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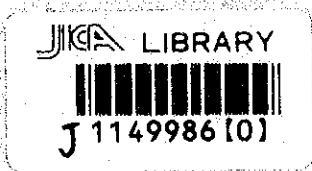


DAVAO INTEGRATED DEVELOPMENT PROGRAM(DIDP)  
THE REPUBLIC OF THE PHILIPPINES

**THE STUDY  
ON  
THE DAVAO INTEGRATED DEVELOPMENT PROGRAM  
MASTER PLANNING  
THE REPUBLIC OF THE PHILIPPINES**

**FINAL REPORT  
PROJECT REPORT**

March 1999



**PACIFIC CONSULTANTS INTERNATIONAL**

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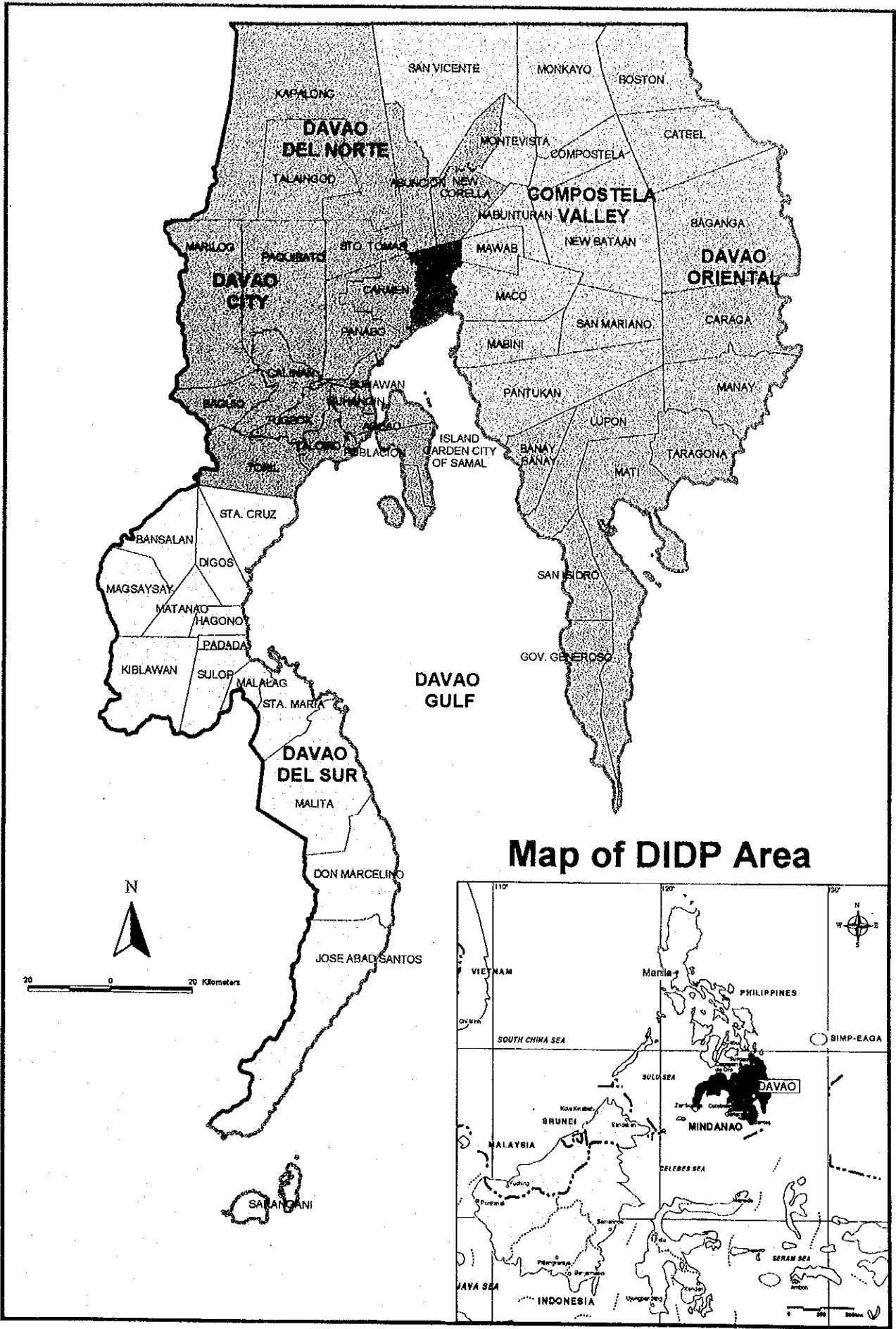
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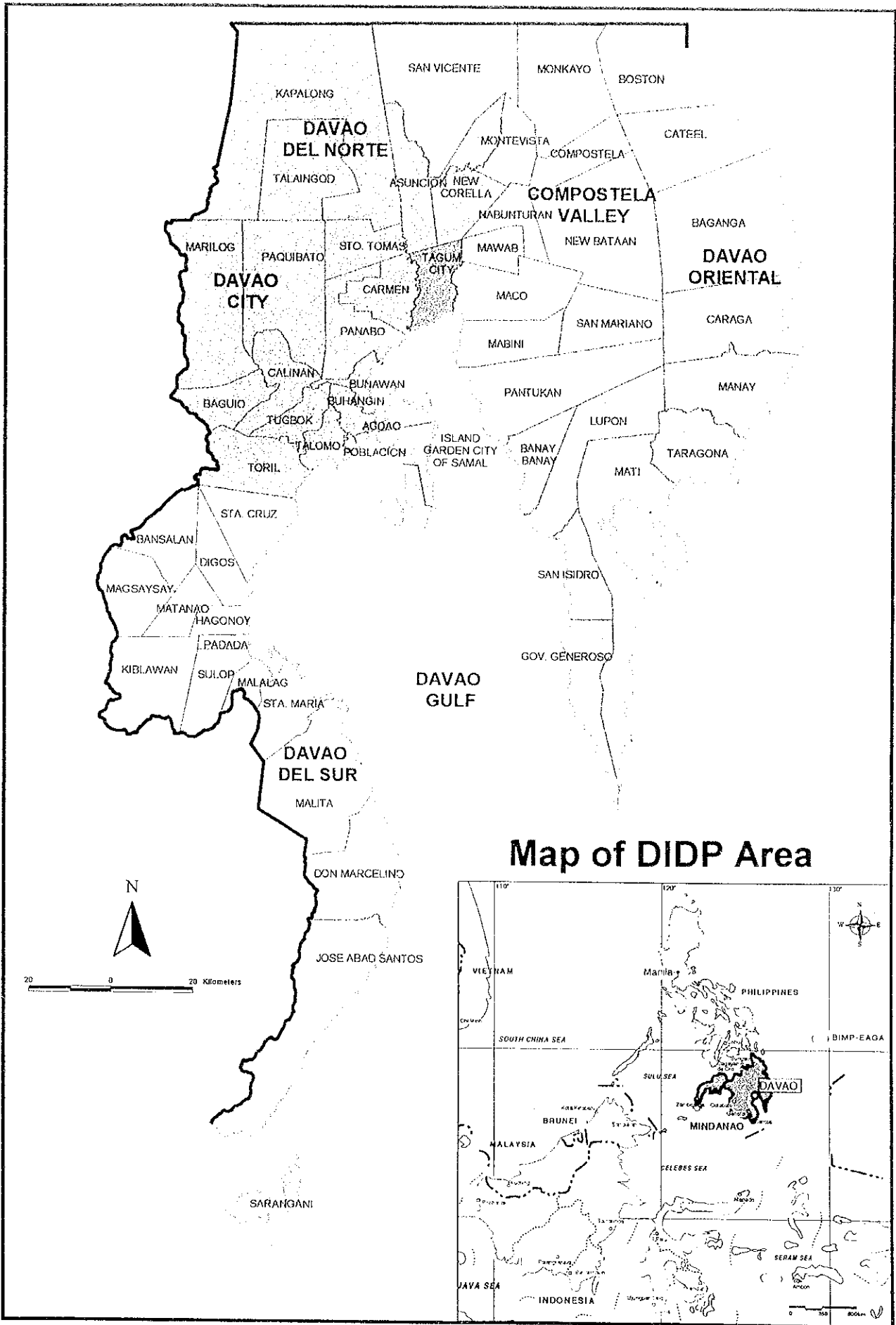
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### Abbreviation

DAO	Department Administrative Order
DENR	Department of Environment and Natural Resources
EIA	Environmental Impact Assessment
IEE	Initial Environmental Examination

## Abbreviations

AADT	Annual Average Daily Traffic
AAGR	Annual Average Growth Rate
ADB	Asian Development Bank
ADZs	Area Development Zones
AIDAB	Australian International Development Assistance Bureau
ARMM	Autonomous Region of Muslim Mindanao
ASEAM	Association of Southeast Asian Nations
ATO	Air Transportation Office
BCD	Business Center Davao
BFPE	Barrels Fuel-Oil Equivalent
BIMP-EAGA	Brunei-Indonesia-Malaysia-Phillipines East Asean Growth Area
BOD	Board Of Directors
BPP	Buile Operate Own
BPT	Bureau Of Transportation
BWSA	Barangay Waterworks and Sanitation Association
CAB	Civil Aeronautics Board
CAMP	Civil Aviation Master Plan
CBD	Central Business District
CBFM	Community Based Forest Management
DAMECP	Davao del Norte Electric Cooperatiove, Inc.
DASIRECP	Davao del Sur Rural Electric Cooperatiove, Inc.
DBM	Department of Budget and Management
DBP	Development Bank of Philippines
DCWD	Davao City Water District
DDA	Davao Development Authority
DENR	Department of Environment and Natural Resources
DIA	Davao International Airport
DIADP	Davao International Airport Development Project
DICTF	Davao City International Container Terminal Facilities
DIDP	Davao Integrated Development Program
DIDPMP	Davao Integrated Development Program and Management Planning
DILG	Department of Interior and Local Government
DLPC	Davao Light and Power Corporation
DOE	Department Of Energy
DOF	Department Of Finance

