	450	4,550	5,000	1,440.0	14,560.0	16,000.0
RC pile	m	560	160	1,440	1,600	89.6	806.4	896.0
Submersible pump, Q=0.5m <sup>3</sup> /s	set	2	637,500	112,500	750,000	1,275.0	225.0	1,500.0
Mechanical rake	set	1	12,920,000	2,280,000	15,200,000	12,920.0	2,280.0	15,200.0
Low-tension distribution panel	set	3	714,000	126,000	840,000	2,142.0	378.0	2,520.0
Auxiliary pump and auxiliary facilities	L.S.	1	-	-	-	255.0	45.0	300.0
Cable and miscellaneous materials	L.S.	1	-	-	-	1,275.0	225.0	1,500.0
Diesel generator, 250kVA	set	1	2,720,000	480,000	3,200,000	2,720.0	480.0	3,200.0
Control panel	set	1	1,530,000	270,000	1,800,000	1,530.0	270.0	1,800.0
Day oil tank, 1.5 ton	ton	1.5	212,500	37,500	250,000	318.8	56.3	375.0
Track crane, 20 ton class	set	1	4,335,000	765,000	5,100,000	4,335.0	765.0	5,100.0
Flood Gate	set	3	4,255,100	750,900	5,006,000	12,765.3	2,252.7	15,018.0
3) Retention Pond								
Excavation	m <sup>3</sup>	13,576	72	48	120	977.5	651.6	1,629.1
Embankment	m <sup>3</sup>	161	104	96	200	16.7	15.5	32.2
Riprapping	m <sup>2</sup>	100	33	297	330	3.3	29.7	33.0
Subtotal (2)						42,998.1	26,321.7	69,319.8
Total (1+2)						178,811.2	112,227.4	291,038.6
3. Miscellaneous Works	%	10				17,881.1	11,222.7	29,103.9
<b>Total Construction Cost</b>						<b>205,632.9</b>	<b>129,061.5</b>	<b>334,694.4</b>

**Table XXIV 3.3 Breakdown of Construction Cost for Forecasting and Warning System Strengthening Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (Million PHP)		
			FC	LC	Total	FC	LC	Total
1. Preparatory Works	%	5				9.6	1.7	11.3
2. Construction Works								
(1) Monitoring system of volcanic eruption								
1) Seismograph system	L.S.					6.8	1.2	8.0
2) GPS system	L.S.					8.5	1.5	10.0
3) Gas collector facility	L.S.					3.4	0.6	4.0
4) Analysis software	L.S.					12.8	2.2	15.0
Subtotal (1)						31.5	5.5	37.0
(2) Monitoring system of flood and mud flow								
1) Rainfall gauge	L.S.					21.9	3.9	25.8
2) Water level gauge	L.S.					9.8	1.7	11.5
3) Telemeter	L.S.					13.0	2.3	15.3
4) Data Processing	L.S.					0.6	0.1	0.7
5) Power supply	L.S.					12.8	2.2	15.0
6) Analysis software	L.S.					22.1	3.9	26.0
Subtotal (2)						80.2	14.1	94.3
(3) Warning system								
1) Siren station and control system	L.S.					45.9	8.1	54.0
2) Power supply	L.S.					3.4	0.6	4.0
3) Cellular phone	L.S.					1.1	0.2	1.3
Subtotal (3)						50.4	8.9	59.3
(4) Repeater station system								
1) Repeater station	L.S.					5.1	0.9	6.0
2) Power supply	L.S.					1.1	0.2	1.3
Subtotal (4)						6.2	1.1	7.3
(5) Inter agency disaster mitigation network								
1) Server and cable	L.S.					10.2	1.8	12.0
2) Hard disk	L.S.					2.0	0.3	2.3
3) Other required equipment	L.S.					2.0	0.3	2.3
4) Software	L.S.					9.1	1.6	10.7
Subtotal (5)						23.3	4.0	27.3
Total (1 -5)						191.6	33.6	225.2
3. Miscellaneous Works	%	5				9.6	1.7	11.3
<b>Total Construction Cost</b>						<b>210.8</b>	<b>37.0</b>	<b>247.8</b>

