(3) Livelihood development

This component shall involve the following: 1) the practice of sustainable agricultural methods suited to the upland areas, 2) the establishment of alternative trading and marketing (ATM) mechanisms for upland products, 3) alternative livelihood systems development, and 4) establishment of alternative rural financial (ARF) mechanisms.

Specific sustainable agricultural technologies would be promoted as appropriate. These would include technologies like Low External Input Rice Production and Sloping Agricultural Land Technology (SALT). It would also include optimization of the upland areas through the possible shifting to high-value crops and the optimal development of areas which can be devoted to the production of fruits, vegetables and rootcrops.

Producers' groups in the upland areas shall be linked directly with peasant and fisherfolk groups within Bataan. It is expected that they would be able to sell portions of their produce directly to the organized groups in the other clusters. In turn, they would be able to buy basic commodities (rice, processed fish) at lower prices.

Alternative livelihood systems involving ecotourism, non-timber forestry products development and other such cooperative-based enterprises shall be pursued and promoted to wean upland dwellers from destructive livelihood practices and increase their income. An alternative rural financial (ARF) system shall be set up both for economic development purposes and for the establishment of "seed funds" for addressing basic social service needs. The ARF system would include improving access of upland dwellers to non-usurious credit sources and savings mobilization.

(4) Forest rehabilitation and protection

The "Bantay Gubat" formations, institutions engaged in environmental protection technical assistance from DENR, shall undertake forest rehabilitation and forest protection activities. Based on the findings of the comprehensive forest survey, areas for reforestation shall be identified. At present, DENR has projected a minimum target of 7,000 hectares for reforestation and 12,000 hectares for protection up to 1998. The Program proposes that activities for these be contracted out to community organizations under Integrated Social forestry (ISF), Forest Land Management Agreement (FLMA) or similar contractual arrangements. Community-based forest management shall be supported by the establishment of nurseries, assistance to the communities in accessing funds and inputs for reforestation efforts, technical assistance, and support for communities in their advocacy efforts. Regular fora shall be conducted to discuss upland issues, while training on forest management and sustainable agriculture will also be undertaken.

(5) Enhancement of the delivery of basic social services

Training on health, nutrition and environmental sanitation will be undertaken. Community health workers (CHWs) shall be identified and trained in basic skills, to enable them to spearhead the installation of community-based health mechanisms.

In addition, village drugstores (Botika sa Barrio) operated by local people's organizations using mainly herbal medicines would be set up in communities where medical needs are most inadequate. To be able to sustain these drugstores, herbolaria (herbal gardens) shall also be put up.

Potable water systems shall be installed in barrios where safe water is a problem. Likewise, campaigns on proper nutrition, environmental sanitation and personal hygiene shall be undertaken.

Ensuring food security and proper diet lessens the vulnerability of upland dwellers to diseases. In order to accomplish this, SALT farms and bio-intensive gardens for demonstration shall be set up in selected barangays.

(6) Passage of laws/ordinances supportive of forest protection and rehabilitation

The major issues as far as the upland areas are concerned include:

1) watershed protection, including the conservation of the Subic Forest/Bataan National Park (which covers practically all watershed areas in the province), and
2) the need to stop indiscriminate upland speculation.

At the minimum, these call for the passage of the total log ban bill, as well as the effective implementation of laws on the titling of land above 18 degrees slope.

4. Implementing Arrangements

The program calls for effective partnership among DENR and other relevant government agencies, the communities (both through the official government structures and through people's organization's) and non-government organizations (engaged in community organizing, livelihood development and environmental protection/management /rehabilitation). In the sites classified as integrated protected areas (Subic Forest/Bataan National Park), the main coordinative mechanism shall be the Protected Area Management Board, while GO-PO-NGO coordinating committees are proposed to be established in the non-IPAS areas.

The communities shall have the primary responsibility for all aspects of the program, with assistance from DENR specifically on forest protection/rehabilitation. Non-government organizations shall be contracted to handle the aspects of community organizing/capability-building and livelihood development. The passage/amendment of relevant laws and ordinances shall be the primary responsibility of legislative bodies from the barangay to the national level.

The Program is expected to be implemented with technical and financial assistance of a donor agency. A limited number of consultants would be employed to facilitate the Program implementation.

5. Project Costs

Cost involved in the Program are estimated as follows.

(unit: in million pesos)

	Cost element	Cost	Notes
1.	Reforestation	210.0	7,000 ha x P30,000 per ha
2	Forest/watershed protection	12.0	12,000 ha x P1,000 per ha
3.	Community organizing/capability buildings	25.0	5,000 households x P5,000 per hh
4.	Livelihood development	100.0	5,000 households x ₱20,000 per hh
5.	Social services	25.0	5,000 households x ₱5,000 per hh
6.	Researches/studies	2.0	
7.	Consultancy	30.0	Including costs of some equipment and other expenses
8.	Contingencies	41.0	
	T o t a l.....	₱445.0	

Project No. CI-2

1. PROJECT TITLE	Local Resource and Agri-Based Rural Industries Establishment
2. LOCATION	Bataan
3. IMPLEMENTING AGENCY	Cooperatives supported by NGOs, LGUs and relevant government agencies.
4.OBJECTIVES	(1) To increase income of primary producers; and (2) To generate employment opportunities through the establishment of rural industries.
5. EXPECTED EFFECTS	More robust and diversified rural economies that are environment friendly and socially acceptable.
6. PROJECT COSTS	₱ 138 million
7. IMPLEMENTATION SCHEDULE	Five years during Phase I - Phase II
8. PROJECT DESCRIPTION	As per attached

Local Resource and Agri-Based Rural Industries Establishment

1. Background

Bataan has a rich natural resource base under the three broad ecosystems, coastal, lowland and upland. The industrialization track led by large export-oriented establishments does not induce local industries, while some of them could be harmful to the environment and the resource base. An alternative track should also be pursued to be led by rural industries based on local resources, including agricultural and fishery produce.

The resource base for rural industrialization is outlined by ecosystem. Of the total fish catch within the coastal ecosystem, some 90% is traded in fresh form. A wide variety of processed fish products are available in Bataan, but production is quite small although the province imports some fish. Most processors are backyard enterprises, except for a few medium-scale manufacturers of smoked fish and fish paste, mostly in Balanga.

Fish is sold immediately because of fishfolks immediate need for cash, lack of storage facilities and lack of coordinated marketing mechanisms. There are only two cold storage plants, but one in Samal is not operational due to technical and financial problems and the other in Balanga is only for processed fish and fresh meat. There are three ice plants in Orion, Balanga and Orani.

Rice farmers in lowland usually sell their produce in unprocessed form (palay) immediately after harvest, when prices are at the lowest. This is due to their immediate need for cash, lack of access to storage and milling facilities, and lack of market linkages.

The upland areas of Bataan are suited to commercial production of fruits, vegetables and root crops. At present, major surplus products include mangoes, cashew, banana and various types of rootcrops. Because of the distance to market centers and lack of processing activities, most farmers sell their produce at farmgate, sometimes at less than half of the prices in market centers.

2. Objectives

The Program aims at maximizing local resources utilization, establishing people-based enterprises, and promoting environmental awareness and community-based approaches through alternative livelihood systems. Specific objectives are (1) to increase incomes of primary producers, and (2) to generate employment opportunities in rural areas through the establishment of rural industries linked to the rural economy and not harmful to environment.

3. Program Description

The Program will establish local resource and agri-based rural enterprises in strategic areas in Bataan. These enterprises are envisioned to be owned and managed by farmers and fishfolks themselves. Government supports would be in the form of concessional loans or grants for the establishment of enterprises and technical assistance for project preparation and implementation. Incentives usually available for export-oriented industries shall be extended to these rural enterprises.

The Program consists of the following components:

(1) Community organizing and capability building,
(2) Establishment of pilot processing facilities,
(3) Establishment of alternative trading and marketing mechanisms, and
(4) Feasibility studies of alternative livelihood systems.

Each component is described below.

(1) Community organizing and capability-building

The implementation of processing and marketing projects would require the formation of organizations at area scopes broader than barrio level. This implies either municipal-level formations or formations for clusters of barrios. Thus, a major component of the Program is the building/strengthening of these larger organizations, plus the strengthening of barrio level organizations and the formation of organizations in strategic barrios where there are currently none.

Capability building would mainly be in the form of trainings in project identification and evaluation, various aspects of project management (particularly financial management), monitoring and evaluation, and specific skills trainings. These would be complemented by trainings aimed at strengthening the organizations themselves (e.g. leadership training, sectoral orientation courses).

(2) Establishment of pilot processing facilities

Fish processing will be encouraged both at the municipal and barrio levels. This will mainly be fish smoking/drying operations pending further study on the environmental effects and overall viability of other types of processing methods: e.g. bottling. The emphasis will be on municipal-level establishments particularly in the towns of Samal, Pilar, Abucay and Morong, to allow to geographic dispersal among the province's coastal towns.

Local manufacture of fishing gear (e.g. nets) and processed products from non-traditional marine products (e.g. fertilizer from shells, capiz handicraft) will also be encouraged.

In the lowland rice farming areas, cooperative-owned ricemills will be established in the towns of Hermosa, Dinalupihan and Balanga or Abucay. Hermosa and Dinalupihan are the two major rice-producing barrios in the province. Hermosa has a relatively low milling capacity to production ratio. While Dinalupihan has a number of ricemills, the sheer volume of rice production in the town still allows for the establishment of additional ricemills. Lastly, a cooperative-owned ricemill in the middle of the province (Balanga/Abucay area) is envisioned to meet the milling needs of farmers in the rice-producing areas from Orani to Orion.

Industries engaged in the manufacture of botanical pesticides and organic fertilizer may be established.

In the upland areas, at least four fruit/vegetable/rootcrop processing facilities will be established in the Dinalupihan-Hermosa area, the Orani to Balanga area, Limay-Mariveles and Bagac-Morong. Based on preliminary studies, mango, cashew, bananas and rootcrops offer potential for processing.

Activities involved in this component are the following.

1) Project preparation - This will include: a) comprehensive project evaluation, including site feasibility and the identification of specific products (particularly in the uplands) for processing, b) the establishment of project management mechanisms within the people's organizations, c) acquisition of necessary licenses and accomplishment of required business registration activities, d) arrangements for financing, e) construction/establishment of the facilities, f) equipment purchase, and g) project hiring.

2) Project implementation - This will involve the actual start-up and operation of the projects.

3) Project monitoring and evaluation - Regular activities will be conducted by the people's organizations to monitor and evaluate project operations. These will be geared towards identifying and immediately addressing operational problems, as well as providing inputs/earnings for the possible replication of the projects in other areas of the provinces.

(3) Establishment of alternative trading and marketing mechanisms

Fish trading centers will be piloted in the towns of Orion and Mariveles, a town in the northern part of the province, and in Morong. Orion and Mariveles in particular are strategic areas for piloting such projects because of the heavy dependence on privately-owned consignacions characterized by a buyers' market and the imposition of high commissions by consignacion operators. The PO-owned consignacions shall charge lower consignacion fees (5% of gross receipts versus the prevailing rate of 7%), the profits from which would also redound to the PO members. In addition, the establishment of the PO-owned consignacions is expected to lead to a measure of price stabilization (subject of course to normal market forces).

While the main pilot areas will be Orion and Mariveles, the viability of other ATM mechanisms suited to the conditions in other towns will also be explored. One potential area in Morong, which is far from the province's market centers. A possible ATM mechanism in Morong is the establishment of "drop-off-points" by a coalition of barrio-level POs or by a municipal federation (when it shall have been formed). The fish produce shall then be transported in bulk to the major trading centers (possibly as far as Navotas) or direct to consumers or POs engaged in processing within the province.

4. Implementing Arrangements

The primary role in the implementation of the projects will be played by cooperatives/organizations of small farmers (upland/lowland) and fisherfolk. The role of government agencies will mainly be in terms of providing financial and technical support, while none-government organizations could be involved in community organizing and capability-building. Large projects can be established via build-operate- transfer schemes with clear divestment schemes from the government or private organizations (which would initially provide the finance) to community organizations.

The Program is expected to be implemented with technical and financial assistance of an international aid organization. A limited number of consultants would be employed to facilitate the Program implementation.

5. Project Costs

Costs involved in the Program are estimated as follows.

(unit: in million pesos)

Cost element	Cost	Note
1. Community organizing and capability building	7.5	100 pax per project x 15 projects
2. Establishment of processing facilities		
- Four fish processing plants	4.0	
- Three ricemills	9.0	
- Four fruit/vegetable/rootcrop processing plants		8.0
3. Other projects	3.0	6 projects x ₱500,000 each
4. Establishment of ATM mechanisms		
- Consignacions (fish trading centers)	2.0	4 x ₱ 500,000
- Palay ATM	60.0	3 x ₱ 20 million
- Fruits/vegetable/rootcrops	2.0	4 x ₱ 500,00
5. Feasibility studies	3.0	
6. Consultancy	35.0	Including costs of some equipment and other expenses
7. Contingencies (10%)	12.5	
T o t a l	₱ 138.0 million	

Project No. CI-3

1.	PROJECT TITLE	Cooperative-Managed Food Terminal
2.	LOCATION	Bulacan
3.	IMPLEMENTING AGENCY	Cooperatives supported by a NGO consortium and the provincial and the national government.
4	OBJECTIVES	(1) To develop an integrated and functional marketing, financial, transport, storage and communication system for agricultural products based on cooperatives; and (2) To develop cooperatives and self-help groups in Bulacan into a market-driven business consortium.
5.	EXPECTED EFFECTS	Better prices for both producers and consumers supported by a more efficient distribution and marketing system for agricultural products.
6.	PROJECT COSTS	₱ 220 million
7.	IMPLEMENTATION SCHEDULE	Eight years during Phase I - Phase II
8.	PROJECT DESCRIPTION	As per attached

Cooperative-Managed Food Terminal

1. Background

The Central and Northern Luzon provinces are known as the rice granary of the Philippines. Benquet in Northern Luzon is known as the vegetable basket of the Country. Some 95% of these agricultural produce are being transported to the cities of Metro Manila, Baguio, Dagupan and Angeles, and public markets tof San Fernando, Tarlac and Santiago City in Isabela. The province of Bulacan is the usual route of these commodities before they reach the final market.

While there is an existing government-owned food terminal in Taguig, Metro Manila, which functions primarily as storage of agri-products, it is not accessible for most farmers and cooperatives. Other principal markets are owned and controlled by cartels, and the entry is difficult for small farmer-producers due to high entry fees.

2. Project Description

The Project will create a cooperative - managed food terminal in the province of Bulacan to facilitate storage and physical distribution of agricultural produce from Central and Northern Luzon. To make this scheme operational, the Project will assist in organizing cooperatives and self-help groups in Bulacan into a business consortium. A transport and financial system will also be created to support the operation of the food terminal.

The following components are included in the Project.

(1) Consortium building and training

This component will involve the organization and training of cooperatives into a market and enterprise-driven consortium. A Cooperative Marketing Board will be initiated. Training will be provided to the consortium members to make them fully responsible for the management of the food terminal

(2) Food terminal establishment

A food terminal will be established on the land of about 5 ha strategically located. To be built in this site are storage facilities, an open drop-off market, office building and other associated facilities. Environmental safeguards will be built in the plan.

(3) Systems development

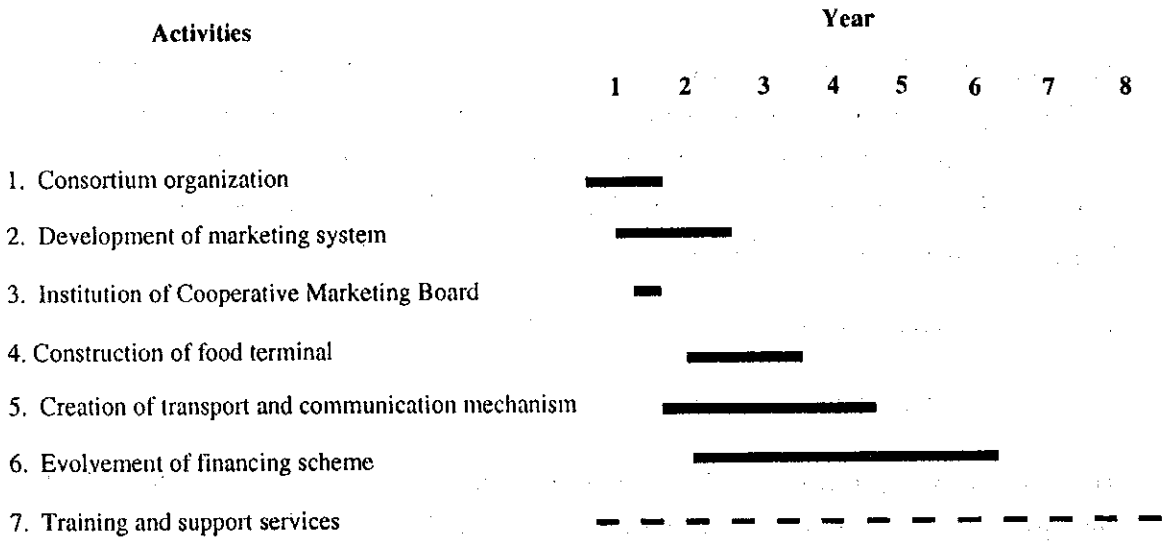
A systematic transport and communication mechanism will be created to cater to the needs of farmer-producers. A financing scheme will be evolved to support the marketing and enterprise formation of producers.

3. Implementing Arrangements

The Project will be initiated by cooperatives with the assistance of a consortium of NGOs. The support of a funding agency and full cooperation of the provincial and the national governments will be solicited. The cooperatives are expected to invest in this venture to enter into a partnership arrangements.

4. Implementation Schedule

The Project will be implemented initially for eight years. Activities of the Project may be scheduled as follows:



5. Project Costs

Costs involved in the Project are estimated as follows:

(Unit : million pesos)

Cost element	Cost
1. Land acquisition	25.0
2. Construction	
- Building	50.0
- Storage facilities	10.0
3. Transport facilities	15.0
4. Credit fund	25.0
5. Marketing fund	50.0
6. Consortium organizing, training and consultancy	25.0
7. Contingencies	20.0
T o t a l	₱220 million

Project No. CI-4

1.	PROJECT TITLE	Cooperative-Based Health Systems Development
2.	LOCATION	Bulacan
3.	IMPLEMENTING AGENCY	NGO consortium in cooperation with LGUs, DOH and DSWD
4.	OBJECTIVES	General : To create and establish comprehensive cooperative health care mechanisms in Bulacan. Specific: (1) to promote preventive health care and services, (2) to promote people's participation in responding to their health needs, (3) to adopt appropriate technology for health care and transfer to local communities, (4) to mobilize beneficiaries' savings for health program, and (5) to provide affordable health services to marginalized/poor patients.
5.	EXPECTED EFFECTS	Well-coordinated primary health care cooperatives at the barangay level. Self-reliant and responsive Bulacan citizenry. Sustainable and effective health care system
6.	PROJECT COSTS	P 946 million
7.	IMPLEMENTATION SCHEDULE	Five years during Phase I - Phase II
8.	PROJECT DESCRIPTION	As per attached

Cooperative-based Health Care Systems Development

1. Background

The province of Bulacan has 49 hospitals, consisting of 8 government-managed and 41 privately-owned, but still nine municipalities do not have access to any hospital within respective jurisdictions. A number of health personnel is generally inadequate, and a typical ratio is one physician serving 10,000 people in 1992. Health services are insufficient as represented by high ratios of malnutrition; of all the Bulacan's school children, 16% are severely or moderately underweight.

Bulacan is known for active cooperatives. Of some 800 operational cooperatives, however, none focuses on health care as a main thrust. This is one remaining area where Bulacan can take the lead for cooperative-based activities to support socio-economic development envisioned under the Philippines 2000.

2. Objectives

The Project aims at establishing comprehensive cooperative health care mechanisms, targeted particularly at the poor in the province of Bulacan. Specific objectives are spelled out as follows.

(1) To promote preventive health care and services rather than curative measures by establishing primary health care cooperative centers at the barangay level;

(2) To promote people's participation and involvement in responding to their health needs through education and trainings to be conducted through the primary health care and service cooperatives;

(3) To adopt appropriate technology and transfer to local communities by conducting seminars and trainings for eligible community health workers through primary health care and service cooperatives;

(4) To encourage beneficiaries to save for their health needs through the mobilization and establishment of member savings for health program and health savings banks at the municipal to the provincial level; and

(5) To provide affordable health services to the marginalized patients by establishing four people's district cooperative hospitals.

3. Project Description

The Project will establish primary health care and service cooperatives as main bodies to promote people's participation and self-reliance for their own health care. People will be well informed of basic health care measures and techniques and encouraged to secure their future health expenditures through health savings banks. Women's roles in the promotion of health care in their families are vital for the success of the Project.