DOH	Department Of Health
DORECO	Davao Oriental Rural Electric Cooperative, Inc.
DOST	Department of Science and Technology
DOTC	Department of Transportation and Communication
DPWH	Department of Public Works and Highways
DSM	Demand Side Management
DTI	Department of Trade and Industry
DUCC	Davao Union Cement Corporation
ECE	Energy Consumption Elasticity
EDC	Energy Development Corporation
EIB	European Investment Bank
EPZ	Export Processing Zone
ER	Electrification Ratio
ERB	Energy Regulatory Board
GDP	Gross Domestic Product
GRDP	Gross Regional Domestic Product
GSC	General Santos City
HIGC	Home Insurance and Guaranty Corporation
HLURB	Housing and Land Use Regulatory Board
HPI	Hijo Plantation Inc.
HUDCC	Housing and Urban Development Coordination Council
IBRD	International Bank for Reconstruction and Development
IEC	Information and Education Campaign
IFMA	Industrial Forest Management Agreement
IOUs	Investor Owned Utilities
IPPs	Independent Power Procedures
IQS	Industrial Questionnaire Survey
IRA	Internal Revenue Allotment
JICA	Japan International Cooperation Agency
LEGOIL	Legaspi Oil Company, Inc.
LGU	Local Government Unit
LRT	Light Railway Transit
LTFRB	Land Transportation Franchising and Regulatory Board
LTO	Land Transportation Office
LWUA	Local Water Utilities Administration
MARINA	Maritime Industry Authority
MBN	Minimum Basic Needs

MEO	Municipal Engineer's Office
MMBFOE	Million Barrels of Fuel-Oil Equivalent
MMLF	Moro National Liberation Front
MPDO	Municipal Planning and Development Office
MTBS	Mindanao Terminal Brokerage Services, Inc.
NCR	National Capital Region
NEA	National Electrification Administration
NEDA	National Economic and Development Authority
NGO	Non-Governmental Organization
NIA	National Irrigation Administration
NLUC	National Land Use Committee
NPC	National Power Corporation
NPFD	National Physical Framework Plan
NTCP	National Traffic Count Program
NWRB	National Water Resources Board
ODO	Original Destination
ODA	Official Development Assistance
OECE	Overseas Economic Cooperation Fund
PACINTER	Pacific International Terminal
PAGASA	Philippine Atmospheric Geophysical and Astronomical Service Administration
PAIC	Provincial Agri-Industrial Center
PCMI	Per Capita Municipal Income
PDOs	Port District Offices
PEO	Provincial Engineer's Office
PEP	Philippine Energy Plan
PEZA	Philippine Export Processing Zone Authority
PGSEP	Philippine German Solar Energy Project
PMOs	Port Management Offices
PNOC	Philippine National Oil Corporation
PPA	Philippine Port Authority
PPDO	Provincial Planning and Development Office
PUV	Public Utility Vehicle
RAIC	Regional Agri-Industrial Center
RDC	Regional Development Council
RDF	Residue Derived Fuel
RDIP	Regional Development Investment Program

RECs	Rural Electric Cooperatives
REREDP	Rural Electrification and Renewable/Energy Development Program
RIC	Regional Industrial Center
RPFP	Regional Physical Framework Plan
RWSA	Rural Waterworks and Sanitation Association
SCBCS	Solar Central Battery Charging System
SEP	Special Energy Program
SEZ	Special Economic Zone
SOSKSARGEN	South Cotabato-Sultan Kudarat Sarangani General Santos City
SWIM	Small Water Impounding Management
SWIP	Small Water Impounding Project
TADECO	Tagum Agricultural Development Corporation, Inc.
TEFASCO	Terminal Facilities and Services Corporation
TSS	Total Suspended Solids
UHLP	Unified Housing Lending Program
UNDP	Unified Nations Development Program
UNICEF	United Nations Children's Fund
WB	World Bank
WBA	World Bank Atlas
WD s	Water Districts
WRR	Water Resources Region



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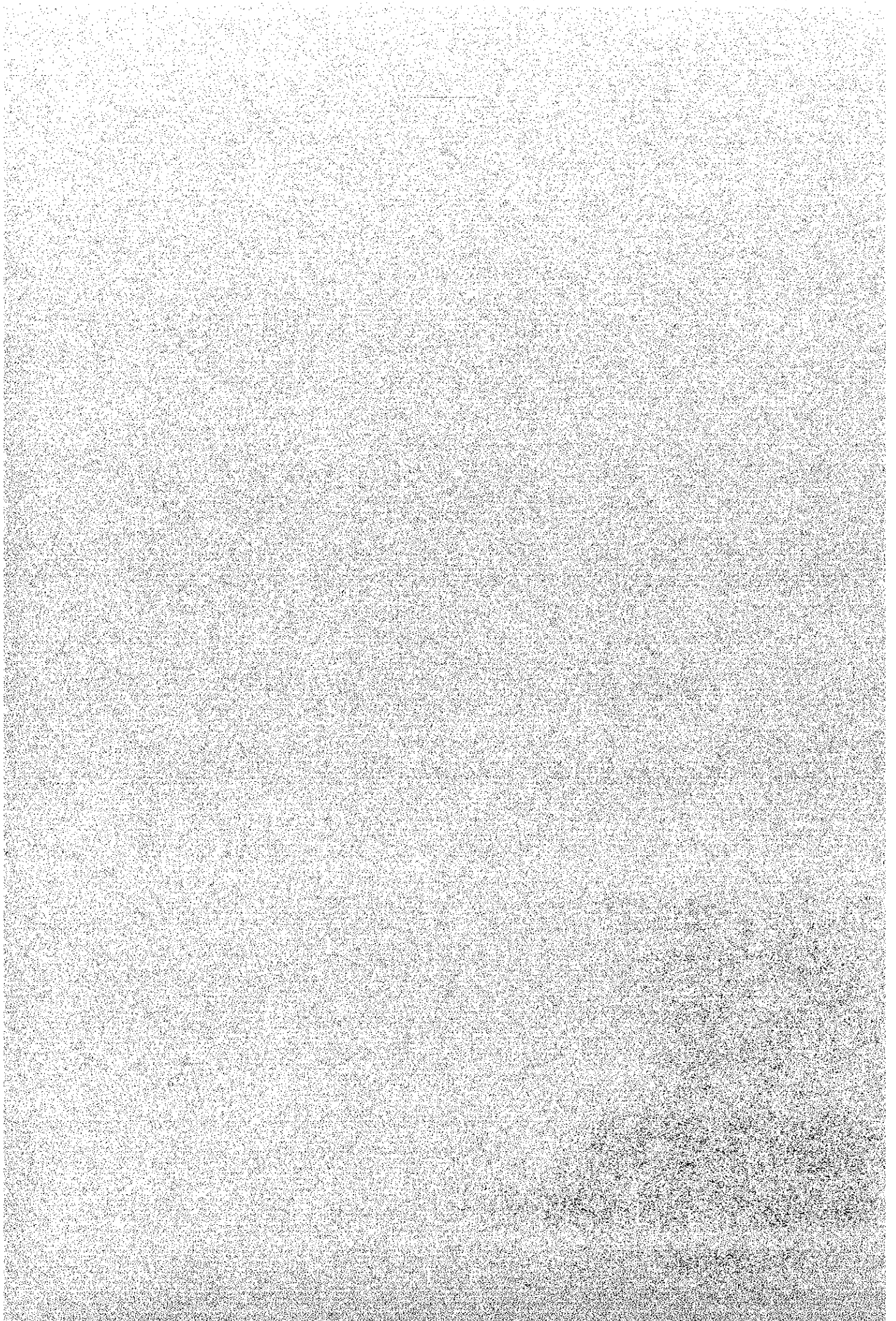
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***Part 1***  
***Detailed Project Profiles***





## Small Irrigation Development Project (EC-1)

### 1. Background

#### 1.1. General

Large irrigation systems require huge initial investment as well as expensive operation and maintenance including systematic water management, in order to attain the expected production increase to sustain and/or improve food self-sufficiency in the nation and improve living standard of beneficial farmers. Beside it, those irrigation systems usually take time to realize their effects, and the impacts will be appeared in limited area, which may cause distorted development.

On the other hand, small irrigation systems which could be managed by local people have advantage in view of relatively small investment cost, of shorter construction period, of quick yield, and of equitable development. After the completion of major national irrigation systems, the Government has already changed its policy on irrigation development from large scale to small scale, which would lessen the Government's burden on irrigation investment.

The project will pursue the Government policy by implementing small irrigation development in a rational manner.

#### 1.2. Irrigation Development in the DIDP Area

Irrigated area in the DIDP Area totals some 38,500 ha including 30,000 ha of national irrigation systems (NISs) and 8,500 ha of communal irrigation systems (CISs), benefiting some 30,000 farmers. There are 55 CISs, which have been developed all over the Area, benefiting 6,900 farmers. Based on the well-organized water users association, CISs have been properly maintained. With high cropping intensity and moderate productivity level, farmers have been paying their share in the investment without delay. Blessed with ample water resources, performance of irrigation systems in the DIDP Area has been very high with average cropping intensity of over 170%, as compared with national average of 132%.

Recently the Department of Agriculture (DA) has launched shallow tube wells development schemes, which are highly cost-effective. So far 166 schemes covering 850 ha have been developed in the DIDP Area.

Along with the Government policy, under the forthcoming six year development period (1999-2004), NIA plans to develop some 8,000 ha under CISs by developing both surface water and groundwater, and the Department of Agrarian Reform (DAR) has another five CISs with 1,100 ha under its supporting services, while DA will develop 4 units of diversion dams (DDs), 23 units of small water impounding projects (SWIPs), and 1,020 units of small farm reservoir (SFR) in the DIDP Area, as shown below.

**Irrigation Development Plan by Type in the DIDP Area 1999-2004**

	CISs		DD Number	SWIP Number	SFR Number	DAR	
	Number	Area (ha)				Number	Area (ha)
Davao Province	23 (10)	3,290 (1,050)	1	6	300	4	500
Davao City	4	230	2	6	120	-	-
Davao del Sur	26 (19)	2,037 (317)	1	5	300	1	100
Davao Oriental	35 (27)	2,961 (1,981)	-	6	300	1	500
DIDP Total	88 (56)	8,018 (3,348)	4	23	1,020	6	1,100

Note: Figures in parenthesis for CISs represents pump irrigation schemes.