**Table XXIV 3.4 Breakdown of Construction Cost for Evacuation System Strengthening Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (Million PHP)		
			FC	LC	Total	FC	LC	Total
1. Preparatory Works	%	5				0.0	12.7	12.7
2. Construction Works								
(1) Evacuation center								
1) Extension of evacuation center	L.S.					0.0	225.3	225.3
2) Installation of water supply facility	L.S.					0.0	0.6	0.6
3) Installation of toilet facility	L.S.					0.0	0.9	0.9
Subtotal (1)						0.0	226.8	226.8
(2) Emergency shelter								
1) Shelter	L.S.					0.0	7.0	7.0
2) Supplementary facility	L.S.					0.0	2.7	2.7
Subtotal (2)						0.0	9.7	9.7
(3) Live stock sanctuary								
1) Shelter	L.S.					0.0	7.0	7.0
2) Supplementary facility	L.S.					0.0	0.3	0.3
Subtotal (3)						0.0	7.3	7.3
(4) Improvement of existing evacuation road	L.S.					0.0	10.0	10.0
Total (1 -4)						0.0	253.8	253.8
3. Miscellaneous Works	%	10				0.0	25.4	25.4
<b>Total Construction Cost</b>						<b>0.0</b>	<b>291.9</b>	<b>291.9</b>

**Table XXIV 3.5 Breakdown of Construction Cost for Resettlement Site Development Project**

Description	Unit	Quantity	Unit Price (1,000 PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
1. Preparatory Works	%	5				202.9	8,805.4	9,008.2
2. Construction Works								
(1) Banquerohan Phase I								
Road Network (Rehabilitation)	L.S.					121.0	80.6	201.6
Water Supply System	L.S.					0.0	5,011.4	5,011.4
Sanitary System	unit	474	0.0	17.70	17.70	0.0	8,389.8	8,389.8
Drainage System	m	8,000	0.0	0.07	0.07	0.0	560.0	560.0
Primary School	unit	1	0.0	2,870.0	2,870.0	0.0	2,870.0	2,870.0
Core housing Units	unit	96	0.0	106.8	106.8	0.0	10,250.9	10,250.9
Access Road	L.S.					1,860.0	12,264.0	14,124.0
Subtotal (1)						1,981.0	39,426.7	41,407.7
(2) Banquerohan Phase II								
Water Supply System	L.S.					0.0	4,939.0	4,939.0
Sanitary System (Rehabilitation)	unit	460	0.0	0.84	0.84	0.0	386.4	386.4
Drainage System (Rehabilitation)	m	6,700	0.0	0.07	0.07	0.0	469.0	469.0
Multi-purpose Hall	unit	1	0.0	446.4	446.4	0.0	446.4	446.4
Warehouse	unit	1	0.0	1,418.5	1,418.5	0.0	1,418.5	1,418.5
Productivity Center	unit	1	0.0	690.8	690.8	0.0	690.8	690.8
Power Supply System	L.S.					86.5	4,849.3	4,935.8
Core housing Units	unit	460	0.0	106.8	106.8	0.0	49,118.8	49,118.8
Roads	L.S.					533.6	355.8	889.4
Pathwalks	L.S.					44.0	29.3	73.3
Site Clearing	L.S.					16.9	11.3	28.2
Subtotal (2)						681.1	62,714.6	63,395.6
(3) Anislag								
Water Supply System	L.S.					0.0	4,263.7	4,263.7
Multi-purpose Hall	unit	1	0.0	446.4	446.4	0.0	446.4	446.4
Warehouse	unit	1	0.0	1,418.5	1,418.5	0.0	1,418.5	1,418.5
Productivity Center	unit	1	0.0	690.8	690.8	0.0	690.8	690.8
Health & Day Care Center	unit	1	0.0	451.7	451.7	0.0	451.7	451.7
Primary School	unit	1	0.0	2,870.0	2,870.0	0.0	2,870.0	2,870.0
Chapel	unit	1	0.0	703.4	703.4	0.0	703.4	703.4
Core Housing Units	unit	505	0.0	106.8	106.8	0.0	53,923.9	53,923.9
Access Road	L.S.					1,395.0	9,198.0	10,593.0
Subtotal (3)						1,395.0	73,966.4	75,361.4
Total (1+2+3)						4,057.0	176,107.7	180,164.7
3. Miscellaneous Works	%	10				405.7	17,610.8	18,016.5
<b>Total Construction Cost</b>						<b>4,665.6</b>	<b>202,523.9</b>	<b>207,189.4</b>