The Project will create and develop a comprehensive health care system, integrating preventive health care, mother and child care, adult care, nutrition, herbal medicines, health education and training, local health workers training, support to DOH programs and health savings. It consists of three main components as described below.

(1) Primary health care service cooperative organizing

This component involves organizing and training of the people in all communities to form cooperative service centers, that could participate in carrying out programs for preventive health care, mother and child care, adult care, local health workers education and training, nutrition, dental care, barrio clinics, herbal medicine and health savings. It is in this component where the existing cooperatives will be encouraged to integrate health care systems in their policies and operations so as to maximize the dissemination and creation of a comprehensive health care system in the province. The formation and creation of cooperative centers, herbal gardens, barangay drugstores (botica sa barangay) and member health service savings at community and barangay levels will form part of this component.

(2) Health care and service development

This component will integrate health research, indigenous health care measures, and existing health facilities and services into a comprehensive health care system, taking account of environment, social and cultural aspects. The system will develop in steps, capitalizing on existing facilities and services. Organized community-based cooperatives and barangay cooperatives will be enhanced through integration of health related factors such as locally-based drugstores and herbal medicine production. The integration will lead to the establishment of people's district cooperative hospitals and cooperative health savings banks.

(3) Health research, policy studies and advocacy

This component consists of health related researches and studies, review of existing government policies, formulation of better health policies, and a comprehensive advocacy program to call for policy changes to improve health services. Studies to be undertaken in

this component will look into socio-cultural aspects related to health issues, and researches will help contribute to the development of medical science and technology in the Philippines.

4. Implementing Arrangements

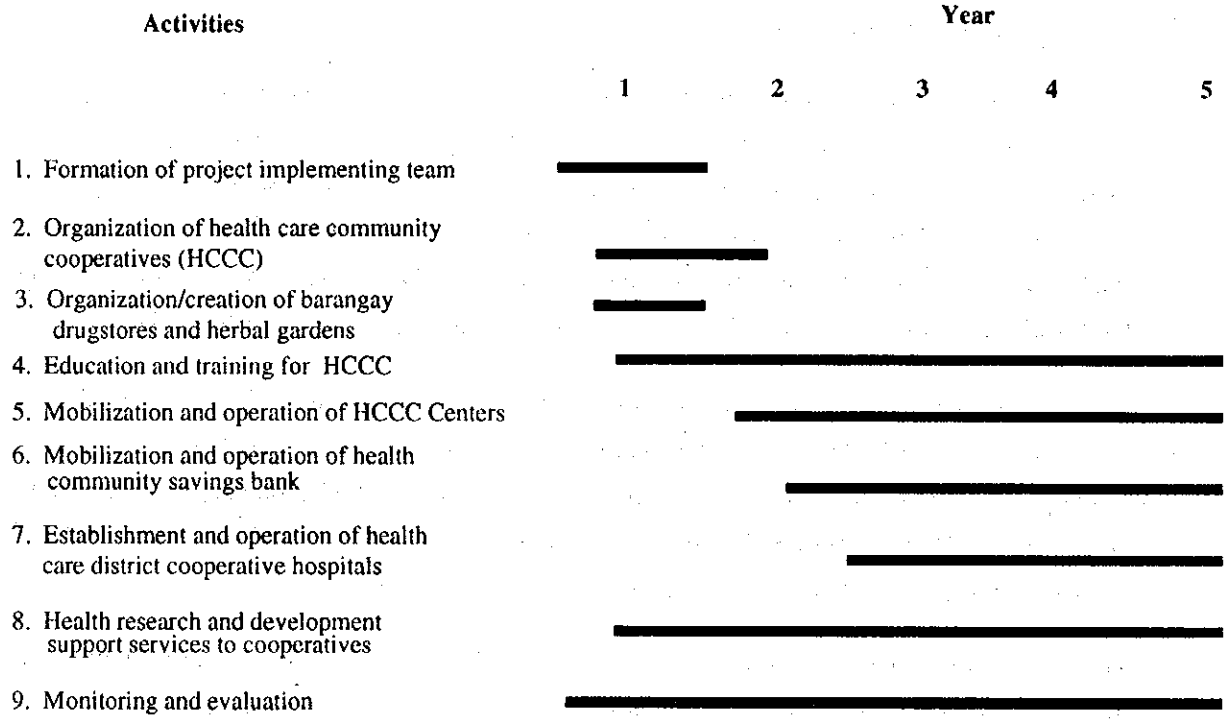
Consultation and joint planning with direct beneficiaries of the Project will be a necessary step towards the organization and development of a people's cooperative health care and maintenance program. Building contracts and working relationships with existing organized cooperatives and people's organizations will accelerate the participation of the people themselves. Tapping the government agencies especially DOH and DSWD and integrating the Project with related NGO projects will surely maximize the benefits of the project.

A project implementing team will solicit participation among the target beneficiaries during the implementation of the project. The team will only assist members in the operations of the primary health cooperatives until the members themselves are socially-prepared and can stand alone. An NGO consortium will exercise general supervision and provide necessary support services to the project implementing team.

The project implementing team will consist of a project director, a project coordinator, five medical specialists, two enterprise development specialists, one monitoring and evaluation officer and three cooperative organizers. Other staff requirements include driver/mechanic, bookkeeper, utility person and administrative assistant.

5. Implementation Schedule

The Project will be implemented along the following schedule



6. Project Costs

The implementation of the Project over a five year period will involve a total coast of P946 million as shown.

(unit: in million pesos)

Cost element	Cost
1 Primary health care community cooperative centers	
- Cooperative organizing and building	40.0
2. Primary health care community cooperative development	
- Health savings bank	10.0
- District cooperative hospitals	800.0
- Localized drugstores and herbal gardens	5.0
3. Health research, policy studies and advocacy	5.0
4. Contingencies (10%)	86.00
T o t a l	₱ 946.0 million

Project No. CI-5

1.	PROJECT TITLE	Sustainable Rice-based Enterprise Development Program
2.	LOCATION	Nueva Ecija and Pampanga
3.	IMPLEMENTING AGENCY	NGOs and a federation of cooperatives
4.	OBJECTIVES	General : (1) To assist farmers in Nueva Ecija, and Pampanga to take control of 25% of production, trading and marketing of rice produced in the provinces; and (2) To introduce/promote sustainable agricultural technologies among farmers in the province. Specific: (1) to contribute to the establishment of an alternative rural financial system, (2) to establish PO-managed training programs for sustainable agricultural technologies, (3) to established agri-related industries supporting sustainable agricultural practices, (4) to establish demonstration sites for integrated farming, and (5) to establish alternative trading and marketing organizations linking producers and consumer directly.
5.	EXPECTED EFFECTS	More vibrant local economy Increased and more stable income for rice farmers
6.	PROJECT COSTS	₱ 136 million
7.	IMPLEMENTATION SCHEDULE	Three years during Phase I - Phase II

8. PROJECT DESCRIPTION

Central Luzon is the rice granary of the Philippines, supplying 20% of the Country's rice requirements, and Nueva Ecija is the biggest producer of the six provinces. Rice production in Central Luzon, however, is mainly chemical-base, dependent on HYV technological packages having high external input. Not only is this environmentally hazardous and unsustainable, but this also confines farmers within perennial debts to usurers.

The Program will provide an integrated package of measures to support rice farmers in Nueva Ecija and Pampanga in the form of a sustainable production and marketing system. The Program consists of four components as outline below.

The Program will develop the capacity of POs for savings mobilization and credit management. A savings and credit program will be established as a crucial step toward building an alternative rural finance system in the form of a people's bank.

The Program will promote sustainable agricultural technologies that are economically and technically viable, environment friendly and socially acceptable. Training programs will be provided for integrated organic farming which combines rice cultivation with vegetable growing, livestock and fish production, sloping agricultural land technology (SALT) and others. Demonstration farms will be established for various forms of integrated farming.

The Program will identify, develop, test and establish agri-related rural industries. Potential industries include organic fertilizer production, cono-weeder fabrication, and rice mill and other postharvest facilities.

The Program will establish alternative trading and marketing organizations (ATMOs), at a provincial level to facilitate trading of agri-commodities. Satellite ATMOs will be established within barangays to ensure needs of each community at affordable prices.

A special task force will be created consisting of DILG and a consortium of NGOs/POs to monitor, evaluate and supervise these activities at every LGU level. It will open legislative opportunities for project beneficiaries, leading to a policy reform. The NGOs/POs consortium will participate also in the training programs and the establishment of ATMOs.

Project No. CI-6

1.	PROJECT TITLE	Community-Based Integrated and Diversified Farming Promotion
2.	LOCATION	Tarlac
3.	IMPLEMENTING AGENCY	Consortium of NGOs and cooperatives
4	OBJECTIVES	(1) To promote sustainable, productive, environmentally sound, organic and diversified farming by small farmers; (2) To expand the raw materials base for agro-based rural industries; and (3) To rehabilitate depleted forest areas and regenerate lahar-laiden farmlands.
5.	EXPECTED EFFECTS	More diversified rural economies and environment Higher and more stable incomes for small farmers
6.	PROJECT COSTS	P 30 million
7.	IMPLEMENTATION SCHEDULE	Three years in Phase I

8. PROJECT DESCRIPTION

At present, there is an over-reliance on single-crop agriculture in Tarlac, which not only results in economic insecurity for small producers but also in the depletion of soil fertility. Promotion of multiple cropping is not just an economic necessity but also an ecological imperative for the long term viability of agriculture in the province and the region as a whole.

A diversified/integrated farm production approach needs to be adopted to suit different geographic areas in the province including lahar-affected areas. The approach, already taken by some farmers' cooperatives, needs to be applied more widely in an integrated and comprehensive manner.

The Project will involve the development of viable diversified/integrated farming schemes for different geographic areas, education and trainings for farmers to adopt new approaches, field application of more viable schemes with technical extension, and information/promotion activities to disseminate new approaches and schemes. A diversified/integrated farming

resource center will be established as a central facilities for the promotion of the new approaches and also for the delivery of technical services.

More promising schemes have already been identified for upland/midland and forest areas, and irrigated and rainfed lowland areas. Additional researches and experiments are necessary particularly for lahar-laiden areas. Extensive application of organic agriculture is generally a direction to pursue. Alley cropping or hedgerow inter-cropping combining vegetables and rootcrops with leguminous crops may be promoted. For areas not vulnerable to further lahar, soil should be enriched by applying composts produced by improved methods to minimize nutrients losses. These areas can be used for high value crops and/or fodder crops. The fodder crops production can be combined with extensive grazing on lahar-laiden grassland for cattle.

The Project will be implemented by a consortium of NGOs involved in sustainable agriculture. Farmers' cooperatives will participate in the Project through the field application. Technical extension will be provided by relevant government agencies as well.

Project No. CI-7

1.	PROJECT TITLE	People's Postharvest and Trading Facilities
2.	LOCATION	Tarlac
3.	IMPLEMENTING AGENCY	Cooperatives supported by NGOs, LGUs
4.	OBJECTIVES	(1) To increase income of small producers; (2) To improve bargaining position of small farmers for better prices for their produce; (3) To establish an alternative buying, distribution and trading network; and (4) To reduce consumers' prices of agricultural produce.
5.	EXPECTED EFFECTS	More vibrant local economy, free from the impoverishing cycle of cartelized markets
6.	PROJECT COSTS	₱ 85 million
7.	IMPLEMENTATION SCHEDULE	Three years in Phase I

8. PROJECT DESCRIPTION

Markets for agricultural products especially rice, are dominated by traders/usurers, resulting in suppressed prices. Postharvest facilities are insufficient for both traditional and non-traditional crops, and most of them are owned by private traders. While many cooperatives have emerged to support farmers for production through credit sourcing, farm input procurement and land preparation, they have yet to make an impact on postharvest operation.

The Project will put up postharvest facilities and capacities owned and managed by a federation of small farmers' cooperatives in Tarlac. Components of the Project are (1) small farmers organizing, (2) consumers/market network building, (3) technology and facilities build-up, and (4) credit.

Small farmers organizing

The Project will bring together a core of organizations of small farmers capable of producing a consistent volume of products, which will form a baseline tradable volume. This core will form part of the management body of the Project. Other members will come from NGOs involved in providing technical support and trade networking.

Consumers/market networking

A prevalent practice in human-scale market transactions in the Philippines is the cultivation of "suki", a mutually beneficial relationship between preferred buyers and sellers. A suki buyer maintain a preferred seller, who in turn offers a lower price and a better service than the competition. The Project will build on the suki in establishing linkages between participating producers and consumers.

A parallel core of suki consumers will be established, which will constitute a baseline demand. The core may include consumers' cooperatives, labour unions, and community organizations.

Technology and facilities build-up

The Project will acquire/install postharvest facilities. They include a warehouse, simple processing facilities such as dryer, thresher and rice mill, and transportation. The acquisition/installation of facilities is cumulative, as more resources are generated through re-investment or external contributions.

Credit

The project will provide financial facilities to extend loans to participating organizations, most probably in the form of advance payments for products. This is an essential component as it will spur production activities.

Project No. CI-8

1.	PROJECT TITLE	Community-Based Resettlement and Livelihood Development
2.	LOCATION	Zambales
3.	IMPLEMENTING AGENCY	Consortium of NGOs in cooperation with LGUs and relevant government agencies
4.	OBJECTIVES	(1) To establish resettlement sites as viable and vibrant communities; (2) To contribute to the establishment of livelihood for settled people; and (3) To develop capability of settled people through resettlement and livelihood development activities by a participatory approach.
5.	EXPECTED EFFECTS	Reduced public resource requirements for resettlement projects. More viable and vibrant resettled communities.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

Despite collective efforts by government agencies and NGOs to help people evacuated by the Mt. Pinatubo eruption and subsequent lahar, most resettlement sites still face various problems. Continuing lahar flows may displace more families and force resettled families to be further relocated. While the capital intensive approach to resettlement taken by the Technology Livelihood Resource Center (TLRC) has attained some success, it has failed to provide sufficient livelihood opportunities to resettled people. New approaches need to be explored and implemented immediately to alleviate continuing suffering of a large number of people. Given the uncertainties involved, a heuristic and participatory approach would be more effective to cope with changing conditions through capability building of people.

The Project will establish a new approach to resettlement and livelihood development applicable to both existing settlements and new resettlement activities. The approach is based

on participatory mechanisms facilitated by NGOs/POs and complementary employment generation and livelihood development through resettlement/rehabilitation activities.

For new resettlement activities, the Project will apply the adopter-adoptee concept. Towns (barangays) that are out of the way of danger can "adopt" towns (barangays) that are in the path of lahar. The basic idea is to invest in the capability of an adopter town to absorb affected families from the adopted towns. This will reduce the capital costs for resettlement, and enhance the chance for the resettled families to establish viable economic activities.

Another mechanism is a "land trust" to be created for the development rights over affected areas. Land trust share holders will have exclusive right to develop the land for more intensive use after the lahar effects are stabilized.

For existing resettlement sites, basic facilities need to be provided with continuing government supports. Planning and implementation for the provision of additional facilities will be conducted under the Project by a participatory approach. Unemployed settlers will provide their labour for construction of facilities they plan, with technical training as necessary. They can also be involved in the rehabilitation of coastal and upland areas. Such activities will naturally lead to the establishment of economic activities by those involved in the rehabilitation with proper institutional supports.

Various community enterprises can be established associated with resettlement and rehabilitation works. Manufacturing of organic fertilizer provided a livelihood opportunity for a large number of resettled families. Rehabilitation of upland areas with planting of fruit or nut bearing trees will expand opportunities for a range of livelihood activities. These trees can be combined with other crops and livestock for multi-storey farming and integrated farming. Processing of these products can be conducted at household level integrated into a common management system for community enterprises. Inter-related processing activities can be centrally located in Community Enterprise Zones.

The Project will develop in steps. First, a consortium of NGOs will be formed with the participation of viable NGOs having experiences in community organizing, capability building and livelihood development. Overall issues involved in resettlement and livelihood development will be discussed, and the basic approach agreed. It will then become a body to organize Community-based Relief and Rehabilitation Committee at the barangay level. The Committee will prepare a plan for resettlement and rehabilitation supported by the NGOs. They will be federated into Town Relief and Rehabilitation Committees.

The NGO consortium will also provide efficient communication and information channels. In addition to relief related information, success/failure cases will be conveyed to affected people to allow them better plan and implement their own activities.

Project No. CI-9

1.	PROJECT TITLE	Popular Leadership and Entrepreneurship Training
2.	LOCATION	Six provinces
3.	IMPLEMENTING AGENCY	Consortium of NGOs and cooperatives in cooperation with relevant government agencies
4.	OBJECTIVES	(1) To help to build strong and dynamic local economies through the development of farmer-leaders; and (2) To enhance and institutionalize popular economic formations like cooperatives and community enterprises.
5.	EXPECTED EFFECTS	Stronger and more dynamic local economies with strong leadership and popular institutions
6.	PROJECT COSTS	P 25 million
7.	IMPLEMENTATION SCHEDULE	Three years in Phase I

8. PROJECT DESCRIPTION

An essential prerequisite for people-oriented development is the enhancement of capabilities of people. This involves the development of technical, leadership, entrepreneurial, negotiation and management skills, and strengthening of cooperatives and community enterprises.

The Project will offer a comprehensive education program in popular leadership and entrepreneurship. This is contrasted with existing training and education programs of various agencies focusing on singular skills or formal education curricula basically for college preparation, biased towards producing graduates for service careers.

The Project will draw from the rich popular education tradition of NGOs which gives emphasis on popular participation and the appreciation of indigenous and experiential knowledge. It will also develop new pedagogies that will help in the formulation and dissemination of new knowledge and skills necessary for relevant leadership and enterprises of the present day society. The Project will combine the provision of both theoretical handles and practical guidance to participating leaders and organizations.

Project components

The Project will offer the following courses and activities

(1) Residential courses (six weeks to two months)

This is like a general education course on popular leadership and enterprise. The course content deals with a combination of attitudes, skills and knowledge that comprise the basic orientational and conceptual foundations of popular leadership and enterprise. The course design combines classroom-type activities, workshops, case works, site visits, interaction with resource persons and basic investigation.

(2) Short courses (Five days)

These are focused on specific topics and concerns which are dealt with more thoroughly than in the residential courses. Depending on his/her long-term interest in the broad fields of leadership and popular enterprise, a participant can register in a series of short courses that are cumulative of particular themes or topics (e.g. marketing, product development, financial management, etc.) Short courses can be held in actual sites of production (e.g. diversified farm systems).

(3) Continuing distance education

This includes disseminating literature resources and conducting house visits by trainors for practical tutoring and counseling.

(4) Resource center building

The goal is to set up a leadership and enterprise resource center for popular leadership and enterprises run by a consortium of NGOs, people's organizations and cooperatives that holds regular courses, extends educational and other support services and provides relevant sources and resources to leader-entrepreneur. The center would engage also in researches and data-base building relevant to its purpose.

Implementing arrangements

The Project will be implemented initially by a consortium of NGOs with long-term training capacities. Once a leadership enterprises resource center is set up, it will have a governing board where the participating NGOs will have representation.

A faculty pool of resource persons and facilitators will be developed. Members will be drafted from the academe, business communities, NGOs, POs and the Government. Links with academic institutions will be set up. Possibilities for formal accreditation of educational courses will be sought.

Project No. GN - 1

1.	PROJECT TITLE	Muñoz Agro-Science Community - Quinquepartite Networking.
2.	LOCATION	Region - wide; Munoz as a center for the networking and rurban information management.
3.	IMPLEMENTING AGENCIES	Central Luzon Agriculture and Resources Research and Development Consortium (CLARRDEC) and Central Luzon State University (CLSU).
4.	OBJECTIVES	To enhance agricultural productivity through wide application of established technologies and to stimulate further applied research for better agricultural practice; and To promote research and development into appropriate institutional extension services development for improved agriculture and land management.
5.	EXPECTED EFFECTS	More diversified and robust agriculture Increased farm income and rural employment opportunities. Development of innovative institutional and extension service approaches.
6.	PROJECT COSTS	₱30 million for building, equipment, vehicles and institutional strengthening.
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The Project would provide central facilities to support agricultural diversification through several sub-projects. In particular, the Project would be coordinated and managed through the established CLARRDEC mechanism, for which respective main facilities would locate at CLSU. The sub-projects have research, extension and training components that would be carried out by CLSU in cooperation with other research institutes, government agencies, LGUs and NGOs.

The centerpiece of the Project is the establishment of the quinquepartite network linking academic institutes, national government agencies, LGUs, NGOs and POs for exchange and distribution of information related to land management and agricultural technologies. Information management is another important component. A data base would be established, expanding the existing one, for market information, crop and farm budgets, agro-ecological data, opportunities and feasibility of agro-processing and other technical data. Training would also benefit from this.