Source: Southern Mindanao Regional Development Investment Program (RDIP) 1999-2004

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Moreover, DA plans to construct 3,497 units of shallow tube-wells in the whole Region XI which includes the DIDP Area. Location of DA schemes, however, has not fully identified yet.

### **1.3. Constraints to Future Development**

- (1) The development of CISOs is not rationally planned. Development plan should be justified with adequate reasons.
- (2) It is obvious that groundwater, especially in shallow aquifer, will be more developed as sources of irrigation water. However characterization for groundwater has not been made for the whole DIDP Area.
- (3) Each of NIA and DA has its own development plans without coordination. It will cause confusion in their implementation such as area overlapping.

## **2. Project Description**

Based on the above situation, the small irrigation development project (the Project) will be formulated aiming at implement small irrigation development in consistent and rational manner.

### **2.1. Definition of Small Scale Irrigation**

The small scale irrigation scheme, in this particular project, is defined as the irrigation scheme which has an irrigation area of not more than 1,000 ha. By this definition, the Project generally covers the communal irrigation projects under NIA, and small water impoundment projects (SWIP), small river impounding projects (SRIPS), diversion dams (DD), small farm reservoir (SFR) and shallow tube-wells under DA.

### **2.2. Project Component**

The Project has the following components

- (1) Determination of development target by setting target self-sufficiency rate in rice  
Although target crop to be irrigated will not always be rice, it will be the basis for planning irrigation development from the viewpoint of food security.  
Rice has been imported in recent years mainly due to national calamities. The Government is now looking Mindanao as a food basket of the Country, but the development framework on irrigation has not been established by setting future production target based on the target self-sufficiency rate in rice to be set. It should be planned by region/province based on land potential, water availability, etc.  
This work will be done by DA (Central and regional offices), in cooperation with LGUs and NIA.
- (2) Determination of development scale and location by implementing agencies  
Once production target is set, DA, LGUs and NIA will coordinate one another to determine their development target in terms of scale and location. Overlapping of development area among agencies will be avoided through this work. Necessary arrangement for budgeting will be made simultaneously.
- (3) Groundwater characterization in the DIDP Area  
The characterization of groundwater will be made through groundwater survey in the entire DIDP Area in order to help planning of groundwater irrigation development avoiding over exploitation. The University of South-Eastern Philippines (USEP) in

Tagum will be responsible for this work in cooperation with LGUs.

(4) Training of farmers on water management

Farmers who develop shallow tube-wells will get trained on how to manage groundwater. Extension workers in LGUs will also be trained. DA and LGUs will be responsible for the training.

Beneficiary farmers under CISs, SWIPs, DDs, etc. will also get trained on how to organize water users association and its management, collection of water charge, maintenance of the system including water management, etc. NIA will mainly be responsible for the training.

(5) Provision of credit

Loan will be arranged for farmers who are to shallow tube-well construction. DA will coordinate with LBP in provision of loans.

(6) Implementation of the projects

Planned projects will be implemented according to the schedule. The progress of project implementation will be monitored by each implementing agency, and reported to DA Region XI office.

(7) Evaluation and rolling plan

The Project will be evaluated every three years, and the plan will be revised if required.

**2.3. Institutional Arrangement**

Overall coordination will be made by the DA Region XI Office. Implementing and/or cooperate agencies/offices are: NIA (regional and provincial), LGUs (PAOs/MAOs) and USEP. Division or works by each agency/office in the Project is summarized as follows:

Division of Work by Relevant Agencies

Components	DA XI	NIA XI	NIA Prov.	PAO/MAO	USEP	LBP
Overall Coordination	●					
Determination of development target	●	●	●			
Groundwater characterization	●	●	●	●	●	
Farmers training on STWs	●			●		
Provision of credit	●			●		●
Training of extension workers	●			●		
Farmers training on CISs, SWIPs, DDs, etc.		●	●			
Construction works (implementation)	●	●	●	●		
Evaluation	●	●				

**2.4. Implementation Schedule**

The Project will be implemented during the whole DIDP planning period (1999 – 2016). Overall implementation schedule is shown below:

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Determination of dev't target																		
Groundwater characterization																		
Training farmers																		
Provision of credit																		
Training extension workers																		
Implementation																		
Evaluation																		

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## 2.5. Project Costs

The Project will require total cost of some ₱1,442 million, consisting of ₱50 million for training both extension workers and farmers, ₱10 million for credit, another ₱10 million for groundwater characterization, and ₱1,372 million for construction of irrigation systems.

## Abaca Industry Revitalization Project (EC-3)

### 1. Background

#### 1.1. General

Abaca (*Musa textilis* NEE), known as Manila hemp, has been widely grown in Southern Mindanao Region including the DIDP Area for long time by Indigenous people as materials for their clothes. Tribal people have developed their own designs for their clothes with which one can feel their cultural identity.

Commercial production of abaca in the Area was started by Japanese immigrants in early 1900s. Since then, abaca fiber has been utilized mainly as marine cordage throughout the world, because of its superior strength and durability in water. It had been one of the most important export commodities in the Philippines as World War I occurred. However, when cheap petroleum synthetic fiber was developed in the 1950's and utilized for cordage as a substitute of abaca, the abaca industry lost its market and was sharply declined.

After years, the demand for abaca again started to increase after the new usage of abaca fiber such as special papers and fibercrafts has been developed capitalizing on its superior features such as strength and breathability, and on recent trend of "environment consciousness".

It has been longed for in the DIDP Area that once flourished abaca industry be revitalized as a 21<sup>st</sup> century material industry which is human oriented and environment friendly.

#### 1.2. Abaca Industry in the Philippines

##### (1) Abaca fiber and its products

Recent export quantity and domestic consumption of abaca fiber and its products are shown in Table 1 and Table 2.

**Table 1 Export of Abaca Fiber and Products**

Item	Unit	1991	1992	1993	1994	1995	1996	1997
Fibers	MT	19,662.2	17,617.4	15,403.0	18,143.6	19,321.4	17,947.3	17,790.6
Pulp	MT	10,615.6	11,906.7	10,794.3	11,947.0	11,503.6	13,227.1	13,458.3
Cordage	MT	9,172.0	8,131.7	8,546.2	7,798.2	8,056.1	7,424.0	8,407.9
Total		39,449.8	37,655.8	34,743.5	37,888.8	38,881.1	38,598.4	39,656.8

Source: "Abaca Fiber Statistics", FIDA, Region XI

**Table 2 Domestic Consumption of Abaca Products**

Item	Unit	1991	1992	1993	1994	1995	1996	1997
Pulp	MT	21,971	24,168	23,926	26,200	24,870	26,482	26,650
Cordage, Yarn & Twines	MT	14,205	13,495	13,846	12,270	12,100	11,808	12,520
Fibercrafts	MT	4,014	4,616	5,099	5,230	7,270	5,610	5,765
Total	MT	40,190	42,279	42,871	43,700	44,240	43,900	44,935

Source: "Abaca Fiber Statistics", FIDA, Region XI, including export after processing

From the above tables, recent trend in the demand of abaca products may be seen as follows:

- Export of abaca fiber has been steady or slightly declined;
- Abaca pulp has been increasing in both export and domestic markets;

- 
- Cordage, yarn and twines consumption has been steady or slightly declined;
  - Fibercraft in the domestic market has been increasing; and
  - Overall demand for abaca is showing upward trend.

(2) Market for fiber

Owing to England and the US, relatively steady amount of abaca fiber has been kept exporting. Slightly decreasing trend in the abaca fiber export may be due to Japan's decreasing importation amount, as a result of shifting importing material from fiber to pulp.

(3) Market for abaca cordage

The demand of abaca cordage at present mainly comes from the regular customers such as English navy. Domestic demand of cordage, yarn and twines also seems more or less constant. The demand for cordage, therefore, is predicted to be stable at about 12,000 tons in future.

(4) Market for pulp

The abaca pulp sector, which in terms of volume and export earnings, registered a growth rate of 6.6% and 14% per annum, respectively since 1987. ("The Philippine Abaca Industry", FIDA 1997). Due to the abaca fiber's various characteristics such as strength and breathability that are absent in other fibers, the abaca pulp is utilized for special paper such as currency paper, tea bag, meat and sausage casing, cigarette papers, cosmetic papers, insulating paper for electric goods, dust collecting bag for vacuum cleaner, kitchen garbage bag for draining liquid off, etc. The demand for these commodities is expected to expand in future.

(5) Market for fibercraft

The fibercraft sector is another growth area registering a 16.4 % improvement in earnings per annum from 1987 to 1996 ("The Philippine Abaca Industry", FIDA 1997).

The recent trend, credited to the "Green Earth", is evident especially in developed countries. As people becoming more "environmentally conscious", "simple" and "green" goods become more fashionable. A stand out among the "eco-friendly" products is handicrafts. Its coarse texture and rustic look makes owning handmade fiber and paper products indispensable for people who "love the earth".

The list of products that can be made from handmade abaca fiber and paper including other plant resources seems endless. Aside from gift bags, one can make slippers, rugs, matings, carpets, coasters and stationery.

### **1.3. Abaca industry in the DIDP Area**

(1) Production trend

According to the statistics, the Regions of Eastern Visayas and Bicol are the production centers in the Country, in terms of production. The two regions produced some 45,600 tons of abaca in 1995, accounted for 71.5% of the Country's total. It should be noted that the harvested area of abaca in Bicol is far larger than that in Eastern Visayas, reflecting rather lower yield in Bicol (Tables 3 to 5).

The harvested area and production of abaca in the DIDP Area, were 7,438 ha and 5,308 ton, respectively, each of which accounted for 7.2% and 8.2% of the Country's total in 1995. In terms of production, the Area is positioned third next to the above two regions.

Although the harvested area in the Area increased 42.0% in five years since 1991, the production increased only 11.7% in the same period, due to the reduction of yield from 1.0 ton/ha to 0.7 ton/ha.

**Table 3 Harvested Area of Abaca by Region/Province during 1991 - 1995**

Region/Province	1991	1992	1993	1994	1995	Change 1990-1995	Share in 1995
Southern Tagalog	788	858	865	872	450	-45.7%	0.4%
Bicol Region	53,438	53,509	52,769	42,552	42,562	-25.6%	41.3%
Western Visayas	1,407	1,188	1,264	1,859	2,050	34.2%	2.0%
Central Visayas	2,425	2,464	2,470	2,482	2,648	8.6%	2.6%
Eastern Visayas	20,614	20,971	21,658	28,311	29,069	24.5%	28.2%
Western Mindanao	8,458	9,080	7,367	7,863	7,331	-12.2%	7.1%
Northern Mindanao	3,287	2,143	2,298	2,532	2,438	-23.7%	2.4%
Southern Mindanao	5,821	5,907	6,775	8,294	8,665	43.8%	8.4%
Central Mindanao	3,542	3,213	3,213	3,204	3,207	-10.1%	3.1%
Caraga	4,521	2,822	3,496	4,255	4,673	21.7%	4.5%
Philippines	104,301	102,155	102,175	102,224	103,093	0.4%	100.0%
DIDP Area	5,253	5,198	5,916	7,435	7,438	42.0%	7.2%

Note: Data on 1996 is preliminary estimate.

Source: JICA Study Team based on the data from BAS, DA.

**Table 4 Production of Abaca by Region/Province during 1991 - 1995**

Region/Province	1991	1992	1993	1994	1995	Change 1990-1995	Share in 1995
Southern Tagalog	49	61	81	83	56	42.4%	0.1%
Bicol Region	21,906	23,283	20,297	22,956	22,294	10.4%	34.9%
Western Visayas	614	692	677	658	815	0.0%	1.3%
Central Visayas	490	226	171	129	206	-36.9%	0.3%
Eastern Visayas	24,122	22,666	22,442	25,419	23,317	7.9%	36.5%
Western Mindanao	4,608	4,620	3,493	4,167	4,147	0.2%	6.5%
Northern Mindanao	873	1,421	1,788	1,827	1,562	52.7%	2.4%
Southern Mindanao	5,736	5,379	5,668	5,807	5,943	9.8%	9.3%
Central Mindanao	1,943	1,596	1,728	2,131	2,403	7.7%	3.8%
Caraga	2,590	2,215	2,288	2,043	3,078	9.1%	4.8%
Philippines	62,931	62,159	58,633	65,220	63,821	9.4%	100.0%
DIDP Area	5,038	4,624	4,688	5,088	5,308	11.7%	8.3%

Source: "Abaca Fiber Statistics", FIDA Region XI

**Table 5 Yield of Abaca by Region/Province during 1991 - 1995**

Region/Province	1991	1992	1993	1994	1995	Change 1990-1995
Southern Tagalog	0.1	0.1	0.1	0.1	0.1	60.4%
Bicol Region	0.4	0.4	0.4	0.5	0.5	28.6%
Western Visayas	0.4	0.6	0.5	0.4	0.4	-52.0%
Central Visayas	0.2	0.1	0.1	0.1	0.1	-49.7%
Eastern Visayas	1.2	1.1	1.0	0.9	0.8	-22.0%
Western Mindanao	0.5	0.5	0.5	0.5	0.6	11.0%
Northern Mindanao	0.3	0.7	0.8	0.7	0.6	61.7%
Southern Mindanao	1.0	0.9	0.8	0.7	0.7	-60.4%
Central Mindanao	0.5	0.5	0.5	0.7	0.7	16.2%
Caraga	0.6	0.8	0.7	0.5	0.7	-16.1%
Philippines	0.6	0.6	0.6	0.6	0.6	9.0%
DIDP Area	1.0	0.9	0.8	0.7	0.7	-52.2%

Source: "Abaca Fiber Statistics", FIDA Region XI

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Both Eastern Visayas and Bicol Regions are located in the typhoon corridor, and abaca planted areas are often damaged by typhoon.

(2) Prospects and constraints to revitalization

Following are prospects of the DIDP Area in relation to abaca industry revitalization:

- a. Favorable natural condition for abaca cultivation including soils, rainfall pattern, no typhoon, etc.,
- b. Long history of cultivation by indigenous people, whose cultural identity can be preserved through abaca weaving practice,
- c. Experienced people on commercial abaca plantation in the Area,
- d. Local people's strong desire to revitalize abaca industry supported by the local governments' will in the Area,
- e. Relatively less crop damage by diseases in the Area than other areas such as Bicol and Leyte, and
- f. Originally grown in mountain side and expected to contribute to soil conservation in sloping land.

On the other hand, there still are constraints to overcome as shown below:

- a. Farmers who cultivate abaca often consider the crop as secondary crop and do not take care of it well, which resulted in lower yield with low quality,
- b. Abaca producers do not have an idea on market requirements on quality nor on price information, as there is no communication channel between producers and market ,
- c. The way of post-harvest processing is very conventional, and needs much laborious work,
- d. The supply amount of abaca fiber to the market is unstable despite the buffer function of middlemen, which causes the price fluctuation,
- e. It is difficult for farmers to market abaca products directly to pulp mills, as individual farmer does not produce large amount in one time and does not have storage,
- f. The grading standard currently used is for cordage making, which does not necessarily meet the market needs at present,
- g. Most handicraft enterprises which produce abaca products are small in scale, and the number of the enterprise is not sufficient enough, and
- h. Market information on handicraft products is still insufficient.

## **2. Project Description**

Based on the above situation, the Abaca Industry Revitalization Project (the Project) will be formulated in order to revitalize abaca production as a 21<sup>st</sup> century material industry as well as for the symbol of the identity of Davao.

### **2.1. Objectives**

The project has the following objectives:

- (1) to dramatically increase production of abaca in the DIDP Area through organizing farmers, improved variety introduction, improved farming practices and post-harvesting technology, credit provision, etc.;



- 
- (2) to increase value added of the products by improving grading on the basis of new market needs; and
  - (3) to promote handicraft enterprises in the DIDP Area through market research and development and product development.

## 2.2. Project Area

The Project area covers 64 barangays in the DIDP Area, which are abaca producing, as shown on the attached sheet. The number of barangays per province is shown below.

Davao del Norte:	3 barangays
Compostela Valley:	3 barangays
Davao City:	11 barangays
Davao del Sur:	11 barangays
Davao Oriental:	36 barangays

The project also covers entrepreneurs who manufacture abaca made handicrafts.

## 2.3. Project Components

The Project will consist of the following components:

### (1) Productivity improvement

- Organize producers' group  
Through the dialogue with the producers, 24 barangays will be selected as initial implementation areas of the Project. Necessary arrangement for organizing farmers' group will be made. The project area will be expanded to other barangays according to the progress of the Project.
- Provision of credit  
The Project will source fund for production loan to selected barangays/farmers' group.
- Introduction of improved varieties for replanting/rehabilitation  
The Project will distribute necessary materials (corms/suckers) for replanting and/or rehabilitation.
- Extension of improved farming practice  
Improved farming practice will be extended by MAOs in respective municipalities. MAO will be trained on abaca farming prior to the implementation of the Project.
- Provision of inputs  
Necessary inputs for abaca cultivation will be procured through private dealer.
- Research and development on new variety which is high yielding and disease resistant  
Develop new variety having high yielding and disease resistant features in tissue culture laboratory.
- Multiplication of new variety for dissemination and demonstration of the recommended farming practice  
An experimental/demonstration farm, or a techno-demo farm will be established for multiplying new varieties and demonstrating farming practice.
- Market information dissemination  
An information system will be established for farmers' group to know the market

price of abaca periodically.

- Project monitoring

The progress of the Project will be monitored by MAOs regularly, and report to PAOs/CAO.

(2) Post-harvest improvement

- Development of new grading standard(s) based on the market requirement

New grading standard(s) will be developed to meet the market requirement of new products (e.g. pulp).

- Development of new stripping machine to enhance efficiency

A new stripping machine will be developed to ease taxying and enhance efficiency. It may require foreign expert specialized in mechanics engineering.

(3) Market research and products development for abaca made handicraft

- Conduct training on product development

A series of training will be conducted on product development to manufacturer. Foreign experts in design and quality management may be required for this purpose.

- Market research and development

Study tours to both local and international markets will be conducted periodically to know the fashion trend and users' preference and reflect new product development.

- Participating in exhibition

Manufacturers will be encouraged to participate in various exhibition for promotion of their products.

- Competition on new products

An annual competition will be held on new abaca handicraft products to motivate manufacturers.

## 2.4. Institutional Arrangement

The entire Project will be coordinated mainly by DIDP-PMO. Implementing agencies/offices to be involved in the Project are: FIDA Region XI, DA Region XI, LGUs (PAOs/CAO, MAOs), CDA Region XI, SUCs (DOCSST and USEP) and DTI Region XI. The division of works by each agency is shown in the following matrix.

**Table 6 Division of Work by Relevant Agencies**

Components	DIDP-PMO	FIDA XI	CDA	DA XI	PAO/CAO	MAO	DTI	DOCSST	USEP	DOST
Overall Coordination	•									
Organize producers' group			•		•	•				
Provision of credit	•	•	•		•	•				
Introduction of improved varieties for replanting/rehabilitation		•			•	•				
Extension of farming practice		•			•	•				
Provision of inputs					•	•				
R&D on new variety		•						•		
Multiplication of new variety		•		•	•					
Market information dissemination				•	•	•				
Project monitoring	•				•	•				
Development of grading standard		•								
Development of stripping machine		•						•	•	•
Training on product development							•			
R&D on market							•			
Participating in exhibition							•			

## 2.5. Implementation Schedule

The Project will be implemented during 10 years, from year 2000 to 2009. Overall implementation schedule is shown below:

Component	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Overall Coordination	■	■	■	■	■	■	■	■	■	■
Organize producers' group	■	■	■	■	■					
Provision of credit	■			■			■			
Introduction of improved varieties for replanting/rehabilitation	■	■	■	■	■	■	■	■	■	
Extension of farming practice	■	■	■	■	■	■	■	■	■	■
Provision of inputs	■	■	■	■	■	■	■	■	■	■
R&D on new variety	■	■	■	■	■					
Multiplication of new variety						■	■	■	■	■
Market information dissemination	■	■	■	■	■	■	■	■	■	■
Project monitoring	■	■	■	■	■	■	■	■	■	■
Development of grading standard	■	■	■	■						
Development of stripping machine	■	■	■	■	■					
Training on product development	■	■	■	■	■	■	■	■	■	■
R&D on market	■	■	■	■	■	■	■	■	■	■
Participating in exhibition	■	■	■	■	■	■	■	■	■	■

## 2.6. Project Cost

The Project will require total cost of some ₱140 million, consisting of 14 million for training both extension workers and farmers, another 14 million for credit, which will be a seed fund for production loan, 37 million for research and development including new grading standard, new stripping machine, and new variety development, and 75 million for infrastructure on new machinery.

Abaca Producing Barangays in the DIDP Area

Province	Municipality	Barangay	Province	Municipality	Barangay
Davao del Norte	Asuncion Carmen Talaingod	Sto Nino Ising Dagohoy	Davao Oriental	Baganga	Mahan-ub Binondo Mikit Campawan Batawan Caaatijan Carmen Cawayanan San Jose Sibajay Simulao Abijod Aliwagwag Cabasagan Mainit Taytayan San Antonio Anitap Marayag Calapagan Don Mariano Marcos Limbahan Capasnan Concepcion Old Macopa Rizal San Fermin Taocanga Tagabakid Taguibo Sanghay Dadong Limot Tamaong Ompao Tubaon
Compostela Valley	Compostela New Bataan Nabunturan	Gabi Fatima Manat		Boston	
Davao del Sur	Digos  Kiblawan  Malita Sta. Cruz  Sta. Maria	Kapatagan Binaton Ihan Kisulon Little Baguio Tibulo Sibulan San Pedro Kinilidan San Antonio San Juan		Cateel	
Davao City	Baguio District Calinan District  Toril District    Tugbok District Marilog District	Carmen Riverside Tamayong Taguraano Eden Kilate Tagluno Daliaon Catigan Tacunan Salumay		Govenor Generoso Lupon	
				Manay	
				Mati	
				Tarragona	

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## **Abaca Handicraft Industry Development Project (EC-3a)**

### **1. Background**

#### **1.1. General**

Refer to the Project Profile of Abaca Industry Revitalization Project.

#### **1.2. Constraints**

The constraints to be eliminated in abaca handicraft industry is basically the same as those constraining most other industries consisting mainly of family based enterprises such as food industry. These constraints are summarized below.

(1) Lack of comprehensive support system

There are not effective comprehensive policy and integrated institutional management system in many official agencies concerned to promote development of abaca handicraft industry in the DIDP Area.

(2) Small scale operation

Most enterprises are traditional home-base operation level.

(3) Stagnant technology

In most case, technologies have not improved and sophisticated well compared with the level in developed countries. However, they are quite appreciated for a technology that allows flexibility and inclusiveness, evaluating the various products made by clients' order. The most problem is that they have less information in the potential market, both local and overseas, so that they can not recognize which technologies to be improved and introduced.

(4) Weak linkages with market

As mentioned in (3) above in terms of technology, most enterprises are facing difficulties finding out where their efforts should be focused, such as: improvement of quality, reduction of price, and development of new design, because market information is very limited with unreliable and ineffective information networks with end users. The weak and thin linkage with market is also impeding the marketing efforts made by the enterprises.

(5) Factors increasing production costs

There are many factors which have been affecting and increasing the production cost and market price such as; complicated channels with intermediates of product distribution as well as raw materials procurement, difficult procurement and high prices of sub-materials other than abaca and high transportation costs.

### **2. Objective and Expected Effect**

The objectives of the project is:

To develop the abaca hand-craft industry through promotion of market oriented activities and improvement of product development activities by providing financial and technical assistance to producers' groups.

And expected effects are:

(1) Improvement of living standard of producers by increasing income through stable management condition of their economic activities;

- 
- (2) Creation of competitive enterprises and groups through changing their minds to market-oriented ones and expansion of various economic activities derived from abaca processing;
  - (3) Development of basic and related industries such as transportation and sub-materials required by abaca handicraft industry; and
  - (4) Increasing job opportunities through the development of abaca processing industry.

### **3. Activities of the Project**

The scope of the Project focuses on the development of abaca hand-craft industry through improvement of capabilities for products development and marketing promotion in enterprises. Therefore, improved relations between raw material supplier especially abaca fiber producers and handicraft enterprises are expected by the implementation of the "Abaca Industry Revitalization Project". The detailed contents of activities in relation with the expected implementation agencies are presented in Table 1.

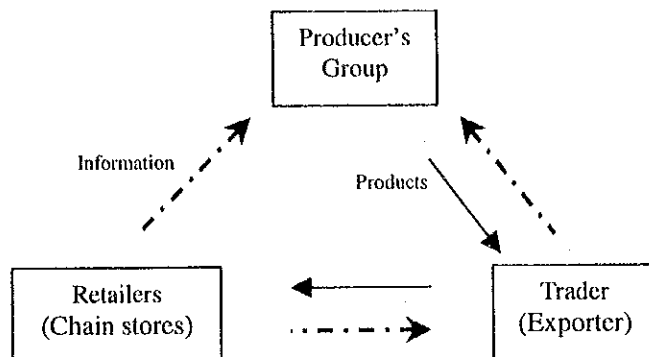
#### **(1) Products development**

- a. To support and ensure the enterprises for recognizing market needs and trends,
- b. To train and improve technology of craftsmen to meet market requirements,
- c. To train in product development method and procedure, and
- d. To manage and foster product designers in the Area.

#### **(2) Marketing promotion**

- a. To promote marketing of the products by various measures such as exhibitions, forums and via mass-media,
- b. To strengthen the market information system and provide market information by which processor can learn and consider the potential market needs both local and foreign,
- c. To promote match making opportunities between hand-crafts enterprises and users such as market survey mission, forum and exhibition,
- d. To train the owners of enterprises in business management way based on the recent marketing management method, and
- e. To promote establishment of a model triangle promotion system organized by producer's group, a trader or a exporter as ideal and retailers.

The three parties will establish a smooth communication linkage to each other, and the two parties except producer's group supply market information including buyers' reaction to the products distributed to market already by various points of view such as design, price and delivery. Based on their requests and market needs, the producers group will improve the existing products and develop new products. Such feedbacks between the three parties by the products and information will be managed properly and maintained.



#### 4. Recommendations

To ensure the satisfactory and effective implementation of the Project, it is desirable to introduce a technical assistance program in a timely manner. Expected fields for technical assistance are as follows:

- a. Development and improvement of production (Processing engineer and Product designer),
- b. Research of market condition (Expert being familiar with the big potential markets such as Japan, the U.S. and E.C.), and
- c. Quality control (Expert being familiar with quality control technology in a factory)

Table 1 Detail Activities of the Project

Category/Activity	Detailed Contents	Implementing Agency
1. Training and Technologies Transfer	To train craftsmen and improve their processing technology.	DTI, Academe, NGOs, Private sector
	To train in product development method and procedure to meet the requirements of markets.	DTI, PDDCP, Academe, NGOs, Private sector
	To train and foster the qualified product designer.	DTI, PDDCP, Academe, NGOs
	To train market oriented business management.	CDA, LGUs, DTI, DA, Academe
2. Credit and Finance	To train and transfer the necessary technology to improve the quality of products and/or to develop new products.	DTI, Academe, LGUs, NGOs, Private sector
	To provide investment funds for expanding the capacity of activities and/or introducing machinery and equipment, and for establishment of new enterprises to investors	DTI, LBP, RBs, PFI, GFI
3. Marketing	To support marketing promotion of products by various measures such as exhibition, forum and via mass-media.	DTI, DA, CITM, CC
	To establish the products display center.	DTI, DA, CITM, CC
	To strengthen market information system in terms of collection, accumulation and analysis and provide information by which processors can learn and consider the potential market needs both local and foreign.	DTI
4. Model triangle promotion system	To promote mach making opportunities between producers and buyers through dispatching market survey missions, exhibition and forum.	LGUs, DA-Agri.busi. Office
	To organize craftsmen group, a trader (exporter) and retailers such as a chain store enterprise.	LGUs, DTI, NGOs, Private enterprises
	To establish a smooth and effective communication system	DTI, PDDCP, Private enterprises
	To assist improvement of existing products and new products development.	DTI, PDDCP, Academe, NGOs, Private sector



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## **Agro-processing Promotion Project (EC-4)**

### **1. Background**

In the Philippines, families are changing their lifestyles gradually with increasing income levels. They have become more health conscious with preference to fruits and vegetables as part of their daily diet. The export potentials of certain Philippine agricultural products are quite naturally linked to the Country's location in the tropics where the soil and climatic conditions favor the growth of wide variety and cultivars of crops for both commercial and food products. Recently fresh and processed banana, mango and orchid have become popular export products, particularly to Japan, Hong Kong, Singapore, Rep. of China, Thailand and the U.S.A.

For many decades, the Philippines was the world's leading exporter of sugar and copra which have unfortunately become victims of a series of downtrends in international prices. Fresh banana and pineapple (fresh and processed) exports have become popular foreign income earners, continuous to this day to supply markets in Rep. of China, Singapore, Hong Kong and Japan. Fresh and processed mangos are probably the latest addition to the promising export products in foreign markets even as stiff competition is being felt with neighboring countries, e.g., Thailand and Indonesia.

On the other hand, fresh and processed vegetables have not yet approached prominently in the export trade considering their highly perishable nature, particularly the fresh supply, let alone the proximity of the Philippine ports, hence high freight charges, even to markets in neighboring countries. Moreover, Japan, Rep. of China, and Rep. of Korea grow abundant supplies of both temperate and tropical vegetables.

### **2. Constraints to Agro-processing Industry Development**

Agro-processing industry development is viewed as an important component for improving farm incomes, increasing foreign exchange earning, employment generation and productivity improvement. However, the constraints impeding proper development of agro-processing industry in the DIDP Area are existing yet as follows.

#### **(1) Lack of comprehensive policy**

There exists no effective comprehensive policy nor integrated institutional management system in many official agencies concerned to promote development of agro-processing industry in the DIDP Area. While various mango and coconut related products are found in the Japanese market, for instance, such products consist of mango juice from Thailand, Colombia, South Africa and Philippine, mango pudding from Singapore and coconut milk and coconut toasted chips from Thailand in addition to dried mango and desiccated coconut from the Philippines. In fact, there are many original products from various countries even in case of mango and coconut derivative goods sold in Japan. Actually import enterprises are looking for and selecting products that can obtain more profit and have the quality to satisfy market requirements out of the same kind of goods offered from all over the world. Through interviews with manufacturers of mixed fruit juices using mango puree imported from the Philippines, it can not be guaranteed at all that they will continue to procure same mango puree from the Philippines because they are always looking for better sources in line with their efforts to win out over all competitors.

Such attitude of the enterprises and condition of market is showing consistence with the modern marketing management theory. Also the fact that almost all dried mango imported from the Philippines and sold in Japan are produced in the Cebu area means

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that the same kind of products produced in the DIDP Area have no comparative advantage yet with reference to local products in other areas, less so for products sold in a market of Japan. As a result, all efforts led by comprehensive policies and strategies should be focused and concentrated on how comparative advantages could be created around agro-processing industry in the DIDP Area.

Current situations mentioned above have had an adverse impact on:

- Attracting more private sector's participation and flow of investment,
- Appropriate development of physical and fundamental infrastructure such as water supply, electric power, transportation, post-harvest facilities and cold storage network,
- provision of financial incentives and institutional capacities,
- Manpower training and development,
- Providing forward and backward linkages between agriculture, agro-processing industry and market as end users,
- Inter-agency and sectoral coordination,
- Developing marketing and information system,
- Legislative support, and
- Vital research and technology transfer.

(2) Small scale operation

Most enterprises are traditional home-based, although some have enlarged their operation to medium-scale.

(3) Stagnant technology

In most cases, technologies have remained stagnant at a low level. Under those circumstances, there are less incentives to acquire such technologies for long-term development and less information about market requirements by which they can recognize which technologies to be improved and introduced. For example, it is pointed out that post-harvest losses are estimated at 28% and 42% of fruits and vegetables (FAO 1990).

(4) Weak linkages with market

In the free market regime it is the theory that any economic activity should be operated and managed based on market needs. However, most enterprises are facing difficulties finding out where their efforts should be focused such as : improvement of quality, reduction of price, development of new products and establishment of new marketing channels, because market information is very limited with unreliable and ineffective information networks with the end users.

(5) Unstable quantity and uneven quality of raw materials

It is difficult for enterprises to organize suppliers of raw materials for stable procurement and uniformity of quality. Even the system of contracting production has not been able to break through the static cooperative activities.

(6) Many factors increasing products price

To cope with the price competitiveness in markets, there are many factors to be improved which have been affecting and increasing the production cost and market price throughout the distribution stream from producers to consumers. Major factors are

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as follows:

- Complicated channels with many intermediates of product distribution to consumers as well as of raw material procurement from producers,
- Difficult procurement and high price of sophisticated packaging materials and ingredients being imported from Manila because of nonexistence of such kind of industry in the Area, and
- High transportation charges especially between Manila, the largest market and a terminal for exporting.

### 3. Activities of the Project

As mentioned, it is a precondition to promote and ensure the development of the agro-processing industry in the DIDP Area that the various policies and strategies be formulated and synchronized to comprehensively cover a whole range of agro-processing activities. The entire aspect of requirements including such policies and strategies are illustrated in Figure 1. Policies and/or strategies required and activities to be carried out by the Project are listed below. Detailed contents of activities in relation with the expected implementation agencies are presented in Table 1.

#### Policy and activities

##### (1) Linkages

(Between producers and processors)

- To enable producers groups to produce a stable supply of raw materials to processors in terms of quantity and quality, and
- To promote appropriate contract farming system safeguarding interests of producers and processors.

(Between processor and markets)

- To promote and support the producer to have linkages with integrators/ enterprises (directly concerns markets such as traders and exporters).

##### (2) Technology

(To producers)

- To train in farming management to meet the requirements of processors,
- To train and disseminate the necessary cultivation technology to ensure the production in conformity with the producers requirements,
- To train and foster the qualified group leaders, and
- To carry out research and development for necessary technology to produce the advantageous raw materials in terms of quantity, quality and economy especially for new crops to be introduced.

(To processors)

- To train in market oriented management,
- To demonstrate and disseminate new and/or improved processing technology,
- To train in and transfer the necessary technology to improve the quality of products and/or to develop new products,

- 
- To disseminate quality standard and standards required by markets in foreign countries and support quality improvement of products, and
  - To carry out research and development for applied technology to produce the products welcomed in markets in terms of quantity, quality and price.

(To all concerned)

- To train people concerned in both the private and the public sectors and change their ways of thinking in economic activities towards more market oriented way which is suitable to free market mechanism (The chart showing the market-oriented business management system in view of Strategic Marketing and Logistic System is attached as Figure 2 for reference.),
  - To develop and disseminate effective grading standards for raw materials of processing,
  - To develop and disseminate quality standards of products which can improve for marketing of the products, and
  - To carry out the inspection to enforce quality control.
- (3) Investment
- To support the feasibility studies for new products and/or new businesses carried out by existing processor, investors and/or consultants,
  - To promote investment to this industry, and
  - To support and assist necessary procedure for investors.
- (4) Credit and finance
- To provide farm credit, and
  - To provide investment fund for expanding the capacity of activities and/or introducing new machinery and equipment to existing processors, and for establishing new enterprises to investors.
- (5) Marketing
- To promote marketing of the products by various measures such as exhibitions, forums and via mass-media,
  - To strengthen the market information system and provide market information by which processor can learn and consider the potential market needs both in local and foreign, and
  - To promote match making opportunities between processors and users such as market survey mission, forum and exhibition.

#### **4. Phases of implementation**

The Project implementation is divided in two phases according to target crops and products selected according to the market potential expected. Activities listed above should be carried out continuously throughout the Project period focusing on the target crops and products.

(1) Phase I

Mango and coconut derivatives are the targets because market potential of mango derivatives such as dried and puree has been recognized especially in foreign markets.

The sales recovery of coconut derivatives such as juice and milk has been expected strongly by the economic sector in the DIDP Area.

(2) Phase II

The target crops and products in Phase II should be selected among the products derived from fruits and vegetables with high market potentials expected by the market research carried out throughout the period of Phase I.

**5. Project Facilities**

The following facilities need to be introduced for proper implementation of the Project.

**Phase I**

(1) Research and development facilities

Area: 300 m<sup>2</sup>

- Pilot and experimental machinery and equipment for research and development of various processing ways for mango and coconut derivatives.

Major components are as follows:

Washer, peeler, cutter, dryer, juicer, pulper, mixer, cooker, refrigerator, freezer, sterilizer (retort), dryer, canning machine, bottling machine and VHT device.

(2) Inspection and analytical machinery and equipment for quality control

**Phase II**

(1) Research and development facilities (for expansion)

- Additional pilot and experimental machinery and equipment necessary for research and development of various processing ways for other target crop and products.

Expected major components are:

Other type of dryer, mixer and cooker, and grinder, pulverizer, bioreactor, and extruder.

(2) The inspection and analytical machinery and equipment for quality control

The machinery and equipment introduced additionally in the Phase should be selected to raise the level of quality control, such as a near-infrared analyzer.

**6. Project Cost**

The cost for facilities mentioned above are roughly estimated and shown below.

(1) Phase I

Item	Cost	Area
Machinery & Equipment	₱10 million	-
Land	-	-
Building	-	300 m <sup>2</sup>
Total	-	-

(2) Phase II

Item	Cost
Machinery & Equipment	₱10 million
Total	₱10 million

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## 6. Recommendation

- (1) The Project can not accomplish the objectives through introduction of technical and financial support only, and the success will depend mostly on how the producers and processors can improve their management mind to market oriented way and create the comparative advantage for their products for competition in a market. Therefore, they should study and make efforts by themselves earnestly and continuously to develop the quality of their activities.
- (2) In addition to both producer's and processor's own efforts above, it is conceivable that the appropriate development and management of the socio-economic conditions such as the location of the Area do not pose a disadvantage in their activities. Along with this, assurance of fair competition in a market is indispensable for creating proper incentives in their minds.
- (3) Trading activities by small amount of vegetable and fruits are being carried out mainly by women in the Area. As the trading activities are being modernized, the importance of such activity by local women may become small. Accordingly, special attention should be given to expanding the working opportunities for women and for shifting their quality suitable to new job opportunities in the Project as much as possible.
- (4) To ensure the satisfactory and effective implementation of the Project, it is desirable to introduce a timely technical assistance program.

Expected fields for technical assistance are as follows.

- a. Development and improvement of production (Processing engineer and Product designer).
- b. Research of market condition (Expert being familiar with the big potential markets such as Japan, the U.S. and E.C.).
- c. Quality control (Expert being familiar with international regulation such as quarantine condition for export, and quality control technology in a factory).
- d. Improvement of cultivation (according to kind of crop and subjects)

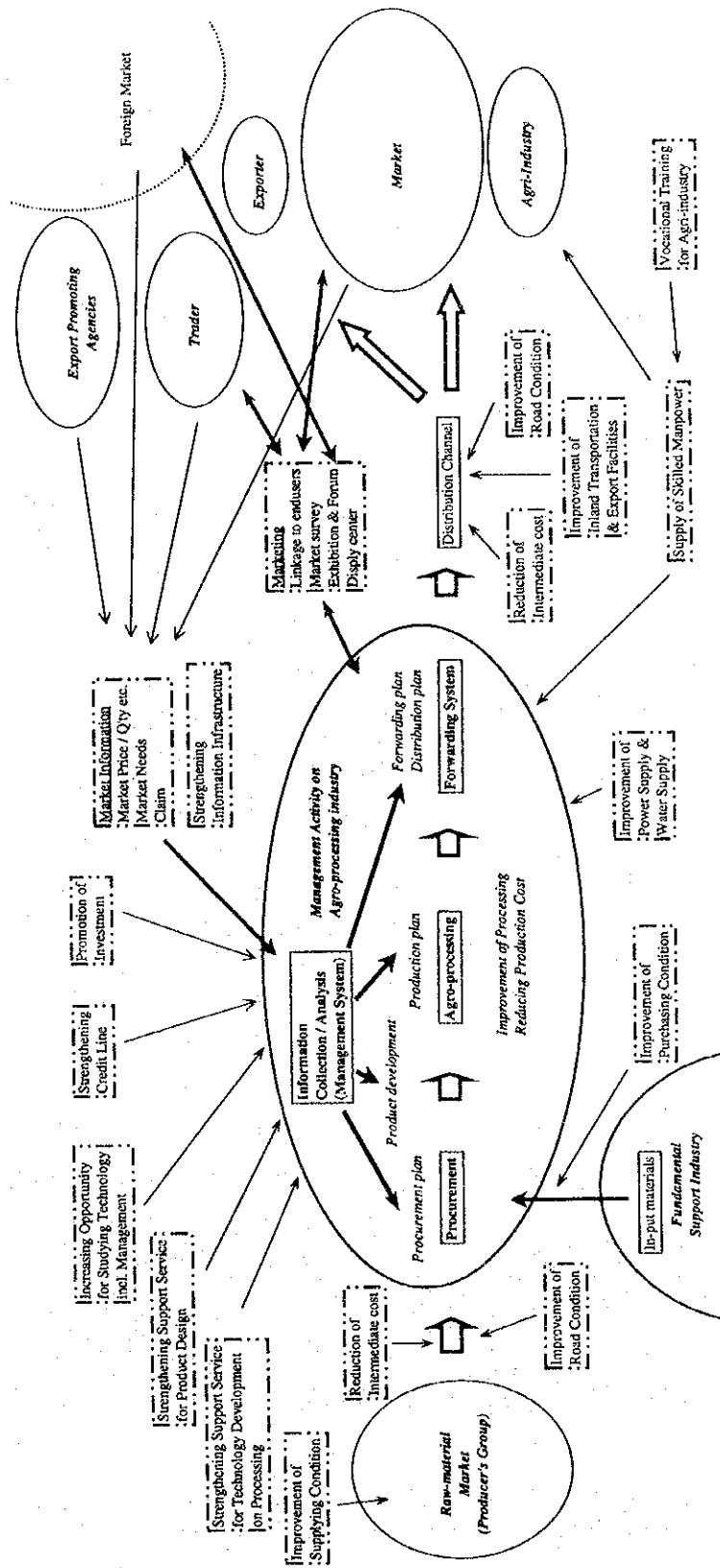
**Table 1 Detail Activities of the Project**

Category/Activity	Detailed Contents	Recipients of services			Implementing Agency
		Producers	Processors	Officials	
1. Linkage	To promote better communication linkages between producers and processors to ensure stable supply of raw materials with uniform quality to producers through organizing producer's group.	*	*		DA-BAS+Agri-busi. Office, NGO(e.g. PRLD), Producers, Processors, Cooperatives
	To promote appropriate contract farming system safeguarding interests of producers and processors.	*	*		DA+Agri-busi. Office, COA, NGO (e.g. PRLD), Cooperatives
	To promote and support producers to have the communication linkages with enterprises directly concerned to markets such as supermarkets and exporters.		*		DA-BAS+Agri-bis. Office,
2. Research & Development	To research and develop necessary technologies to produce advantageous raw materials to processors in terms of quantity, quality and economy, especially for new crops to be introduced.	*			DOST, Academe, DA SMARRDEC
	To research and develop applied technologies to produce products welcomed in markets in terms of quantity, quality and price.		*		DOST, Academe, DA SMARRDEC, DCCI
	To research and develop effective grading standard for raw materials for processors as well as quality standard of processed products to bring advantages for marketing of products.	*	*		DA+Agri-busi. Office, Academe, DOST, DTI, DCCI
3. Training and Technologies Transfer	To train people concerned and change their minds in economic activities to be more market oriented and suitable to free market mechanism.	*	*	*	DA+Agri-busi. Office, Academe, DTI, COD, LGUs, Cooperatives
	To train in farming management to meet the requirements of processors and markets.	*			DA+Agri-busi. Office, DTI, COD, LGUs, Cooperatives
	To train and foster the qualified group leaders.	*			CDA, LGUs

Table 1 (Continue)

Category/Activity	Detailed Contents	Recipients of services			Implementing Agency
		Producers	Processors	Officials	
3. Training and Technologies Transfer (the rest)	To train and disseminate the necessary cultivation technology to ensure the production in conformity with processor's requirements.	*			DA, LGUs, cooperatives
	To train market oriented business management.		*	*	CDA, LGUs, DTI, DA, Academe
	To train and transfer the necessary technology to improve the quality of products and/or to develop new products.		*		DTI, DA, CDA, LGUs
	To demonstrate and disseminate new and/or improved processing technology.		*		DA, DTI, LGUs, CDA
4. Investment	To disseminate the quality standards and the other standards required by markets in foreign countries.	*	*	*	DTI, DA+Market Intelligence
	To support the feasibility study for new products development and/or new enterprise establishment.		*		DA, LGUs
	To promote investment to the industry by effective measures such as explanatory sessions and campaign by mass-media.		*		DTI-BDI, LGUs,
	To facilitate advantage conditions for investors such as reduction and/or exemption of taxes, and provision of credit line and land with appropriate condition.		*		LGUs, DTI-BDI
5. Credit and Finance	To support and assist the necessary procedure for establishment of enterprises.		*		DTI-BDI, LGUs,
	To provide farming funds.	*			DA, LBP, RBs, PFI
6. Marketing	To provide investment funds for expanding the capacity of activities and/or introducing machinery and equipment to existing processors, and for establishment of new enterprises to investors		*		DA, LBP, RBs, PFI, GFI
	To support marketing promotion of products by various measures such as exhibition, forum and via mass-media.		*		DTI, DA, CITM, CC
	To strengthen market information system in terms of collection, accumulation and analysis and provide information by which processors can learn and consider the potential market needs both local and foreign.		*		DA-BAS
	To promote mach making opportunities between producers and buyers through dispatching market survey missions, exhibition and forum.		*		LGUs, DA-Agri.busi. Office

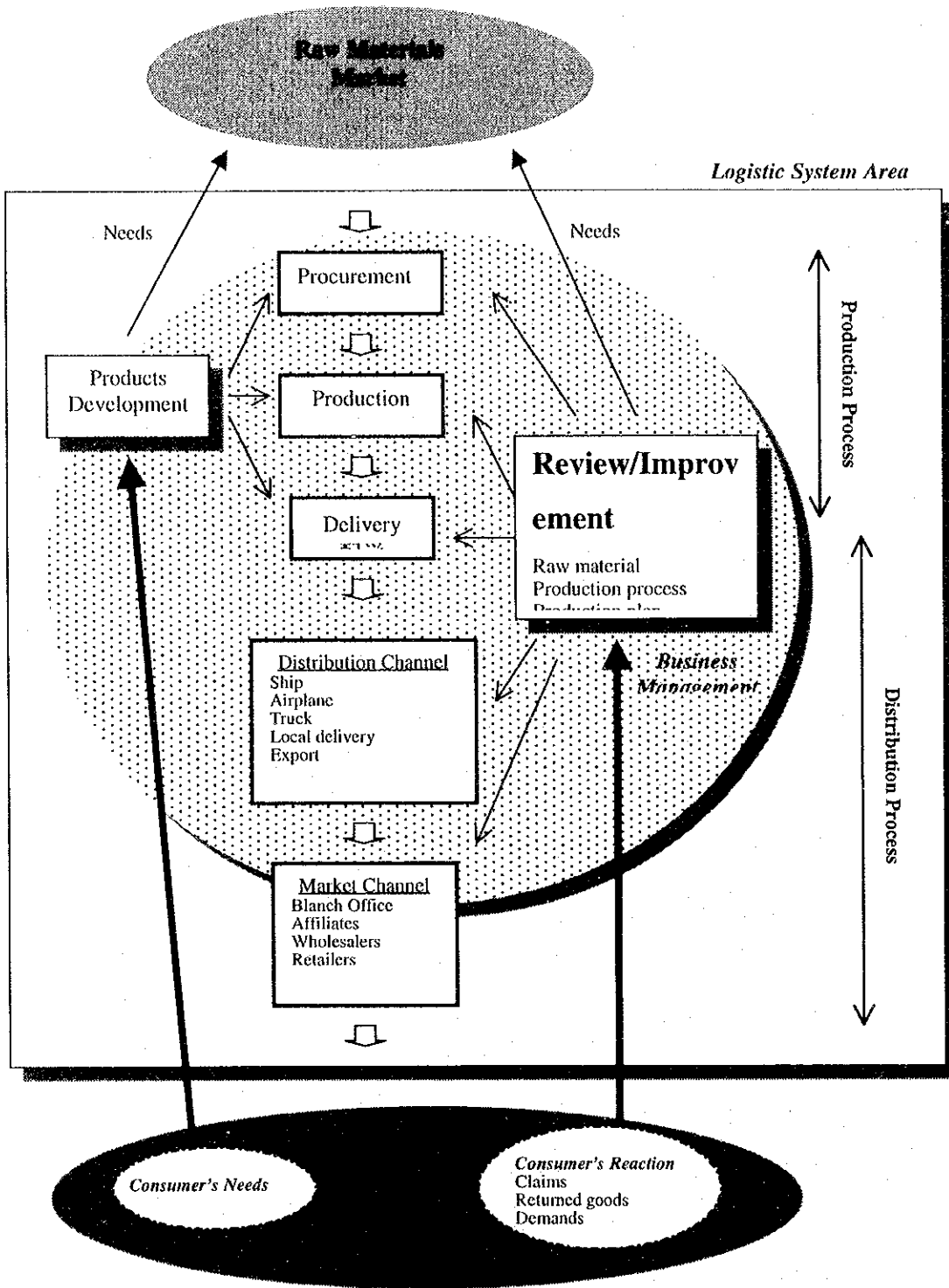




Background Requirement) Improvement of Law and Regulation concerned and Enforcement of Application Capability  
 (2) Elimination of Unfair Condition in Free Market System such as Cartel of Shippers and Rice Traders  
 (3) Reduction of Comparative Disadvantages due to Location of DIDP Area

Note: The inputs on gray background are covered by the Project among all inputs enclosed by a square line.

Figure 1 General Aspects of Requirements for Development of Agro-processing Industry in DIDP Area



**Figure 2 Market-oriented Business Management System in Agro-processing Industry (in View of Strategic Marketing and Logistic System)**

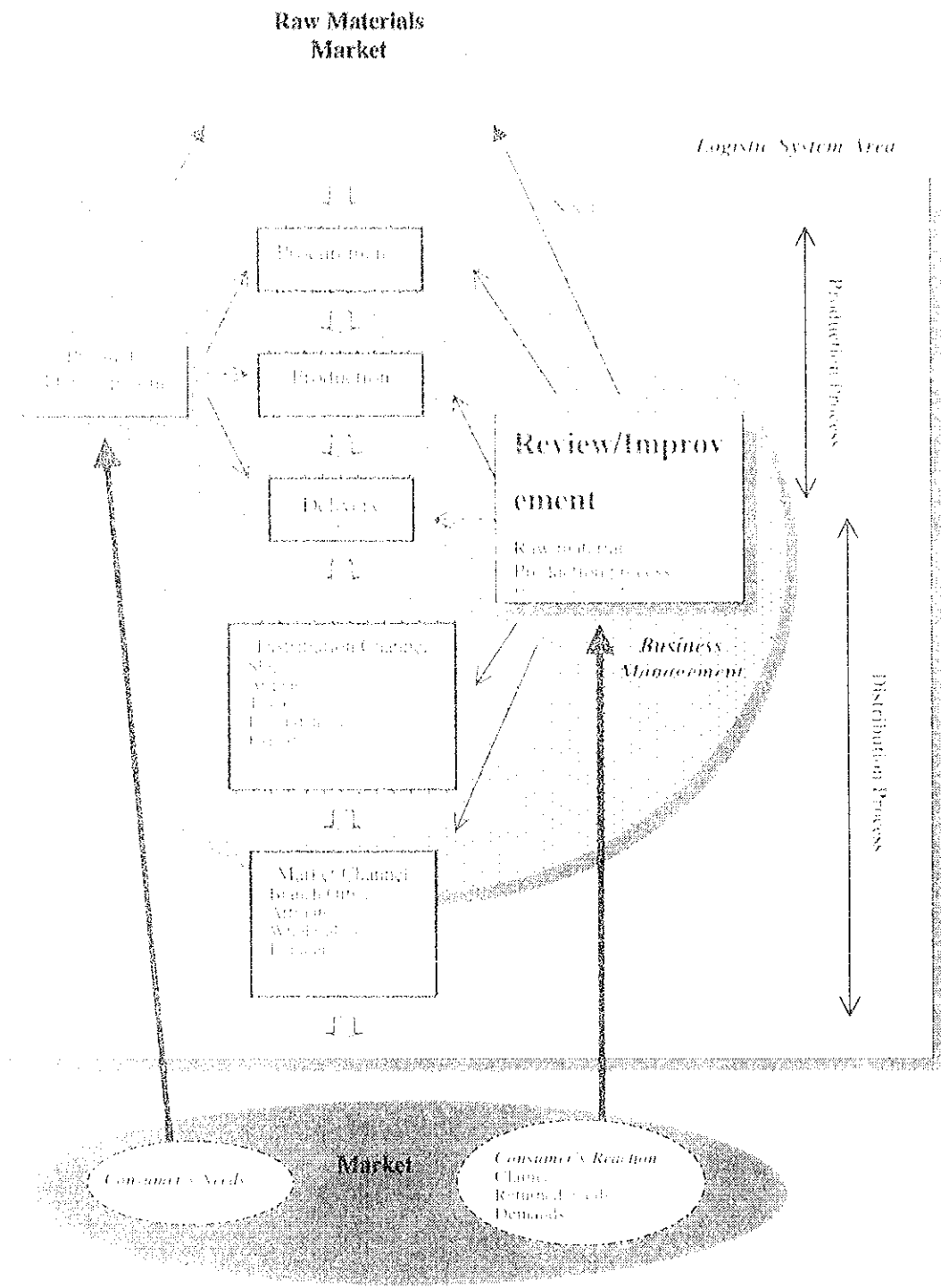


Figure 2 Market-oriented Business Management System in Agro-processing Industry (in View of Strategic Marketing and Logistic System)

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## **Fisherfolks Livelihood Enhancement Program (EC-14)**

### **1. Background**

The fisherfolks along the coast of Davao Gulf and the east coast of Davao Oriental depended largely on the small-scale fish products within municipal waters. However, most of them are very poor because the fishing gears are very limited and their fishing grounds have been depleted due to recent fishing pressures. Most of the subsistence fisherfolks have no way to live without fishing at present. Provision of the alternative livelihood projects and development of technical skills for the alternative works/jobs are urgent matter for the subsistence fisherfolks.

Also, most of the fishermen have no specific modernized and environmentally friendly fishing skills. Many fishing activities are not profitable and may lead to depletion of the fish resources in the fishing grounds. One of the constraints is lack of basic fishing facilities, but the others are lack of opportunities to learn the modernized fisheries skills.

The Project aims to enhance the livelihood of fisherfolks with two components. One is to develop alternative means of livelihood to diversify their income sources. The other is to provide more profitable and environmentally friendly fishing skills training, improved facilities.

### **2. Objectives**

- To provide the alternative jobs and opportunities of the technical skills for the subsistence fisherfolks
- To decrease the fishing pressures for the depleted fishing grounds
- To improve the fisheries technologies for the municipal fishermen

### **3. Project Description**

#### **3.1. Project Scope**

##### **(1) Project area**

The Project areas have been selected according to the magnitude of intensive fishing pressures for alternative livelihood enhancement component and high potential of more profitable fishery development for fisheries skills improvement component. The Project at each component area covers the following fisherfolks municipalities :

##### Alternative Livelihood Enhancement Component

- Santa Maria, Davao del Sur
- Don Marcelino, Davao del Sur
- Jose Abad Santos, Davao del Sur
- Maco, Compostela Valley
- Pantukan, Compostela Valley
- Lupon, Davao Oriental
- San Isidoro, Davao Oriental
- Gov. Generoso, Davao Oriental

##### Fisheries Skills Improvement Component

- Mati, Davao Oriental Province
- Mabini, Compostela Valley
- Panabo, Davao del Norte

- Malalag, Davao del Sur
- Babak, Island Garden City of Samal

(2) Ongoing project

The Integrated Livelihood Program for Fisherfolks is ongoing. The program is targeted at subsistence fisherfolks to improve their living conditions and to augment their income during their fishing off seasons. It includes capture fisheries, seaweed culture, and establishment of cooperative stores, mainly funded by DA and BFAR through various LGUs which could use their community development fund. It is reported that the program had generally been successful in many cases of the coastal communities in Davao Gulf area. In terms of the seaweed culture components, approximately 10 major seaweed farms were established by the program.

(3) Project components

Alternative Livelihood Development Component

The component will cover the coastal municipalities which have many sustenance level fisherfolks and have depleted fishing grounds within municipal waters. This component should be carried out through the continuous support from DA and RFTC. The component will cover the following:

- Identification of appropriate alternative sources of income or job for fisherfolks,
- Implementation of feasibility studies for candidate alternative livelihoods such as cut flowers, cottage industry and others,
- Implementation of technical training of the jobs for the subsistence fisherfolks, and
- Monitoring of the alternative works activities

Fisheries Skills Improvement Component

The component should be implemented by each active fisheries association/cooperative in cooperation with trainers of the RFTC in Panabo. This component also needs to be carried out through the continuous support from the DOST. Each training program should be selected based on the characteristics of the present fisheries resource situations. The component will include the following:

- Provision of fishing gears and establishment of basic fish processing plants,
- Implementation of fisheries training workshop for appropriate and more skilled fishing methods including mariculture, preservation of fish,
- Information dissemination to the relevant local fisheries officers and fisherfolks, and
- Assessment of the project.

**3.2. Implementing Schedule**

The project can be scheduled over ten years during Phase 1 - Phase 2, as follows.

	Year									
	1	2	3	4	5	6	7	8	9	10
Fisherfolks organizing										
Identification of alternative livelihoods or fish skills										
Establish fish processing plants										
Skills training and supports										
Assessment of the project										

### 3.3. Institutional Arrangement

The primary role in the implementation will be played by each active fisheries association/cooperative or each organized fisherfolk. Also, NGOs could be involved in fishing communities organizing and resource management awareness raising. The Project is also expected to be implemented with technical and financial assistance of international aid organization. Each relevant agency and organization should involve in as follows.

#### DA Region XI

- Provide directions on the overall project implementation, and
- Provide candidate alternative sources of income for sustenance fisherfolks.

#### Provincial Agriculturist Office Fisheries Section

- Coordinate between DA Region XI and coastal municipalities, and
- Monitoring the alternative works and fisheries skills training.

#### Coastal municipalities

- Identify and provide project sites for alternative livelihoods and fisheries skills training sites, and
- Provide the existing fisheries facilities and logistics support for fisheries skills training.

#### RFIC

- Provide suitable fishing technologies and implement fisheries skills training workshops to the beneficiaries.

#### Fisheries associates/cooperatives or other organized fisherfolks

- Implementation body of the project.

#### DOST

- Provision of appropriate fishing skills such as preservation of fish, mariculture practices and aquaculture practices.

#### NGOs

- Support small scale fishing communities organizing.

## 4. Project Assessment

### 4.1. Project Cost

The project costs for the implementation are roughly estimated as follows.

<u>Cost Items</u>	<u>Cost (P million)</u>	<u>Remarks</u>
- Fisheries associations/cooperatives organizing	5	
- Establishment of fish processing plants (drying, smoking etc.)	5	5 municipalities
- Installment of passive fishing gears (fish pot etc.)	8	25,000P x 40 units x 8 sites
- Training cost (Fisheries/other skills training)	13	13 sites
- Feasibility study for candidate alternative livelihoods	5	5 areas
- Project Assessment	7	7 sites
Total		43

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#### **4.2. Expected Benefits**

The small-scale fisherfolks could improve their present socioeconomic conditions through the following measures by the project implementation:

- Generating alternative sources of income for subsistence fisherfolks,
- Development of the technical skills for the alternative jobs,
- More profitable fisheries activities on a sustainable base, and
- Development of the technical skills for municipal fisheries.

#### **5. Recommended Actions**

To achieve the objectives of the project, the following priority actions should be taken:

- Strengthening of model fisheries associations/cooperatives,
- Expand the trainers and improve the quality of the trainers of the RFTC,
- Identify the suitable skills training from the following candidate skills:
  - Seaweed farming,
  - Fish processing (drying, salting, etc.), and
  - Cutflower,
- Implementation of feasibility studies for the candidate alternative livelihood component at each province