**Table XXIV 3.6 Breakdown of Water Supply System for Resettlement Site Development Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>(1) Banquerohan Phase I</b>								
Excavation	m <sup>3</sup>	820	0	120	120	0.0	98.4	98.4
Backfilling	m <sup>3</sup>	570	0	200	200	0.0	114.0	114.0
Elevated water steel tank, 10,000 gal.	unit	2	0	540,000	540,000	0.0	1,080.0	1,080.0
Pump, 5 HP Jetmatic Type	unit	2	0	91,200	91,200	0.0	182.4	182.4
Deep well drilling	unit	2	0	300,000	300,000	0.0	600.0	600.0
PVC pipe line, dia.=100 mm	m	1,381	0	897	897	0.0	1,238.8	1,238.8
PVC pipe line, dia.=75 mm	m	885	0	728	728	0.0	644.3	644.3
PVC pipe line, dia.=50 mm	m	1,080	0	658	658	0.0	710.6	710.6
Cast iron fittings	pcs.	25	0	4,200	4,200	0.0	105.0	105.0
Gate valve	pcs.	14	0	8,383	8,383	0.0	117.4	117.4
Air release assembly	set	2	0	5,472	5,472	0.0	10.9	10.9
Blow-off assembly	set	1	0	12,907	12,907	0.0	12.9	12.9
Communal faucet	unit	65	0	1,488	1,488	0.0	96.7	96.7
<b>Total of (1)</b>						<b>0.0</b>	<b>5,011.4</b>	<b>5,011.4</b>
<b>(2) Banquerohan Phase II</b>								
Excavation	m <sup>3</sup>	800	0	120	120	0.0	96.0	96.0
Backfilling	m <sup>3</sup>	560	0	200	200	0.0	112.0	112.0
Elevated water steel tank, 10,000 gal.	unit	2	0	540,000	540,000	0.0	1,080.0	1,080.0
Pump, 5 HP Jetmatic Type	unit	2	0	91,200	91,200	0.0	182.4	182.4
Deep well drilling	unit	2	0	300,000	300,000	0.0	600.0	600.0
PVC pipe line, dia.=100 mm	m	1,395	0	897	897	0.0	1,251.3	1,251.3
PVC pipe line, dia.=75 mm	m	1,195	0	728	728	0.0	870.0	870.0
PVC pipe line, dia.=50 mm	m	735	0	658	658	0.0	483.6	483.6
Cast iron fittings	pcs.	15	0	4,200	4,200	0.0	63.0	63.0
Gate valve	pcs.	14	0	8,383	8,383	0.0	117.4	117.4
Air release assembly	set	2	0	5,472	5,472	0.0	10.9	10.9
Blow-off assembly	set	1	0	12,907	12,907	0.0	12.9	12.9
Communal faucet	unit	40	0	1,488	1,488	0.0	59.5	59.5
<b>Total of (2)</b>						<b>0.0</b>	<b>4,939.0</b>	<b>4,939.0</b>
<b>(3) Anislag</b>								
Excavation	m <sup>3</sup>	640	0	120	120	0.0	76.8	76.8
Backfilling	m <sup>3</sup>	450	0	200	200	0.0	90.0	90.0
Elevated water steel tank, 10,000 gal.	unit	2	0	540,000	540,000	0.0	1,080.0	1,080.0
Pump, 5 HP Jetmatic Type	unit	2	0	91,200	91,200	0.0	182.4	182.4
Deep well drilling	unit	2	0	300,000	300,000	0.0	600.0	600.0
PVC pipe line, dia.=100 mm	m	650	0	897	897	0.0	583.1	583.1
PVC pipe line, dia.=75 mm	m	775	0	728	728	0.0	564.2	564.2
PVC pipe line, dia.=50 mm	m	1,210	0	658	658	0.0	796.2	796.2
Cast iron fittings	pcs.	17	0	4,200	4,200	0.0	71.4	71.4
Gate valve	pcs.	12	0	8,383	8,383	0.0	100.6	100.6
Air release assembly	set	2	0	5,472	5,472	0.0	10.9	10.9
Blow-off assembly	set	1	0	12,907	12,907	0.0	12.9	12.9
Communal faucet	unit	64	0	1,488	1,488	0.0	95.2	95.2
<b>Total of (3)</b>						<b>0.0</b>	<b>4,263.7</b>	<b>4,263.7</b>

**Table XXIV 3.7 Breakdown of Power Supply System for Resettlement Site Development Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
(1) Banquerohan Phase II								
Creosoted WD Poles, 10.5m, 9.15m,7.6m	L.S.	1				24.7	1,264.4	1,289.1
Wires and Cables	L.S.	1				16.2	1,129.4	1,145.6
Wire accessories	L.S.	1				11.4	708.5	719.9
Pole Accessories	L.S.	1				16.2	506.3	522.5
Transformer and Mounting Hardware	L.S.	1				18.0	1,240.7	1,258.7
<b>Total</b>						<b>86.5</b>	<b>4,849.3</b>	<b>4,935.8</b>