The Project also focuses on development of new and innovative approaches in institutional and extension services development like the Barangay Integrated Development Approach for Nutrition Improvement (BIDANI) and the Regional Integrated Applied Communication Program (RIACP).

Project costs cover a center building, a computer system for information management, a radio station and mobile stations for networking and information distribution, audio-visual equipment for extension and trainings vehicles and others.

A coordinating and supervising committee will be established for this project and other related projects (Nos. GN-2, 3, 6, 7 and 9, RU-6 and 7), where pilot or demonstration schemes will be implemented to ensure proper distribution of budget and information. The committee will consist of LGUs and NGOs/POs as well as farmer-beneficiaries linked by the network.

Project No. GN - 2

1. PROJECT TITLE — Tissue Culture Laboratory

2. LOCATION — CLSU, Munoz

3. IMPLEMENTING AGENCY — CLSU in cooperation with DA, DOST etc. coordinated through Project No. GN-1.

4. OBJECTIVES — General:

To support crop diversification, reforestation, and livelihood enterprises by mass producing disease/virus free planting materials.

Specific:

(1) to serve as a research laboratory of CLSU,
(2) to serve as an extension arm, and
(3) to produce planting materials for various crops.

5. EXPECTED EFFECTS — Established tissue culture techniques and planting materials with genetically desirable characteristic Trained graduates.

6. PROJECT COSTS

7. IMPLEMENTATION SCHEDULE — Phase I

8. PROJECT DESCRIPTION

The Tissue Culture Laboratory would be located at the College of Agriculture, Central Luzon State University. The laboratory would be used to augment instruction, research and extension activities of the College for both undergraduate and graduate students in the field of crop science. The laboratory would also be instrumental in the research component of the Tropical Plant Multiplication and Distribution project (Project No. GN-3).

An existing building of the College of Agriculture would be used to house the laboratory. The Project covers equipment and supplies for various experiments, and facilities necessary to improve the building.

Project No. GN - 3

1. PROJECT TITLE	Tropical Plants Multiplication and Distribution
2. LOCATION	Six Provinces with CLSU as the multiplication and distribution center
3. IMPLEMENTING AGENCY	DENR-Nueva Ecija, DENR-III, Provincial Governments etc. coordinated through Project No. GN-1 with CLSU.
4. OBJECTIVES	To provide alternative sources of income for rural populace and sustain livelihood enterprises; To contribute to protection and restoration of environment with sound bio-diversity; and To expand the raw materials base for processing.
5. EXPECTED EFFECTS	Diversified and more stable livelihood opportunities to warrant higher income. Restored environment of sound bio-diversity.
6. PROJECT COSTS	
7. IMPLEMENTATION SCHEDULE	Implementing arrangements during Phase I followed by implementation in Phase II.

8. PROJECT DESCRIPTION

The Project would provide seedlings of rattan and bamboo, and planting materials for banana and orchid. Rattan and bamboo would be used for reforestation, while banana and orchid would be planted by small farmers to sustain their livelihood enterprises.

The Project consists of research, production, distribution and extension components. The research on tissue culture to produce continuous supply of planting materials with genetically desirable characteristics would be carried out by the Central Luzon State University (CLSU) under Project No. GN-2. CLSU would also establish a greenhouse for acclimatization of multiplied planting materials. Field planting would be conducted by DENR-Nueva Ecija and DENR III. The Project will benefit Project No. EN-1: Rattan Plantations Development and Management, and Project No. EN-2: Bamboo Plantations Development and Management. Coordination and management of the Project implementation, covering extension, would be provided through Project No. GN-1.

Project No. GN - 4

1.	PROJECT TITLE	Farm Mechanization
2.	LOCATION	Region-wide
3.	IMPLEMENTING AGENCIES	LGUs - Offices of Provincial Agriculturist in cooperation with cooperatives.
4.	OBJECTIVES	To increase farm income and agricultural productivity through farm mechanization; and To organize and empower farmers for pre- and post harvest operations and management.
5.	EXPECTED EFFECTS	Enhanced land productivity in rural areas Upgraded socio-economic status of farmers
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

Farm mechanization is an inevitable direction for increasing land productivity for agriculture. Increased land productivity would discourage conversion of agricultural lands to urban/industrial uses. Farm mechanization in Central Luzon should focus on small farmers, and for this farmers' organization would hold a key.

The Project would provide two main supports: (1) leasing of appropriate farm machineries by establishing an agricultural machinery leasing center in each province, and (2) provision of credit for purchase of farm machineries. Viable cooperatives would be identified and become recipients of both support measures, covering hand tractor, water pump, rice transplanter, harvester, thresher mechanical dryer and miller.

A farm level grain center may be established by the federation of cooperatives at the municipality level, as a comprehensive post harvest facility equipped with warehouse and processing facilities. Recipients of farm machineries would be provided with training for operation and management of pre-and post harvest facilities through cooperatives.

Project No. GN - 05

1.	PROJECT TITLE	Multi-Storey Crop Diversifications
2.	LOCATION	All the six provinces of Central Luzon
3.	IMPLEMENTING AGENCIES	LGUs in cooperation with DENR, DA and DOST as well as NGO's.
4.	OBJECTIVES	To increase income and employment opportunities of upland farmers through establishment of cash crops under multi-storey farming; To expand raw materials base for agro-processing and diversify provincial economies; and To contribute to watershed management.
5.	EXPECTED EFFECTS	Productive and environmentally sound upland areas. Higher and diversified farm income.
6.	PROJECT COSTS	₱30 million for initial implementation
7.	IMPLEMENTATION SCHEDULE	Initial implementation for Bataan and Zambales in Phase I; expansion in Phase II - Phase III

8. PROJECT DESCRIPTION

Multi-storey cropping is part of agricultural development strategy for the Central Luzon Development Program. It will contribute to crop diversification in favour of high value crops and also to improvement of environment. Upland areas in Bataan and Zambales have been identified highly suitable for this type of farming with cashew, mango, coffee and cacao. These tree crops can be combined with forest trees and vegetables and corn.

These schemes of multi-storey cropping have been technically well established in Bataan and Zambales. Bataan is producing coffee, cacao and mango in combination with vegetables. Zambales has established agro-forestry with cashew, jackfruit and mango as well as forest trees, and corn and vegetables are also combined. What is necessary is a systematic expansion of these initial efforts in these and other provinces.

The Project would establish initially a module for each multi-storey cropping scheme. Each module consists of a central nursery for seedlings production of a key tree crop, a nucleus expansion area, organized farmers supported by credit facilities, simple processing facilities, and a research and extension link. This would be multiplied to cover larger areas, and a full scale processing plant established. Viable NGOs would be made instrumental in organizing farmers and facilitating extension and training. Ownership as well as management of nurseries and other facilities would be transferred in steps to the organized farmers.

Project No. GN - 6

1. PROJECT TITLE — Crop-Livestock Integrated Farming

2. LOCATION — Nueva Ecija, Pampanga, Zambales.

3. IMPLEMENTING AGENCY — Provincial Governments in cooperation with DA, DENR etc. coordinated through Project GN-1 with NGOs and CLSU.

4. OBJECTIVES — To increase farm income by improving land productivity through integrating crop and livestock production; and
To minimize wastes by efficient use of livestock/poultry wastes and crop by-products through crop-livestock integration.

5. EXPECTED EFFECTS — Higher income particularly to small farmers engaged in backyard livestock/poultry.
Improved rural environment with respect to soil conditions and reduced pollution load.

6. PROJECT COSTS

7. IMPLEMENTATION SCHEDULE — Pilot implementation in Phase I; expansion in Phase II - Phase III

8. PROJECT DESCRIPTION

Economic family farm size modules established through a research by the Central Luzon State University would be applied to the following schemes.

Schemes	**Crop**	**Livestock/Poultry**
Rice-livestock	Rice	Hog/Layer/Goat/Beef/Carabao
Upland crop-livestock	Corn/Peanut/Mungbean	Goat/Beef
Tree crop-livestock	Cashew/Mango	Goat

Areas for pilot implementation would be selected in upland and lowland Nueva Ecija, lowland Pampanga, and upland Zambales. Most viable schemes would be established for these different areas from commercial as well as technical points of view.

Among the criteria for selecting pilot areas are (1) existence of small farmers engaged in backyard livestock/poultry in an area large enough for pilot implementation, (2) marketing prospects of products involved, (3) initiative of LGUs, and (4) presence of viable NGOs having experiences in community organizing and rural development. The Project may be expanded in steps to cover larger areas and other crops/activities.

Project No. GN - 7

1.	PROJECT TITLE	Carabao-Based Dairy Development
2.	LOCATION	Munoz
3.	IMPLEMENTING AGENCIES	Philippine Carabao Center (PCC) in cooperation with a cooperative
4.	OBJECTIVES	To establish a small holder dairy industry based on cross bred carabao; and To contribute to improvement of nutrition of both urban and rural people.
5.	EXPECTED EFFECTS	Established carabao-based dairy system to be replicated in other areas.
6.	PROJECT COSTS	Costs of improving facilities at PCC; grant-in-aid technical cooperation
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

Carabao-based dairy has been the most neglected area in the livestock sector in the Philippines. There were 2.9 million carabao according to the 1985-87 inventory of which female were 1.1 million. However, only 12,000 heads of carabao are recorded to have been used for milk production.

The Project would established a breeding station of 20-50 ha within the CLSU land based on the existing purebred Murrah buffalos. Imported frozen semen would be used for breeding of improved animals. The Phil-Murrah crossbreds produced through natural or artificial insemination would also be kept in the farm. An elite group of 30 crossbreds would be maintained.

Farmers/carabao owners should be organized into a cooperative for the following purposes:

1) improvement of working relation with PCC,
2) establishment of milk collection scheme with collection points at the barangay level, collection center at city or town proper and processing at the CLSU milk processing plant.

As a prerequisite , a farmer-carabao owner would first undergo a training program on carabao production to be conducted by PCC.

Project No. GN - 8

1.	PROJECT TITLE	Community Coastal Fisheries Development
2.	LOCATION	Selected barangays in coastal municipalities of Bataan and Zambales.
3.	IMPLEMENTING AGENCIES	BFAR, LGUs, and NGOs
4.	OBJECTIVES	To promote appropriate and conservation oriented fishing practices in municipal fishery areas by small fishermen and to improve their competitiveness in local markets.
5.	EXPECTED EFFECTS	Improved fishing practices in municipal coastal areas.
6.	PROJECT COSTS	20 million Pesos
7.	IMPLEMENTATION SCHEDULE	Phase I 1995-1997; Phase II 1997-2002

8. PROJECT DESCRIPTION

The Program will help to establish more viable fishery communities by utilizing cooperatives as media to channel various support services to fishfolks. The following supports will be provided:

(1) establishing/strengthening fishery cooperatives for joint procurement of input, ownership of fishing gear and facilities, and marketing of products.

(2) technical extension for appropriate low cost fishing gear and technologies,

(3) provision of equipment to support self-watch of illegal fishing activities, and

(4) training and education on sustainable coastal and marine resources management.

The Program will complement the Project No. AG-18: Fishery Common Service Facilities Establishment. Fishfolks organized through the implementation of the Program will participate more actively in the operation and use of these facilities, leading eventually to owning some of these pre- and post-harvest facilities.

Participation of NGOs is essential for the success of the Program. They will take the lead in establishment/strengthening of fishery cooperatives and training and education on sustainable coastal and marine resources management.

Project No. GN - 9

1.	PROJECT TITLE	Aquaculture Integrated Farming (Community-based Aquaculture)
2.	LOCATION	Pampanga, Nueva Ecija
3.	IMPLEMENTING AGENCY	Freshwater Aquaculture Center, BFAR and CLSU
4.	OBJECTIVES	(1) To increase and stabilize income of small farmers by integrating aquaculture and crop/livestock/poultry activities; and (2) To contribute to the improvement of diet of rural populace.
5.	EXPECTED EFFECTS	(i) Additional income for small farmers (ii) Improved diet (iii) Expanded base for livelihood enterprises
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Target communities selection in Phase I and implementation in Phase II

8. PROJECT DESCRIPTION

The Project would transfer established aquaculture technology to small farmers as well as experimenting on cage/pen/pond culture using low cost feeds available. Various integrated farming systems incorporating fish would be covered such as pig-fish, poultry-fish, rice-fish etc.

Target communities would be selected, cost-effective system identified for each community, and pilot implementation undertaken to be followed by expansion. Implementation would be closely monitored, and impact evaluated with respect to technology, organization and economies. Systems may be modified based on the monitoring and evaluation.

Project No. GN - 10

1.	PROJECT TITLE	Masinloc-Oyon IPAS Conservation Program
2.	LOCATION	Masinloc
3.	IMPLEMENTING AGENCY	Department of Tourism, DENR, Masinloc municipal government and NGOs/POs
4.	OBJECTIVES	To protect and enhance marine environment by providing economic incentives; and To diversify local economies as well as tourism attractions in Central Luzon.
5.	EXPECTED EFFECTS	More employment opportunities and enhanced environmental consciousness of local people
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

Masinloc and its off-shore islands such as Magalawa and Salvador abound in attractive underwater scenery. As the Masinloc-Oyon Bay area was recently designated as a marine life sanctuary under the NIPAS, natural conditions will be preserved in a good condition.

Coastal and marine environment in the Masinloc-Oyon Bay area can be more effectively protected and even enhanced, if limited tourism activities are allowed with the concept of eco-tourism. For this purpose, the Masinloc Marine Park will be established with operation of glass boat, diving facilities, fishpond restaurants and other facilities, all carefully located. A marine museum may also be established, and environmental education may be offered as part of the Project. Part of income from tourism is used for conservation.

The Program will allow first the preparation of a natural resources conservation and restoration plan. The plan will establish (1) zoning for strict protection area, restoration area, conservation areas, and tourism facilities area, (2) monitoring mechanisms, (3) community-based "nipa" farming, and (4) community-based mangrove plantation.

Project No. GN - 11

1.	PROJECT TITLE	Tourism Communities Development
2.	LOCATION	(not specified)
3.	IMPLEMENTING AGENCY	LGUs in cooperation with DOT and local communities.
4.	OBJECTIVES	To promote more orderly tourism development that is environment friendly and benefits local communities
5.	EXPECTED EFFECTS	Increased tourist visits and increased income of LGUs and local communities
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase II

8. PROJECT DESCRIPTION

Small and segmented tourism development has been common in the Philippines, which causes deterioration of natural environment and shortens resort life-cycle. Philippine tourism lacks a resort area that works as a resort-commerce complex which is enjoyed by both tourists and local communities.

The Project will establish tourism communities by cooperative efforts of the public sector and local communities. The public sector would take the lead in identifying areas for tourism communities. Identified area would be promoted to relevant local governments. Each of the local governments would clarify the land ownership of the identified areas, purchase land if necessary, and prepare a land use plan by a participatory approach with technical assistance by the relevant Government agency.

Infrastructure development for each tourism community would be planned consistently with the plan for the host community/local government. Infrastructure development would be undertaken by the LGUs initiative, and after that the land would be sold and further developed in lot by private investors. In this way, more orderly and integrated tourism development would be assured to benefit local communities.

This approach can be applied to satellite resorts development for the Greater Subic Tourism Core Development (Project No. RP-3).

Project No. GN - 12

1.	PROJECT TITLE	Balingtingon Reservoir Resort
2.	LOCATION	General Tinio
3.	IMPLEMENTING AGENCY	Dept. of Tourism, NIA, municipal government of General Tinio in cooperation with local communities.
4.	OBJECTIVES	To develop a mountain resorts for weekend tourism by Metro Manila residents.
5.	EXPECTED EFFECTS	Opening up of the mountain areas with improved security conditions
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase II

8. PROJECT DESCRIPTION

Despite the extensive mountain areas in the east and the west, Central Luzon lacks mountain resorts. Many Metro Manila residents travel for several hours to the Baguio area for cool climate. The planned Balintingon Reservoir Multi-purpose Project (Project No. RE-21) would help to open up the Sierra Madre mountain areas with construction of an access road to the dam site.

The Balintingon reservoir would create an attractive landscape with mountains in the background. To compensate for the inundation, the watershed should be improved and tourism facilities should be sited carefully with landscaping. The public sector initiative would be indispensable, but the "tourism communities development" approach should be taken in planning with the participation of upland communities to be affected (Project No. GN-11). Management of facilities thus planned should also be delegated to the upland communities as integral part of community-based resource management to provide them also with viable and sustainable economic activities.

Project No. GN - 13

1.	PROJECT TITLE	Localization Initiatives in Forest Protection and Uplands Management
2.	LOCATION	Selected barangays in delineated protected areas (NIPAS and non-NIPAS) in all provinces
3.	IMPLEMENTING AGENCY	DENR, LGUs and NGOs
4.	OBJECTIVES	To promote a sense of environmental consciousness through better land use practices and forest protection activities while improving the quality of life and standard of living of upland communities living adjacent or near protection forest areas; and To encourage upland communities to play an active role in community development activities in an effort to advance the self-sufficiency of the upland communities.
5.	EXPECTED EFFECTS	Reduced encroachment in adjacent protected forests. Improved land use practices. Improvement in the quality of life of upland communities.
6.	PROJECT COSTS	20 million Pesos
7.	IMPLEMENTATION SCHEDULE	1999 - 2006, three phases each of three years duration

8. PROJECT DESCRIPTION

The establishment of a local institution called "Environmental Protection Society (EPS)" in the village is central to this project proposal. The aim of creating an EPS is to maximize the villager's participation in the planning, implementation and management of activities at the village level, so that a sense of appreciation and responsibility for conservation would pervade in village communities. In order to become a member of the EPS, participants have to sign a commitment stipulating that they would not cut trees nor hunt animals and that they would report such activities to the EPS. The EPS would provide villagers with access to credit through a revolving loan fund which will disburse low interest loans for

environmentally sound income generating activities. GOs and NGOs are expected to provide villagers with community development assistance, agriculture extension, health services, training and educational information on appropriate land use practices and conservation. The combined impact of the EPS ability to mobilize villagers, intensive educational efforts and comprehensive rural development activities is hope to result in changed attitudes and practices amongst villagers.

The Project will encompass the following.

1) Establishment of Environmental Protection Societies in each target barangay;

2) Setting up of revolving loan funds to promote environmentally conscious, self-sufficient land use and development practices amongst the villagers;

3) Provision of training to the EPS members in the areas of agroforestry and cultivation practices on steep land, appropriate land management, practices for improved soil and water conservation, income generation and marketing techniques;

4) Construction of latrines, water storage facilities for drinking water and shallow wells for ground water;

5) Education to villagers concerning nutrition, primary health care, immunization, AIDS prevention as well as to eliminate malnutrition;

6) Establishment of cooperative stores in the villages and helping them increase their capability and overall effectiveness;

7) Introduction of important appropriate technologies to the upland communities for improved land management practices and for increasing productivity;

8) Promotion of indigenous cultural activities based on community cooperation and organizing semi-annual village workshops to serve as a forum for the discussion of experience gained in implementation; and

9) Establishment of small water reservoirs in each targeted village.

Project No. GN - 14

1.	PROJECT TITLE	Post MPC Agro-Industrial Rurban Community Program
2.	LOCATION	Resettlement sites in Central Luzon
3.	IMPLEMENTING AGENCY	DTI in cooperation with NGOs
4.	OBJECTIVES	(1) To establish Mt. Pinatubo related resettlement sites as viable rurban (rural urban) communities; and (2) To foster linkages between small industries and between agriculture and industry.
5.	EXPECTED EFFECTS	Vitalized economies of resettlement sites linked to other rural and urban economies, Higher income and improved living conditions of resettled people.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Detailed program development in Phase I; implementation in Phase II

8. PROJECT DESCRIPTION

The Mt. Pinatubo Commission (MPC) will be dissolved in 1998, and existing Productivity Centers will be turned over to respective municipalities. Effective utilization of these and other facilities are vitally important to establish the livelihood of resettled people at the minimum and further to develop viable community enterprises linked to other main stream economic activities.

The Program aims at sustaining the development of Mt. Pinatubo related resettlement sites after the dissolution of MPC. Measures to realize this include the following:

(1) organizing of communities through value education and leadership training,
(2) skills training and science and technology education to enhance craftmanship,
(3) support to organized communities for maintenance and management of the productivity centers (PCs) and other facilities,
(4) transfer of land tenure and buildings to respective municipalities,

(5) provision of an incentive package similar to the existing one to prospective investers in the PCs, and

(6) provision to allow establishments in the PCs to acquire/build housing units for their employees' dormitories.

Those community enterprises that would strengthen linkages between agriculture and industry, and help to develop new industrial clusters would be particularly encouraged. They include post harvest facilities, village feed mills, organic fertilizer manufacturing, agricultural implements manufacturing, and agricultural machinery leasing and workshops.

For community organizing and various training/education, viable NGOs should be mobilized. Other incentives and support measures would be provided through DTI. Studies should be conducted before the MPC dissolution to clarify needs of each resettlement site for additional facilities and to identify promising livelihood and other economic activities. Agro-industrial rurban community development plans should be prepared by a participatory approach for implementation in Phase II.

Project No. RU - 1

1.	PROJECT TITLE	Rural Water Supply and Sanitation Improvement
2.	LOCATION	Six provinces
3.	IMPLEMENTING AGENCIES	LGUs, DPWH and Local Water Utilities
4.	OBJECTIVES	To provide reliable and safe water supply that is easily accessible to the majority of households within the shortest time practicable in a cost-effective manner, To increase sanitation and sewerage service coverages; and
5.	EXPECTED EFFECTS	Improvement/enhancement of health conditions and living environment of the local populace.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase III

8. PROJECT DESCRIPTION

In Central Luzon, about 40% of rural population enjoy water supply of acceptable standards. Over 80% of those served obtain water from wells. The major source of water supply in rural areas of Central Luzon at present is groundwater through wells and springs. It is only in a few isolated mountain barangay that rainwater and surface water are reported to be utilized for domestic needs.

As for the sanitation requirements, the National Master Plan set a sector target level of services at 77% for Phase I covering 1992-1996 and 98% for Phase II covering 1997-2010. This Rural Water Supply and Sanitation Improvement Project was elaborated referring to the National Master Plan and specifically zeroes in on the improvement/enhancement of the health and sanitation conditions in the rural areas.

In conformity with this Plan, the Project would then provide two levels of water service (Level I: point source and Level II: communal faucet system or standposts) to the rural communities depending upon technical and financial considerations, the needs of the Water Districts (WDs) and Rural Waterworks and Sanitation Associations (RWSAs), and their willingness and ability to share in the costs and the responsibility of constructing and maintaining the water systems.

The following criteria would be adopted/considered to select and allocate the new projects:

For water supply and sanitation

- Community commitment
- Inadequacy of existing water supply and sanitation
- Prevalence of water-related diseases
- Community development level and potential
- Capital cost per capita
- Proportion of households served by flush toilets, water sealed latrines or sanitary latrines deemed suitable by local health authorities

For sewerage projects

- Presence of existing sewerage system
- Existence of economically and efficiently operated and maintained water supply system
- Population density
- Community commitment
- Community development level and potential

In addition to the above, the following shall be promoted in close cooperation with the line government agencies concerned such as DPWH, LWUA,DILG,DOH and NEDA.

- Construction of flush toilets with septic tanks for those financially capable. (In depressed communities, graduated subsidy can be applied).
- Construction of water-sealed toilets and off-set type of toilet installation
- Blind drainage methods for individual households wastewater disposal
- Collection and disposal of refuse (i.e. sanitary landfill, composting, etc.)

Project No. RU - 2

1.	PROJECT TITLE	Rural Energy Program
2.	LOCATION	Six provinces
3.	IMPLEMENTING AGENCIES	Department of Energy (DOE-NCRD) Affiliated Non-Conventional Energy Center (ANEC) NAPOCOR, NEA, NIA
4.	OBJECTIVES	To promote indigenous resources-based energy development and use in rural areas; and To preserve/enhance living environment for rural populace.
5.	EXPECTED EFFECTS	More environment friendly energy use and environment conscious mind among rural people
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase II

8. PROJECT DESCRIPTION

The Program would offer a comprehensive package of measures to promote the development and use of indigenous energy resources. Specifically, it would cover rice-husk cooking stove, photo voltaic power distribution, photo voltaic drinking water supply, wind power generation, and mini-hydro. Support measures include pilot project implementation for demonstration, dissemination of information on proper application, applied research, collection and analysis of basic data and others, depending on the components.

Rice-husk cooking stoves commercialization

The following would be undertaken by DOE-NCRD with ANC.

(a) Commercialization of rice-hull cooking stove for household
(b) Campaign for dissemination of rice-hull cooking stove
(c) Establishment of rice hull collecting and supply/retailing system
(d) Establishment of ash treatment system

Photo voltaic power distribution

This component would involve DOE-NCRD, ANC, NAPOCOR and NEA for the following particularly in Tarlac and Nueva Ecija.

(a) Installation of the centralized PV (5-kWp) and decentralized PV (small scale) systems.
(b) Collection and analysis of monitoring data
(c) Dissemination program for application of PV system

Photo voltaic drinking water supply

This component would establish a viable application of photo voltaic technology to drinking water supply in highland areas. The following would be undertaken by DOE-NCRD with ANC.

(a) Preliminary study and site reconnaissance
(b) Installation of the pilot plant ($10m^3$/day)
(c) Collection and analysis of monitoring data
(d) Preparation of commercialization program

Wind power generation

Coastal areas in Bataan and Zambales and highland areas in Nueva Ecija may be suitable for wind power generation. Some basic data on wind resources are available, but feasibility of windpower generation has not been established. This component is for a feasibility study, including the following.

(a) Preliminary study and site reconnaissance
(b) Installation of the wind regimes monitoring system
(c) Collection and analysis of monitoring data
(d) Design of the pilot plant for further development

Mini-hydro

Several promising sites have been identified for mini-hydro power development for rural electrification. Early implementation would be promoted for the following more promising sites: Talavera and Pris in Nueva Ecija, Kanding Falls in Tarlac, and Cabaluan River and Salaza in Zambales.

Project No. RU - 3

1.	PROJECT TITLE	Rural Roads Development and Management
2.	LOCATION	Region-wide
3.	IMPLEMENTING AGENCIES	DPWH-III, LGUs
4.	OBJECTIVES	- To expedite development/improvement of rural roads; and - To strengthen the improvement and maintenance system of rural roads using self-help efforts.
5.	EXPECTED EFFECTS	Activation of rural economics. Improve access to social and other urban services for rural populace.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	
8.	PROJECT DESCRIPTION	

Conditions of rural roads in Central Luzon are less than adequate. Some rural communities face difficulty in marketing their produce due to poor farm to market roads. Some others are completely isolated from outside their communities during flooding. As Central Luzon is disaster - prone, repair and maintenance of rural roads are as important as construction of new roads.

The Project will provide two main components: (1) development/improvement of rural roads, and (2) strengthening of improvement and maintenance system of rural roads. The Project will start with a study to review and assess the present rural road development and maintenance system, and to evaluate existing conditions of rural roads. The road system for uplands and resettlement sites would be a particular focus among others. Priority criteria will be established for development/improvement of rural roads with design standards in view of availability of budget and manpower resources. To complement/augment government efforts and resources, a more effective rural roads improvement and maintenance system will be formulated based on self-help efforts of local communities.

Project No. RU - 4

1.	PROJECT TITLE	Rural Database Development
2.	LOCATION	NEDA-III office and CLSU
3.	IMPLEMENTING AGENCIES	NEDA-III, CLSU
4.	OBJECTIVES	(1) To formulate and systematize the structure, plan and methodology of social surveys for a regional rural database development; (2) To integrate the social survey mechanisms in formulating the structure and plan of the regional rural database for easy understanding and use in development planning using a GIS; and (3) To set up a regional rural database center at CLSU
5.	EXPECTED EFFECTS	Database structure and formulation to enable easy user friendly queries, complied sector wise for each municipality (and its constituent villages or barangays).
6.	PROJECT COSTS	US $ 3.3 million
7.	IMPLEMENTATION SCHEDULE	Phase II

8. PROJECT DESCRIPTION

The Project will encompass the following.

(1) To study existing institutions, policies and data gathering mechanisms for rural development in Central Luzon,

(2) To formulate a comprehensive village level social survey data gathering plan.
Items and checklists need to be systematized to enable comprehensive formulation and analysis - both sector wise and municipality wise. Questionnaires adequately covering all areas of significance in rural development will be formulated as a first step followed by the analytic procedures to systematize the results of the questionnaires, leading to a comprehensive village level social survey data gathering plan.

(3) To formulate the structure and plan of the rural database.
This will be realized by the social survey data gathering plan, using GIS.

(4) To set up the regional rural database center at CLSU.

(5) To select one of the provinces for a demonstration project
Steps (1), (2) and (3) will be conducted in detail.

(6) To provide a training program for officials and university research staff.
The program covers rural development in general and GIS application in particular.

Project No. RU - 5

1.	PROJECT TITLE	Countryside Agro-Industrial Centers (CAICs) Development Program
2.	LOCATION	Selected locations in six provinces
3.	IMPLEMENTING AGENCIES	DTI, LGUs
4.	OBJECTIVES	To increase income and employment opportunities in rural areas by promoting rural industrialization; and To provide incentives to crop diversification by encouraging processing activities.
5.	EXPECTED EFFECTS	More active rural economies and lively rural life.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The Program would provide a start-up facility for rural agro-industrialization in each province. Initially, seven locations have been selected: Abucay in Bataan, San Ildefonso in Bulacan, Guimba and Palayan City in Nueva Ecija, Magalang in Pampanga, Sta. Ignacia in Tarlac, and Botolan in Zambales.

The first step is to conduct a feasibility study to identify specific agro-industries to be promoted in each CAIC, select sites, and recommend an organization to implement the Project. Small and medium industries prioritized by respective provincial governments and DTI would be selected. The following criteria should apply to industries to be accommodated: (1) processing of local produce, input for agricultural activities or manufacturing of consumer goods, (2) non-pollutive, and (3) not stressing local resource base or ecosystem. Site selection may follow the criteria established for the National Industrial Estate Program (NIEP).

The whole point of the Program is to provide improved infrastructure and utility facilities selectively for areas of higher potentials with viable agro-processing activities. In addition, one-stop, investment facilitation center would be set up in each CAIC to provide necessary investment documentation required by government agencies as well as technical guidance and intermediation services to match up potential investors. Incentives would be given to enterprises which will be set up by cooperatives or community organizations.

Project No. RU - 6

1.	PROJECT TITLE	Seri-Culture Promotion
2.	LOCATION	Upland areas in Nueva Ecija and Bulacan
3.	IMPLEMENTING AGENCIES	LGUs supported by CLSU, DA
4.	OBJECTIVES	To establish seri-culture technology suited to the region; and To stimulate related industries.
5.	EXPECTED EFFECTS	Establishment of seri-culture and related industries
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase II - Phase III

8. PROJECT DESCRIPTION

Seri-culture has been found promising agro-ecologically especially in the upland areas of Nueva Ecija and Bulacan. In the medium to long term, seri-culture may strengthen the Central Luzon's position as a center for fashion design industry by diversifying the raw material base.

The Project would support technology development for seri-culture conducted at CLSU and its transfer to upland farmers. A few small scale seri-culture would be established by organized farmers in willing municipalities. Their operation would be supported and coordinated by the established CLARRDEC mechanism, which would be strengthened by Project No. GN-2. The supports include credit facilities, technical extension and joint marketing of cocoons initially. The operation would be expanded and processing facilities established and owned by a specialized federation of the cooperatives.

Project No. RU - 7

1.	PROJECT TITLE	Postharvest Operations Nucleus Development
2.	LOCATION	One municipality in each of six provinces
3.	IMPLEMENTING AGENCIES	National Post-Harvest Institute for Research and Extension (NAPHIRE), LGUs
4.	OBJECTIVES	General: To empower farmers to participate in postharvest operations to increase their productivity and income. Specific: (1) to expand postharvest infrastructure and facilities for commercial crops and grains, (2) to enhance technical and management capacity for postharvest operations, and (3) to strengthen capabilities of NAPHIRE for training and extension of postharvest technologies.
5.	EXPECTED EFFECTS	Demonstration of viable postharvest operation schemes by active participation of farmers
6.	PROJECT COSTS	Construction costs of postharvest infrastructure and facilities; grant-in-aid technical cooperation
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

A major strategy of the Government to empower farmers is to mobilize farmers or farmer groups to engage in postharvest handling and processing as well as marketing of their products. The Project would establish pilot processing plants in strategic key commercial crops and grains areas, organize farmers and train them extensively for operation and management of respective processing. The following municipalities may be selected for the initial implementation: Abucay-Bataan, San Ildefonso-Bulacan, Muñoz-Nueva Ecija, Magalang-Pampanga, Tarlac-Tarlac, and Botolan-Zambales. The Project would be implemented for two years, and its expansion would follow.

Each pilot processing plant would be equipped also with necessary training and laboratory facilities and equipment. NAPHIRE staff would also receive training on management, extension and postharvest research to acquire technologies emanating from other countries.

Project No. AG - 1

1.	PROJECT TITLE	Integrated Organic Farming Promotion
2.	LOCATION	All the six provinces of Central Luzon
3.	IMPLEMENTING AGENCIES	Office of Agriculturist, LGUs
4.	OBJECTIVES	To restore/enhance land productivity in areas affected by Mt. Pinatubo; To reduce soil erosion and degradation in upland and lowland; and To promote organic agriculture throughout Central Luzon.
5.	EXPECTED EFFECTS	Higher agricultural production through sound practice of organic agriculture; Enhanced environmental quality with sound bio-diversity
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II for Mt. Pinatubo affected areas; application to other areas starting in Phase II

8. PROJECT DESCRIPTION

Damages to agricultural lands by the Mt. Pinatubo eruption may be taken as an opportunity to promote sound organic agriculture. Natural regeneration of productive capacity of damaged lands can be accelerated by application of organic agriculture to lead to higher agricultural production than was the case before the disaster.

The Project would encourage alley cropping or hedgerow inter-cropping in the upland, use of leguminous crops and crop residue to feed livestock, and improved composting. Extension and seedlings of leguminous trees would be provided to farmers.

Alley cropping combines soil conserving/enriching perennials with food crops. Hedgerows are established by ipil-ipil (leucaena) and kakawate (gliricidia), and in between these, corn, mungo and sweet potato are planted.

Rice straw and corn stovers, abundant in small farms, have low feeding value but are good roughages to maintain mature animals during lean months. Legume hay, empty legume

pods, green corn and sweet potato vines have better feeding value and are also available. Other feed materials include rice bran, sugarcane tops, cassava leaves and cashew leaves. Proper use of these materials should be promoted.

An improved composing method is available, which would minimize the loss of nitrogen. Nitrogen contents of compost from two heads of cattle can be equivalent to eight bags of ammonia sulfate fertilizer.

Project No. AG - 2

1.	PROJECT TITLE	Integrated Upland Farming System Development
2.	LOCATION	Upland rain-fed farms in Central Luzon
3.	IMPLEMENTING AGENCIES	Office of the Provincial Agriculturists of six provinces in Central Luzon and NIA
4.	OBJECTIVES	General:

To provide supplemental irrigation and maximum utilization of land, generate farmers' income to uplift their living standard and improve socio-economic conditions in the depressed upland areas; and

To contribute to the rehabilitation and protection of forest resources.

Specific:

(1) to increase production of selected agricultural commodities such as rice, corn, roots crops, legumes, vegetables, fruits, milk & meat products, etc.,
(2) to generate employment opportunities in the upland areas,
(3) to improve access to credit/financing institutions,
(4) to improve access to pre-construction, post-harvest and marketing facilities and services,
(5) to generate and/or test the SALT (I, II & III)/HALT and agro-forestry technologies in Region III,
(6) to formulate and test strategies for the subsequent adoption and commercialization of the above technologies, and
(7) to establish mechanisms for resources management by upland communities to

ensure the rehabilitation and protection of forest resources in the long run.

5. EXPECTED EFFECTS — Adoption of integrated farming system (crop-livestock) in a large scale, increase of farm productivity, maximum efficiency in land utilization, and alleviation of the impeding poverty problem in marginal areas.

6. PROJECT COSTS

7. IMPLEMENTATION SCHEDULE — Phase II - Phase III

8. PROJECT DESCRIPTION

The population pressure brought about by the uncontrolled population growth has forced most of the landless Filipinos to find their fate in the upland areas. Unemployment or limited job opportunities in urban areas is also one of the causes of migration to upland areas. Very few of the settlers in the hilly areas own a piece of land to cultivate throughout the year. A high percentage of them are squatters and lack the livelihood.

On the other hand, cultivation of upland/hilly areas posed unwanted effects to the environment. Erosion which is primarily the effect of inappropriate cultivation practices in the upland/hilly lands is the major form of soil degradation now in the Philippines.

Upland inhabitants are primarily poor farming families with insecure land tenure. Subsistence food production rather than forestry is their overriding priority. The paramount objective for public intervention in upland management is that of obtaining the greatest good for the greatest number of people in ways that are consistent with long term sustainability of the productive capacity of the ecosystem.

The integrated upland farming development plan to be formulated considering the eco-system will include the following livelihood projects and technologies. For forest and upland agriculture technologies, the Bataan State College/Bataan College of Agriculture should be supported.

1) Crop
   - Orchard development
   - Cash crop and vegetable production
   - Agro-industrial development
   - Small water impounding projects and small reservoir irrigation projects (SWIPs, SRIPs)

- Small farm reservoir (SFR)
- Shallow ground water pump irrigation (SGWPI) or shallow tube well (STW)

2) Livestock development (small backyard livestock production)
   - Breeding/fattening of cattle, carabao, swine, goat and sheep, and poultry, and dairy production

3) Fishery (tilapia production): with the water resources development like SWIPs, SRIPs and SFR

4) Integrated systems in upland: SALT I, II and III, and HALT

Institutional development in line with the 1991 LGC for effective resource management based on local communities is another vital component of the Program. This will be effected initially through the preparation of a forest rehabilitation and protection plan by a participatory approach, consistent with the integrated upland farming development plan. Land tenure situations in upland areas should be clarified, areas suitable for integrated upland farming delineated, and the agrarian reform implemented accordingly.

Project No. AG - 3

1.	PROJECT TITLE	Citrus Intercropping Pilot Development
2.	LOCATION	Sierra Madre mountainous areas in Nueva Ecija
3.	IMPLEMENTING AGENCIES	LGUs in cooperation with DA
4.	OBJECTIVES	To increase farm income of upland farmers through inter-cropping citrus with rice and vegetables.
5.	EXPECTED EFFECTS	More diversified income sources and provincial economy
6.	PROJECT COSTS	₱ 12 million for initial 100 ha
7.	IMPLEMENTATION SCHEDULE	Phase II

8. PROJECT DESCRIPTION

Areas suitable for citrus orchards can be found in the upland of Sierra Madre mountains with respect to climate, soil and topography. For instance, Palayan City is envisioned as an orchard city specialized in citrus fruits (calamansi). Implementation is subject to solving the "green disease" prevalent in the region.

The Project would establish a multi-storey farming system with citrus as a key tree crop. A module would be 333 grafted citrus seedlings at 6 m x 5 m lattice covering a hectare field. To be inter-cropped are rice, tomato, watermelon and other crops.

Land tenure situations should be clarified for areas found suitable for this scheme, and the agrarian reform may be implemented if necessary. Those areas with better organized farmers would be prioritized for implementation. Technical extension and financial assistance would be provided through farmers organizations.

Project No. AG - 4

1.	PROJECT TITLE	Angat Afterbay Regulator Dam (Bustos Diversion Dam) Rehabilitation
2.	LOCATION	Angat-Maasim River Irrigation System (AMRIS), NIA-Region III, Bulacan
3.	IMPLEMENTING AGENCIES	NIA, Provincial Government
4.	OBJECTIVES	To contribute to the self-sufficiency in rice by fully rehabilitating the largest NIS in the Philippines.
5.	EXPECTED EFFECTS	Restoration of irrigation provision to the firmed-up service area of 31,485 ha*.
6.	PROJECT COSTS	₱399.9 million
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The Angat Afterbay Regulatory Dam or Bustos Diversion Dam stores water released from the main power plant of NPC which is at the toe of the Angat Multipurpose Dam of Norzagaray. The Regulator Dam is about 50 km downstream of the NPC power plant, and has a storage capacity of 3,600m^3.

The crest of the Dam has been raised with the installation of six sector gates, each 2.5 m high and 79.0 m long. The gates, installed in 1968, have remaining economic life of two years. One of them was washed away by floodwater during 1990. It was replaced by a temporary weir of gabion type.

The Rehabilitation Project would replace the temporary gabion weir and the deteriorating five other sector gates. Permanent gates using rubber type dam would be installed.

* AMRIS

Firmed-up service area	31,485 ha
Potential area	34,000 ha
Number of landowners	12,998
Number of farms served	16,570
Average farm size	1.55 ha
Number of lots	20,311

Project No. AG - 5

1.	PROJECT TITLE	Pampanga Delta Development Project - Irrigation Component (PDDP-IC)
2.	LOCATION	Pampanga
3.	IMPLEMENTING AGENCIES	NIA
4.	OBJECTIVES	To contribute to rice self-sufficiency; and To uplift socio-economic conditions of farmer-beneficiaries through increasing productivity.
5.	EXPECTED EFFECTS	Increase in rice yield in dry and wet seasons and improvement of living standards in the areas.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

A feasibility study on the Pampanga Delta Development Project was carried by Japan International Cooperation Agency (JICA) from 1980-1982. Detailed engineering design work was conducted under a loan from the OECF from 1987-89. Pre-construction work of PDDP-IC was undertaken form February 1992 to February 1993, and the construction work was expected to start in November 1993 and end in October 1997 under OECF loan. However, since the effects of Mt. Pinatubo eruption in June 1991 was seriously anticipated, the implementation of PDDP-IC was suspended in February 1993.