**Table XXIV 3.8 Breakdown of Community Facility for Resettlement Site Development Project (1/2)**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>(1) School Building</b>								
Excavation	m <sup>3</sup>	56	0	120	120	0.0	6.7	6.7
Concete	m <sup>3</sup>	120	0	3,500	3,500	0.0	420.0	420.0
Reinforcing bars	kg	6,200	0	25	25	0.0	155.0	155.0
Masonry	m <sup>2</sup>	620	0	780	780	0.0	483.6	483.6
Trusses	m <sup>2</sup>	530	0	780	780	0.0	413.4	413.4
Roofing	m <sup>2</sup>	530	0	480	480	0.0	254.4	254.4
Electrical	lot	1	0	150,000	150,000	0.0	150.0	150.0
Plumbing	lot	1	0	60,000	60,000	0.0	60.0	60.0
Ceiling works	m <sup>2</sup>	530	0	780	780	0.0	413.4	413.4
Painting works	lot	1	0	120,000	120,000	0.0	120.0	120.0
Tile works	m <sup>2</sup>	62	0	1,440	1,440	0.0	89.3	89.3
Doors	set	9	0	4,200	4,200	0.0	37.8	37.8
Windows	set	28	0	7,800	7,800	0.0	218.4	218.4
Plubing	set	5	0	3,600	3,600	0.0	18.0	18.0
Electrical	lot	1	0	30,000	30,000	0.0	30.0	30.0
<b>Total of (1)</b>						<b>0.0</b>	<b>2,870.0</b>	<b>2,870.0</b>
<b>(2) Productivity Center</b>								
Excavation	m <sup>3</sup>	10	0	120	120	0.0	1.2	1.2
Concete	m <sup>3</sup>	20	0	3,500	3,500	0.0	70.0	70.0
Reinforcing bars	kg	1,100	0	25	25	0.0	27.5	27.5
Masonry	m <sup>2</sup>	147	0	780	780	0.0	114.7	114.7
Trusses	m <sup>2</sup>	136	0	780	780	0.0	106.1	106.1
Roofing	m <sup>2</sup>	136	0	480	480	0.0	65.3	65.3
Electrical	lot	1	0	9,000	9,000	0.0	9.0	9.0
Plumbing	lot	1	0	18,000	18,000	0.0	18.0	18.0
Ceiling works	m <sup>2</sup>	136	0	780	780	0.0	106.1	106.1
Painting works	lot	1	0	48,000	48,000	0.0	48.0	48.0
Tile works	m <sup>2</sup>	26	0	1,440	1,440	0.0	37.4	37.4
Doors	set	4	0	4,200	4,200	0.0	16.8	16.8
Windows	set	11	0	4,200	4,200	0.0	46.2	46.2
Plubing	set	6	0	3,600	3,600	0.0	21.6	21.6
Electrical	lot	1	0	3,000	3,000	0.0	3.0	3.0
<b>Total of (2)</b>						<b>0.0</b>	<b>690.8</b>	<b>690.8</b>
<b>(3) Core Housing Units</b>								
Excavation	m <sup>3</sup>	2	0	120	120	0.0	0.2	0.2
Concete	m <sup>3</sup>	4	0	3,500	3,500	0.0	14.0	14.0
Reinforcing bars	kg	140	0	25	25	0.0	3.5	3.5
Masonry	m <sup>2</sup>	58	0	780	780	0.0	45.2	45.2
Trusses	m <sup>2</sup>	30	0	540	540	0.0	16.2	16.2
Roofing	m <sup>2</sup>	30	0	340	340	0.0	10.2	10.2
Electrical	lot	1	0	1,800	1,800	0.0	1.8	1.8
Plumbing	lot	1	0	3,000	3,000	0.0	3.0	3.0
Doors	set	2	0	1,800	1,800	0.0	3.6	3.6
Windows	set	4	0	1,800	1,800	0.0	7.2	7.2
Plubing	set	1	0	600	600	0.0	0.6	0.6
Electrical	lot	1	0	1,200	1,200	0.0	1.2	1.2
<b>Total of (3)</b>						<b>0.0</b>	<b>106.8</b>	<b>106.8</b>