The project area of 15,000 ha in gross and 12,000 ha in net is located at about 60 km northwest of Metro Manila and extends southwards from Mt. Arayat on the right bank of the Pampanga river. At present, rainfed agriculture is being practiced. The project has been designated to enable year round irrigation, diverting irrigation water of 20.18 m^3/sec from the Pampanga river. For this purpose, construction of a diversion dam, and irrigation and drainage facilities have been proposed under the Project. The proposed diversion dam in located in the Pampanga river about 2.6 km upstream of the Arayat bridge.

On April 2, 1991, the volcanic activities of Mt. Pinatubo commenced and the main eruption occurred on June 15, 1991. The eruption produced substantial pyroclastic ashfall and pyroclastic flow deposits on the flanks of Mt. Pinatubo. An amount of this volcanic deposit is roughly estimated at four to seven billion m^3.

During a period of June 15 to September 10 in 1991, the lahar flowed into the Pampanga river through the Bamban and Rio Chico rivers. Some were deposited in the river beds and on both banks of the rivers. Apart from the above effects, another effect of the lahar is observed in the project area. The deposits were partly removed by DPWH in the dry season from November 1991 to March 1992. However, the lahar continues to flow down to the project area. DPWH shall undertake emergency dredging of these rivers to protect area from the further effect of lahar.

These efforts reflect the concerns of DPWH and the Province of Pampanga for early implementation of the Project. The Project represents the best potential source of food production with irrigation facilities. Moreover, it will generate livelihood and employment opportunities for those directly or indirectly affected by the natural calamity.

Project No. AG - 6

1.	PROJECT TITLE	Porac-Gumain River Irrigation System (PGRIS) Restoration.
2.	LOCATION	Floridablanca, Guagua, Sta. Rita and Lubao in Pampanga.
3.	IMPLEMENTING AGENCY	NIA
4.	OBJECTIVES	To restore living conditions of farmers affected by the Mt. Pinatubo disasters; and To contribute to the revitalization of provincial socio-economy.
5.	EXPECTED EFFECTS	Restoration of full irrigation services to a designed service area of 6,000 ha.
6.	PROJECT COSTS	₱45.8 million
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The PGIS takes water from the Porac and the Gumain river to serve 6,000 ha in Floridablanca, Guagua, Sta. Rita and Lubao. The Project involves the replacement of steel sluice gates, hedgates and falling shutters, including wooden flashboards of various check gates of the system, channelization, desilting of canals and canal structures and disposal of silts, repair of canal structures, embankments, service roads and office building and facilities, and restoration of an existing earthdam.

Project No. AG - 7

1.	PROJECT TITLE	Mapanuepe River Lake Irrigation
2.	LOCATION	San Marcelino, San Antonio
3.	IMPLEMENTING AGENCIES	NIA
4.	OBJECTIVES	To provide irrigation water for the salvaged area of the Sto. Tomas Irrigation System; and To restore the livelihood of some people affected by the Mt. Pinatubo derived lahar and contribute to rice production in the province.
5.	EXPECTED EFFECTS	Recovered rice production and confidence of people affected by Mt. Pinatubo.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	1995 - 1999
8.	PROJECT DESCRIPTION	As per attached

Mapanuepe River Lake Irrigation Project

1. Background

The existing Sto. Tomas River Irrigation System was damaged by the eruption of Mt. Pinatubo in 1991. The service area which is about 3,924 has was rendered totally devastated by lahar flows and thick deposits of volcanic ash falls. The irrigation canals were clogged up and the existing dam which diverted water from Sto. Tomas River was burried by lahar. The deposition of lahar at the upstream portion of the dam created a reservoir for water that comes from Mapanuepe River. Mapanuepe River and Marella Rivers are major tributaries of Sto. Tomas River before the eruption of Mt. Pinatubo. After the eruption, Marella River found a new course while Mapanuepe was blocked, hence the reservoir now called Mapanuepe Lake. Thus, aside from being buried, the dam has no more water to divert. The creation of Mapanuepe Lake submerged the housing village of Dizon Mining Corporation. The water level therein is expected to rise even more during rainy season due to the absence of outlet threatening submergence of more houses in the vicinity. In order to avert this occurrence, the DPWH constructed an outlet channel which would discharge water from the lake to Marella River to prevent rising of water level in the lake.

Taking this opportunity, NIA proposed the rehabilitation of Sto. Tomas River Irrigation System by utilizing the Mapanuepe Lake as source of irrigation water. Of the total service area of the irrigation system, about 1,900 ha mainly located at the municipalities of San Antonio and San Marcelino can still be rehabilitated and irrigated.

2. Objectives

The proposed construction Mapanuepe River Irrigation System has the following objectives:

1. To provide irrigation water for the salvaged area of the Sto. Tomas Irrigation System.
2. To restore the livelihood of some people in the area and contribute to rice production in the province.

3. Project Description

NIA proposed the completion of the Project in two schemes. The first scheme consisted of constructing an intake at the outlet channel constructed by DPWH, a 5-km diversion channel and 3 km stretch of the existing system's main canal. A 3-km stretch of chute pipe will provide continuity of the diversion channel on the unstable portion of the channel's path. The 3-km stretch of lined canal will connect the diversion channel to the main canal. The study of this scheme has been completed with a computed economic internal rate of return (EIRR) of 21%.

The Project has a capability for power generation depending on the design option of the diversion channel. The 5-km channel can have at least 67-m head.

During dry season, the service area of the system reduces to 900 ha due to insufficiency of water. In order to augment water requirement, the second scheme was conceived. This will consist of creating a dead storage of the lake which could collect water during wet season to augment the requirement during dry season. This scheme will be able to provide irrigation water for additional 900 ha during dry season. This consists the second scheme.

In addition, the Project shall also include rehabilitation of existing irrigation canals, structures and on-farm facilities. Specific construction works shall include desilting of canal and canal structures, reconstruction some canals structures and gates and concreting of some portions of main canal and laterals. Lahar protection dike shall also be constructed in areas where necessary.

4. Project Costs

The financial cost of the Project is estimated at P139,213,000.00. This includes the cost of construction and pre-engineering cost.

Project No. AG - 8

1.	PROJECT TITLE	Upper Tabuating Irrigation
2.	LOCATION	General Tinio-Nueva Ecija
3.	IMPLEMENTING AGENCIES	Upper Pampanga River Integrated Irrigation System - National Irrigation Administration (UPRIIS-NIA)
4.	OBJECTIVES	To uplift socio-economic conditions of farmers through increase productivity; and To contribute to rice self-sufficiency.
5.	EXPECTED EFFECTS	Increase in rice yield in dry and wet seasons
6.	PROJECT COSTS	₱ 172 million
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The Project constitutes an irrigation component of the Comprehensive Agrarian Reform Program under UPRIIS. An earth dam would be constructed to diverst water from the Upper Tabuating river to irrigate a proposed service area of 1,000ha with 480 farmer - beneficiaries.

Project No. AG - 9

1.	PROJECT TITLE	Aulo Small Water Impounding Project (SWIP)
2.	LOCATION	Palayan City, Nueva Ecija
3.	IMPLEMENTING AGENCY	NIA
4.	OBJECTIVES	General: To improve/enhance socio-economic conditions of the farmer-beneficiaries. Specific: 1) to generate power (1,204 million kWh annually), 2) to increase paddy production by a year-round, irrigation to 550 ha, plus 225 ha during the rainy season, and 3) to promote inland fishery.
5.	EXPECTED EFFECTS	Improvement of socio-economic life of farmer-beneficiaries and enhancement of regional economy.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II
8.	PROJECT DESCRIPTION	

The Aulo River Multi-Purpose Small Water Impounding Project (SWIP) is located in Palayan City. Palayan City is only 20 minutes drive away from Cabanatuan City on a 15 km of concrete paved road. Most of the areas around the City have remained undeveloped, particularly those classified as agricultural. The Project will tap the potential to generate hydropower, provide year round irrigation for 550 ha of land for paddy plus the irrigation of an additional area of 225 ha during the rainy season, and fish production.

Project No. AG - 10

1. PROJECT TITLE — Small River Irrigation/Impounding Projects (SRIPs)

2. LOCATION
   - Tangilad SRIP (Orani-Samal, Bataan)
   - Labangan SRIP (Abucay, Bataan)
   - Mayamot SRIP (Talugtog, Nueva Ecija)
   - Bayating SRIP (Sta. Ignacia, Tarlac)

3. IMPLEMENTING AGENCY — NIA

4. OBJECTIVES — To provide additional water supply to the farmlands during the wet and dry seasons, and
   To uplift socio-economic conditions of farmers through increase productivity.

5. EXPECTED EFFECTS — Crop intensity of 200% and improvement of living standards in the areas.

6. PROJECT COSTS

7. IMPLEMENTATION SCHEDULE — Phase I - Phase II

8. PROJECT DESCRIPTION

The Small Reservoir Irrigation/Impounding Projects (SRIPs) are planned to be a small scale storage project with irrigation as the major component and fishery as an incidental function.

The reservoir dam is to be constructed to supply irrigation water to existing small systems drawing water from the river and/or rainfed farms where farmers are forced to put up with only a cropping per year due to non-availability of irrigation system.

The Tangilad SRIP will provide a reservoir to serve the five existing communal irrigation systems with a total area of 932 ha. The Labangan SRIP will serve a new area of 199 ha and improvement of 466 ha with a reservoir. The Mayamot SRIP will generate an area of 150 ha for irrigated paddy to be served by a reservoir. The Bayating SRIP will construct a reservoir to serve 550 ha during the wet season and 900 ha during the dry season.

Project No. AG - 11

1.	PROJECT TITLE	North Lawis (Palongohon) Irrigation
2.	LOCATION	Candelaria-Zambales
3.	IMPLEMENTING AGENCY	NIA
4.	OBJECTIVES	To increase income of rice farmers through productivity increase; and To contribute to food self-sufficiency in the province.
5.	EXPECTED EFFECTS	Increase in rice yield from 3.5 ton to 4.5 ton per ha during well season and from 4.0 ton to 4.75 ton per ha during dry season.
6.	PROJECT COSTS	₱ 78 million (as of July 1994)
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The Project has a potential service area of 1,020 ha and would benefit 820 farmers. The Project involves the construction of a 2.0m x 100 m run-of-river concrete diversion dam, 30 km of main canal and laterals, cut and cover structure, canal siphons, road crossing and drainage structure, terminal facilities, and 20 km access and service roads.

The Project would be a partial replacement of irrigated paddy area damaged by the Mt. Pinatubo eruption. The Project area may receive settlement of some of those affected by the eruption, if the Project is successfully implemented.

Project No. AG - 12

1.	PROJECT TITLE	Tarlac Satellite Irrigation
2.	LOCATION	Bamban, Capaz, Sta. Ignacia and San Jose, Tarlac
3.	IMPLEMENTING AGENCY	National Irrigation Administration
4.	OBJECTIVES	To expand the effective service coverage of existing and new irrigation projects for yield increase of rice.
5.	EXPECTED EFFECTS	Crop intensity of 170-200%
6.	PROJECT COSTS	₱ 25 million for the first schemes
7.	IMPLEMENTATION SCHEDULE	Phase I for the three schemes and the F/S of other priority schemes for implementation during Phase II - Phase III.

8. PROJECT DESCRIPTION

The Project would cover initially a few existing and one new irrigation schemes. The Panaisan communal irrigation system (CIS) in Bamban was devastated by the Mt. Pinatubo eruption and needs restoration. At present it irrigates only 55 ha during wet season and 35 ha during dry season. The Project would serve the potential area of 112 ha in wet and dry season.

The Kawili-wili CIS in Capaz needs major rehabilitation. Implementation of the Project would irrigate an area of 185 ha in wet and 133 ha in dry season. The Sta. Ines East - West Small Water Impounding Project (SWIP) in Sta. Ignacia would serve 300 ha cultivated by 100 farmers. The farmers have been organized for the SWIP implementation, which would allow a year round irrigation and fishpond operation. Also the desilting of four dams in San Jose implemented under the SWIP will be undertaken: viz. the Manginlog, Utilatin, Balugis and Pangaran dams.

While these schemes are implemented, new CIS schemes should be identified/formulated, and a feasibility study conducted for selected priority schemes under the title of "Tarlac Satellite Irrigation Project Feasibility Study".

Project No. AG - 13

1.	PROJECT TITLE	Communal Irrigation
2.	LOCATION	Bataan, Nueva Ecija, Pampanga, Zambales
3.	IMPLEMENTING AGENCY	NIA, LGUs
4.	OBJECTIVES	To expand the effective service coverage of existing and new communal irrigation projects.
5.	EXPECTED EFFECTS	Increased rice production with crop intensity up to 200%.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The Project will promote the development of communal irrigation projects (CIPs) in four provinces. Those in Tarlac will be covered by the Tarlac Satellite Irrigation (Project No. AG-12). The following CIPs will be covered initially.

Scheme	Location	Service area (ha)
Layac-Balsic	Hermosa-Dinalupihan, Bataan	500
Cabu-Mapalad	Sta. Rosa, Nueva Ecija	800
Bagting	Gabaldon, Nueva Ecija	153
Sta. Maria	Mabalacat, Pampanga	
Virgen	Candaba, Pampanga	
Bancal	Iba, Zambales	1,231

Additional schemes will be formulated for implementation subsequently.

Project No. AG - 14

1.	PROJECT TITLE	Pilot Pump Irrigation
2.	LOCATION	Bulacan, Nueva Ecija, Pampanga, Tarlac
3.	IMPLEMENTING AGENCIES	National Irrigation Administration
4.	OBJECTIVES	General: To increase agricultural productivity and alleviate food shortages. Specific: (1) to establish pilot pump irrigation schemes and determine technical viability, (2) to increase irrigated farmlands, (3) to increase farm income, and (4) to reduce unemployment problem.
5.	EXPECTED EFFECTS	Established pump irrigation technology to be transferred to other areas. More income and employment.
6.	PROJECT COSTS	₱ 130 million
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The Project will establish a pilot pump irrigation scheme in each of target municipalities to determine the technical viability depending on water source, topography and other physical conditions. It includes pumping stations to draw water from the Pampanga river, other major rivers/creeks or groundwater. The service area in Pampanga covers 1,408 ha in the municipalities of Sta. Ana, Mexico, San Simon and Apalit. In Nueva Ecija, several municipalities in lowland rainfed areas will be covered. In Bulacan, shallow groundwater will be tapped to provide supplemental irrigation. In Tarlac, municipalities of concepcion, Bamban, Moncada and Tarlac should be covered.

Project No. AG - 15

1.	PROJECT TITLE	Backyard Animal Production Enhancement Program
2.	LOCATION	Region-wide
3.	IMPLEMENTING AGENCIES	Bureau of Animal Industry (BAI), LGUs
4.	OBJECTIVES	To increase and stabilize income of small farmers through more profitable animal production; and To expand raw materials base for meat, dairy and leather products industries.
5.	EXPECTED EFFECTS	Expanded and strengthened livestock sector Higher income and more employment opportunities in rural areas.
6.	PROJECT COSTS	Costs of construction/improvement of AI centers/breeding stations and village seed mill; grant-in-aid technical cooperation.
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

Animal production in Central Luzon is constrained by lack of supports particularly for dominant backyard operations. The Program would provide a comprehensive package of measures to enhance the backyard animal production by small farmers.

The Program consist of three broad components: (1) support component for cattle, (2) animal feed component which would benefit not only cattle but also other animals and (3) management component. Each component has the following elements.

(1) Cattle support component
- Establishment of breeding stations
- Improvement of artificial insemination centers
- Extension for production
- Disease control with establishment of mini animal disease diagnostic laboratories

(2) Animal feed component

- Establishment of village feed mills for simple mixing/processing of feed using local materials as well including agricultural wastes and by-products.
- Corn production expansion by organized farmers
- Establishment and expansion of suitable fodder crops

(3) Management component

- Facilities and equipment for extension, training and information services
- Access to credit facilities
- Linkage with applied research on animal decease, genetics, silage development etc.

Project No. AG - 16

1.	PROJECT TITLE	Provincial Tilapia Hatchery
2.	LOCATION	One location each in Bataan, Nueva Ecija, Pampanga, Tarlac and Zambales
3.	IMPLEMENTING AGENCY	LGUs in cooperation with the National Freshwater Fisheries Technology Research Center (NFFTRC).
4.	OBJECTIVES	To uplift socio-economic status of rural people and improve their diet through aquaculture.
5.	EXPECTED EFFECTS	Continuous supply of fish fingerlings to backyard fishponds, communal fishery and other fishery activities.
6.	PROJECT COSTS	P5 million
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The Project would breed tilapia and distribute its fingerlings widely to support backyard fishponds and other inland aquaculture activities. Locations have been selected in Bataan, Pampanga and Zambales by respective provincial agriculturalists' offices. In Tarlac, a location has been suggested in North Moncada.

Facilities to be provided for each province consist of a water reservoir, 10 to 20 breeding tanks, storage, water pump and accessories. Facilities for Bataan would be located in Pilar (Pantengan) with 2 ha. A water reservoir has a dimension of 50 m x 80 m, and 10 units of breeding tanks would be provided. Facilities for Pampanga would be located also on 2 ha land with the similar scheme.

Initial fingerlings would be supplied from the Tilapia Breeding Center of NFFTRC in Muñoz, Nueva Ecija. Expected fingerling production is 2 million per month at each station.

Project No. AG - 17

1.	PROJECT TITLE	Grouper Cage Culture
2.	LOCATION	Bataan, Bulacan, Zambales
3.	IMPLEMENTING AGENCY	LGUs, Cooperatives
4.	OBJECTIVES	To establish and demonstrate viability of fish production by cage culture; and To increase production of high value fish and income of fishfolks.
5.	EXPECTED EFFECTS	Established technology for cage culture for wide application. Increased and more stable income for fishfolks through sustainable fishery activities.
6.	PROJECT COSTS	₱ 10 million for three year initial implementation
7.	IMPLEMENTATION SCHEDULE	Phase II

8. PROJECT DESCRIPTION

Grouper, locally known as lapu-lapu, is a promising culture species emerging as a good alternative for prawn. It commands high market prices especially when it is sold live. Cage culture is the rearing of a certain specieis of fish in an enclosure made of nettings either floating or stationary. The Project will culture green groupers (E. Tauvina) in cages in brackish water at river mouths.

A typical module of cages may consist of nine rearing cages and one nursery cage suspended of floating rafts. The module is mobile and can be towed to safer ground during storms. Each cage will be stocked with juvenile groupers weighing 30 to 60 g. Harvesting of stocks will be made after six months culture when the fish are in sizes in 500 to 1,000 g.

The Project will be managed by cooperatives with the technical assistance of the Provincial Agriculturalist Offices, DOST and other relevant government agencies.

Project No. AG - 18

1.	PROJECT TITLE	Fishery Common Service Facilities Establishment
2.	LOCATION	Zambales, Bataan
3.	IMPLEMENTING AGENCIES	LGUs supported by the Bureau of Fisheries and Aquatic Resources (BFAR).
4.	OBJECTIVES	To increase income and employment opportunities of fishfolks through increase in marketable fish products and participation in marketing and processing; and To contribute to diversification of provincial economy and improvement of diet of people.
5.	EXPECTED EFFECTS	Fishery sector as a more vital component of provincial economy.
6.	PROJECT COSTS	₱483 million for Zambales consisting of ₱186 million for fish port complex, ₱178 million for processing center, ₱109 million for fishing ports and wharf.
7.	IMPLEMENTATION SCHEDULE	F/S in Phase I; implementation in Phase II

8. PROJECT DESCRIPTION

Zambales

Fishery is already an important activity in Zambales, but further development is constrained by lack of proper fish landing, handling and marketing facilities, lack of fish processing, cold storage facilities and ice plants, and inadequate fishing vessels and handling techniques. The Project would establish common service facilities for three types of fishermen: (1) sashimi-tuna fishermen, (2) municipal fisherman, (3) commercial deepsea purse seine fishermen for the purpose of increasing marketable fish products aiming mainly at domestic markets.

The Project consists of tree main components : (1) fishing port complex in Masinloc, (2) fish processing center in Masinloc, and (3) municipal fishing ports in Sta Cruz and fishing wharf in Iba. Provision would be made also to improve other existing municipal ports, and fishing vessels, gear and technologies.

The fishing port complex in Masinloc would consist of (1) tuna landing jetties, (2) fish landing quay, and (3) purse seiner landing wharf. Essential support infrastructure consists of fish market halls, ice plants and cold storage, brokers' offices, and loading and parking area.

The processing center would be composed of mini-standard factory buildings to be constructed near the port complex. It would consist of 20 modular buildings with floor area of 600 m^2 each. The center would be provided with its own water system, access roads, communication facilities and other utilities.

Municipal fishing ports of Bolitok and Sabang, Sta. Cruz would be improved with construction of mini-landing berths. The fishing wharf in Iba would be constructed near the public market to eliminate the need for middlemen. Dredging would be necessary of the Takar river.

Other municipal ports in Candelaria, Palauig, Botolan etc. would be improved and linked to these central facilities. Improvement of fishing vessels and technologies would also be supported. A general direction is toward low cost appropriate technologies based on traditional/establishment methods, including deep sea tuna fishing by rafts and ring net fishing.

Bataan

Components of the Project for Bataan are similar to the Zambales components described above. A fishing port complex with a processing center would be established in Mariveles (Cabcaben) or the existing facilities in Orani expanded and upgraded. Municipal ports would be improved in Abucay, Bagac, Balanga, Mariveles, Orion and Samal, and a network of fishing ports established.

In both provinces, ownership and management of fishery common service facilities will be gradually transferred to fisherfolk groups through appropriate divestment schemes.

Project No. AG - 19

1. PROJECT TITLE	Regional Agricultural Training and Extension Center
2. LOCATION	Sto. Niño, Magalang, Pampanga
3. IMPLEMENTING AGENCIES	Agricultural Training Institute - Regional Training Center III (ATI-RTC III)
4. OBJECTIVES	General:

To establish a training center capable of conducting multi-level training programs and extension services in the region.

Specific:

(1) to establish, manage and operationalize a training center to service farmers and fishfolks in the region,
(2) to strengthen the ATI major programs through identification of program facilities and sevices,
(3) to design and conduct location-specific training courses that are supportive to the CLDP,
(4) to institutionalize workable linkages with research and extension institutions and organizations for program complementation and for cost-effectiveness, and
(5) to identify the institutional arrangements and financing alternatives that are necessary in facilitating the implementation of the Project.

5. EXPECTED EFFECTS	Provision of better extension services and promotion and acceleration of agricultural and rural development in the region.
6. PROJECT COSTS	

7. IMPLEMENTATION SCHEDULE Phase I - Phase II

8. PROJECT DESCRIPTION

The Agricultural Training Institute (ATI) is the training arm of the Department of Agriculture (DA). It takes as its basic premise that man is the center of all development activities and his nature involvement in every aspects of development is vital to his realization. Hence, mobilizing collective efforts through human resources development and creating appropriate structures for their viability are fundamental to farm family focused, community based, and farm and home management oriented agricultural and rural development.

Under Executive Order No. 116, ATI is mandated to:

- train agricultural extension workers and their clientele, the farmers and fisherfolks;
- conduct multi-level training programs to promote and accelerate rural development; and
- ensure that research results are communicated to the farmers through appropriate training and extension activities.

To achieve this mandate, the ATI-RTC III which is designated to service Central Luzon should be consolidated. It is within this context that there is a need to construct and Agricultural Training Institute - Regional Training Center Complex to serve as the training center for farmers and fisherfolks and their families in Central Luzon. The training complex will strengthen the conduct of the major programs of the ATI-RTC, which are:

a) Agricultural Manpower Development Program;
b) Development Support Communication Program;
c) Center Network Development Program; and
d) Training Research Program.

The construction of ATI-RTC III complex will be a major step toward providing better extension services and in promoting and accelerating agricultural and rural development in the region.

Project No. AG - 20

1. PROJECT TITLE	Regional Cooperative Development and Training Institue
2. LOCATION	Guimba or Cabanatuan City, Nueva Ecija
3. IMPLEMENTING AGENCIES	Cooperative Development Authority (CDA)
4. OBJECTIVES	General: To establish a learning center for cooperatives or regional cooperatives development and training institute through cooperative development in the region. Specific: (1) to develop a generative and sustainable cooperative institute which provides a continued process of assistance to cooperative clientele; (2) to assist cooperative leaders to develop their management skills in running their respective cooperatives; (3) to synthesize cooperative development by integrating the participation of CDA, government and non-government agencies and organizations involved in the cooperative movement; (4) to set up pilot and demonstration areas as a model or prototype for cooperative operation; and (5) to develop the institute capability and be able to offer formal graduate diploma courses and degree curriculum on cooperatives.
5. EXPECTED EFFECTS	Viability growth of cooperatives as instrument of equity, social justice and economic development.
6. PROJECT COSTS	

7. IMPLEMENTATION SCHEDULE Phase I - Phase II

8. PROJECT DESCRIPTION

The main component of the Project is the construction of buildings and identifying, acquiring and setting for operation of the needed facilities for the Institute. The Project would serve primarily the agro-based secondary and primary cooperatives and their leaders with practical and job related trainings, seminars, workshops, assistance and the likes that will develop their skills and managerial abilities in running their respective cooperatives. It will primarily focus its services in Central Luzon and as it develops, to the neighboring regions.

The Project will integrate the management capability building effort of NGOs, government agencies and the local government units to the needs of the cooperatives sectors. The Institute will look for secondary and primary cooperatives nearby which will be developed into model cooperatives to serve as demonstration and laboratory for trainees.

The Institute will collaborate with the academic institutions interested or offering cooperative related courses. It will be an excellent place for on-the-job trainings, research and the subject offerings for cooperative courses.

Project No. UR - 1

1.	PROJECT TITLE	Integrated Urban Development Program
2.	LOCATION	Major urban centers
3.	IMPLEMENTING AGENCIES	LGUs supported by NEDA-III
4.	OBJECTIVES	To improve urban infrastructure of the major urban centers selectively in line with the expected functions of each center.
5.	EXPECTED EFFECTS	Strengthened urban functions and stronger characterization of each urban center.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Stepwise implementation through three phases

8. PROJECT DESCRIPTION

The Government has been making efforts to improve the provision of various urban infrastructure through its infrastructure fund and foreign assisted projects of RCDP and PREMIUMED financed by IBRD. In Central Luzon, only Cabanatuan City has been covered by PREMIUMED for a bus terminal, roads and drainage.

The Program would expand these efforts to cover in steps major urban centers at upper tiers of the proposed hierarchical structure of urban centers in Central Luzon. Excluding San Fernando and Angeles City to be covered by Project No.UR-4 and Meycauyan by Project No. UR-3 as well as Cabanatuan City, 11 urban centers may be covered first: Olongapo City, Malolos, Tarlac, Palayan City, San Jose City, Gapan, Dinalupihan, Balanga, Mariveles, Iba and Baliuag. Other urban centers will be covered in steps.

The Program has three main and inter-related components: (1) project formulation, (2) planning capacity building, and (3) revenue base strengthening. Planning capacity would be augmented through land use planning and project formulation works. Financial position of each city/municipality would be analysed as part of evaluation of existing conditions, and specific measures to strengthen the revenue base formulated. Implementation schedule of formulated projects would be prepared within the projected financial capacity of each city/municipality.

Project No. UR - 2

1.	PROJECT TITLE	Urban Land Readjustment Program
2.	LOCATION	Urban municipalities in Bulacan
3.	IMPLEMENTING AGENCIES	LGUs
4.	OBJECTIVES	To facilitate implementation of infrastructure projects in highly urbanized or rapidly urbanizing areas; and To contribute to the planning capacity building and revenue base strengthening of LGUs.
5.	EXPECTED EFFECTS	More efficient implementation of various infrastructure projects in urban areas. Strengthened LGU capacity
6.	PROJECT COSTS	Technical cooperation
7.	IMPLEMENTATION SCHEDULE	Phase II - Phase III

8. PROJECT DESCRIPTION

Establishment of guidelines and their enforcement would be increasingly important to control urbanization and manage urban environment especially in areas receiving spillover from Metro Manila. The Program would provide tools to guide further urbanization.

Land adjustment methods available would be reviewed in the light of urbanization conditions in the Philippines and Central Luzon, and a land readjustment manual would be prepared. Such methods would allow to create lands necessary for various infrastructure facilities such as roads, parks, schools and hospitals. They can also help to generate additional revenue for LGUs.

By such land adjustment methods, private land owners would exchange their lands with the title for lands having much higher prices after infrastructure development. This would create opportunities for the public sector to own surplus lands previously owned by the private owners and/or to obtain additional income from sales/lease of such lands. This in turn would help the public sector to secure land for the development of various infrastructure.

Project No. UR - 3

1.	PROJECT TITLE	Urban Renewal and Industrial Modernization (Green Aid Program)
2.	LOCATION	Meycauyan, Bulacan.
3.	IMPLEMENTING AGENCIES	Meycauyan municipality, DTI, DENR
4.	OBJECTIVES	To provide a model case of urban renewal in highly urbanized area through relocation of industries and development of evacuated area with urban amenities; and To provide an opportunity to modernize those industries to be relocated.
5.	EXPECTED EFFECTS	Improved urban environment with various amenity facilities. More viable local industries through modernization.
6.	PROJECT COSTS	Costs of urban renewal and development of an industrial area to be funded by an international aid organization with technical cooperation for industrial modernization
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

Areas in Bulacan along the highways leading to Metro Manila have been rapidly urbanizing, and shortage of industrial land may occur in the medium term. Bulacan has many viable industries having potential for further development, but modernization holds a key. Some of them are also highly polluting such as marble manufacturing and leather tanning.

The Project addresses to these issues in a comprehensive way. Meycauyan has been selected for initial implementation, as it is subject to most rapid urbanization located closest to Metro Manila and has some polluting industries. Those industries within the already urbanized areas, including the polluting ones, would be relocated to areas outside the urbanized area to be identified. Areas to be made available by the relocation would be developed for various amenity facilities such as urban parks, community hall, trade plaza and cultural facilities. Relocated industries would be re-established with more advanced technology in areas where common facilities would be provide for waste and wasterwater treatment as well as infrastructure and utilities.

Project No. UR - 4

1.	PROJECT TITLE	San Fernando-Angeles Metropolitan Area Development
2.	LOCATION	San Fernando, Angeles City, Mabalacat, Magalang, Mexico, Guagua and Sto. Tomas in Pampanga.
3.	IMPLEMENTING AGENCIES	City and municipal governments supported by NEDA
4.	OBJECTIVES	To promote orderly development of the San Fernando-Angeles Metropolitan Area with multiple urban functions collectively provided by the member city and municipalities.
5.	EXPECTED EFFECTS	Advanced metropolitan area fully equipped with various urban functions and offering comfortable urban environment.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Comprehensive planning and project formulation in Phase I

8. PROJECT DESCRIPTION

The San Fernando-Angeles Metropolitan Area is envisioned as one of the National Triad Growth Centers to drive the CLDP, including also the neighboring municipalities of Mabalacat, Magalang, Mexico, Guagua and Sto. Tomas. The combined population of 751,000 in 1990 is expected to expand to 1.58 million by the year 2010. Orderly development should be pursued not only to create comfortable urban environment but also to protect productive agricultural land and rural environment in their vicinity.

As the first step, a Metropolitan Area Development Study should be conducted. Within the socio-economic framework of the CLDP, functional division among the member city/municipalities should be clarified, key facilities allocated, and land use plans prepared. In line with the CLDP spatial framework, urban structure of the future Metropolitan Area should be formulated. In particular, capacity, alignment and location of key transport infrastructure should be worked out in a mutually consistent way. Specific urban projects to be implemented subsequently should be formulated such as water supply, sewerage, solid waste management, social facilities, intra-and inter-urban transport, residential development and others.

Project No. UR - 5

1.	PROJECT TITLE	Bulacan Central Water Supply
2.	LOCATION	Eight municipalities in Bulacan
3.	IMPLEMENTING AGENCIES	Local Water Utilities Administration (LWUA)
4.	OBJECTIVES	To expand the public water supply system to eight municipalities/districts in Bulacan
5.	EXPECTED EFFECTS	Safe and potable water for 432,000 residents
6.	PROJECT COSTS	₱1,988 million (US$ 72 million)
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The centralized water system is envisioned to serve the needs of an estimated 432,000 area residents by 1995, or 81% of the projected service area of the eight municipalities by that year. There are two components: the central water supply and transmission system, and the distribution system. The first component is to be composed of deepwells (for groundwater) located in the Angat Well Fields in the vicinity of Bustos and San Rafael. The water is then distributed to the individual reservoirs of the water districts in each of the eight municipalities.

Project No. UR - 6

1.	PROJECT TITLE	Olongapo City Water Supply Improvement
2.	LOCATION	Olongapo City
3.	IMPLEMENTING AGENCIES	LWUA
4.	OBJECTIVES	To improve the water supply of the Olongapo City Water District.
5.	EXPECTED EFFECTS	Service coverage of 173, 408 by the year 2000 or 88% of the service area population
6.	PROJECT COSTS	₱355 milllion
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The Olongapo City Water District services the whole city except for areas of high altitude. Expansion of its water supply system is necessary due to the rapid population increase expected in coming years. Detailed design for the Project has been completed. The improvement consist of the following:

(1) Drilling of 11 wells with expected capacities of 60 l/sec each in the Castillejos-San Marcelino plain,

(2) Construction of 11 well pumping stations complete with electro-mechanical equipment, and other appurtenance,

(3) Laying of 30 km transmission pipeline,

(4) Construction of booster pump stations with 1,800 m^3 sump,

(5) Construction of two 2,600 m^3 reinforced concrete ground reservoirs,

(6) Laying of 25. 3 km distribution pipelines,

(7) Installation of valves and other appurtenances in the distribution system, and

(8) Installation of new service connections to bring the total connections to 28,675 by the year 2000.

Project No. UR - 7

1.	PROJECT TITLE	LWUA Water Supply
2.	LOCATION	Sta. Cruz, Zambales; Calumpit, Bulacan; San Leonardo, San Isidro, Talavera and Lupao, Nueva Ecija; other selected municipalities.
3.	IMPLEMENTING AGENCIES	LWUA
4.	OBJECTIVES	To improve the supply of safe and potable water for selected municipalities.
5.	EXPECTED EFFECTS	Increased service coverage of respective water districts.
6.	PROJECT COSTS	P 121 million for the five municipalities for initial implementation

7. IMPLEMENTATION SCHEDULE

8. PROJECT DESCRIPTION

The Project will improve the supply of safe and potable water for municipalities in Central Luzon continuously. The municipalities of Sta. Cruz, Zambales, Calumpit, Bulacan; San Leonardo, San Isidro, Talavera and Lupao, Nueva Ecija have been identified for immediate implementation. Target beneficiaries to be served by the year 2000 are 17,484 in Sta. Cruz, 22,841 in Calumpit, 15,358 in San Leonardo, 19.537 in San Isidro, 27,872 in Talavera, and 6,579 in Lupao. Other municipalties will be selected for subsequent implementation.

Project No. UR - 8

1.	PROJECT TITLE	Bypass Construction
2.	LOCATION	Cabanatuan City, Tarlac, Angeles City, Olongapo City
3.	IMPLEMENTING AGENCIES	DPWH
4.	OBJECTIVES	To construct bypasses on major highways to mitigate traffic congestion in Cabanatuan City, Tarlac, Angeles City and Olongapo City and to contribute to efficient links among major towns.
5.	EXPECTED EFFECTS	Reduced traffic congestion and air pollution. Reduced travel time between major towns.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Project preparation in Phase I; Implementation during Phase II

8. PROJECT DESCRIPTION

Cabanatuan City

1) San Gregorio - Alibangbang

This connection would provide a shortcut for the traffic from Sta. Rosa to Munoz.

2) San Joseph - Magasawang Alibangbang

This connection would establish a ring road and serve for the traffic from Sta. Rosa to Palayan City. The Cabanatuan common bus terminal is planned to be build along this roadway.

Tarlac

Two road alignments have been proposed to prevent inter-city traffic between Capaz and Sta. Ignacio or La Paz. The bypass should be planned in relation to the proposed extension of the North Luzon Expressway.

Angeles City

Proposed bypass sections would comprise a ring road connecting Santol, Calibutbut and Palungmarago. The south-west section is the existing Philippine American Friendship Highway and its extension toward the McArthur Highway. The north section runs along the perimeter fence of the Clark International Airport and will be extended to the Angeles interchange. The east section connects the south of the City to the Angeles interchange.

Project No. IN - 1

1.	PROJECT TITLE	Industrial Clusters International Partnership Program
2.	LOCATION	n.a.
3.	IMPLEMENTING AGENCIES	Industrial association or cooperatives and LGUs
4.	OBJECTIVES	To promote efficient technology transfer and linkages between enterprises in Central Luzon and those in other countries; and To sustain complementary growth within international cooperation and division of work.
5.	EXPECTED EFFECTS	More enterprises in Central Luzon receiving technology transfer from, or linked to foreign firms
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The Program aims at promoting efficient technology transfer and linkages between enterprises in Central Luzon and foreign countries for their sustainable complementary growth. Linkages provide also a conduit for investment.

In Japan, the Ministry of International Trade and Industry subsidizes a model project named "Foreign Trainee Joint Receiving Project." implemented by manufacturing cooperatives. By organizing cooperatives, SMEs can break through the limit of number of foreign trainees legally regulated. Foreign trainees work effectively as on-the-job trainees with wages after passing a skill examination. These incentives make SMEs to receive more foreign trainees.

The Program would apply this scheme to selected industrial clusters promising in Central Luzon. The partnership should be sought not only with Japan but also with other countries. Sister city/province partnership may be effectively utilized for the purpose. No support measure is expected from the Government, as this is a self-help scheme. The first step would be dispatch of missions to prospective partner countries.

Project No. IN - 2

1.	PROJECT TITLE	Strategic Overseas Workers Management Program
2.	LOCATION	n.a.
3.	IMPLEMENTING AGENCIES	Philippine Overseas Employment Administration in cooperation with DTI-III, DOLE, LGUs etc.
4.	OBJECTIVES	To mobilize overseas workers substantially for future development of Central Luzon
5.	EXPECTED EFFECTS	More motivated Filipino overseas workers gaining better income and technical/management skills.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

Overseas Filipino workers contribute to GNP of the Philippines through remittance, but their experiences are not fully utilized for the national development. Overseas experience/training particularly in advanced countries would be very useful.

The Program would be implemented in the following way:

(1) to identify job areas matching the needs derived from future industrial structure in Central Luzon,
(2) to give a priority to the identified job areas in granting permits to overseas works,
(3) to give a priority to the application linked to training programmed by Central Luzon's SMEs,
(4) to monitor returned overseas workers to assess if attained technology or skill has been transferred in Central Luzon, and
(5) to assist returned overseas workers establish new firms based on attained technology or skills.

The main support would be provided in the form of fund for outfit allowance for workers going abroad and start-up of new business after their returns.

Project No. IN - 3

1.	PROJECT TITLE	World Class Designer Invitation Program
2.	LOCATION	Former US base facilities or the Philippine Refugee Processing Center in Morong for a designers village.
3.	IMPLEMENTING AGENCIES	Relevant industrial association and member firms supported by DTI
4.	OBJECTIVES	To develop original design capacity of Filipino designers; and To contribute to development of branded products of international quality.
5.	EXPECTED EFFECTS	Upgraded quality of Philippine products and their images worldwide
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The Program would expand opportunities for Filipino designers to communicate with world class designers and develop their sense and skills. It should cover not only fashion apparel designers but also designers of leather goods, GTH, pottery, metalcraft and other industrial designers and also fashion coordinators.

A designers' village would be established for both Filipino and foreign designers to stay for longer periods as well as for occasional visits. The village should be equipped with international telecommunication links as well as various amenity facilities.

The following indirect effects are also exported:

(1) dissemination of information on the Philippines in general and excellent sense and skills of Filipino people in particular by invited designers and their staff,
(2) franchise sales of "designers brand" products made in Central Luzon,
(3) additional job opportunities offered by visitors, and
(4) expansion of tourism opportunities.

Project No. IN - 4

1.	PROJECT TITLE	Tripartite R & D Promotion Program
2.	LOCATION	Not specified.
3.	IMPLEMENTING AGENCIES	Commission composed of manufacturers in a specified area, members of academe such as CLSU, UP-Angeles City and Polytechnic University of the Philippines - Mariveles, DTI-III and DOST-III
4.	OBJECTIVES	To promote inter-disciplinary cooperation for more efficient R & D.
5.	EXPECTED EFFECTS	More advanced R & D activities linked more closely to application
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

Research linkages between government agencies, the business sector and the academe are not strong at the regional level. As R & D needs for Central Luzon increase rapidly along with agro-industrialization and industrial modernization, inter-disciplinary cooperation becomes imperative, since science and technology are in fact very close to each other at the molecule and atom levels that advanced technology deals with. While the basic science research is very costly and its output stays to be "public goods", more product- or market-oriented research is needed.