**Table XXIV 3.8 Breakdown of Community Facility for Resettlement Site Development Project (2/2)**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>(4) Warehouse</b>								
Excavation	m <sup>3</sup>	30	0	120	120	0.0	3.6	3.6
Concete	m <sup>3</sup>	66	0	3,500	3,500	0.0	231.0	231.0
Reinforcing bars	kg	3,540	0	25	25	0.0	88.5	88.5
Masonry	m <sup>2</sup>	580	0	780	780	0.0	452.4	452.4
Trusses	m <sup>2</sup>	426	0	780	780	0.0	332.3	332.3
Roofing	m <sup>2</sup>	426	0	480	480	0.0	204.5	204.5
Electrical	lot	1	0	36,000	36,000	0.0	36.0	36.0
Doors	set	4	0	7,800	7,800	0.0	31.2	31.2
Windows	set	9	0	4,200	4,200	0.0	37.8	37.8
Electrical	lot	1	0	1,200	1,200	0.0	1.2	1.2
<i>Total of (4)</i>						<b>0.0</b>	<b>1,418.5</b>	<b>1,418.5</b>
<b>(5) Multi-purpose Hall</b>								
Excavation	m <sup>3</sup>	6	0	120	120	0.0	0.7	0.7
Concete	m <sup>3</sup>	11	0	3,500	3,500	0.0	38.5	38.5
Reinforcing bars	kg	590	0	25	25	0.0	14.8	14.8
Masonry	m <sup>2</sup>	70	0	780	780	0.0	54.6	54.6
Trusses	m <sup>2</sup>	89	0	780	780	0.0	69.4	69.4
Roofing	m <sup>2</sup>	89	0	480	480	0.0	42.7	42.7
Electrical	lot	1	0	9,000	9,000	0.0	9.0	9.0
Plumbing	lot	1	0	14,400	14,400	0.0	14.4	14.4
Ceiling works	m <sup>2</sup>	89	0	780	780	0.0	69.4	69.4
Painting works	lot	1	0	42,000	42,000	0.0	42.0	42.0
Tile works	m <sup>2</sup>	21	0	1,440	1,440	0.0	30.2	30.2
Doors	set	4	0	4,200	4,200	0.0	16.8	16.8
Windows	set	8	0	3,600	3,600	0.0	28.8	28.8
Plubing	set	4	0	3,000	3,000	0.0	12.0	12.0
Electrical	lot	1	0	3,000	3,000	0.0	3.0	3.0
<i>Total of (5)</i>						<b>0.0</b>	<b>446.4</b>	<b>446.4</b>
<b>(6) Health &amp; Day Care Center</b>								
Excavation	m <sup>3</sup>	6	0	120	120	0.0	0.7	0.7
Concete	m <sup>3</sup>	12	0	3,500	3,500	0.0	42.0	42.0
Reinforcing bars	kg	650	0	25	25	0.0	16.3	16.3
Masonry	m <sup>2</sup>	70	0	780	780	0.0	54.6	54.6
Trusses	m <sup>2</sup>	98	0	780	780	0.0	76.4	76.4
Roofing	m <sup>2</sup>	98	0	480	480	0.0	47.0	47.0
Electrical	lot	1	0	9,000	9,000	0.0	9.0	9.0
Plumbing	lot	1	0	14,400	14,400	0.0	14.4	14.4
Ceiling works	m <sup>2</sup>	98	0	780	780	0.0	76.4	76.4
Painting works	lot	1	0	42,000	42,000	0.0	42.0	42.0
Tile works	m <sup>2</sup>	11	0	1,440	1,440	0.0	15.8	15.8
Doors	set	3	0	4,200	4,200	0.0	12.6	12.6
Windows	set	9	0	3,600	3,600	0.0	32.4	32.4
Plubing	set	3	0	3,000	3,000	0.0	9.0	9.0
Electrical	lot	1	0	3,000	3,000	0.0	3.0	3.0
<i>Total of (6)</i>						<b>0.0</b>	<b>451.7</b>	<b>451.7</b>
<b>(7) Chapel</b>								
Excavation	m <sup>3</sup>	18	0	120	120	0.0	2.2	2.2
Concete	m <sup>3</sup>	44	0	3,500	3,500	0.0	154.0	154.0
Reinforcing bars	kg	2,366	0	25	25	0.0	59.2	59.2
Masonry	m <sup>2</sup>	145	0	780	780	0.0	113.1	113.1
Trusses	m <sup>2</sup>	270	0	780	780	0.0	210.6	210.6
Roofing	m <sup>2</sup>	270	0	480	480	0.0	129.6	129.6
Electrical	lot	1	0	18,000	18,000	0.0	18.0	18.0
Doors	set	2	0	5,400	5,400	0.0	10.8	10.8
Electrical	lot	1	0	6,000	6,000	0.0	6.0	6.0
<i>Total of (7)</i>						<b>0.0</b>	<b>703.4</b>	<b>703.4</b>

**Table XXIV 3.9 Breakdown of Road & Site Clearance for Resettlement Site Development Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>(1) Banquerohan Phase I</b>								
1) Access Road (L = 2 km)								
a) Drainage								
Open canal	m	2,000	0	512	512	0.0	1,024.0	1,024.0
Trench excavation	m <sup>3</sup>	600	120	80	200	72.0	48.0	120.0
b) Right-of-way clearing								
Site clearing	m <sup>2</sup>	20,000	3	2	5	60.0	40.0	100.0
Subgrade preparation	m <sup>2</sup>	20,000	5	3	8	96.0	64.0	160.0
Base course preparation	m <sup>3</sup>	3,000	144	96	240	432.0	288.0	720.0
Concrete pavement, 230mm thickness	m <sup>2</sup>	20,000	60	540	600	1,200.0	10,800.0	12,000.0
<b>Total of 1)</b>						<b>1,860.0</b>	<b>12,264.0</b>	<b>14,124.0</b>
2) Rehabilitation of Road Network								
a) Major Road (10m & 6.5m roads)								
Subgrade preparation	m <sup>2</sup>	12,100	5	3	8	58.1	38.7	96.8
b) Pathwalk & Alleys								
Subgrade preparation	m <sup>2</sup>	13,100	5	3	8	62.9	41.9	104.8
<b>Total of 2)</b>						<b>121.0</b>	<b>80.6</b>	<b>201.6</b>
<b>(2) Banquerohan Phase II</b>								
1) Major Road								
Subgrade preparation	m <sup>2</sup>	20,215	5	3	8	97.0	64.7	161.7
Base course preparation	m <sup>3</sup>	3,032	144	96	240	436.6	291.1	727.7
<b>Total of 1)</b>						<b>533.6</b>	<b>355.8</b>	<b>889.4</b>
2) Pathwalk								
Site clearing	m <sup>2</sup>	5,640	3	2	5	16.9	11.3	28.2
Subgrade preparation	m <sup>2</sup>	5,640	5	3	8	27.1	18.0	45.1
<b>Total of 2)</b>						<b>44.0</b>	<b>29.3</b>	<b>73.3</b>
3) Site Clearing								
	m <sup>2</sup>	5,640	3	2	5	16.9	11.3	28.2
<b>Total of 3)</b>						<b>16.9</b>	<b>11.3</b>	<b>28.2</b>
<b>(3) Anislag</b>								
1) Access Road (L = 1.5 km)								
a) Drainage								
Open canal	m	1,500	0	512	512	0.0	768.0	768.0
Trench excavation	m <sup>3</sup>	450	120	80	200	54.0	36.0	90.0
b) Right-of-way clearing								
Site clearing	m <sup>2</sup>	15,000	3	2	5	45.0	30.0	75.0
Subgrade preparation	m <sup>2</sup>	15,000	5	3	8	72.0	48.0	120.0
Base course preparation	m <sup>3</sup>	2,250	144	96	240	324.0	216.0	540.0
Concrete pavement, 230mm thickness	m <sup>2</sup>	15,000	60	540	600	900.0	8,100.0	9,000.0
<b>Total of 1)</b>						<b>1,395.0</b>	<b>9,198.0</b>	<b>10,593.0</b>

**Table XXIV 4.1 Breakdown of O/M Cost for Yawa River System Sabo Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>1. Common expenses</b>								
1) Salary cost								
- General manager/ administrator, 4 staffs x 12 months	M/M	48	0	12,000	12,000	0.0	576.0	576.0
- Other staffs, 3 staffs x 12 months	M/M	36	0	7,000	7,000	0.0	252.0	252.0
2) Vehicle running cost								
- O/M cost for 1 vehicle	Unit/M	12	0	3,500	3,500	0.0	42.0	42.0
- Wage of driver	M/M	12	0	7,000	7,000	0.0	84.0	84.0
<b>Total of 1.</b>						0.0	954.0	954.0
<b>2. Maintenance cost of structures</b>								
- Rehabilitation of concrete facing	m <sup>3</sup>	1,139	450	2,050	2,500	512.7	2,335.8	2,848.5
- Rehabilitation of boulder facing	m <sup>3</sup>	1,508	200	1,800	2,000	301.6	2,714.0	3,015.6
- Rehabilitation of gabion	m <sup>3</sup>	570	75	1,425	1,500	42.8	812.3	855.0
<b>Total of 2.</b>						857.0	5,862.1	6,719.1
<b>3. Dredging works for sand pocket</b>								
- Pawa-Burabod, hauling distance = 1.75 km	m <sup>3</sup>	13,200	49	45	94	645.2	595.6	1,240.8
- Anoling, Budiao, hauling distance = 0.75 km	m <sup>3</sup>	146,600	44	40	84	6,403.5	5,910.9	12,314.4
<b>Total of 3.</b>						7,048.7	6,506.5	13,555.2
<b>Grand Total</b>						<b>7,905.7</b>	<b>13,322.6</b>	<b>21,228.3</b>

**Table XXIV 4.2 Breakdown of O/M Cost for Legazpi City Urban Drainage Project**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>1. Common expenses</b>								
1) Salary cost								
- General manager/ administrator, 3 staffs x 12 months	M/M	36	0	12,000	12,000	0.0	432.0	432.0
- Operator, 6 staffs x 12 months	M/M	72	0	8,000	8,000	0.0	576.0	576.0
- Other staffs, 10 staffs x 12 months	M/M	120	0	7,000	7,000	0.0	840.0	840.0
2) Vehicle running cost								
- O/M cost for 1 vehicle	Unit/M	12	0	3,500	3,500	0.0	42.0	42.0
- Wage of driver	M/M	12	0	7,000	7,000	0.0	84.0	84.0
<b>Total of 1.</b>						0.0	1,974.0	1,974.0
<b>2. Maintenance cost of structures</b>								
1) Civil works								
- Excavation for river improvement	m <sup>3</sup>	150	72	48	120	10.8	7.2	18.0
- Riprapping for river improvement	m <sup>2</sup>	50	33	297	330	1.7	14.9	16.5
- Excavation for pump drainage	m <sup>3</sup>	300	72	48	120	21.6	14.4	36.0
Subtotal 1)						34.1	36.5	70.5
2) Gate facilities, 1.0% of initial cost x 0.4	L.S.					37.8	6.7	44.5
3) Pump facilities, 2.0% of initial cost x 0.5	L.S.					923.5	163.0	1,086.5
4) Others (10% for civil works)	L.S.					3.4	3.6	7.1
<b>Total of 2.</b>						998.8	209.7	1,208.5
<b>Grand Total</b>						<b>998.8</b>	<b>2,183.7</b>	<b>3,182.5</b>

**Table XXIV 4.3 Breakdown of O/M Cost for Forecasting and Warning System Strengthening Project**

Description	Unit	Quanti	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>1. Common expenses</b>								
<b>1) Salary cost</b>								
- General manager/ administrator, 4 staffs x 12 months	M/M	48	0	12,000	12,000	0.0	576.0	576.0
- Other staffs, 4 staffs x 12 months	M/M	48	0	7,000	7,000	0.0	336.0	336.0
<b>2) Vehicle running cost</b>								
- O/M cost for 2 vehicle	Unit/M	24	0	3,500	3,500	0.0	84.0	84.0
- Wage of driver	M/M	24	0	7,000	7,000	0.0	168.0	168.0
<b>Total of 1.</b>						<b>0.0</b>	<b>1,164.0</b>	<b>1,164.0</b>
<b>2. Maintenance cost of Facilities</b>								
1) Monitoring system of volcanic eruption	L.S.					3,459.5	610.5	4,070.0
2) Monitoring system of flood and mud flow	L.S.					8,817.1	1,556.0	10,373.0
3) Warning system	L.S.					5,544.6	978.5	6,523.0
4) Repeater station system	L.S.					682.6	120.5	803.0
5) Inter agency disaster mitigation network	L.S.					2,552.6	450.5	3,003.0
<b>Total of 2.</b>						<b>21,056.2</b>	<b>3,715.8</b>	<b>24,772.0</b>
<b>Grand Total</b>						<b>21,056.2</b>	<b>4,879.8</b>	<b>25,936.0</b>

**Table XXIV 4.4 Breakdown of O/M Cost for Evacuation System Strengthening Project**

Description	Unit	Quanti	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>Maintenance cost of structures</b>								
<b>1) Evacuation center</b>								
- Maintenance works for the center (775 units x PHP1,000)	L.S.					0.0	775.0	775.0
- Maintenance works for the water supply system (56 schools x PHP1,000)	L.S.					0.0	56.0	56.0
<b>2) Emergency shelter</b>								
- Maintenance works for shelter and facilities (16 emergency chelters x PHP2,000)	L.S.					0.0	32.0	32.0
<b>3) Live stock sanctuary</b>								
- Maintenance works for sanctuary and facilities (9 livestock sanctuaries x PHP3,000)	L.S.					0.0	27.0	27.0
4) Others (10%)	L.S.					0.0	89.0	89.0
<b>Grand Total</b>						<b>0.0</b>	<b>979.0</b>	<b>979.0</b>

**Table XXIV 4.5 Breakdown of O/M Cost for Resettlement Site Development Project**

Description	Unit	Quanti	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>Maintenance cost of structures</b>								
- Subgrade preparation for major road and pathwalk	m <sup>2</sup>	70,000	5	3	8	336.0	224.0	560.0
- Maintenance works for public buildings (10 public buildings x 2,000)	L.S.					0.0	20.0	20.0
- Maintenance works for water/power supply system	L.S.					0.0	30.0	30.0
- Others (10%)	L.S.					33.6	27.4	61.0
<b>Grand Total</b>						<b>369.6</b>	<b>301.4</b>	<b>671.0</b>

**Table XXIV 5.1 Breakdown of Cost Estimate for Supporting Program**

Description	Unit	Quantity	Unit Price (PHP)			Amount (1,000 PHP)		
			FC	LC	Total	FC	LC	Total
<b>(1) Organization and Strengthening of Multi-purpose Cooperatives with Micro-lending Component</b>								
1. Engineering Services								
1) Remuneration								
- Foreign expert	M/M	96	950,000	0	950,000	91,200.0	0.0	91,200.0
- Local expert	M/M	144	0	15,000	15,000	0.0	2,160.0	2,160.0
2) Direct Cost (30% of 1))	L.S.					27,360.0	648.0	28,008.0
Subtotal 1						118,560.0	2,808.0	121,368.0
2. Trainings - 3 modules	L.S.					0.0	950.0	950.0
3. Equipment for skills training	L.S.					0.0	50.0	50.0
4. Micro-lending finance scheme	L.S.					0.0	1,000.0	1,000.0
5. Administration cost (30% of 2-4)	L.S.					0.0	600.0	600.0
6. Physical contingency (10% of 1-5)	L.S.					11,856.0	540.8	12,396.8
<b>Total of (1)</b>						<b>130,416.0</b>	<b>5,948.8</b>	<b>136,364.8</b>
<b>(2) Provincial Disaster Management System Strengthening</b>								
1. Engineering Services								
1) Remuneration								
- Foreign expert	M/M	96	950,000	0	950,000	91,200.0	0.0	91,200.0
- Local expert	M/M	144	0	15,000	15,000	0.0	2,160.0	2,160.0
2) Direct Cost (30% of 1))	L.S.					27,360.0	648.0	28,008.0
Subtotal 1						118,560.0	2,808.0	121,368.0
2. Training including equipment								
1) Administrative programs	L.S.					0.0	13,000.0	13,000.0
2) Operational programs	L.S.					0.0	31,800.0	31,800.0
Subtotal 2						0.0	44,800.0	44,800.0
3. Administration cost (30% of 2)	L.S.					0.0	13,440.0	13,440.0
4. Physical contingency (10% of 1-3)	L.S.					11,856.0	6,104.8	17,960.8
<b>Total of (2)</b>						<b>130,416.0</b>	<b>67,152.8</b>	<b>197,568.8</b>
<b>(3) Community-based Disaster Management System Strengthening</b>								
1. Engineering Services								
1) Remuneration								
- Foreign expert (Senior Volunteer)	M/M	96	250,000	0	250,000	24,000.0	0.0	24,000.0
- Local expert	M/M	144	0	15,000	15,000	0.0	2,160.0	2,160.0
2) Direct Cost (30% of 1))	L.S.					7,200.0	648.0	7,848.0
Subtotal 1						31,200.0	2,808.0	34,008.0
2. Training module	L.S.					0.0	3,970.0	3,970.0
3. Administration costn (30% of 2)	L.S.					0.0	1,191.0	1,191.0
4. Physical contingency (10% of 1-5)	L.S.					3,120.0	796.9	3,916.9
<b>Total of (3)</b>						<b>34,320.0</b>	<b>8,765.9</b>	<b>43,085.9</b>