The Program will establish tripartite linkages between government agencies, the business sector and the academe for inter-disciplinary R & D. Human resources at academic institutes will be mobilized for product- or market-oriented R & D activities jointly with the business sector by the provision of R & D facilities and subsidies by the government. DTI-III will initiate the Program and coordinate its activities.

Project No. IN - 5

1.	PROJECT TITLE	Skills Expert System Development
2.	LOCATION	Not specified.
3.	IMPLEMENTING AGENCIES	Relevant industrial association, Industrial Technology Development Institute (ITDI), DTI.
4.	OBJECTIVES	To develop an expert system for manufacturing skills to make them inherited and applied for mass production.
5.	EXPECTED EFFECTS	Commercialization of manufactured goods originally produced by traditional skills
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I
8.	PROJECT DESCRIPTION	

An expert system (ES) is a computer software that helps to duplicate the know-how developed by experts through their experiences for a wider application. It is compsed of (1) knowledge base, (2) reasoning/deduction, and (3) interface. Knowledge base is an aggregate of expertise arranged by a certain way of expression that serves to the optimum solution through experience-based reasoning.

The Project will develop an ES for manufacturing skills developed by excellent craftmen or masters through years of experience. The ES will make in particular traditional skills developed in Central Luzon accessible to everybody and support skill-intensive manufacturing. Promising application areas for the ES include wood carving, metal craft, jewelry and other handicrafts. Along with mechanization, the ES will be effective for modernizing traditional industries through the development of new production tools and machines.

Project No. IN - 6

1.	PROJECT TITLE	Industrial Clusters Integrated Modernization Program
2.	LOCATION	Region - wide
3.	IMPLEMENTING AGENCIES	Industrial association or cooperative to be established specific to the program.
4.	OBJECTIVES	To modernize selected industrial clusters having superior viability to the internationally first class industries; and To contribute to the establishment of an industrial heartland of Central Luzon.
5.	EXPECTED EFFECTS	Much enhanced productivity and competitiveness of the selected industries Much larger multiplier effects through linkages with respect to employment and income.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The Program would provide a set of measures to modernize selected industrial clusters. Candidate industries include garments, furniture, leather goods, metal craft or metal works, and jewelry. Mechanization is imperative for future growth of these industries. Specialization among manufacturers would be encouraged.

An industrial association or cooperative should be established for each target industry under the Program. Main support measures of the Program are (1) lease of advanced machinery and equipment by a foundation with low charges, and (2) compensation for replaced machinery and equipment. These measures would be more effective than loans and duty-free procurement for modernization supported by existing policies.

A modernization plan needs to be formulated first. Target industries should be identified and a more detailed plan prepared for each of them.

Project No. IN - 7

1.	PROJECT TITLE	Regional World Trade Center (EC LUZON)
2.	LOCATION	(To be specified)
3.	IMPLEMENTING AGENCIES	DTI in cooperation with business associations
4.	OBJECTIVES	To provide effective access to foreign markets especially for export-oriented SMEs.
5.	EXPECTED EFFECTS	Increased export value Development of more diversified export commodities
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase II
8.	PROJECT DESCRIPTION	

Promotion of Exports of Central Luzon (ECLUZON) is already planned to introduce Central Luzon's SMEs to the export market. Also, a World Trade Center is under construction in Metro Manila for all export products in line with the Magna Carta Law.

A Regional World Trade Center of ECLUZON would provide functions of big trading firms or wholesalers lacking in the Philippines. It would accommodate an exhibition hall, permanent showrooms combined with head or representative offices of SMEs, trade agents and relevant government agencies, meeting facilities including function rooms, hotels and amusement facilities.

Project No. IN - 8

1.	PROJECT TITLE	Central Luzon Research Triangle
2.	LOCATION	Muñoz, Tarlac, Angeles City
3.	IMPLEMENTING AGENCIES	CLSU, University of the Philippine - Angeles City, DOST-III, DTI-III, LGUs
4.	OBJECTIVES	To promote cooperation among key research institutes for efficient and complementary R & D activities; and To sell high R & D images to attract investments.
5.	EXPECTED EFFECTS	Agglomeration of high-tech and other advanced industries.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase II

8. PROJECT DESCRIPTION

The Project aims at forming an R & D complex for inter-disciplinary, inter-industry R & D activities. The complex would be constituted by:

Agro-Science Community in Muñoz,
Technopolis in Angeles City, and
Science City in Tarlac

The Agro-Science Community in Muñoz is specialized in agro-related technology with the Central Luzon State University as a core institute. The Technopolis would be led by the University of the Philippines in San Fernando in such areas as electronics, computer software and engineering. The Science City in Tarlac is envisioned after Tsukuba Science City in Japan.

Project No. IN - 9

1.	PROJECT TITLE	Techno-Communicator Development Program
2.	LOCATION	n.a.
3.	IMPLEMENTING AGENCIES	DTI, DOST
4.	OBJECTIVES	To facilitate dissemination of technology and commercialization.
5.	EXPECTED EFFECTS	Wider application of established technology for better products
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase II

8. PROJECT DESCRIPTION

A techno-communicator is defined as a professional who disseminates information of useful technology and technological seeds and thereby coordinate/organize some actors into technology transfer or commercialization. He will make manufacturers, engineers and reseachers in Central Luzon aware of the importance of R & D. He may organize symposia or seminars concerning latest technology development.

The functions of techno-communicator are partially provided by R & D institutes belonging to government agencies. The Program intends to satisfy increasing need for techno-communcators as R & D activities expand throughout Central Luzon.

Project No. IN - 10

1.	PROJECT TITLE	Provincial Industrial Testing Center
2.	LOCATION	One location in each province
3.	IMPLEMENTING AGENCIES	DTI, DOST, LGUs
4.	OBJECTIVES	To contribute to improvement of product quality; and To facilitate products development.
5.	EXPECTED EFFECTS	Upgraded quality and more diversification of manufactured products
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase III

8. PROJECT DESCRIPTION

This is an extension of regional testing and R & D functions. The Metal Industry Research and Development Center has a plan to establish Regional Service Centers (RSC) for SMEs. Central Luzon's RSC is to be established targeted at heat treatment, tool and die, and forging.

Of the functions expected at each center, consultancy for problem-solving, training for technical and craft-level skills, testing and quality control would be shouldered by provincial or city government, while facilities sharing for product development, relevant applied research, and technology incubator function would be borne by the Central Government's regional office.

Project No. IN - 11

1.	PROJECT TITLE	International Design Academy
2.	LOCATION	
3.	IMPLEMENTING AGENCIES	Relevant industrial associations and their member firms supported by DTI
4.	OBJECTIVES	To support the broad design industry to be established in Central Luzon; and To take the lead in a life style trend setting or creation of life value.
5.	EXPECTED EFFECTS	Highly qualified designers in various fields High image of the Philippines as a world center in broad design industry
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase III

8. PROJECT DESCRIPTION

Clusters of promising manufacturing industries in Central Luzon would form two main industry complexes: the total fashion industry (TFI) and the total interior design industry (TIDI). Both of them are expected as life style trendsetters/creators.

As a main common facility or soft infrastructure for these industry complexes, the International Design Academy (IDA) would be established. The Academy would not only help to educate creative designers but also serve as a symbol representing high images of TFI and TIDI. The Academy would encompass a wide application including computer software (CAD/CAM), computer assisted instruction (CAI), engineering, industrial design and others.

The designers village to be established under the World Class Designer Invitation Program (Project No. IN-3) may be a step to the IDA.

Project No. IN - 12

1. PROJECT TITLE — Life Style Research and Information Center
2. LOCATION
3. IMPLEMENTING AGENCIES
4. OBJECTIVES — To support the International Design Academy.
5. EXPECTED EFFECTS — Database for design-related information.
   Better functioning of the IDA.
6. PROJECT COSTS
7. IMPLEMENTATION SCHEDULE — Phase III
8. PROJECT DESCRIPTION

The Life Style Research and Information Center would be established as an annex to the IDA. It would be specialized into design related information and serve as a world center for life style and trend setting.

Project No. IN - 13

1.	PROJECT TITLE	Tourism-Local Industry Complex
2.	LOCATION	(not specified)
3.	IMPLEMENTING AGENCY	Private sector supported by Department of Tourism
4.	OBJECTIVES	To create man-made tourism attractions targeting at Metro Manila residents and international tourists; and To provide a market outlet for products of local industries.
5.	EXPECTED EFFECTS	More employment opportunities and more dynamic local economics through various linkages.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The Project would provide supports to the establishment of various man-made tourism attractions based on local industries. They include the following.

1) Tourism farm

This is a fruit orchard open to public for an entrance fee. In Central Luzon, a mango farm may be most suitable, which would attract international tourists as well. A farm requires only picnic huts and clean toilets, and can be developed with small capital. A tourism ranch is another possibility with barbecue facilities and/or steak restaurant. It may provide an additional incentive to strengthen/diversify the livestock sector in Central Luzon.

2) Fishpond restaurant

A restaurant would be attached to a fishpond to serve fresh fish dishes, while the pond would serve also for landscaping. Restaurants can be located in the proposed satellite resorts and the Masinloc Marine Park.

3) Factory tour

Factories for wood-carving, furniture, shell craft and other products produced in a traditional way would have an appeal to international tourists. Jewelry and leather goods would also be attractive.

Project No. IN - 14

1.	PROJECT TITLE	Mining Area Development and Use
2.	LOCATION	Six provinces
3.	IMPLEMENTING AGENCY	DENR and DTI
4.	OBJECTIVES	To delineate, classify and prioritize mining areas for sustained development by both large and small scale miners; and To determine guidelines for sustained use of identified mining areas.
5.	EXPECTED EFFECTS	Identification of mineral lands to enable their sustained exploitation and use. Regulated and controlled exploitation of mineral lands with minimal adverse environmental effects.
6.	PROJECT COSTS	₱ 10 million
7.	IMPLEMENTATION SCHEDULE	1997 - 1998

8. PROJECT DESCRIPTION

Central Luzon is endowned with a variety of metallic and non-metallic mineral deposits estimated at around 2.4 billion metric tons of reserves, of which 57% comes from non-metallic production. These mineral lands have not been totally identified due to lack of continuous detailed exploration to determine the location and volume of minerals and to find more ore reserves of higher grade. Moreover, a large number of mineral locations could be within protection areas. Small scale miners, especially illegal ones, pose significant danger to the environment due to crude methods they use.

The Project would address these problems of resources exploitations and environmental protection through a clear cut delineation, classification and prioritization of mining areas for sustained development by both large and small scale miners. It would also formulate comprehensive guidelines for sustained use of identified mining areas.

Project No. IN - 15

1.	PROJECT TITLE	Bulacan Wholesale and Distribution Center
2.	LOCATION	Meycauyan, Obando or Bocaue
3.	IMPLEMENTING AGENCY	DPWH, DTI, private sector
4.	OBJECTIVES	To establish a wholesale and distribution center to share the physical distribution function of Metro Manila.
5.	EXPECTED EFFECTS	More efficient distribution of goods for Metro Manila and alleviation of traffic congestion around the Divisoria market.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The distribution center will be located near the intersection of North Expressway and C-5 or C-6 and have facilities as follows:

- truck terminal,
- dry port facility with freight depot,
- wholesale market,
- warehouse and cold-storage warehouse, and
- processing and packaging factories.

It will have the following functions:

- physical distribution function for delivering goods to the northern part of Metro Manila,
- wholesale function for intermediating goods from the North and Central Luzon to Metro Manila,
- transshipment function for goods from Manila North Harbor and various parts of the Luzon island, and
- dry port function for clearing custom procedure.

This type of distribution complex requires public sectors' intervention as it is not a very profitable business. Establishing a third sector organization would be preferable to manage the center.

Project No. IN - 16

1.	PROJECT TITLE	Regional Integrated Distributors Promotion
2.	LOCATION	Not specified
3.	IMPLEMENTING AGENCY	DTI
4.	OBJECTIVES	To encourage the establishment of integrated distributors who will help producers in Central Luzon to find buyers and provide market information.
5.	EXPECTED EFFECTS	More market responsive production by SMEs for higher income.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

Integrated distributors will coordinate production activities by feeding back market information to producers. They will support mainly SMEs with transportation, warehousing, financing and primary wholesale functions.

DTI Region III should publicize the concept of integrated distributors to potential investors in distribution business. A subsidy would be required to help integrated distributors to establish in Central Luzon.

Project No. SO-1

1. PROJECT TITLE	Bataan National School of Arts and Trade Upgrading
2. LOCATION	Bataan
3. IMPLEMENTING AGENCIES	DECS, BNSAT, DPWH
4. OBJECTIVES	To improve the facilities and increase the capacity of BNSAT to meet the growing demand in Central Luzon for qualified craftsmen and designers.
5. EXPECTED EFFECTS	Stronger manpower base for design-related industries
6. PROJECT COSTS	
7. IMPLEMENTING SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The CLDP strategy for education consists of three components : (1) strengthening of basic education through improvement of accessibility and survival rates at the primary education level, (2) improvement in quality of education through upgrading teachers capability and improving curricula and teaching tools, and (3) re-orientation of education system to make it more responsive to the business sector. The Project corresponds to the third component. The Bataan National School of Arts and Trade (BNSAT) is a specialized education institute that will be increasingly more important in the industrialization drive of Central Luzon. It should be made even more responsive to the business sector's needs.

The Project will upgrade facilities of the BNSAT and increases its capacity. It will also cover the upgrading of the Bataan National School for Filipino Craftsmen. The Project will serve the entire region by expanding/strengthening reserve corps of Filipino designers and craftsmen to support the strategic design-related industries.

Project No. SO-2

1.	PROJECT TITLE	Bataan Teachers' College Upgrading
2.	LOCATION	Bataan
3.	IMPLEMENTING AGENCIES	DECS, BTC, DPWH
4.	OBJECTIVES	To improve the facilities and increase the capacity of BTC to meet the growing demand in Central Luzon for qualified teachers in various fields.
5.	EXPECTED EFFECTS	Broader base for improved education qualify with increased number of qualified teachers.
6.	PROJECT COSTS	
7.	IMPLEMENTING SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The CLDP strategy for education consists of three components : (1) strengthening of basic education through improvement of accessibility and survival rates at the primary education level, (2) improvement in quality of education through upgrading teachers capability and improving curricula and teaching tools, and (3) re-orientation of education system to make it more responsive to the business sector. The Project corresponds to the second strategy.

The Project will upgrade facilities of the existing Bataan Teachers' College and increase its capacity to produce qualified teachers in various fields. It will cover also the upgrading of the Bataan National Agricultural School to contribute to the re-orientation of agriculture as a career option rather than subsistence needs. The Project will serve the entire region by expanding/strengthening reserve corps of qualified teachers to support the agro-industrialization strategy of the CLDP.

Project No. SO-3

1.	PROJECT TITLE	Acquisition and Upgrading of Teaching Tools
2.	LOCATION	Elementary and High Schools in depressed, deprived and undeserved communities (DDUs) Nine (9) Vocational High Schools Nine (9) National High Schools Two (2) State Universities
3.	IMPLEMENTING AGENCIES	DECS - III
4.	OBJECTIVES	To modernize/upgrade the education system through the introduction of computers, television-education, engineering laboratory and equipment, and improved textbooks as well as upgrading the teaching competencies of mentors; To attract more students to enroll in skills-oriented schools; and To firm-up a collaborative relationship between these technical schools and local industries to absorb the graduates from these schools or pursue self-employment endeavors.
5.	EXPECTED EFFECTS	More effective education system with better tools and materials. Higher participation and attainment rates More youths better oriented to market-driven career development.
6.	PROJECT COSTS	₱ 226 million in six years
7.	IMPLEMENTATION SCHEDULE	1996 - 2001

8. PROJECT DESCRIPTION

The Project consists of five components as outlined below.

(1) Modernization of teaching tools

Teaching tools in selected (DDUs) primary and secondary schools will be modernized through the introduction of television to impart modern science and in the area of value education.

(2) Parent Learning Support System

This component will implement the Parent Learning Support System which places particular emphasis on the active participation of parents in the teaching learning processes occurring in schools, at home and in the community. Other programs shall be made part of this component, such as : Early Childhood Education, Special Education Program, Non-Formal Education, and Values Development.

(3) Upgraded secondary education

It is a reality that a great percentage of those who pursue high school never make it to college. This component shall provide the youth with the opportunity to pursue a secondary education that can give them economic opportunities immediately after graduation. This includes entrepreneurial opportunities, practical skills for use in rural areas that can help upgrade farming technologies as well as encourage the youth to appreciate agricultural pursuits, and skills needed by industries in the localities.

(4) Audio-visual buildings for model highschools

This component will provide audio-visual buildings for model highschools for the purpose of serving the need for continuous staff development of both public and private secondary schools.

(5) Engineering laboratories

This component will allow the acquisition/provision of state-of-the-art engineering laboratories and equipment for the Bulacan State University and Tarlac State University to further enhance the quality of instruction, research, and extension.

The Project will involve P 226 million over the six year perid, consisting of P 5 million for DDUs, P 5 million for distance educatin, P 10 million for technical-vocational schools, P27 million for AV buildings, P 79 million for the Tarlac State University, and P 100 million for the Bulacan State University.

Project No. SO-4

1.	PROJECT TITLE	Elementary Science Schools Establishment
2.	LOCATION	
3.	IMPLEMENTING AGENCY	DECS - III
4.	OBJECTIVES	To provide for a more intensive and advanced elementary education program with special reference to science.
5.	EXPECTED EFFECTS	Developed critical and creative thinking among young students.
6.	PROJECT COSTS	₱ 130 million
7.	IMPLEMENTING SCHEDULE	1999 - 2004

8. PROJECT DESCRIPTION

Elementary Science Schools are special schools for the more intellectually gifted students. They are separate elementary schools and not merely special classes in regular schools. The science schools have above-average capabilities in terms of physical facilities such as building, laboratories and equipment, computers, and library.

Each school shall be provided with the following:

- One six-room building : four to be used as classrooms, two as laboratories, complete with furniture,
- Facilities and equipment : library, science apparatus and equipment, computer units, TV monitors, etc.
- Vehicle : as a component of the Project

Project No. SO-5

1.	PROJECT TITLE	Functional Division Educational Management Information System (EMIS)
2.	LOCATION	Nine (9) Division of Schools
3.	IMPLEMENTING AGENCY	DECS - III
4.	OBJECTIVES	To produce data and information needed for : - policy formulation, - educational planning, - budgeting and decision-making, and - project development
5.	EXPECTED EFFECTS	Enhanced capability to produce data/information to facilitate decision-making and policy formulation.
6.	PROJECT COSTS	₱3 million
7.	IMPLEMENTATION SCHEDULE	1999 - 2003

8. PROJECT DESCRIPTION

EMIS is a system that helps educational administrators assess the implementation of educational goals and objectives with respect to equity, efficiency, and effectiveness. It consists of the following sub-systems cutting across the elementary and secondary levels of management :

(1) Pupil/student management information system,
(2) Personnel management information system,
(3) Curriculum management information system,
(4) Legislation and control management information system,
(5) Physical facilities management information system,
(6) Finance management information system,
(7) Community extension service management information system, and
(8) Educational planning management information system.

A functional EMIS room is expected to be furnished with the following:

1. Computer units: latest software, colored monitor with mouse, colored printer, tables, display screen
2. Air condition unit
3. Projector
4. Furniture
5. Informative books, etc.

Project No. SO - 6

1. PROJECT TITLE	Acquired Competencies and Excellence in Sports (ACES)
2. LOCATION	Nine (9) School Divisions
3 IMPLEMENTING AGENCY	DECS - III
4. OBJECTIVES	To promote sports to develop physical fitness and health of the pupils/student athletes; To provide opportunities for youth participation in mass-based sports competition; and To foster self-discipline, teamwork, and other values inherent in the practice of sports.
5. EXPECTED EFFECTS	Physically fit pupil/student athletes. More participation especially of the youth in sports. Well-disciplined and enhanced teamwork and acquired other values inherent in the practice of sports
6. PROJECT COSTS	P 70 million in three years

7. IMPLEMENTATION SCHEDULE

8. PROJECT DESCRIPTION

The Philippine Constitution mandates the promotion of physical education and encourages sports program to foster self-discipline, teamwork, and excellence for the development of a healthy and alert citizenry. Through the provision of sports equipment and materials, the institutions shall provide educational and technological services in mass-based sports in order to produce a citizenry possessing the skills and positive attitude towards physical activity as a way of life, appreciating cultural heritage and imbued with the quest for sports excellence.

Project No. SO - 7

1. PROJECT TITLE	Human Resources Development and Training Center
2. LOCATION	One in each province
3. IMPLEMENTING AGENCIES	NGOs, Provincial Social Welfare and Development Office (PSWDO), Provincial Disaster Coordination Council (PDCC)
4. OBJECTIVES	To establish a Human Resources Development and Training Center as a center for gender and development to include office, resource center/library, skills training facilities, as a center for continuous education/staff development activities, and as a center for disaster preparedness including storage, rescue, communication facilities, and networking.
5. EXPECTED EFFECTS	Effective and efficient services to women/children in crisis or women in development or in need of additional skills; Well trained human resources; Quick response to all type of emergencies; and Service to other disadvantaged sectors.
6. PROJECT COSTS	US$ 5 million for feasibility studies and design ₱ 650 million for construciton of HRDTC buildings (₱ 50 million/province), facilities and equipment (₱ 50 million/province), and training at the barangay level (₱ 50 million).
7. IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The Project will provide central facilities where all activities of the different sectors can be conducted, such as : library, counseling clinics, productivity skills training, staff development, seminar/workshops for out-of-school youths, senior citizens, disabled/handicapped people, service networking, disaster operations center, disaster preparedness training for the province to municipalities and barangay levels, disaster

communication link-up, disaster storage facility for relief goods, rescue vehicles and equipment.

The Project will be implemented by collaborative efforts of NGOs, PSWDOs and PDCCs, Main responsibilities of these agencies are as follows:

NGO

a. Gender and development activities
b. Productivity skills development
c. Resource center/library
d. Counseling clinics
e. Disaster preparedness trainings programs

PSWDO

a. Training/workshop rooms
b. Audio-visual facilities
c. Storage facility
d. Dormitory/guest rooms
e. Reception and temporary shelter for people with special needs.

PDCC

a. Communication room/facilities
b. Rescue vehicle and equipment

Project No. SO - 8

1. PROJECT TITLE	Integrated Training, Livelihood and Organization Development Program for Mt. Pinatubo Resettlement areas
2. LOCATION	Lowland resettlement sites (11) Upland resettlements sites (10)
3. IMPLEMENTING AGENCIES	Mt. Pinatubo Commission and Local Organizations within the Resettlement Sites and their respective LGUs
4. OBJECTIVES	To establish resettlement sites as new barangay communities through proper organizational development to manage the sites and provision of training learning/facilities to develop skills and knowledge.
5. EXPECTED EFFECTS	Resettlement sites run and managed by the people's organizations and multi-purpose cooperatives from within.
6. PROJECT COSTS	
7. IMPLEMENTATION SCHEDULE	Phase I

8. PROJECT DESCRIPTION

The proposed project concept is to pinpoint a group of key leaders within a resettlement site, both men and women, who exhibit qualities of a leader and have an entrepreneurial spirit. A group of professional managers, one lead manager with several assistants having a solid background in organizational development intervention, cooperative-formation and enterprise building will be convened to act as project management office (PMO) of each resettlement site. The initial batch of community leaders will be the "understudies" of the PMO. It will be the PMO's responsibility to transfer the necessary skills to the former within the stipulated 1-2 years timeframe. This strategy goes beyond basic community organizing because the main objective is actual skills-transfer within a timeframe which is primarily geared towards building self-contained enterprises or a string of small-scale enterprises and/or simple economic activities within each resettlement site. Roles of each person within the resettlement site are clearly defined and regarded as equally important be that of a simple homemarker, a day-care center volunteer to one handling the more complex phase of

marketing the products of the resettlement site. The overall impact is having a sense of community purpose ingrained in each settler-family.

Project No. SO-9

1. PROJECT TITLE	Public Health Services Improvement
2. LOCATION	Region-wide
3 IMPLEMENTING AGENCIES	Integrated Provincial Health Office (IPHO), District Hospital/Rural Health Units (DH/RHU), NGOs.
5. OBJECTIVES	To promote preventive medical/health care in all communities through the conduct of IEC campaigns; To provide safe drinking water in all barangays; and To improve delivery of public health services .
6. EXPECTED EFFECTS	Reduced incidence of diarrhea, cholera, and typhoid fever due to unsafe drinking water. Reduced occurrence of minor illnesses through preventive health education campaign. Improved delivery of health services
7. PROJECT COSTS	US$ 5 million for feasibility sudies and design ₱56 million for water facilities (₱20,000/barangay x 2,800 barangays) ₱12 million for drilling equipment ₱6 million for fogging machines ₱12 million for health programs (IEC)

8. IMPLEMENTAION SCHEDULE

9. PROJECT DESCRIPTION

Diarrhea, cholera, and typhoid fever are some of the major causes of morbidity for all ages. Availability of potable water is a prerequisite for good health and for survival. Public health services promote preventive rather than curative efforts that could reduce the need for expensive hospital care. Provision of modern equipment shall strengthen implementation and monitoring of public health programs which have been hampered by the devolution of functions.

The Project will be implemented by collaborative efforts of IPHOs, DHs/RHUs and NGOs. IMPHOs and DHs/RHUs will program the construction of water supplies, the conduct of fogging activities and, the designing and production of information and education materials, and implement public health services. NGOs will construct the water facilities with the help of the community people and help in disseminating IE materials or conduct of community meetings.

Project No. SO-10

1.	PROJECT TITLE	Hospitals Upgrading
2.	LOCATION	Region-wide
3	IMPLEMENTING AGENCIES	DOH-LGU
4.	OBJECTIVES	To improve and upgrade the physical structures and facilities of the 38 existing government hospitals for better service delivery.
5.	EXPECTED EFFECTS	Improved health services with regained confidence supported by improved facilities and equipment.
6.	PROJECT COSTS	₱675 million
7.	IMPLEMENTATION SCHEDULE	1996-2000

8. PROJECT DESCRIPTION

Government hospitals account for 32% of all the hospitals and 61% of hospital beds available in Central Luzon. They are important particularly for the poor, providing health services at lower costs. Many existing government hospitals suffer from insufficient and degraded facilities due to lack of adequate attention and support by LGUs. Upgrading will be in terms of expansion, renovation, establishment of various departments (e.g. cystoscopy, urology, endoscopy, opthalmology) and procurement of necessary equipment/facilities and ambulances.

Project No. SO - 11

1. PROJECT TITLE	Regional Herbal Processing Plant
2. LOCATION	To be identified
3 IMPLEMENTING AGENCY	DOH
4. OBJECTIVES	To provide continuous supply of low-cost, effective herbal drugs and medicines, and health education/information on herbal plants and medicines.
5. EXPECTED EFFECTS	Provided low-cost but effective herbal drugs and medicines to the people of Central Luzon.
6. PROJECT COSTS	₱40 million
7. IMPLEMENTATION SCHEDULE	Feasibility study and design in Phase I followed by implementation in Phase II.

8. PROJECT DESCRIPTION

The exorbitant cost of modern drugs and medicines prohibits the low-income families to buy them, and thus makes simple diseases difficult to treat and allows common diseases to degenerate and cause complications. The Project will establish a Regional Herbal Processing Plant. It consists of the establishment of a herbal garden and processing plant to answer the need for low-cost drugs and medicines. It also includes IEC on herbal plants and training on the operations of the processing plant.

Project No. SO - 12

1.	PROJECT TITLE	Integrated Family Planning and Child Survival Program
2.	LOCATION	48 sites/municipalities in the six provinces during five year period
3.	IMPLEMENTING AGENCIES	An NGO of known track record in maternal child care and their network affiliates in Central Luzon in cooperation with DOH, LGUs
4.	OBJECTIVES	To establish a self-reliant community-based network that will continuously promote and sustain the practices related to family planning and child survival, and propel the evaluations of the favorable societal norms among the people in far-flung agricultural communities.
5.	EXPECTED EFFECTS	Institutionalization of the small size family norm and the practice of family planning as well as better health care for the children, lower maternal and infant mortality rates.
6.	PROJECT COSTS	₱67.6 million
7.	IMPLEMENTATION SCHEDULE	5 years for initial implementation

8. PROJECT DESCRIPTION

The Project will be implemented in three phases in order to have a solid build-up of capability within target areas in Central Luzon. The first Phase (Phase I) will be in one pilot municipality in each province or a total of six demonstration centers. Subsequent phases (Phase II & III) will increase in coverage with Phase II having 18 additional demonstration centers while Phase III aims to generate 24 additional centers. Total program target 48 centers in mostly remote and agricultural communities.

The municipal project sites are to be selected based on the following criteria:

a) Agricultural community where at least 80% of the population are engaged in farming;
b) 10 or more kilometers away from the capital town;
c) population of at least 20,000;

d) low prevalence rate of Family Planning (FP) acceptors and high incidence of children's diseases and infant mortality,

e) inadequate government family planning and health services, and

f) available and willing medical doctor, pharmacist/drugstore owner, self-employed midwives and farmer-leaders to serve as the network members.

The total population of the project sites (Phase I to III) will be approximately 960,000 (almost 1 million). The married couples of reproductive Age (MCRA) is estimated at about 120,000 (8% of total estimated population target), and the 0-6 years old children is placed around 240,000 (about 2 children per MCRA).

The activities of the Project will be focused mainly on the MCRA and the 0-6 years old children, even as the concern is directed to the entire population. Intensive IEC (information-education-communication) campaigns will be undertaken to reach at least 80% or 576,000 of the estimated 720,000 adult population. Corollary to this the motivational efforts will be concentrated on the approximately 120,000 MCRAs, who are also presumed to be the parents of the estimated 240,000 0-6 years old children.

The promotional activities are aimed at encouraging at least 75% (90,000) of the MCRAs to plan their families, and maintain at least 65% (78,000) of then as users of their personally chosen and preferred family planning method by the end of the Projects. Roughly, the same is targeted to be the recipient's of services related to child survival.

Project No. SO-13

1.	PROJECT TITLE	Construction of Day Care Centers and Health Clinic
2.	LOCATION	1,058 barangays and municipalities
3.	IMPLEMENTING AGENCIES	LGUs and NGOs
4.	OBJECTIVES	To provide day care services and health clinic facilities/permanent structures to 1,058 barangays and municipalities.
5.	EXPECTED EFFECTS	Much improved day care and health services.
6.	PROJECT COSTS	US$ 5 million for feasibility study and design ₱158 million in three years (₱150,000/center x 1,058 barangays and municipalities)
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase III

8. PROJECT DESCRIPTION

One-third of all the barangays do not have a day care center required by the law. Many existing day care centers/health clinics do not have permanent structures. The Project will expand day care center/health facilities by providing permanent structures. Construction of about 1,058 centers is aimed at by the Project for the six provinces.

Construction of each day care center/health clinics shall be supported by participation of local people through labour. This would constitute the first step for local communities to become main actors in day care services/health programs supported by LGUs as well as owners of the facilities.

The day care center shall service a group of 40 children in the morning and another group in the afternoon. The health clinic shall serve the medical needs of the people in the community.

Day care centers will be operated by day care workers. Health clinics will be operated by health practitioners from both government (BHS) and NGOs through proper scheduling/coordination.

Project No. SO-14

1.	PROJECT TITLE	Computerization of LGU Data Base
2.	LOCATION	Region-wide
3.	IMPLEMENTING AGENCIES	DOLE, LGUs
4.	OBJECTIVES	General : To computerize tax mapping and registry of skills. Specific (1) to facilitate the preparation, installation and maintenance system of tax mapping graphically showing all properties and establishments subject to assessment, (2) to upgrade assessment techniques, procedures and practices to bring about equitable distribution of the realty tax among real property owners, (3) to determine skills needed to match job vacancies, skills available, and suitable training for those applications needing employability enhancement services, and (4) to gauge the educational qualifications of registered applicants.
5.	EXPECTED EFFECTS	Eliminated or minimized tax evasion Increased income of LGUs Systematic matching between skills available and job vacancies.
6.	PROJECT COSTS	₱ 464 million
7.	IMPLEMENTATION SCHEDULE	8 years over Phase II - Phase III

8. PROJECT DESCRIPTION

The Project will strengthen the on-going efforts of the Integrated Capability Building on Local Governance, assisted by USAID and CIDA. The Public Employment Services Office

(PESO) provides the mechanism through which the various employment promotion/creation programs of DOLE and that of other agencies are made available under one roof to enable all types of clientele avail of employment and income opportunities in the provincial level. With the computerization of tax mapping system (patterned after the Land Information System of Japan), the Provincial Assessor's Office can easily classify and appraise all kinds of taxable objects, properties, and establishments. This way the office will be able to help the LGU increase its income and in the process, dishonesty would be prevented.

Initially, the Project will cover the six (6) provinces. The next phase will cover the five cities. The third phase will cover 50% of the municipalities. The forth phase will cover the remaining 50% of the municipalities.

Project No. EN - 1

1.	PROJECT TITLE	Rattan Plantations Development and Management
2.	LOCATION	Bataan, Tarlac, Pampanga
3.	IMPLEMENTING AGENCIES	CENRO in Bataan, PENROs
4.	OBJECTIVES	To increase income of rural populace through additional livelihood opportunities; To expand raw material supply for furniture and fixture industry; and To improve rural environment.
5.	EXPECTED EFFECTS	Higher income and more employment opportunities in rural areas. More lucrative and robust rattan industry.
6.	PROJECT COSTS	₱30 million
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The Project would establish rattan plantations in several locations. Sites would be selected in upland of Bataan, lowland of Pampanga, and upland/lowland in Tarlac. Bagac in Bataan has been proposed for a 100 ha plantation in a logged-over forest land. Other sites should be identified.

The first step is to conduct survey mapping and planning for each site, covering slope, soil conditions, agro-ecology and existing vegetation as well as socio-economic conditions of host communities. Most suitable species will be determined. The host communities should be involved in this step.

After establishment, the rattan plantations would be managed by respective host communities supported by CENRO/PENROs for continuous supply of high quality rattan canes. Monitoring would be conducted for proper soil and forestry management and also for acquiring ecological information to further improve the management.

Project No. EN - 2

1.	PROJECT TITLE	Bamboo Plantations Development and Management
2.	LOCATION	Pampanga, Tarlac
3.	IMPLEMENTING AGENCIES	PENRO in Pampanga, and Tarlac, LGUs
4.	OBJECTIVES	To increase income of rural people through additional livelihood opportunities; To make idle land productive and help protect river banks from erosion; and To provide adequate supply of raw materials for local handicraft industry.
5.	EXPECTED EFFECTS	Higher income and more employment opportunities in rural areas
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Phase I - Phase II

8. PROJECT DESCRIPTION

The Project would establish small bamboo plantations on many lands along river banks left idle after the Mt. Pinatubo eruption. Planting materials would be supplied by PENRO Pampanga to cooperating farmer-owners.

The Project could be implemented immediately on lands identified. For continuing implementation with much larger area, survey mapping and planning would be necessary to identify suitable areas with respect to soil and drainage conditions, slope, agro-ecological and other conditions. The Project may benefit in Phase II from the Tropical Plant Multiplication and Distribution project (Project No. GN-3).

Project No. EN - 3

1. PROJECT TITLE — Pollution Control and Prevention Center

2. LOCATION

3. IMPLEMENTING AGENCIES — DTI in cooperation with DENR

4. OBJECTIVES — To establish a support organization for cottage/micro, small and medium size enterprises as well as large ones with the following functions:

   (1) to provide technical assistance for pollution control and prevention, and
   (2) to provide long term loans at low interest rate for installation of pollution control facilities and device.

5. EXPECTED EFFECTS — More pollution control facilities installed.
   Better pollution control.
   Decrease in water and air pollution.

6. PROJECT COSTS

7. IMPLEMENTATION SCHEDULE

Study	1 year	(1995-1996)
Establishment	1 year	(1997)
Implementation		(1998 ~)

8. PROJECT DESCRIPTION

This Project aims at the establishment of a fund for industries to install pollution control facilities and device. As the first step, a study will be carried out covering the following:

(1) environmental regulations and institution study,
(2) industrial sectors study including interviews to existing SMEs,
(3) formulation of a concept of the supporting organization,
(4) feasibility study of the establishment of the support organization, and
(5) financial study.

Project No. EN - 4

1.	PROJECT TITLE	Solid Waste Management Improvement Pilot Project
2.	LOCATION	One municipality in each of the six provinces
3.	IMPLEMENTING AGENCIES	DENR and LGUs
4.	OBJECTIVES	(1) To formulate a solid waste management plan, (2) To improve the existing solid waste management system, and (3) To introduce new solid waste disposal methods.
5.	EXPECTED EFFECTS	Upgraded solid waste management for demonstration and subsequent introduction to other municipalities Improved sanitary and health conditions.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	2.5 years (1995 - 1998)

8. PROJECT DESCRIPTION

Solid waste management practices in Central Luzon need to be upgraded in steps in anticipation of rapid urbanization. The Project will establish a pilot solid waste management system for one municipality in each of the six provinces. Appropriate solid waste management systems differ depending on population size, income levels, urban morphology and financial status of municipalities as well as existing systems.

First, a master plan study will be carried out to plan for the most appropriate solid waste management system for each municipality and stage-wise development of facilities and institutions. Second, a feasibility study will be conducted for the initial establishment of the proposed solid waste management system. The following will be covered by the studies:

(1) present solid waste amount and composition,
(2) projection of garbages to be generated by different activities,
(3) collection and transportation of solid wastes,
(4) treatment methods,

(5) disposal methods and sites, and

(6) institutional and financial aspects.

Improved solid waste treatment and disposal systems will be established as a pilot project. They may include new type collection vehicles, transshipment station, improved composting, and different levels of landfill.

Project No. EN - 5

1.	PROJECT TITLE	Candaba Swamp Conservation Program
2.	LOCATION	Candaba Swamp, Pampanga Province
3.	IMPLEMENTING AGENCY	DENR
4.	OBJECTIVES	1) To prepare an inventory of existing environmental conditions. 2) To formulate a conservation plan consistent with IPAS requirements, and 3) To establish a NIPAS legal conservation area
5.	EXPECTED EFFECTS	Establishment of the valuable swamp area as a conservation area registered with the Ramsar Convention. Use of the swamp area for environmental education.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	2.5 year (1995 - 1998)

8. PROJECT DESCRIPTION

The Project will encompass the following:

1) survey of existing environmental conditions,
2) scientific evaluation of the Candaba Swamp,
3) identification of development activities,
4) formulation of a conservation plan,
5) promotion of environmental awareness,
6) formulation of environmental education programs, and
7) preparation of documents for register as a NIPAS area.

NIPAS: National Integrated Protected Areas System
Ramsar Convention : Convention on Wetland of International Importance species of especially as waterfowl habitat

Project No. EN - 6

1. PROJECT TITLE — Sta. Cruz Marine Conservation Program

2. LOCATION — Sta. Cruz, Zambales

3. IMPLEMENTING AGENCY — DENR and the municipal government of Sta. Cruz

4. OBJECTIVES

1) To establish a marine sanctuary in the Sta. Cruz area where various marine species could reproduce, mature and increase their number without being over fished;
2) To restore environmental quality damaged by illegal and inappropriate fishing techniques and methods; and
3) To sustain aquatic resources productivity for the benefit of small fishermen and the local community.

5. EXPECTED EFFECTS

1) Upgraded quality of marine resources in the coastal area;
2) Generation of more income for local communities or fishermen through improved fishing conditions and productivity;
3) Eradication of illegal fishing methods within the coastal area;
4) Enhanced environmental consciousness among local communities.

6. PROJECT COSTS

7. IMPLEMENTATION SCHEDULE — Phase II

8. PROJECT DESCRIPTION

The Program aims at restoring the coastal and marine environment of the Sta. Cruz area in order to support fishing activities by small fishermen on a sustainable basis. As the means to realize this, the Program will establish a marine sanctuary, strictly control fishing activities for a limited time, preventing illegal and inappropriate fishing methods, establish sustainable levels of fishery, and promote sound and sustainable fishing activities.

A study will be carried out to prepare documents necessary to establish the sanctuary and sustainable levels of fishery.

Project No. EN - 7

1.	PROJECT TITLE	Luzon Sea Coastal Resources Management
2.	LOCATION	Coastal areas (Luzon Sea) in Zambales and Bataan
3.	IMPLEMENTING AGENCY	DENR and Bureau of Fisheries, DA in cooperation with provincial governments of Zambales and Bataan.
4.	OBJECTIVES	To rehabilitate and protect coastal and marine resources; To restore fishery resources to support small fishfolks' livelihood on a sustainable basis; and To promote orderly development of coastal areas to diversity local economies.
5.	EXPECTED EFFECTS	Upgraded quality of coastal and marine resources. Increased income for fishfolks and local communities. Enhanced environmental consciousness among local people.
6.	PROJECT COSTS	
7.	IMPLEMENTATION SCHEDULE	Master plan and feasibility study in Phase I; implementation in Phase II and Phase III

8. PROJECT DESCRIPTION

Coastal areas in Zambales and Bataan have been undergoing rapid transformation due to destruction of coral reefs by illegal fishing, conversion of mangrove areas to large fishponds, reckless tourism and other activities. Recently, the Mt. Pinatubo derived lahar has add to this transformation. Poverty is widespread among small fishfolks, which in turn tends to further resource exploitation type activities.

Collective and concerted effort will be necessary to reverse the trend. As the first step, a master plan for coastal resources management will be prepared in the following steps: