

ABSTRACT

A study was conducted during the months of June and July, 2005 to map out the interventions undertaken in Lake Mainit and the ecosystems and communities surrounding it. Primary and secondary data were gathered to determine the kind of interventions, the implementors, the source of funds and, where available, the amount provided for the projects. Impacts of the initiatives were assessed through interviews and questionnaires.

Major interventions fall under six general categories, namely; infrastructure, livelihood assistance, social and health services, agriculture, biodiversity conservation, and research. Policy interventions, community organizing and information education campaigns (IEC) emerged from the survey but they are an integral part of most of the major categories of interventions hence are not thoroughly dealt with in this report. A total of 12 NGOs with many collaborating POs work in the area. Funds for various projects are provided by the LGUs, government agencies like DENR and DA and international organizations and agencies like AusAID, CIDA, the Spanish government, the British government, USAID and UNDP. The impacts are variable. Some people believe the projects improved their lives while others think that they really have not benefited from the interventions. The indigenous communities are receiving attention from the NGOs working in the area. A number of their members believe that the root of their problems had been addressed while some of them think that their being an indigenous group is used to access money from funding agencies. Implications of these findings to the management of the lake are discussed in the report.

INTRODUCTION

The Philippines is one of the mega-diverse countries in the world in terms of its varied and wide array of flora and fauna, which are endemic in its archipelagic landscapes and seascapes. However, the Philippines also rank among the top biodiversity “hotspot” areas, mainly because of the alarming rates of habitat destruction and the consequent loss of biodiversity on national, regional and even on local scales. Government and non-government organizations have realized that such destruction could bring about economic disaster, the reason why they loudly express their commitments to conserve biodiversity that comprises the biological capital of the country. To this cause, various funding institutions here and abroad responded by allocating some funds to support interventions that address socio-economic and environmental issues and concerns. Labeled as developmental projects, the interventions often fall in any of the four components, namely; social development, infrastructure, economic and project management, all of which are hoped to answer interrelated concerns associated with resource management, increased and sustained productivity, generation of productive employment, and access to social and health services. In most cases however, intervention projects undertaken are narrowly anchored on the immediate needs of the area, specifically in addressing poverty-related problems. In the absence of a general management framework, the interventions become fragmented developments resulting to non-realization of objectives and dissipation of meager resources. The situation where resources are poured but without tangible results will be a recurring concern and will discourage funding institutions, consequently placing prospective initiatives in peril. Obviously, there is a need to adopt a holistic approach in undertaking interventions in a area. Lake Mainit that spans in the provinces of Agusan del Norte and Surigao del Norte can be a case in point.

Lake Mainit, which is encompassed by four municipalities, namely: municipalities of Mainit and Alegria in the province of Surigao del Norte, and Jabonga and Kitcharao, of Agusan del Norte province, is geographically located near the extreme northern tip of Mindanao Island. Its name is derived from Mainit River that traverses the

lake and has hot sulfur-rich water. It is the fourth largest lake in the Philippines, with a total inland water of 17,000 hectares. It is also the deepest lake in the Philippines, with a depth of 180 meters and an elevation of 37 meters above sea level. The lake is one of the most natural ecosystems in Caraga region and one of the largest lakes in the country that possesses unique and endemic biodiversity. It is a home to some rare freshwater fishes, including the endemic “*bolinao*.” It has the most pristine water surrounded by numerous cold and hot springs in its various tributaries. The terrestrial ecosystems feature some of the rare and endangered species of palm, orchids, and hardwood premium trees. Records show that the lake is also a transient habitat for many migratory bird species, many of which are already in endangered status. It supports an important fishery to local economy. In fact, in 1997, fish production was estimated at 369 metric tons. The economy of the municipalities around it is heavily dependent upon agricultural production concentrated around the arable perimeter of the lake. While the lake is owned by the state, the agricultural lands and the ricefields around it are privately owned. The other surrounding areas are ancestral lands that are dominantly occupied by the Mamanwa tribe (Kongkista).

Efforts have been directed towards tapping the rich resources of Lake Mainit. In 1989, the Lake Mainit Integrated Area Development Project (LMIADP) was launched. The project envisioned a holistic and concerted development of the Lake’s Influence Areas (LIA), including the municipalities of Mainit, Alegria, Jabonga and Kitcharao, through an integrated approach by providing primary production facilities, and improving and protecting the environment. Although not realized, LMIADP was an attempt to holistically address the issues affecting Lake Mainit.

In an attempt to rehabilitate, protect and conserve the lake within the concept of sustainable development, the cluster of municipalities around it have started to work together and eventually evolved into the Lake Mainit Development Alliance (LMDA). The goals of the alliance are: (1) to conserve the aquatic resources and to enhance their economic, ecological and recreational values, (2) to properly manage forestlands and improve the land within the watershed, and (3) to promote gender involvement of the

government, the private sector, local communities and other stakeholders in the sustainable management of the lake and other critical resources.

The LMDA's call for concerted efforts in the lake is also the concern of many government and non-government agencies in the country. The Philippine Council for Aquatic and Marine Resources Development (PCAMRD) listed the lake as a priority aquatic ecosystem in the country to ensure that it is given sufficient funds for its conservation. In response, many international and local organizations have infused some amounts of money to fund projects of individuals and groups that share the vision of harnessing, developing and tapping the rich natural and human potentials of the lake. The international funding institutions include, among others, the United Nations Development Programme (UNDP), Canadian International Development Agency (CIDA), Australian Agency for International Development (AusAID), United States Agency for International Development (USAID), Japanese and British governments, and many other agencies. The local governments of the provinces of Agusan del Norte and Surigao del Norte have also placed Lake Mainit in their development agenda. Research institutions have conducted studies on the lake's fisheries and other hydro-biological resources with the aim of providing inputs to a lake management plan. Limnological and biological assessments of the lake were also done, following the pioneering research of Lewis in 1973. Government and non-government agencies have introduced different forms of interventions to address specific concerns in the lake. In 2001, the Foundation for the Philippine Environment (FPE), through its Site-Focused Projects, funded the Lake Mainit Biodiversity Conservation Project of the Caraga Consortium for Environmental Protection and Sustainable Development (CCEPSD). Despite these efforts, there are many indications that the lake is continually threatened and disturbed by both anthropogenic and non-anthropogenic activities.

The fact that Lake Mainit is under the jurisdiction of two provinces and it is a convergence area for indigenous and non-indigenous peoples suggests that it is very necessary to come up with a lake-wide management framework upon which all lake-related activities must be anchored. At present, a general framework for the management

of Lake Mainit is wanting. The researches and intervention programs of various agencies are carried out separately and independently resulting in overlaps and maybe duplication of activities. Obviously, resources are wasted and may, as a whole, aggravate the problems in the lake. There is therefore an urgent need to develop a management and development framework for Lake Mainit upon which all programs shall be based. The same framework shall guide funding institutions in determining priority programs and areas for awarding grants. However, an appropriate and realistic framework shall be based on right inputs that shall include, among others, a database on the interventions already carried out as well as the long-term programs to supposedly address issues and concerns in the lake. This was the guiding theme of this research. A mapping of all interventions affecting the lake was conducted with the aim of establishing a database of intervention programs that can be used as inputs in the development of a management framework for Lake Mainit. Specifically, the following objectives were set:

1. To make a list of the past, present and planned interventions in Lake Mainit ecosystems and the surrounding indigenous and non-indigenous communities.
2. To determine the present status of the interventions.
3. To obtain a database of NGOs, POs, LGUs, national and international agencies directly or indirectly involved in activities in the landscapes of Lake Mainit.
4. To assess the impacts of interventions on the local communities around the lake.
5. To make relevant recommendations for a lake-wide management framework for Lake Mainit.

METHODS

Gathering of information was guided with the assumption that an intervention, in any form, is a basic component of any approach toward development by government and non-government institutions at all levels. Hence, all entities engaged in lake-related activities were considered a source of information in this study.

The preliminary work was to identify the different categories and forms of interventions. Based on these categories, government and non-government offices in the two provinces that can be potential sources of information were identified. The list included the following:

1. Regional Office of the Department of Environment and Natural Resources (DENR)
2. Provincial Environment and Natural Resources Office (PENRO)
3. Community Environment and Natural Resources Office (CENRO)
4. National Economic Development Authority (NEDA), Provincial Agriculture and Natural Resources Office (PANRO)
5. Provincial Planning and Development Office (PPDO)
6. Provincial Social Welfare and Development Office (PSWDO)
7. Municipal Agriculture Office (MAO)
8. Municipal Planning and Development Office (MPDO)
9. Office of Lake Mainit Development Alliance
10. Offices of NGOs and academic institutions.

A trip was made to the offices mentioned above. After entry protocol with the heads of the offices, designated persons-in-charge were requested to fill up information data sheet ([Appendix 1](#)). Copies of relevant records from the office were photocopied for verification and documentation purposes. A visit to the LGUs in the municipalities around the lake was also done to explain the objectives of the project and to obtain permission to conduct study in their areas of jurisdiction. This protocol ensured the support and cooperation of the various sectors in the lake, especially in giving

information and making available data from their respective units. In all cases, interviews were conducted to validate items vaguely or not mentioned in the reports gathered. Where possible, individual NGOs and POs were asked to provide details of their projects. Academic institutions actively engaged in research activities were contacted and visited as well. Scanning the literature and surfing the Internet were done simultaneous to field data gathering.

The surrounding communities are also a potential source of information. Gathering of primary data was done employing the following methods: use of survey questionnaire, interviews of key informants and focused group discussions. A questionnaire was developed to address the objectives of the project ([Appendix 2](#)). This was administered to pre-selected persons from the different barangays and municipalities around the lake. Individuals from the barangay, municipal and provincial LGUs, NGOs and POs operating in the area, government agencies like DENR and BFAR, and other stakeholders like indigenous peoples adjudged as key informants were interviewed. A group discussion was also initiated in some selected areas to solicit information on the activities in the lake and the impacts of introduced interventions introduced.

The listing obtained in this survey is definitely not complete. Many LGUs, especially at sitio and barangay levels, and other stakeholders (e.g. youth) may have undertaken interventions but these are not necessarily accounted for in the records of concerned agencies. Tree planting, for instance, done by schools and some organizations may not be in the records of DENR. Hence, it is very possible that the actual interventions are beyond what had been identified in the present survey.

Collation and Analysis of Data

The reports and documents gathered from different offices were examined to extract relevant data and information that will address the objectives of the project. They varied in form and contents but all indicated presence of initiatives at different levels. The office of DENR, for instance, has a list of areas under CBFM or community-based forest management, a “resource-access” management strategy. This program involves

empowering a community to manage and to benefit from a given forested area. An integral part of the CBFM Agreement is to set aside a portion of the total CBFM area as a Protected Area while the remaining portion is used for production. In a way, the Protected Area component of the CBFMA is already a form of intervention that will address the continuing destruction of terrestrial habitats.

Some reports indicated the interventions with specific description of activities, source of funds and the amount of funds allocated for a project while others have incomplete details or did not give any figure at all. Thus, the report, based on the available data, contains some information gaps, despite the efforts to come up with a complete picture of the interventions done in Lake Mainit areas.

RESULTS AND DISCUSSIONS

Interventions Undertaken in Lake Mainit

Interventions within the coastal municipalities of Jabonga, Kitcharao, Mainit and Alegria and some available data from the watershed municipalities of Sison, Tubay, Santiago and Tubod were extracted from the data gathered from different sources. Some reports indicated only 'Lake Mainit areas' as the location of the project hence, were listed as interventions under the four municipalities.

The data collected show six broad categories of interventions undertaken in Lake Mainit areas. The list includes **infrastructure** developments, **livelihood** programs, **agricultural** projects, **social** and **health** services, **biodiversity conservation** and **researches**. It does not mean however that interventions can only be in these forms. In evaluating the data, **policy** interventions, **information education campaigns (IEC)** and **community organizing** have become part and parcel of many projects. Theoretically, the policy environment is critical in determining legal acceptability of interventions. Hence, activities such as prohibition on the use of *baling* and other illegal means of fishing, policy advocacy, apprehensions and legal prosecution of violators of laws, imposing

penalties on illegal activities, and deputization of some fisherfolk as fish wardens that are mentioned in the data collected contribute to a legal environment supportive of efforts to sustain the lake resources. Similarly, the existence of many people's organizations and some cooperatives in the area indicates efforts of agencies and NGOs to organize communities that would later become partners in the implementation of some specific projects. IEC and community organizing are therefore viewed as forms of intervention that prelude many of the interventions identified in this study. But because policy interventions, IEC and community organizing are not clearly spelled out in the data collected, they are not considered "broad categories" mentioned in this report but are just subsumed by other projects. Besides, reviewing the policies and characterizing the legal environment in relation to conservation and development is considered a big project that could no longer be covered by the resources allocated for this study. The rest of this report is therefore centered on the six broad categories identified in this study.

Activities in infrastructure developments range from flood control systems to road construction and solid waste management activities, as well as community irrigation systems. Specific names and description of these interventions are listed in [Table 1](#). The list shows that indigenous peoples (IPs) and non-IPs are both beneficiaries of the projects. Very noticeable is the construction of a school building with a health center specifically for IPs.

Livelihood activities to augment the economic needs of the people are widespread around the lake. They include projects like dried fish making, orchard or fruit trees plantation, poultry and livestock raising and even micro-enterprise to some cooperatives. As shown in [Table 2](#), the livelihood activities are both land-based and water-based. This is practical because majority of the communities rely on agricultural production, both farming and fishing in the perimeters of the lake. These agricultural interventions include acquisition of bottom set gill nets, pond and cage cultures of tilapia, fish solar dryer, agro-forestry, dispersal of tilapia and carp fingerlings, training and workshops on sustainable agriculture and fishery production, inland fisheries, plant and animal health care programs and other sustainable agricultural practices like organic farming ([Table 3](#)).

Efficient delivery of health services is also vital to the welfare of the constituents. With this concern, various groups have initiated and carried out interventions that address the health needs of the people, young and old, women and men. These activities are: pre- and ante-natal care, dental care, medical check-ups and outreach programs, sanitation program, access to district hospital and health centers, reproductive health, vaccination and immunization, IEC activities, supplemental feeding, vitamins supplement, disease treatment and prevention (e.g. malaria, filariasis, TB, leprosy, and others), water chlorination, family planning, drug symposium, nutrition and health monitoring, and minor surgical and laboratory services (Table 4).

While addressing the health needs of the people is the main thrust of some organizations operating around the lake, a number of groups focused on projects related to conservation of biodiversity and protection of its habitat. The interventions include agro-forestry, fish sanctuary, fish seeding, lakegrass protection, riverbank protection, watershed rehabilitation, reforestation and tree planting, and CBFMA as management strategy of the DENR (Table 5). The Bureau of Fisheries and Aquatic Resources (BFAR) and LGUs declared a grassy portion of the waters in Kitcharao as a protected area. AusAID-PACAP has provided some money for the protection of the riverbanks in the same municipality. These interventions are further supplemented by various researches conducted by some participating academic institutions with the objective of providing baseline data and information useful for the continuous management of the lake resources. These researches range from assessments of the faunal diversity, feasibility studies of aquaculture species and limnological surveys. Details of these researches are presented in Table 6. The delivery of other social services that include infrastructures, literacy development, water system improvement and others are incorporated in the Comprehensive and Integrated Delivery of Social Services (CIDSS) Projects. Table 7 enumerates a detail of projects initiated by CIDSS. These projects are present in four municipalities of Jabonga, Kitcharao, Alegria and Mainit. In the presentation of initiatives at the municipal level, CIDSS projects are incorporated under social services and health interventions.

Table 1. Infrastructure interventions in Lake Mainit areas.

General Categories of Infrastructure Interventions	Description of Interventions
1. Road Development System	Circumferential road connection of Mainit and Jabonga Development of circumferential road system Construction of farm-to-market roads with bridges Rehabilitation of farm-to-market roads
2. Flood Control Measures	Flood control survey in Kalinawan river Flood damage assessment Inundation mapping Construction of gabions and bamboo plantation in river banks Lake wall repair and concreting
3. Water System Development	Water system improvement to Level II Construction of water reservoir Increase of potable water supply to Level II Construction of rural water system
4. Electrification Development	Electrification using solar power energy
5. Building Development	Construction and rehabilitation of day care centers Construction of new municipal building Improvement of the municipal gymnasium Completion of public market building Municipal warehouse establishment IPs school building with health center Construction of 2-room school building w/ water facilities
6. Tourism Development	Farm level grain center establishment Improvement of Great Lake resort Establishment of eco-tourism center managed by IPs Eco-tourism destination development (view deck, CR & footbridge)
7. Solid Waste Management	Open dump site construction Feasibility study on sanitary landfill site
8. Drainage System	Construction of drainage canal Establishment of concrete culverts and canals in roads
9. Community Irrigation System	Communal irrigation system project Rehab program on communal irrigation system project

Table 2. Livelihood interventions in Lake Mainit areas.

General Categories of Livelihood Interventions	Description of Interventions
1. Food Processing	Coco virgin oil production Dried fish making Fish and vegetable processing Alamang Processing Alternative Learning
2. Material Processing	Rattan craft, weaving and furniture making
3. Livestock Development	Poultry raising Swine production and fattening Native chicken production
4. Agro-forestry Development	Orchard/fruit tree plantation Alley & diversified cropping with livestock Ampalaya production Abaca production Establishment of central and satellite nurseries Green corn and palay seeds production
5. Fishery Development	Provision of gill nets Fish cage development Establishment of floating fish cages
6. Seminars and Trainings	Capability building seminars on swine, native chicken, goat, vegetable production, dried fish production, farming techniques and use of organic fertilizers
7. Microenterprise	Skills training on soap making Market on tilapia, carp, fruits and vegetables Swine and poultry marketing Self employment assistance project

Table 3. Agricultural interventions in Lake Mainit areas.

General Categories of Agricultural Interventions	Description of Interventions
1. Fishery Development	Provision of 200-unit bottom set gill nets Tilapia fingerling assistance to pond & cage culture Fish catch survey monitoring Stocking of 133,000 pcs & 100,000 pcs of tilapia and carp
2. Mechanical Support	Construction of fish solar driers Construction of small water and impounding project Free services to mechanical rice thresher & corn sheller Demo-testing of Kuliglig hand tractor & acquisition of farm tractors Farm level grain center
3. Agroforestry Development	Rotational single cropping of rice and corn Acquisition of high-value cash crops, multi-cropping and hybrid rice Distribution of seeds and plant materials
4. Microenterprise Development	Facilitate farmers to loan access granted by QUEDANCOR (lending institution for rice production)
5. Livestock Support	Livestock disease prevention & control Dispersal of carabao, cattle, swine & goats Artificial insemination, deworming, vaccination & treatment
6. Trainings and Seminars and Social Support	FAO rehabilitation program & subsidy to calamity affected areas Regular monthly meetings & a year-round-end forum Strengthening rural-based organization and support & participation for agricultural sector development Post-harvest training Aquaculture & post-harvest technical assistance Provision of mechanical facilities for turtle & floating tillers
7. Resource Regulation and Management	A proposal on a one-stop-shop complete facility Monitoring & evaluation of Lake resources Monitoring & assessment of 4 Fish Sanctuaries Apprehensions made to fishery violators Deputization of Fish Warden Bantay Danao law enforcement

Table 4. Social services and health interventions in Lake Mainit areas.

General Categories of Interventions	Description of Interventions
1. Medical Health Care	Medical screening of possible complications on pregnancy, anemic and high blood moms Regular dental check ups and roving dental clinics & dentists Monthly prenatal check up in every Brgy Expanded program on immunization & vaccination Oral examination, tooth extraction and preventive measures (fluoride application for school children) Case finding and treatment on TB, leprosy, malaria, schistosomiasis & filariasis
2. Support Facilities	District hospitals and health centers
3. Sanitation Program	Chlorination of water from the source Sanitary inspectors Water sampling for bacterial counts monitoring in potable water sources
4. Reproductive Health	Planning of reproductive age Dissemination of birth control materials (pills & condoms) Methods of birth controls & counseling Pre-marriage counseling
5. Medical IEC	Malaria control & information drive Seminars & symposium on drugs and the national policy Phil measles campaign
6. Nutritional Support	Operation timbang & feeding of moderately & severely malnourished children Iron and Vitamin A supplement for children
7. Other Health Programs and Services	Ante natal care, normal delivery, Post partum care, immunization, Family planning, growth monitoring, Nutrition, communicable diseases control: ARI, CDD, TB, and STD,

Non-communicable diseases control,
 Minor surgical cases, laboratory services,
 Referral of emergency cases to core referral
 hospitals,
 Health education training: TBA/BHW,
 Public health management: planning, health
 information, health boards
 Health counseling, dental services and
 environmental sanitary services

Table 5. Biodiversity conservation initiatives in Lake Mainit areas.

General Categories of Interventions	Description of Interventions
1. Upland and Watershed Management	Establishment of nursery for fruit tree propagation Promote production of various quality fruits Promote soil conservation measures Production of forest tree seedlings (Falcata) Rehabilitation of the upland area through comprehensive site development, maintenance & protection Reforestation and tree plantation projects Community-based forest management Microwatershed Agroforestry Reafforestation program
2. Integrated Fish Management	Restocking of tilapia and carp fingerlings Prohibition on the use of <i>baling</i> , <i>sarap</i> (fine mesh nets), electro fishing,
3. Lake-based Management	Lakegrass Protected Area Lakeshore Fish Sanctuary
4. Ancestral Land Claims	Issuance of tenurial instruments Development of the open areas, maintenance & protection Certificate of Stewardship to individual occupants of the forestland

Table 6. Research interventions in Lake Mainit areas.

General Categories of Interventions	Description of Interventions
1. Baseline Data Assessment	Lake Mainit physico-chemical and limnological assessment Limnological survey of Lake Mainit, Philippines
2. Experimental Investigations	Sex reversal tilapia culture Rearing tanks for carp breeding Growth & survival of tilapia in cages placed in irrigation canal of the NIA
3. Government & Philippine Agenda 21	Adopt the concept of sustainable development and strengthen capability building
4. Biological Resources Assessments	The Crustaceans of Lake Mainit Mindanao, Philippines The Avifauna of Lake Mainit, Mindanao, and Its Environs The Molluscs of Lake Mainit Mindanao, Philippines Amphibians of Lake Mainit and Vicinity of Surigao Del Norte, Philippines Bats and Their Associated Ectoparasites in Lake Mainit Watershed, Surigao Del Norte, Philippines Ichthyofauna of Lake Mainit, Mindanao
5. Socio-economic and Political Surveys	Formulation of a gender-based profile and women's situationer Caraga growth centers – An Info Book LGU Performance Program (LPP) Multi-indicator Cluster Survey Assessment of the Effects of Oplan Kontra Sistom: Organisadong Katilingban, Siguradoha Project towards reduction of Schistosomiasis prevalence in Caraga An Interim Evaluation of ADP-Surigao del Norte

Table 7. Projects under Comprehensive Integrated Delivery of Social Services (CIDSS).

1.	Water Pipelines Expansion and rehab
2.	DCC Construction, improvement and fencing
3.	DCC Indoor / Outdoor Facilities
4.	Vegetable Production
5.	Swine Fattening
6.	Garment Making Project
7.	Solar Dryer Project
8.	Water Reservoir
9.	Construction of Marketing Center
10.	Construction of school buildings
11.	Road Rehabilitation/Improvement/Upgrading
12.	Community volunteers RD Training
13.	Pre & Post Harvest Facilities
14.	Foot Bridge Construction
15.	Senior citizens center construction
16.	Drainage System Project
17.	Supplemental feeding
18.	Jetmatic Pump Installation
19.	Stone Masonry Line Canal Construction
20.	Street Lights Project
21.	Socialized Credit Scheme
22.	Relief Augmentation Assistance
23.	Buy & Sell Agricultural Farm Inputs Project
24.	Tilapia Fish Cage Culture
25.	Meat and Moliedo Processing
26.	Disaster Capability Building Training
27.	Mini Market Building Construction
28.	Emergency Shelter Assistance
29.	SEA-K Capital Seed Fund

The Municipalities and the Existing Interventions

Four municipalities of the provinces of Surigao del Norte and Agusan del Norte are located in the coastal areas of the lake, hence the livelihood activities of the people directly affect the lake and conversely, the lake affects the lives of these people. It is therefore not surprising to see projects focused in these coastal municipalities.

A. Municipality of Jabonga

In Jabonga, Agusan del Norte, the major categories of interventions enumerated earlier address the issues and concerns of both the Mamanwa tribe and the non-indigenous peoples in this area. The specific activities in this municipality are described in detail in [Table 8](#). The infrastructure interventions include the construction of water reservoir for ISF project, construction and rehabilitation of farm-to-market roads, development of circumferential road system, generation of electricity using solar power, improvement of the Baleguian water system, construction of day care centers, improvement of Great Lake resort, construction of municipal building and gymnasium, establishment of eco-tourism center, establishment of farm level grain center and construction of a municipal open dump site.

Livelihood projects are initiated in Jabonga. These include dried fish making, and other livelihood projects for LMC, orchard or fruit tree plantation, aggregate program for agriculture, fish cage development, skills training on soap making, alamang processing, food sufficiency improvement, provision of gears to fishers, particularly the dissemination of 200-unit bottom set gill nets, fingerling assistance for pond and cage cultures of tilapia and the establishment of a fish solar drier to provide drying facility for the fisherfolk.

Many of the constituents in the area also rely on agriculture, that is, on farming and fishing. Agricultural interventions are therefore aimed at increasing food production and sustaining the agricultural areas by means of sustainable farming systems. As presented in [Table 8](#), agricultural interventions range from acquisition of machines to loan access and micro-enterprise. Regular monthly meetings and seminars are also

conducted to strengthen rural-based organizations and the capabilities of the farmers and fishers.

Delivery of health services is also ensured to have constituents that are healthy and at pace in all their undertakings. Midwives, trained health workers, medical doctors and other health practitioners, regularly conduct monthly check-ups in every barangay of various municipalities. Water sampling is also done to monitor the level of coliform bacteria in potable water sources. This delivery of health and social services is intensified through Comprehensive and Integrated Delivery of Social Services (CIDSS) Projects. The components of these projects include, among others, potable water system construction, water pipelines expansion, solar dryer project, multi-purpose drying pavement, marketing center construction, road rehabilitation and improvement, mini-market building construction, and construction of day care centers. On the other hand, relief augmentation assistance, especially during calamities is a sole social service intervention.

It is heartwarming to note that the people have gained higher level of awareness on the importance of natural resources to socio-economic development and ecological balance. Cognizant of this fact, they have adopted measures towards resource conservation and management. These measures include the establishment of nursery to ensure sufficient source of seedlings for reforestation programs, tilapia and carp seeding to replenish the depleted stocks, and rehabilitation of watershed in the upland areas. In addition to these, strict prohibition on the use of *baling* and other illegal means of fishing is articulated through regulatory measures to ease the pressures against sustainable fish stocks in the Lake.

Added to all these interventions are the establishment of baseline information on the current status of the lake and some of its resources. These are made possible through assessment studies conducted by various institutions, among them are the two autonomous campuses of the Mindanao State University System namely: MSU at Naawan and MSU-IIT in Iligan City.

Table 8. Interventions in the barangays and municipality of Jabonga

Description of Interventions	Barangay Site of Interventions
A. Infrastructure Interventions	
1. Circumferential Road System	Jabonga to Mainit
2. Circumferential Road System	San Pablo-Bunga
3. Farm to Market Roads	Baliguian-Punta Gracia
4. Farm to Market Roads	Magsaysay-Pigapi
5. Farm to Market Roads	Colorado-Takayan
6. Farm to Market Roads	Bangonay-Apa-apa
7. Farm to Market Roads	Cuyago-Tiklan
8. Farm to Market Roads	Libas-San Roque
9. Farm to Market Roads	Baliguin-Maraiging
10. Flood Control Survey	Kalinawan river (outlet)
11. Kalinawan river survey	
12. Flood damage assessment	
13. Inundation mapping	
14. Construction of water reservoir	Tagbuaya & Bangonay
15. Improvement of Baleguian Water System	Baleguian
16. Solar Power Electricity	Tagbuaya
17. 2 School buildings and 2 Day Care Centers	San Pablo
18. Improvement of Great Lake resort	Poblacion
19. Construction of new Municipal Bldg	Poblacion
20. Improvement of the Municipal Gym	Poblacion
21. Establishment of eco-tourism	Poblacion
22. Open Dump Site	
23. Farm Level Grain Center	
center for farm equipments and crops for selling and processing	
B. Livelihood interventions	
1. Coco virgin oil production	
2. Dried fish making	
3. GMA Livelihood Project for LMC	
Orchard/Fruit tree plantation and poultry raising	
4. Livelihood assisted project	
Aggregate program for agriculture (native chicken, green corn and	

- ice bending)
- Fish cage development Poblacion
- 5. Self Employment Assistance Project
- 6. Skills training on soap making
- 7. Alamang Processing Alternative Learning System
- 8. Food sufficiency improvement

C. Agricultural interventions

1. Bottom Set Gill Net: 200 units
Provide gears to fishers
2. Pond culture of tilapia
Fingerling assistance
3. Fish Solar Drier
Provide drying facility for fisherfolk
4. Small Water and Impounding Project Cuyago, A. Beltran and Magsaysay
5. Rotational Single Cropping of Rice and Corn Municipal wide
6. Probation of Fishing Gears Municipal wide
7. Free Services of Farming Facility Baleguian & Magsaysay
Mechanical rice thresher
8. Facilitate farmers to loan access granted by QUEDANCOR Municipal wide
(lending institution for rice production)
9. Fish Catch Survey Monitoring Municipal wide
Catch data survey to track down the fishery resources of the lake
10. Demo-Testing of Kuliglig Hand Tractor (pre/post harvest facility)
11. FAO rehabilitation program; subsidized program
assistance affected by calamity
12. Livestock Disease Prevention & Control
13. Farm Level Grain Center
Boosts economic enterprise
development in the agricultural sector
14. Regular monthly meetings & a year round end forum
15. Corn Sheller Colorado

14. DCC improvement	Cuyago
15. Solar dryer project	Cuyago
16. DCC facilities & fencing	Libas
17. Water system rehabilitation	Libas
18. Water system expansion	Libas
19. Multi-purpose drying pavement	Libas
20. Water reservoir	Magsaysay
21. Rehab of water pipelines	Magsaysay
22. Construction of marketing center	San Vicente
23. 2 school buildings and 2 DCCs	San Pablo
24. Road rehabilitation/improvement	Bangonay
25. Road rehabilitation/improvement	Maraiging
26. Road improvement/upgrading	Libas

Other Social Services and Supports

1. Disaster capability building training	Magdagooc
2. DCC indoor / outdoor facilities	Magdagooc
3. Supplemental feeding	Magdagooc
4. DCC indoor / outdoor facilities	Magdagooc
5. Mini market building construction	Magdagooc
6. Relief augmentation assistance	MDCC
7. SEA-K capital seed fund	Poblacion
8. Supplemental feeding	Sto. Niño
9. SEA individual	Sto. Niño
10. Supplemental feeding	Sto. Niño
11. DCC indoor / outdoor facilities	Sto. Niño
12. Cash for work	Sto. Niño
13. Drainage system project	Sto. Niño
14. SEA-K training	Sto. Niño
15. SEA-K capital seed fund	Sto. Niño
16. DCC construction	Colorado
17. Relief augmentation assistance	
18. SEA-K capital seed fund	Poblacion
19. Emergency shelter assistance	
20. Relief augmentation assistance	A. Beltran

E. Biodiversity conservation interventions

1. Agroforestry
Establishment of nursery for fruit tree propagation
2. Fish sanctuary
Patangag and Poblacion
3. Fingerling dispersal: tilapia & carp
4. Replenishment of tilapia & carp stocks
Tilapia: 102,000 fingerlings
Carp: 80,000 fingerlings
5. Integrated Fish Management
Prohibition on the use of *baling*,
sarap (fine mesh nets), electro fishing, and
over collection of shrimp and shells
6. Assorted Fruit Trees Planting
Promote production of various quality
fruits and soil conservation
7. Materials at the Nursery
8. Support on Lake Mainit watershed area
rehabilitation
9. Production & distribution of forest (Falcata) tree seedlings
10. Lake Mainit watershed
subproject
Rehabilitation of the upland area around
Lake Mainit thru comprehensive
site development, maintenance & protection
San Pablo, Bunga,
Magdagooc, San Jose, and
San Vicente
11. Maraiging reforestation subproject
Maraiging
12. Community-based Forestland Management
Agreement (CBFMA)
Development of the open areas, issuance of
tenurial instrument, agroforestry,
tree seedlings and plantation
Protection & development of the open areas,
its maintenance & protection
San Pablo, Bunga,
Magdagooc,
San Jose, San Vicente and
Baleguin
Protection & development of the open areas
through tree plantation & Agroforestry
13. Certificate of Stewardship to Individual
Occupants of the Forestland
Bunga & San Pablo
Protection & development of the open areas
through tree plantation & Agroforestry

F. Research Interventions

1. Lake Mainit Limnological Assessment Project
2. LGU Performance Program (LPP) Multi-indicator Cluster Survey
3. Assessment of the Effects of *Oplan Kontra Sistom: Organisadong Katilingban, Siguradoha* Project towards reduction of Schistosomiasis prevalence in Caraga

B. Municipality of Kitcharao

The coastal municipality of Kitcharao is part of the province of Agusan del Norte. This municipality has also become a haven of many interventions that include, among others, infrastructure, livelihood, agricultural, social and health services, and biodiversity conservation. [Table 9](#) presents a more detailed description of these interventions.

In the category of infrastructure interventions, emphasis is on the improvement of water system to Level II, from its current level. Barangay Jaliobong is one of the early recipients of this project. Other projects undertaken in this category include the drainage construction in Barangay Mahayahay, construction of farm-to-market roads in various barangays, establishment of a communal irrigation system, construction of gabions and bamboo plantation in the riverbank for stabilization and protection against possible outflow of floodwaters. Also undertaken are the establishments of solar driers both for fish and farm products, and the use of turtle floating tillers.

In the livelihood category, there are quite a number of interventions that can be found in this municipality. Among them are the alley and diversified cropping with livestock, establishment of floating fish cages for tilapia culture, processing of food products, hog fattening, rattan craft production, and marketing of tilapia, carp, fruits and vegetables. The LGU and some NGOs have taken active roles especially in tilapia culture and in establishing fish cages stocked with 21,000 fingerlings. These fish cages are managed by POs making them a collaborative effort that benefit a wide range of citizenry.

An important component of a project that will ensure success is monitoring. In this municipality, monitoring is assiduously done after appropriate assessments of resources. This is specifically done on the three fish sanctuaries established in the area as part of the sanctuary enhancement project of the municipality. Parallel to this objective, some fisherfolk are deputized as fish wardens to implement regulations and apprehend violators. Parallel to this effort is the strengthening of inland-fisheries through increased stocking of fingerlings. In other areas, *palay* seed subsidies are provided to farmers. In addition, an idea for a one-stop-shop complete facility for high value commercial crops is in the offing. To ensure maximum benefit from these projects, the LGU provided post-harvest training and technical assistance for aquaculture, animal health care, particularly on artificial insemination, deworming, vaccination and treatment.

The serious support of the LGU to social and health services initiatives is shown by the presence of a district hospital and health centers. These establishments facilitate, among others, prenatal cares, post partum, control of some diseases, vaccinations, regular medical check ups and supplementary feeding. Seminars and symposia on drug awareness and its underlying national policy are conducted as part of a drive for a drug-free community. These efforts are further enhanced by projects under the Comprehensive and Integrated Delivery of Social Services (CIDSS) program in the municipality.

As an initiative towards biodiversity conservation, the municipality has a community-based resource management program that consists of micro-watershed, agro-forestry, tree plantation, protection on lake-grass, and establishment of lakeshore fish sanctuary.

Table 9. Interventions in the municipality of Kitcharao.

Description of Interventions	Site of Interventions
A. Infrastructure interventions	
1. Water System Improvement to Level II	Poblacion, Upper & Lower Mahayahay
2. Jaliobong Potable Water Supply Level II	Jaliobong
3. Construction of Mahayahay Drainage Canal	Mahayahay
4. Farm to Market Road	Jaliobong
5. Communal Irrigation System	Anibongan
6. Lake Mainit Riverbank Stabilization and Protection	
7. Construction of gabions and bamboo plantation	
B. Livelihood interventions	
1. Alley & Diversified Cropping with Livestock	Hinimbangan, Mahayahay, Sangay, San Isidro, Bangayan,
2. Floating Fish Cage Food processing, Hog fattening and Rattan craft	Canaway, Jaliobong, Poblacion & San Roque
3. Market on Tilapia, Carp, Fruits and Vegetables	San Isidro, Sangay, Mahayahay, Hinimbangan, Jaliobong and Bangayan
C. Agricultural interventions	
1. Fish Solar Drier Establishment	
2. Tilapia Culture in Cages	
# of cages: 3	
# of fingerling stocked: 21,000	
# of operators: 3 POs	
3. Monitoring/Assessments of Resources Enhancement Project	
Monitored 3 fish sanctuaries	
4. Apprehensions made on Fishery Violators	
5. Inland Fisheries	
# of fingerling stocked:	
Tilapia 133,000 pcs.	
Carp 100,000 pcs.	
6. Post-harvest Training	
7. Technical Assistance given for Aquaculture & Post-harvest	
8. Surveillance & Monitoring (Dep. Fish Warden Apprehension)	

- LGU provides technical assistance, trainings and seminars
9. Farm Mechanization: Farm Tractors
 10. STWS, Solar and Mechanical Dryers
 11. Mechanical Facilities
Such as Turtle, floating tillers, palay seed subsidies & demo projects on rice
 12. Dispersal of cattle, swine, goats etc.
 13. Animal Health Care
Artificial insemination, deworming, vaccination & treatment
 14. Proposal on a one-stop-shop complete facility
 15. High Value Commercial Crops, Multi-cropping and hybrid rice

D. Social services and health interventions

1. 3 District Hospitals
2. Health Centers
3. Prenatal Care and Post Partum
4. Control of TB, Leprosy, Schistosomiasis,
5. Malaria, Filariasis, Acute Respiratory Infection
6. Vaccination & Immunization
For children (RHW administer) and anti-tetanus vaccine
7. Family Planning
Methods of birth controls & counseling
8. Medical Check Ups: Blood Pressure
9. Dental Check Ups
10. Operation Ligtas Buntis
11. Iron and Vitamin A supplement for children
12. Pre-marriage Counseling
13. Seminars & symposium on drugs and the national policy
14. Proposed Brgy Health Center in San Isidro
15. Phil Measles Campaign

E. Comprehensive Integrated Delivery of Social Services (CIDSS) Projects

- | | |
|------------------------------------|-----------|
| 1. CVRD Training | Bangayan |
| 2. CVRD Training | Mahayahay |
| 3. DCC Indoor / Outdoor Facilities | Poblacion |
| 4. DCC Indoor / Outdoor Facilities | Bangayan |
| 5. DCC Fencing | Poblacion |
| 6. DCC Rehabilitation | Mahayahay |
| 7. DCC Facilities & Fencing | Mahayahay |
| 8. DCC Completion | Mahayahay |
| 9. DCC Completion | Poblacion |

10. Pre & Post Harvest Facilities	Bangayan
11. Pre & Post Harvest Facilities	Bangonay
12. Water Pipeline Extension	Mahayahay
13. DCC Indoor / Outdoor Facilities	Mahayahay
14. Farm to market road	Sangay
15. Foot Bridge Construction	San Isidro
16. DCC Construction	Bangayan
17. Rehabilitation of water system	San Isidro
18. Spring Development Project	Sangay
19. Water Pipelines	Mahayahay
20. Water Reservoir Construction	Bangayan
21. DCC Construction with Facilities	Bangayan
22. Senior Citizens Center	Poblacion
23. Relief Augmentation Assistance	Sangay
24. SEA-K Capital Seed Fund	Sangay
25. SEA-K Capital Seed Fund	Sangay
26. SEA-K Capital Seed Fund	Sangay
27. SEA-K Capital Seed Fund	San Roque
28. DCC Improvement	San Roque
29. DCC Improvement	Sangay
30. DCC Construction	San Roque
31. DCC Indoor / Outdoor Facilities	San Roque
32. DCC Program materials	
33. DCC Construction	
34. DCC Construction	Jaliobong
35. SEA-K Capital Seed Fund	Poblacion
36. SEA-K Capital Seed Fund	San Roque
37. SEA-K Capital Seed Fund	Sangay
38. DCC Construction	Little Baguio

F. Biodiversity conservation interventions

1. CBRMP NRM	Hinimbangan,
Microwatershed Agroforestry Tree Plantation	Mahayahay, Sangay,
	San Isidro,
Lakegrass Protected Area	Bangayan,
Lakeshore Fish Sanctuary	Canaway, Jaliobong,
	Poblacion & San
	Roque

C. Municipality of Alegria

Alegria is part of the province of Surigao del Norte. The area has inherently difficult landscape, a big portion being relatively upland and forested, that potentially hinder the entry of groups interested in initiating programs. Yet, data show various interventions by different organizations that compliment the initiatives of the local government. [Table 10](#) describes the details of the projects in this municipality.

In the area of infrastructure, considered very important is the upgrading of the water system to Level II and the construction of rural water system. Other infrastructures are in the form of farm-to-market roads, mostly ARC projects, the establishment of a communal irrigation system, and solid waste management.

Livelihood initiatives are generally very few in this municipality. In fact, only three projects have been recorded, namely; abaca production, swine production, and gill net fishing among the fishers. Obviously, there is a need for other viable livelihood initiatives to provide more economic uplift to the people.

Agriculture, both farming and fishing, play a vital component in the day-to-day living of the people in the area. Cognizant of this, the LGU has given its full support towards this initiative by providing post-harvest training, technical assistance for aquaculture, animal health care, artificial insemination, deworming, vaccination and other forms of treatment. These projects are done to supplement the livestock-raising project in the area where dispersals of animals such as cattle, swine, and goats are relatively massive. To further enhance these interventions in agriculture, alternative farming technologies like multi-cropping, and planting of high value commercial crops are likewise introduced to the farmers.

The interventions in terms of social and health services are relatively numerous. The Rural Health Unit (RHU) for instance, facilitates the following services: prenatal care, post partum, TB control, leprosy, schistosomiasis, malaria, filariasis, acute respiratory infection, vaccination and immunization for children, anti-tetanus vaccine, and campaign for prevention of measles. The campaign for family planning is also well

taken care of in this municipality through various programs. These initiatives are further enhanced by the various projects undertaken by the CIDSS.

Efforts towards biodiversity conservation are focused on micro-watershed development through agro-forestry and tree plantation. There are programs to conserve forest resources in the area. The municipality of Alegria is also included in the LGU Performance Program (LPP) Multi-indicator Cluster Survey and Lake Mainit Limnological Assessment Project.

Table 10. Interventions in Alegria, Surigao del Norte.

Description of Interventions	Sites of Interventions
A. Infrastructure Interventions	
1. Water system improvement to Level II	Budlingin
2. Farm to market road: ARC Project	San Juan, Alipao & San Pedro
3. Communal irrigation system	San Pedro
4. Construction of rural water system	Poblacion, Budlingin, San Pedro, Alipao and San Juan
5. Waste management	
B. Livelihood interventions	
1. Abaca production	
2. swine production	Budlingin & Camp Edwards
3. gill net fishing	
C. Agricultural interventions	
1. Small water and impounding project	
2. Rotational cropping of rice and corn	
3. Animal health care	
Livestock disease prevention & control Artificial insemination, deworming, vaccination & treatment	
4. Capability building	
Seminars, information drive	
Strengthening the rural based organization	
5. Monitoring & evaluation of lake resources	
6. Apprehensions made on fishery violators	
7. Technical assistance given for aquaculture & post-harvest	

8. High value commercial crops and hybrid rice
9. Upland development
10. Seeds and plant materials distribution
11. Tilapia fingerling dispersal
Fish production (100,000 pcs. of fingerlings)

D. Social services and health interventions

1. Health programs and services
2. Ante natal care, normal delivery,
3. Post partum care, immunization,
4. Family planning, growth monitoring,
5. Nutrition, communicable diseases
6. Control: ARI, CDD, TB, and STD,
7. Non-communicable diseases control,
8. Minor surgical cases, laboratory services,
9. Referral of emergency cases to core referral hospitals,
10. Health education training: TBA/BHW,
11. Public health management: planning, health information, health boards
12. Health counseling, dental services
13. Environmental sanitary services

Comprehensive Integrated Delivery of Social Services (CIDSS) Projects

- | | |
|--------------------------------------|-----------------|
| 1. DCC construction | Budlingin |
| 2. DCC fencing | Budlingin |
| 3. Drainage system project | Budlingin |
| 4. Supplemental feeding | Budlingin |
| 5. Water system | Budlingin |
| 6. DCC construction | Don Julio Ouano |
| 7. DCC fencing | Don Julio Ouano |
| 8. DCC outdoor facilities | Don Julio Ouano |
| 9. Jetmatic pump installation | Don Julio Ouano |
| 10. Stone masonry line canal constrn | Don Julio Ouano |
| 11. Street lights project | Don Julio Ouano |
| 12. Supplemental feeding | Don Julio Ouano |
| 13. Socialized credit scheme | Ouano |
| 14. DCC construction | Pongtud |
| 15. SEA-K capital seed fund | Pongtud |
| 16. Supplemental feeding | Pongtud |
| 17. Transmission line | Pongtud |
| 18. DCC fencing | San Juan |

19. Socialized credit scheme	San Juan
20. Water system	San Juan
21. DCC outdoor facilities	San Pedro
22. DCC rehabilitation	San Pedro
23. Drainage system project	San Pedro
24. Potable water system constrn	San Pedro
25. Potable water system constrn	San Pedro
26. DCC indoor facilities	Budlingin
27. DCPC	Pongtud
28. DCPC	Pongtud
29. Relief augmentation assistance	Camp Edward
30. Installation of GI pipes	Gamuton
31. DCC completion	Gamuton
32. Jetmatic pump installation	Poblacion
33. DCC rehabilitation	Poblacion
34. SEA-K capital seed fund	San Juan
35. CVMT training	San Juan

E. Biodiversity conservation interventions

1. CBRMP NRM	Camp Edward, Budlingin, Pongtud & San Juan
Fish sanctuary	
Tree plantation	
Lakegrass protected area	
Agroforestry	

F. Research Interventions

1. Lake Mainit Limnological Assessment Project
2. LGU Performance Program (LPP) Multi-indicator Cluster Survey

D. Municipality of Mainit

The municipality of Mainit has an inherent advantage over the other three municipalities in terms of name recall. This is because its name is similar to the lake, which has been the subject of many ecological interventions. Data show that this municipality is a recipient of all the categories of interventions identified in this report. A description of these activities is in [Table 11](#).

In the category of infrastructure, the municipality has a solid waste management facility in terms of a sanitary landfill, which is a pioneering project to address problems on solid waste disposal. Other infrastructures include roads, bridges, drainage systems, potable water system, public market, municipal warehouse, communal irrigation system, school buildings and others. Repair of lake wall and an information center with a view deck, CR, and footbridge was undertaken to enhance tourism activities in the lake.

For livelihood options, initiatives are done not only in production like livestock raising and dispersals but also in capability building through trainings and seminars. The latter ensures sustainability and viability of the program. Production of vegetable, making dried fish, processing organic fertilizer, and handling *palay* seeds are also developed. In support to these initiatives, the LGU has a regular radio program called *Binhian ng Bayan* where *palay* seed production is being promoted. Non-destructive fishing gears (e.g., *pukot*) are provided to fisher-folk as a way of sustainably harnessing the lake resources.

Agricultural interventions that are both land-based and lake-based are equally widespread in this municipality. Carabao dispersal, upgrading the stocks or breeds of swine through artificial insemination, and tilapia dispersal of about 100,000 fingerlings are just some of these efforts. Problems in the uplands are addressed by the municipality's upland development program that includes tree planting and seedling distribution. All these are part of the town's watershed management that is further augmented by seminars on capability building. A legal support to the activities is the organization of *Bantay Danao* that is tasked to enforce laws.

To address the social and health needs of the community, a district hospital and health centers are established in the area. The health practitioners undertake prenatal care and other health cares, including vaccination and immunization of children. Family planning programs are likewise regularly conducted to include counseling of couples. Drug-related problems are addressed by regularly conducting seminars and symposia on drugs and the national government's policies on this concern. These initiatives are further strengthened by the delivery of other social services through the various projects under the Comprehensive and Integrated Delivery of Social Services (CIDSS) Program.

Relative to biodiversity conservation initiatives, the only project is tree planting in denuded areas. Other measures focused on the conservation of the natural resources of the lake, including prohibition on the use of illegal methods of fishing, and legal prosecution of violators.

In the area of research, activities were designed to address the need for food security. These include the test on the viability of some fish species like determining the growth and survival of tilapia (*Oreochromis niloticus*) in cages placed in irrigation canals of the NIA, and sex reversal in tilapia. Forest tree seedlings were also studied to support tree planting program of the municipality. Socio-political assessments are conducted to assess the efficiency of the leaders in local governance. There is also a study that eventually formulated an information book on gender-based profile and women's situationer in Caraga growth centers.

Table 11. Interventions in Mainit, Surigao del Norte.

Description of Interventions	Site of Interventions
A. Infrastructure interventions	
1. Solid management project: sanitary landfill	Mansayao San Francisco & Tolingon Matin-ao Poblacion Quezon Poblacion
2. Rehab of 0.342 km road with spill way bridge	
3. San Francisco-Tolingon potable water system	
4. Matin-ao potable water system	
5. Completion of public market	
6. Municipal warehouse establishment	
7. Communal irrigation system: rehab program	
8. Lake wall repair	
9. Concreting of Lake wall	
10. IPs school building with health center	
Construction of 2 rooms school building w/ water facilities	
11. Rehabilitation of 2.75 km FMR w/ concrete culverts and canals	
12. Farm to market road from Brgy Silop to Paco	

13. Eco-tourism destination
Cons. of info center w/ view deck, CR,
footbridge & rehabilitation of 3.2 access roads

Marayag and
Magsaysay

B. Livelihood interventions

1. Swine production with capability building
2. Native chicken raising with capability building
3. Goat dispersal with capability building
4. Vegetable production with capability building
5. Dried fish production with capability building
6. Organic fertilizer training with capability building
7. *Binhian ng Bayan* program: *palay* seeds production
8. Fish and vegetable processing
9. Production of rattan thru replanting and furniture making
10. Hog raising, fattening and trading
11. SEA-K Projects
 - Micro livelihood projects
 - Livelihood projects for fisherfolks
12. Rattan production: plantation, furniture weaving
13. Poverty alleviation fund project
 - Hog raising, fattening and trading
14. Fishing livelihood project
 - Provision of fishing gear (pukot) to fishers

C. Agricultural interventions

1. Swine artificial insemination
2. Carabao dispersal
3. Upland development
 - Seeds and plant materials distribution
4. Solar drier: post harvest facility
5. Bantay Danao Law enforcement
6. Up-grading of stocks (artificial insemination of swine)
7. Tilapia fingerling dispersal
 - Fish production (100,000 pcs. of fingerlings)
8. Capability building: seminars, information drive

D. Social services and health interventions

1. Matching grant program
2. Weekly prenatal and medical consultation
3. Monthly immunization, BCG, DPT, OPV and measles

4. Immunization
5. Yearly medical and dental outreach
6. Supplemental feeding
7. Case finding on NTP, schistosomiasis & filariasis
8. Family planning and counseling

Comprehensive Integrated Delivery of Social Services (CIDSS) Projects

1. Rehabilitation of potable water	Mabini
2. SEA-K capital seed fund	Mabini
3. DCC indoor / outdoor facilities	Mabini
4. DCC construction	Mabini
5. Buy & sell agricultural	Mabini
6. Farm inputs project	Mabini
7. Water system improvement	Mansayao
8. Pre & post harvest facilities	Roxas
9. Pre & post harvest facilities	Roxas
10. DCC construction	Roxas
11. Fish cage project	Roxas
12. DCC perimeter fence	Roxas
13. Pre & post harvest facilities	San Isidro
14. Rehabilitation of pipelines Level II	San Isidro
15. Agricultural farm inputs	San Jose
16. Water system rehabilitation	San Jose
17. DCC construction	San Jose
18. DCC indoor / outdoor facilities	San Jose
19. Water pipeline rehabilitation	San Jose
20. DCC indoor / outdoor facilities	San Jose
21. WatSan Level II	San Jose
22. Water system	Siana
23. Water system	Siana
24. Fish cage project	Siana
25. Tilapia fish cage culture	Siana
26. DCC indoor / outdoor facilities	Siana
27. DCC outdoor facilities and fencing	Mabini
28. Farm inputs project	Roxas
29. Meat processing	Roxas
30. Socialized credit scheme	San Jose
31. SEA-K Level I	Tolingon
32. DCC indoor & outdoor facilities	Mansayao
33. DCC construction	Mansayao

34. Moliedo processing	Siana
35. DCC construction	San Isidro
36. DCC construction	San Isidro
37. DCC indoor facilities	Mansayao
39. DCC construction	San Isidro
40. DCC indoor facilities	Mansayao
41. Supplemental feeding	San Pedro
42. BTWG orientation	
43. Relief augmentation assistance	Magsaysay
44. DCC construction	Magsaysay
45. SEA-K capital seed fund	Quezon
46. SEA-K capital seed fund	Quezon
47. SEA-K capital seed fund	
48. Corn sheller	
49. Senior citizens center	
50. Relief augmentation assistance	
51. Relief augmentation assistance	Poblacion
52. SEA-K capital seed fund	
53. Relief augmentation assistance	
54. Relief augmentation assistance	
55. Emergency shelter assistance	
56. Food for work	

E. Biodiversity conservation intervention

1. Tree plantation in denuded area

F. Research interventions

- | | |
|---|-----------|
| 1. Growth & Survival of Tilapia in Cages | Magpayang |
| 2. Placed in Irrigation Canal of the NIA, Sex Reverse Tilapia | |
| 3. Forest Tree Seedling Support for Tree Planting | |
| 4. Formulation of a gender-based profile and women's situationer Caraga growth centers – An Info Book | Magpayang |
| 5. LGU Performance Program (LPP) Multi-indicator Cluster Survey | |
| 6. Assessment of the Effects of <i>Oplan Kontra Sistol: Organisadong Katilingban, Siguradoha</i> Project towards reduction of Schistosomiasis prevalence in Caraga Region | |
| 7. An Interim Evaluation of ADP-Surigao del Norte | |

Some forms of interventions are common to the four municipalities. These programs are in line with the Regional framework of programs designed for the whole Caraga Region. For instance, health interventions implemented by the rural health units of every municipality are actually programs designed by the provincial health office (PHO) for a province-wide implementation. Hence, practices are uniform at the barangay and sitio levels. Understandably, this is because supports like medicines, supplies, contraceptive materials, and others are often released from the regional and provincial levels. In the case of Australian-initiated and DSWD-partnered CIDSS Program, delivery of basic social services is designed to help the rural communities alleviate their living and social conditions by provision of basic services ranging from infrastructure, educational development, health and other services that are not sufficiently assisted by the local government. In this program, the community stakeholders are given the freedom to identify and prioritize for themselves their own concerns through a preliminary assessment done in the form of a questionnaire survey administered by trained CIDSS volunteers (CVRDs). Based on the results of this survey, material and financial supports are given which later are assessed to determine if concerns identified by the communities and assisted by the program are sufficiently addressed. The evaluation is conducted through formal and informal interviews. In general, the impression is that the CIDSS projects have not really addressed the issues and concerns of the communities. These observations are inputs to PACAP (a bilateral project of the Australian and Philippine governments), particularly its FOCAS (focused community assistance scheme) strategy. The project is still in its early stage of implementation hence it is difficult to determine whether or not it will really address the needs of the community. This strategy however could rationalize the distribution of project initiatives to avoid duplication and waste of resources. This will also facilitate easier monitoring and evaluation of the project, it being focused in a particular community

The Status of Interventions in Lake Mainit

In terms of scope and nature, the interventions in Lake Mainit had been categorized into infrastructure, livelihood, agricultural, social and health services, biodiversity conservation and research interventions. In terms of status and extent of implementation, these interventions can be classified into three, namely: the completed and functional, the on-going and regular, and the proposed interventions. Completed and functional interventions as well as their specific locations are described in detail in [Table 12](#). The on-going and regular interventions, and the proposed interventions are described in [Tables 13 and 14](#), respectively.

Table 12. Completed and functional interventions in Lake Mainit areas.

Description of interventions	Site of interventions	
	Barangays	Municipality
A. Infrastructure interventions		
1. Water reservoir (ISF Project)	Tagbuaya & Bangonay	Jabonga
2. Farm to market roads	Magsaysay-Pigapi	Jabonga
3. Farm to market roads	Colorado-Takayan	Jabonga
4. Farm to market roads	Cuyago-Tiklan	Jabonga
5. Farm to market roads	Libas-San Roque	Jabonga
6. Farm to market roads	Baliguin-Maraiging	Jabonga
7. Circumferential road	San Pablo-Bunga	Jabonga
8. Solar power electricity	Tagbuaya	Jabonga
9. Baleguian water system	Baleguian	Jabonga
10. 2 school buildings and 2 DC centers	San Pablo	Jabonga
11. Eco-tourism center	Poblacion	Jabonga
12. Water system Level II (CBRMP)	Poblacion, Upper & Lower Mahayahay	Kitcharao
13. Potable water supply Level II	Jaliobong	Kitcharao
14. Farm to market road	Jaliobong	Kitcharao
15. Farm to market road: ARC Project	San Juan, Alipao & San Pedro	Alegria
16. Municipal warehouse establishment		Mainit
17. Communal irrigation system		Mainit
18. Concreting Lake wall	Poblacion	Mainit
19. San Francisco-Tolingon Potable Water System	San Francisco & Tolingon	Mainit
20. Matin-ao potable water system	Matin-ao	Mainit
21. Farm level grain center		Jabonga
B. Livelihood interventions		
1. GMA livelihood project for LMC		Jabonga
2. Self employment assistance project		Jabonga
3. Skills training on soap making		Jabonga
4. Alamang processing alternative learning system		Jabonga
5. Food sufficiency improvement		Jabonga
6. CBRMP livelihood project	Hinimbangan, Mahayahay, Sangay,	Kitcharao

7. CBRMP livelihood project	San Isidro, Bangayan, Canaway, Jaliobong, Poblacion & San Roque Budlingin & Camp Edwards	Alegria
8. <i>Binhian ng Bayan</i> program		Mainit
9. Fish and vegetable processing		Mainit
10. SEA-K projects		Mainit
11. Fishing livelihood project		Mainit

C. Agricultural interventions

1. Bottom set gill net: 200 units		Jabonga
2. Pond culture of tilapia		Jabonga
3. Fish solar drier		Jabonga
4. Small water and impounding project	Cuyago, A. Beltran and Magsaysay	Jabonga
5. Demo-testing of Kuliglig hand tractor (pre/post harvest facility)		Jabonga
6. FAO rehabilitation program; subsidized program assistance affected by calamity		Jabonga
7. Farm level grain center		Jabonga
8. Corn sheller	Colorado	Jabonga
9. Fish solar drier		Kitcharao
10. Tilapia culture in cages		Kitcharao
11. Inland fisheries		Kitcharao
12. Post-harvest training		Kitcharao
13. High value commercial crops, multi-cropping and hybrid rice		Kitcharao
14. Small water and impounding project		Alegria
15. Rotational cropping of rice and corn		Alegria
16. Technical assistance given for aquaculture & post-harvest		Alegria
17. High value commercial crops and hybrid rice		Alegria
18. Upland development		Alegria
19. Fish sanctuary		Alegria

D. Social services: CIDSS projects

1. Potable water system construction

4
municipalities

2. Water pipelines expansion
3. DCC construction and improvement
4. DCC indoor/outdoor facilities
5. DCC facilities & fencing
6. Swine fattening
7. Vegetable production
8. Garment making project
9. Solar dryer project
10. Water system rehabilitation
11. Water system expansion
12. Multi-purpose drying pavement
13. Water reservoir
14. Rehab of water pipelines
15. Construction of marketing center
16. 2 school buildings and 2 DCCs
17. Road rehabilitation/improvement
18. CVRD training
19. Pre & post harvest facilities
20. Farm to market road
21. Foot bridge construction

E. Biodiversity conservation

- | | | |
|---|---|-----------|
| 1. Assorted fruit trees planting materials at the nursery | | Jabonga |
| 2. Support on Lake Mainit watershed area rehabilitation | | Jabonga |
| 3. Lake Mainit watershed subproject | San Pablo, Bunga, Magdagooc, San Jose, and San Vicente | Jabonga |
| 4. Maraiging reforestation subproject | Maraiging | Jabonga |
| 5. San Isidro-Mahayahay refo subproject | San Isidro & Mahayahay | Kitcharao |
| 6. CBRMP NRM | Hinimbangan, Mahayahay, Sangay, San Isidro, Bangayan, Canaway, Jaliobong, Poblacion & San Roque | Kitcharao |
| 7. ADB Loan I on reforestation | San Roque | Kitcharao |
| 8. ADB Loan I on reforestation | Sangay | Kitcharao |
| 9. Tree plantation in denuded area | | Mainit |
| 10. Tree plantation in denuded area | | Mainit |

F. Research interventions

1. Lake Mainit limnological assessment project	4 municipalities
2. Sex reversal in tilapia, culture rearing tanks for carp breeding	Kitcharao
3. Growth & survival of tilapia in cages placed in irrigation canal of the NIA and Sex reverse tilapia	Mainit
4. Forest tree seedling support for tree planting in denuded areas	Mainit
5. Biological resources assessments The Crustaceans of Lake Mainit The Avifauna of Lake Mainit, The Molluscs of Lake Mainit Amphibians of Lake Mainit Bats and their associated ectoparasites in Lake Mainit Ichthyofauna of Lake	Lake Mainit
6. A limnological survey of Lake Mainit, Philippines	Lake Mainit
7. Formulation of a gender-based profile and women's situationer Caraga growth centers – An Info Book	Kitcharao and Mainit
8. LGU performance program (LPP) multi-indicator cluster survey	Alegria & Mainit
9. LGU performance program (LPP) multi-indicator cluster survey	Jabonga & Kitcharao
10. Assessment of the effects of <i>oplan kontra sistom: organisadong katilingban, siguradoha</i> project towards reduction of schistosomiasis prevalence in Caraga	Jabonga & Mainit
11. An interim evaluation of ADP-Surigao del Norte	Mainit

Table 13. On-going and regular interventions in Lake Mainit areas.

Description of interventions	Site of interventions	
	Barangay	Municipality
A. Infrastructure interventions		
1. Lake Mainit circumferential road (LMIADP: Road Network)		Jabonga/Mainit
2. Flood control survey	Kalinawan river (outlet)	Jabonga
3. Farm to market roads	Baliguian-Punta Gracia	Jabonga
Farm to market roads	Bangonay-Apa-apa	Jabonga
4. Great lake resort	Poblacion	Jabonga
5. Municipal building	Poblacion	Jabonga
6. Municipal gymnasium	Poblacion	Jabonga
7. Open dump site		Jabonga
8. Mahayahay drainage canal	Mahayahay	Kitcharao
9. Lake Mainit riverbank stabilization and protection		Kitcharao and Alegria
10. Communal irrigation system	Anibongan	Kitcharao
11. Water system level II (CBRMP)	Budlingin	Alegria
12. Irrigation: ARC project	San Pedro	Alegria
13. Rural water system: ARC project	Budlingin, San Pedro, Alipao and San Juan	Alegria
14. Rural water system	Poblacion & Anahaw	Alegria
15. Waste management/FMR		Alegria
16. Road rehab of 0.342 km w/ spillway	Mansayao	Mainit
17. Public market	Poblacion	Mainit
18. Lake wall repair	Quezon	Mainit
B. Livelihood interventions		
1. Coco virgin oil production	Libas	Jabonga
2. Dried fish making		Jabonga
3. Self Help Group	San Isidro, Sangay, Mahayahay, Hinimbangan, Jaliobong and Bangayan	Kitcharao
4. Marketing on CBRMP livelihood products		Kitcharao
5. Swine production with capability building		Mainit
6. Native chicken raising with capability building		Mainit
7. Goat dispersal with capability building		Mainit

8. Vegetable production with capability building		Mainit
9. Dried fish production with capability building		Mainit
10. Organic fertilizer training with capability building		Mainit
11. Production of rattan thru replanting and furniture making		Mainit
12. Hog raising, fattening and trading		Mainit
13. SEA-K projects	Tapian	Mainit
14. SEA-K projects	Tagbuyawan	Mainit
15. Rattan production	IPs of Cantugas	Mainit
16. Poverty alleviation fund project	IPs of Cantugas	Mainit
17. Poverty alleviation fund project	IPs of Marayag	Mainit
18. Livelihood assistance to agri-fishery based micro-enterprises		SDN
19. World poverty alleviation program		Lake Mainit
20. Community Assistance		SDN

C. Agricultural interventions

1. Rotational single cropping of rice and corn		Jabonga
2. Probation of fishing gears		Jabonga
3. Free services of farming facility	Baleguian & Magsaysay	Jabonga
4. Farmers loan access granted by QUEDANCOR (lending institution for rice production)		Jabonga
5. Fish catch survey monitoring	Municipal wide	Jabonga
6. Livestock disease prevention & control		Jabonga
7. Regular monthly meetings & a year round end forum		Jabonga
8. Monitoring & evaluation of lake resources		Kitcharao
9. Monitoring/Assessments of resources enhancement project		Kitcharao
10. Apprehensions made on fishery violators		Kitcharao
11. Technical assistance given for aquaculture & post-harvest		Kitcharao
12. Fish Solar Drier		Kitcharao
13. Surveillance & monitoring (dep. fish warden apprehension)		Kitcharao
14. Farm mechanization: farm tractors,		Kitcharao

STWS, solar and mechanical dryers	Kitcharao
15. Mechanical facilities	Kitcharao
16. Livestock large animal dispersal	Kitcharao
17. Animal health care	Kitcharao
18. Animal health care	Alegria
19. Capability building	Alegria
20. Monitoring & evaluation of Lake resources	Alegria
21. Apprehensions made on fishery violators	Alegria
22. Tilapia fingerling dispersal	Alegria
23. Swine artificial insemination	Mainit
24. Carabao dispersal	Mainit
25. Upland development	Mainit
26. Solar drier	Mainit
27. <i>Bantay danao</i>	Mainit
28. Fish sanctuary	Mainit
29. Up-grading of stocks	Mainit
30. Tilapia fingerling dispersal	Mainit
31. Capability Building	Mainit

D. Social services and health interventions

1. Monthly prenatal check up in every barangay	Jabonga
2. Expanded program on immunization & vaccination	Jabonga
3. Oral examination, tooth extraction, preventive measures (fluoride application for school children)	Jabonga
4. Outreach programs on medical health & dental services	Jabonga
5. Family planning	Jabonga
6. National tuberculosis program	Jabonga
7. Schistosomiasis treatment Case finding and treatment on leprosy, malaria & filariasis	Jabonga
8. Health center proposal	Jabonga
9. <i>Operation timbang</i> & feeding of moderately & severely malnourished children	Jabonga
10. Chlorination of water from the source	
11. Water sampling for potable water	Jabonga

from the source for bacterial counts monitoring		
12. Prenatal care and post partum		Kitcharao
13. Control of TB, leprosy, schistosomiasis, malaria, filariasis, acute respiratory infection		Kitcharao
14. Vaccination & immunization		Kitcharao
15. Family planning		Kitcharao
16. Medical check ups: blood pressure		Kitcharao
17. Dental check ups		Kitcharao
18. Operation <i>ligtas buntis</i>		Kitcharao
19. Iron and vitamin A supplement for children		Kitcharao
20. Pre-marriage counseling		Kitcharao
21. Seminars & symposium on drugs and the national policy		Kitcharao
22. Proposed brgy health center in San Isidro		Kitcharao
23. Phil measles campaign		Kitcharao
24. Health centers		Kitcharao
25. Health programs and services		Alegria

E. Biodiversity conservation

1. Agroforestry		Jabonga
2. Fish sanctuary	Patangag and Poblacion	Jabonga
3. Fingerling dispersal: tilapia & carp		Jabonga
4. Integrated fish management		Jabonga
5. CBFMA	Maraiging	Jabonga
6. CBFMA	San Pablo, Bunga, Magdagooc, San Jose and San Vicente	Jabonga
7. CBFMA	Baleguin	Jabonga
8. Certificate of stewardship to individual occupants of the forestland	Bunga & San Pablo	Jabonga
9. CBRMP NRM	Camp Edward, Budlingin Pongtud & San Juan	Alegria
10. Reafforestation programme		Lake Mainit

Table 14. Proposed interventions in Lake Mainit areas.

Description of interventions	Site of interventions	
	Barangay	Municipality
A. Infrastructure interventions		
1. Solid management project		Mainit
2. IPs school building with health center		Mainit
3. Rehabilitation of 2.75 km FMR with concrete culverts and canals	Silop	Mainit
4. Eco-tourism destination	Marayag and Magsaysay	Mainit
B. Livelihood interventions		
1. Livelihood assisted project		Jabonga
C. Agricultural interventions		
1. Municipal production center		Kitcharao

Agencies have shown interest on the lake by providing funds for specific activities but duplications are very apparent. For example, the United Nations Development Program provided funds for biodiversity conservation and resource management projects of two different NGOs, namely: Agroforest Builders of Hinimbangan Foundation and AID Foundation ([see profiles of the NGOs](#)). Looking closely at their specific initiatives, the major components of the projects are similar in scope and nature. They may vary in strategies and approach in their respective projects but the expected results are very similar. A very similar case in point is the training on farming technologies in Cantugas, Mainit, Surigao del Norte. This was validated during a round table discussion of NGOs last July 7, 2005. The same training in scope and nature have been conducted by four NGOs: REACH Foundation, Convergence, Caraga Consortium and a certain NGO from Agusan. In the assessment made, this was not only a wasteful duplication of interventions but worse, had caused negative response from the

farmers. Allegedly, the farmers have become tired of trainings and are instead more desperate to see practical results (e.g., improved farming outputs) in their lives.

There are other lake-wide interventions, as per information gathered, but specific locations are either vague or not specified. The lack of data and information gaps (e.g. amount of funds released for a project) for some of the interventions may not give a true and complete picture of the interventions done in Lake Mainit.

All these interventions may have been done with good intentions, in the hope of generating baseline information towards harnessing, developing and conserving the potentials of Lake Mainit. What is to be done though, is the appropriate conglomeration or data banking of all the interventions done. To this end, there seems to be a need to have a governing or a steering body that will advance the establishment of a concerted and holistic database framework on different interventions that were done, on-going or proposed. This body will direct, control, monitor and evaluate all efforts meant to address biodiversity conservation problems, delivery of socio-economic and health services, livelihood and agricultural interventions and other issues and concerns in Lake Mainit ecosystems and the communities surrounding it. This, will not only eliminate duplication of projects, wastage of funds and others, but will also broaden the perspective of the concerned individuals and groups on the fast-degrading biodiversity and socio-cultural and economical environment in and around the lake. One potential agency to man all these is the Lake Mainit Development Alliance (LMDA) that will evolve into a coordinating body, whose focus will be on the development and management of the lake.

Interventions for the Indigenous Peoples (Mamanwa)

Recently, the IPs gained recognition from, and are given due importance by the government and the civil society. In fact, a law (Indigenous People's Rights Act or IPRA) that will grant them the inherent rights to access efficient delivery of socio-economic, health, and other forms of interventions has been enacted. Owing to the very nature of the IPs' very poor living conditions and their struggles for life, many NGOs and other line agencies have recognized the role IPs can play in the conservation and management of

the natural resources. They realized the need for basic livelihood programs to address the IPs' dismal socio-economic conditions and to ease the pressure these peoples have on the natural resources. Towards this end, a carabao dispersal program is introduced to the Mamanwas in Maraiging, Jabonga. Carabao was chosen because of its use in various farming activities (e.g. plowing the field) and means of transportation to hasten cargo (farm produce) delivery to the market. Planting of fruit trees, especially the varieties of mango, durian and lanzones is initiated to ensure a longer-term source of income once the trees start bearing fruits. The women who play vital role in the delivery of social services including women-related problems, are given training under the umbrella program called STIMULUS or Support Training Intervention for Mindanao Upland Lumad Settlement. The women are trained to effectively help their male counterparts in various farming-related activities, including the marketing of produce. Monitoring and evaluation are done on a relatively more regular basis because accordingly, the *Indigenous Peoples* are nomadic in nature. They normally leave and settle in other unsettled areas when other groups encroach into their territories. Assessment and evaluation of projects should therefore include determination of underlying socio-cultural problems confronting these peoples. Permanent settlement for the Mamanwa will define the efficiency in the delivery of socio-economic, and all other forms of initiatives.

Various agencies, despite various negative criticisms against Mamanwas, did not lose hopes and aspirations to improve the plight of the IPs. In Sitio Dinarawan of Barangay San Pablo in Jabonga, a Mamanwa group is a recipient of a cultural and eco-tourism center established in the Poblacion by Convergence. Management of the center and livelihood activities brought about by the center (e.g., catering services to visitors) is turned over to the Mamanwas. This landmark intervention positively created new hopes, built a feeling of trust and confidence among the Mamanwas, and consequently transformed their perspective, ushering them into a full-blast change in mentality and attitude. Conversely, this has also transformed the perceptions and behavior of the non-IPs in terms of their respect for the rights of the Mamanwas and minimized if not totally eradicated discrimination. Accordingly, the breakthrough intervention is already a good

start for them to obtain benefits from the abundance of the lake resources and somehow improved their living conditions. AID Foundation has activities to address the health needs of this same group.

In other areas, interventions came in to facilitate their needs, including supplemental feeding, medical outreach programs, self-sustaining livelihood programs and non-formal education. The non-formal education targets the adults and out-of-school-youth who are taught the basic concepts and principles on literacy. In some areas, formal education is implemented through establishment of primary schools. However, this particular intervention is obstructed by shortage of teachers, classrooms and other educational facilities, including some logistical needs for teachers (i.e. in terms of salaries and benefits), which has to be sourced out from the provincial level.

NGOs: The Principal Actors of Interventions in Lake Mainit

This research aims to generate a list and data of NGOs undertaking all forms of interventions in the Lake Mainit areas. A total of 12 NGOs operate in the area. Majority of these are undertaking alternative livelihoods and delivery of social and health services for the communities in Lake areas and in nearby areas as well. A few NGOs are engaged in conservation of biodiversity and protection and management of natural resources, in collaboration with government line agencies and funding institutions engaged in conservation-related activities. A listing of these NGOs and a summary description of their activities are presented in [Table 15](#). Recently, LMDA, with funding from PACAP, initiated the non-formal networking of these NGOs with the aim of developing a lake-wide management and development framework for the lake. The descriptive profile of the NGOs is presented below.

1. **Agro-Forest Builder of Hinimbangan Foundation Inc. (AFBHFI)** – a beneficiary NGO of UNDP’s Lake Mainit Upland Resource Management and Biodiversity Conservation Project. The total project cost is \$32,231.00. The project covers biodiversity, capacity-building and demonstration. Particularly, it covers

community participation on sustainable agriculture through people empowerment. Specific activities of the group include capacity-building, echo seminar on upland and lowland agriculture with emphasis on sustainability, planting of endemic tree, provision of improved breeds of goats and chicken, dispersal of tilapia for cage culture, and promotion of public awareness to global environment. The project duration is from June 2002 to 2004.

AFBHFI is awarded 27,564 hectares by the DENR for its project on Community-Based Forest Management (CBFM). In line with this, a seedling nurseries are established in six barangays of Poblacion, Bangayan, Mahayahay, Canaway, San Isidro, Sangay, and Jabonga. The Foundation is also an active collaborator of LMDA for a lake-wide management framework agenda.

2. Associates for Integral Development Foundation Inc. (AID Foundation) – This is a beneficiary NGO of UNDP’s Lowland and Upland Conservation for Lake Mainit Influence Areas Project. The total project cost is \$44,045.75. The project covers biodiversity, capability-building and demonstration. The activities include community participation on planning sessions to develop sustainable mechanisms, formulate strategies, policies, and guidelines for people’s organization and project staff assessments. The capability-building component focuses on training intervention, barangay-based environment learning forum and cross-site validations. The livelihood programs include the adoption of the principles on crop-livestock combination farming system, like acquisition of organic fertilizers from goat and chicken manure for field crops. This project was for the period from January 2002 to December 2003. To address the needs of the Mamanwa, the Foundation launched a project on fruit trees plantation. The project provides fruit tree seedlings (i.e. mango, durian and lansones), monitoring on the growth and survival of the seedlings and other technical support while all other activities (e.g. tilling the lands, planting the seedlings and maintenance) are the counterpart activities of the beneficiaries. They also established floating cottages in the fish port area located in front of the cultural center of the Mamanwa.

3. **Convergence** – a coalition of NGOs working for Community-Centered Area Development. Its members are the following:

- a) Center of Empowerment and Resource Development, Inc.
- b) Cooperative Foundation of the Philippines
- c) Philippine Ecumenical Action for Community Empowerment Foundation
- d) Philippine Network of Rural Development Institutes
- e) Philippine Peasants Institute
- f) Philippine Rural Reconstruction Movement
- g) Rural Enlightenment and Accretion in Philippine Society Foundation, and
- h) the Tambuyong Development Center.

Its formation in 1991 was in response to the need to demonstrate ground-level alternative development paradigms and approaches to address the following development imperatives:

- a) accelerate the process of achieving the critical mass necessary for a viable transformation at the grassroots level,
- b) adopt and promote a pluralist and inclusive approach to networking and coalition-building to more effective service area-based organizing and development work,
- c) strengthen concerted initiatives among NGDOs in advocacy work for rural development, particularly integrated community-centered area development,
- d) intensify efforts to address the NGDOs capability-building needs, particularly in the areas of development management, technical services, resource generation, partnership building and development cooperation, and
- e) provide spaces and maximize opportunities for interface mechanisms among NGDOs in various areas of development work.

Convergence has been implementing community-centered, resource-based development projects as a coalition and through its primary member NGOs, together with partner POs of farmers including agrarian reform beneficiaries, fishers, indigenous peoples, women and youth. These are guided by the following principles: (1) self-reliant and self-sustaining communities – emphasizing community access to ownership and control of resources especially by rural communities; (2) ecological completeness – promoting ecologically sensitive use of resources through community-based resource management and appropriate technology; and (3) community empowerment – working for people-centered, gender sensitive development processes by recognizing the capability of communities to control the planning and management of their development and ecology. Its intervention strategies emphasized the following key components, namely; social infrastructure building, sustainable local economic development, natural resources management, planning, monitoring and evaluation, gender and development, and development cooperation and advocacy underscoring the need for critical and collaborative engagements with government and the corporate or private sector.

One of its landmark infrastructure interventions is the establishment of a cultural center managed by the Mamanwas. This, in turn, revitalize the positive outlook of the society (non-indigenous) to the Mamanwa, thereby eradicating racial discrimination and the inclusion of the latter to local governance and other societal undertakings. Other interventions include rattan handicraft production shop, fish trading, marketing and information complex. They also feature the cultural interaction of the Mamanwas including fluvial parades, boat races, tree planting and lake clean-ups.

4. Caraga Consortium for Environmental Protection and Sustainable Development (CCEPSD) – a beneficiary NGO of the Foundation for the Philippine Environment (FPE) Site-Focused Project on Biodiversity Conservation Project in Lake Mainit. It is a consortium of three organizations composed of two NGOs and a PO, namely; Green Mindanao, Sapnayon ang Kinaiyahan sa Agusan (SAK-A) and Agusanong Mag-uugmad Alagad Hugpong Alang sa Nasud, Inc. (AMAHAN). Green Mindanao, based in Cagayan de Oro City, implements community-based resource

management and coastal resources management projects in some of the provinces in Region X and extends its advocacy work in the CARAGA Region. The SAK-A is an environmental advocacy group active in the Caraga Region and is also an active member of the Mountaineering Federation of the Philippines. AMAHAN is a conglomeration of PO farmers in Agusan del Norte that advocates sustainable agriculture. The consortium has technical working group members from DENR-Caraga Region, DA-BFAR Caraga Region, Lake Mainit Development Alliance (LMDA), Surigao del Norte College of Agriculture and Technology (SNCAT) and IP representatives. The Technical Working Group (TWG) provides technical assistance to the members of the consortium and eight POs, while the IP representatives work closely with the members of the consortium for the integration and implementation of IP plans and programs. Among the interventions are: (1) community organizing – including installation of simple financial system and actual hands on, review and enhance CBU, conduct other capability building training, assist PO on social preparations on CADT, community consultations, strategic planning and PMT; (2) resource management – BIOME regular meeting, maintenance of AF/SA demo farm, land and water mapping use and management and paralegal training; (3) advocacy – coordination with different agencies and implementation of IEC/advocacy plan; and (4) livelihood – market linkages, maintenance, assessment and expansion of pilot livelihood projects. They operate in Tagbuyawan, Tapian and Cantugas in Mainit, Poblacion and Bunga in Jabonga, Bangayan and San Roque in Kitcharao, and San Juan in Alegria.

5. Agri-Aqua Development Coalition (AADC) – focuses interventions on watershed management, particularly in the areas of Jabonga and Kitcharao. The group helps in the formulation of developmental plans for barangay council planning and later on will be implemented by the barangay development council. Its major intervention is on enterprise development, particularly in helping cooperatives (e.g. fisherfolk and farmer cooperatives) enhance their produce, the quality of the products and their marketing as well. Likewise, soybean production is also introduced to augment the livelihood of POs. The soybean products are now delivered to San Miguel Corporation at

a very good price. To further enhance this initiative, the cooperatives have made contracts with soybean growers. This is to safeguard and prevent the entrance of strange buyers that may take advantage of the soybean growers and consequently cripple the marketing function of cooperatives. The area of coverage of this NGO is concentrated in Mahayahay and Jaliobong, Kitcharao, Agusan del Norte.

6. **Rural Enterprise Assistance Center (REACH) Foundation, Inc.** – mainly focuses on strengthening and capability-building of the people's organizations, community organizing of POs in the area and facilitate the registration of the POs to Cooperative Development Authority (CDA), National Economic Development Authority (NEDA), Department of Labor and Employment (DOLE), Securities and Exchange Commission (SEC) and NLA.

7. **World Vision - Surigao Norte People's Initiatives Development Association, Inc. (SNPIDA)** – a conglomeration of people's organizations (POs) whose members come from both Surigao mainland and inland populations. Some of the activities collaborated through this organization are economic development, health development, leadership development, project management, Christian nurture, child and youth educational development, and coastal resources management. Specifically, these activities focus on the training of appropriate farming technology, crop production, animal husbandry, health and sanitation, environmental protection, Christian life, livelihood, micro-enterprise development, supplemental feeding and treatment of various diseases. The organization is assisted by World Vision, which is an international humanitarian organization founded by evangelist Bob Pierce in 1950's. Recently, the organization has expanded its interventions into coastal resources management. However, there is a need for baseline information to implement CRM programs. They are also an active collaborator of LMDA on developing a sustainable framework for Lake Mainit.

8. **Educational Discipline in Culture and Area-based Development Services Foundation, Inc. (EDCADS)** – promotes livelihood programs in addressing the much-needed poverty issue among the Mamanwas around the lake. This NGO implements the

carabao dispersal program. It also conducts training and seminars to some communities to improve farming technologies.

9. **Surigao Economic Development Foundation Inc. (SEDFI)** – an NGO engaged in micro-financing to cooperatives, biodiversity resource assessments and in livelihood interventions to certain communities. Based in Surigao City, its area of operation includes the Lake Mainit areas.

10. **People’s Alternative Study Center for Research and Education in Social Development (PASCRES) Foundation, Inc.** – has efforts directed towards democratic participation of people’s organizations at all levels of governance, economic empowerment, cultural renewal and the preservation of the natural environment. The group stresses community development works including organizational development, capacity building, business enterprise development, networking, and advocacy. The interventions undertaken include the following:

A. institution building, particularly,

a) cooperative formation and development projects – this involves harnessing the people’s potentials (i.e. human and financial potentials) to start and operate cooperative enterprise that responds to the basic needs of the members in the areas through credit or micro lending, consumers cooperative, and marketing of farmers’ produce. To date, there are 33 cooperatives that have been organized and are already operational; and

b) PO network building project – networking of POs such as Agrarian Reform Communities’ BARCNET and the Women’s organization. This facilitates establishment of support linkages from institutions that could respond and provide services for member organizations.

B. politics and governance, including

a) party list chapter organizing project – linking the national AKBAYAN party list to be organized locally, with the aim of

changing the political culture of patronage and personality-centered politics to issue and party platform political exercise; and

- b) PO local governance participation project – with the aim of encouraging POs to effectively participate in LGUs ‘ Local Special Body to advance their legislative agenda and project within the formal structure of local governance.

C. socio-economic enterprise development, including

- a) micro-finance project – implementing their economic activities, providing financial assistance in the form of soft loan program for the cooperatives
- b) crop production for food security project – averting the condition of farmers by providing skills on sustainable agriculture through Nature Farming Technologies. This allows the farmers to control material requirements for farming production. Food securities to farming families as well as restoring the fertility of the soil are among its objectives; and
- c) coco-based farming systems development project – enhancing the coco industry by promoting farm diversification and development of coconut by-products and income.

11. **Alterdev Services Foundation, Inc.** – covers areas in Jabonga, Kitcharao and Buenavista with a total of 16 lowland and three upland barangays. Its mission is to build just, humane and free society. It envisions itself as potent and vibrant actor in nurturing the growth of self-reliant and self-determining rural communities, committing to be an active participant in realizing its vision by facilitating the provision for its target groups of opportunities for socio-economic development and empowerment. The programs and services include:

- a) direct assistance on technology transfer for sustainable agriculture that focuses on raising productivity of organic rice in lowland and upland farmers, capability building for POs, training in organizational and

financial management, planning, conflict management and developing the entrepreneurial capacities of organic farmers, farming systems development that focus on improving household incomes through diversification of farm income sources and promotion of SA-based high value cash crops such as vegetables, fruits and livestock;

- b) institutional development and advocacy in terms of multimedia, SA promotion, resource mobilization, partnership building especially on credit and technology providers, market development for organic rice and other organic products and advocacy support for the marketing program, networking and constituency building to establish a broad SA constituency by providing venues and mechanisms that will bring together SA practitioners, advocates and consumers;
- c) enterprise and livelihood development on the formation of income generating activities handled by POs and interest groups, promotion of savings and credits to program beneficiaries and micro-finance assistance for non-farm and off-farm livelihood and enterprises;
- d) community organizing and organizational development services like formation and strengthening POs mixed with women POs, provision of organizational-related training, and promotion on people's participation in the community and local governance; and
- e) gender mainstreaming such as women organizing, promotion of women-led enterprise project and gender profiling, analysis and planning.

12. **Propegemus Foundation Inc.** – one of the NGOs that is said to operate in the Lake Mainit area. It attended and participated in the meeting called for by LMDA but did not give any information about its activities. It is listed here because its existence is recognized by LMDA.

Table 15. NGOs undertaking interventions in Lake Mainit.

Name of NGOs	Nature of Interventions	Sites of Interventions	
		Brgy.	Mun.
1. Agro-Forest Builders of Hinimbangan Foundation Inc. (AFBHFI)	- Seminars on sustainable upland	Poblacion, Bangayan, Mahayahay, Canaway, San Isidro and Sangay	Jabonga
	- Planting of endemic trees		
	- Provision of improved breeds of goats and chicken		
	- Dispersal of tilapia for cage culture		
	- Public awareness on global environment		
	- CBFM project on nursery establishment		
2. Associates for Integral Development Foundation Inc. (AID Foundation)	- Community participation to planning sessions		Kitcharao
	- Training on capability building		Jabonga
	- Barangay-based environment learning forum		Mainit
	- Crop-livestock combination farming system		
	- Provision of fruit tree seedlings		
	- Establishment of floating cottages in Lake		
3. Convergence for Community-Centered Area Development (Convergence)	- Establishment of a cultural center		Kitcharao
	- Rattan handicraft production shop, fish trading, marketing and information complex		Jabonga
	- Fluvial parades, boat races, tree planting and lake clean-ups		Mainit

4. Caraga Consortium for Environmental Protection and Sustainable Development (CCEPSD)	- Community organizing and advocacy BIOME regular monitoring	Tagbuyawan, Tapian and	Mainit
	- Maintenance of AF/SA demo farm	Poblacion & Bunga	Jabonga
	- Land and water mapping use & mgt	Bangayan & San Roque	Kitcharao
	- Paralegal training		
	- IEC implementation		
	- Market linkages for pilot enterprises	San Juan	Alegria
	- Assessment, maintenance and expansion of livelihood projects		
5. ALTERDEV Services Foundation, Inc.	- Assistance on sustainable upland and		Jabonga
	- Diversification of farm income sources		Kitcharao
	- Promotion of SA-based high value cash crops		
	- Institutional development and advocacy		
	- Enterprise and livelihood development		
	- Community organizing and organizational development services		
	- Gender mainstreaming such as women organizing, gender profiling, analysis and planning		
6. Educational Discipline in Culture and Area-based Development Services Foundation, Inc. (EDCADS)	- Dispersal of carabaos		Jabonga
	- Trainings and seminars on sustainable agriculture		
	- Technical and manpower		

supports to Lake Mainit
festivities

- | | | |
|--|---|---------------------------------|
| 7. Propegemus
Foundation | | |
| 8. Rural Enterprise
Assistance Center
(REACH) Foundation | <ul style="list-style-type: none"> - Strengthening and capability-building of the people's organizations - Community organizing of POs - Facilitate the registration of the POs | Kitcharao |
| 9. People's Alternative
Study Center for
Research and
Education in Social
Development
(PASCRES) | <ul style="list-style-type: none"> - Cooperative formation and development projects - PO network building project - Party list chapter organizing project - PO local governance participation project - Microfinance project - Crop production for food security project | <p>Jabonga</p> <p>Kitcharao</p> |
| 10. World Vision -
Surigao Norte
People's Initiatives
Development
Association
(SNPIDA) Inc. | <ul style="list-style-type: none"> - Training of appropriate farming technology, crop production, and animal husbandry - Health and sanitation, and environmental protection - Christian life - Livelihood and micro-enterprise development - Supplemental feeding and treatment of various diseases | Mainit |

11. Surigao Economic Development Foundation (SEDF)	<ul style="list-style-type: none"> - Microfinancing to cooperatives - Biodiversity resource assessments - Livelihood interventions to certain communities 	Mainit
12. Agri-Aqua Development Coalition (AADC)	<ul style="list-style-type: none"> - Watershed management - Enterprise development to cooperatives - Soybean plantation - Formulation of developmental plans for barangay 	Jabonga Kitcharao



The People's Organizatins (POs) in tne Lake Mainit Area

People in local communities are direct recipients of the interventions. To them, the intervention's impacts, can either be positive or negative. Therefore, to ensure positive impacts of an intervention, the people have organized themselves and determine for their own the kind of intervention that would address their real issues and concerns. Towards this end, NGOs collaborate with these people's organizations in implementing projects. Where people's organizations (POs) do not exist, projects are started with community organizing activity. The POs now serve as partners of NGOs and even LGUs in implementing projects.

Information gathered during the survey revealed that line agencies of the government form new POs whenever projects are on hand. As a result, there are POs that are shortlived because their formation was for a very specific project. For example, when DAR or DA or DENR implements a project, it would first require people to organize themselves as a PO if they are to participate in the project implementation. Upon termination of the project, the PO dies naturally.

A list of POs existing in Lake Mainit areas is in [Table 16](#). The information in the list is not necessarily complete. Similarly, their respective interventions are not necessarily accounted for. Their names would however tell of the nature of their undertakings. Majority of the POs are engaged in various economic ventures to address the need to alleviate poverty. Some POs are engaged in CBFM, while others organized themselves into multi-purpose cooperatives. Farmers, women, and fisherfolk organizations are among the common and prevalent people's organizations. It is observed that the POs are comprised of homogeneous and marginalized groups trying to address their common problems and aspirations in life. With this kind of grouping, target recipients or beneficiaries for certain interventions are already identified. In most instances, considering that they are made as collaborators and partners in projects, the relevance of a certain project is assured.

Table 16. People's Organizations operating in the coastal municipalities of Lake Mainit.

Name of PO	Contact Persons	Contact Address
A. Jabonga, Agusan del Norte		
1. Bunga Fisherfolks Organization	Jorge Rosalin	Bunga
2. Jabonga Small Fisherfolk Assoc	Boy Lanquino	Jabonga
3. KASARIGAN	Susan Hurod	Coro Colorado Dinarawan, San Pablo
	Randy Catarman Gadiel Saratorio (Chair)	Cuyago
4. Cuyago Masipag Farmers Org		
5. Magsaysay Masipag Farmers Org	Albert Bernal (Chair)	Magsaysay
6. Integrated Colorado Masipag Farmers Org	Ruth Rendon (Chair)	Colorado
7. Dagandang Colorado Farmers and Fisherfolks Org	Eddie Monteclaro (Chair)	Colorado
8. Awasan Colorado Farmers and Fisherfolks Org	Andres Monton (Chair)	Awasan
9. Calinawan ARB MPC	Jesus Dejolde (Chair)	Colorado
10. Magsaysay ARB MPC	Teofilo Tutor (Chair)	Magsaysay
11. Bangonay Developers & Farmers Assoc	Ephraim Barcelona	Bangonay Purok 4,
12. Baleguian Masipag Farmers Assoc	Losantos M. Edilo	Baliguian Purok 3B,
13. Maraiging Forestland Management Coop	Fernando Legazpi	Baliguian Prk 1, A.
14. A. Beltran Builders Assoc	Orlando O. Onque	Beltran
15. Bag-ong Ugma nga Gihiusahan Alang sa Tanan	Jeffrey Rosalin (Chair)	Bunga
16. San Pablo Community Health Development Org	Russell Petallar (Chair)	San Pablo
17. Maraiging Forestland Management Coop	Fernando Legaspi	Maraiging
18. Cuyago Womens Organization	Virgie Montilla	Cuyago
19. BANDFA	Efracim Barcelona	Bangonay
20. Bangonay Women's Organization	Pamela Monoy	Bangonay
21. Libas Farmers MPC	Esther Mongaya	Libas

22. Mahayahay Farmers Association	Mr. Jamero	Mahayahay
23. Small Coco Farmers Association	Manny Serrano	Colorado
24. Colorado Farmers MPC	Olegario Aguillon	Colorado
25. Poblacion Women's Organization	Harriette Monoy Datu Sidlakan Gwedo	Poblacion
26. MAMATA	Monton Sr.	Colorado
27. JAMMODA	Manny Serrano	Colorado
28. Bunga Fisherfolk Association	Romeo Solalin	Bunga
29. San Pablo Fisherfolk Association	Alexander Mordeno	San Pablo
30. Colorado Farmers Cooperation	Oligario Agelion	Colorado
31. Colorado Agrarian Reform MPC***	Jesus Dejolde	Colorado
32. Cuyago Farmers Association	Dennis Uliot	Cuyago
33. Maraiging Forest Land Management Cooperation	Fernando Legaspi	Maraiging
34. Jabonga MPC, Inc. Lake Mainit Watershed Development	Crisanto Beluan, Jr.	
35. Cooperative	Arthur B. Grana	Poblacion

B. Kitcharao, Agusan del Norte

1. Bangayan Lakeview Association	Nilo Guinalubahan	Bangayan
2. San Roque Multi-purpose Coop	Anino Alatraca	San Roque
3. TIBULOS	Noel Danapa Tito Bago Cain Hokman/ Raul Moralda	Jaliobong Canaway
4. MARIG-ON		
5. Jay Irrigators		Poblacion
6. Mamkas Irrigators		Mahayahay
7. UDAFE		Sangay
8. CAFPA		Canaway
9. Women's		San Isidro
10. Canaway Masipag Farmers Org	Pedmar Reyes (Chair)	Canaway
11. Jaliobong Masipag Farmers Org	Roel Hoyle (Chair)	Jaliobong
12. Kitcharao Employees MPC (KEMCO)	Dario L. Bermudez	Poblacion
13. Malambuong Kausa sa Kababayan-an sa San Isidro	Margarita Iligan	San Isidro

14. Hugpong sa Kananayen-an sa Canaway	Teofemia Taliman (Chair)	Canaway
15. Immaculate Heart of Mary MPC	Albert Garrido	Poblacion
16. KINARECA	Elsa Galido	Poblacion
17. Small Coconut Farmers Agrarian Reform Benefeciaries MPC (SCOFARBEMULCO)	Leonila Alindongan	Mahayahay
18. JAFFA	Liberato Demol	Jaliobong
19. San Isidro Farmers Cooperative	Pepito Dagangon	San Isidro
20. SARUFA	Mario Justicio Napalan	Bliss
21. Kitcharao District Teachers Employees MPC	Evelyn Velasco	
22. San Isidro MPC		San isidro
23. Zapanta Valley Forest Resource MPC	Rey Tiape	Bangayan

C. Alegria, Surigao del Norte

1. Alegria Lakeshore & Rural Workers Assoc	Felix Basil	Alegria
2. Alipao MPC	Joel T. Seroy	Alipao
3. Budlingin Rural Workers Association	Adriano V. Cabil	Budlingin
4. Makugihon Livelihood Association	Roberta S. Conjurado	
5. Pongtud Women's Association	Daisy O. Galido	
6. Anahaw Women's Association	Fedencia C. Ellar	
7. Poblacion Alegria Farmers Association Alipao Community Based Health Management Association	Gloria A. Sala	Alipao
8. Alegria Motorized Trisikad Operators & Drivers Consumer	Redelson Ugay	
9. Alegria MPC	Valeriano R. Ranay, Jr.	
10. Bodiongin Small Coconut Farmers MPC	Eleveria P. Sorondo	Bodiongin
11. Gamuton Farmers MPC	Roberto L. Ugay	Gamuton
12. Tigbawan United Farmers Producers Cooperative	Jorgenoel Odchique	Tigbawan
13. United Northern Mindanao Operators & Drivers Cooperative	Servando Manongas	

D. Mainit, Surigao del Norte

1. Tagbuyawan Lakeshore Assoc	Rosalyn Mota	Tagbuyawan
2. MARIG-ON	Raul Moralda/Helen Beto	Cantugas
3. Tampilan Development Assoc Cantugas, Subangdaan Farmers Irrigators	Capt. Marlon Banzon	Tampilan
4. Association	Alberto Odtojan	Cantugas
5. Cantugas Farmers Association	Aurelio C. Campihan	Cantugas
6. Mansayao Farmers Association	Bertuldo Montaner	Mansayao
7. Federated for Free Farmers		
8. Farmers Field School	Victor Resullar	
9. Magsaysay Farmers Association	Gregorio Dojeñas	Magsaysay
10. Magsaysay Farmers Association	Rudy B. Dejolde	Magsaysay
11. Municipal Agricultural and Fisheries Council	Victor Resullar	
12. Roxas Farmers Association Farmers Association Against	Joel Cesar	Roxas
13. Schistosomiasis	Danilo Paglinawan	Roxas
	Michael Amplayo	Magpayang
14. Roxas Farmers MPC	Linabeth Paglinawan	Roxas
15. Magpayang Irrigators Service Association	Marfredo Reporial	Magpayang
16. San Isidro Farmers Association	Sabino Osayen	San Isidro
17. San Isidro Farmers Association	Nelson R. Reyes	San Isidro
18. Matin-ao Federated Irrigators Association Fisheries and Aquatic Resources		Matin-ao
19. Management Council	Mario Salino	Quezon
20. Municipal Fisheries and Aquatic Resources and Management Council	Panfilo Mozar	
21. Mainit Integrated Fisherfolks Association	Elmer Turnuas	
22. Barangay Ecological Solid Waste Management Committee	Nelson R. Reyes	
23. Rural Improvement Club	Greta Lamanilao	
24. Womens Organization		

25. Mainit Concerned Citizens for Development	Pepito S. Mupas	
26. Mainit Fabricators Association	Nelson R. Reyes	
27. Tolingon Agra-Multipurpose Cooperative	Evelyn Batistil	
28. Philippine Coconut Producers Federation	Robuam M. Relliquette	
39. Federation of Senior Citizens Association of the Philippines	Robuam M. Relliquette	
30. Veterans Federation of the Philippines, 7th Mainit Veterans P	Robuam M. Relliquette	
31. Mainit MPC	Victor Resullar	
32. HEAD Mothers and Fathers	Gloria S. Moncano	
33. Matin-ao Handicraft Womens Association Mainit Concerned Citizens Action for	Susan Villamon	Matin-ao
34. Progress	Francisco M. Mososte, Jr.	
35. Federated Day Care Workers	Lelita C. Nalam	
36. Federated Womens Organization	Marianeza Ballescas	
37. Day Care Parents Group Committee	Jerry Heron	
38. Mainit Fishermen and Vendors MPC Mainit Malimono Tree Farmers	Antonio Galve	Quezon
39. Association	Rizal Labadan, Jr.	
40. Roxas Farmers Organization	Joel M. Cesar	Roxas
41. Faith Always In The Home, MPC United Marayag Progress and	Marilou B. Endico	Silop
42. Development Association	Nabel Naguila	Marayag
43. Mainit Fisherfolk and Vendor, MPC	Timotea Badilla	Quezon
44. United Farmer Association of Binga	Jonnie Sabote	Binga
45. Mansayao Small Fisherfolk Organization	Rodenio Nopal	Mansayao
46. Lake Mainit Credit Cooperative	Fely M. Beltran	
47. Mabini Farmers Credit Cooperative	Cesar Caulin	Mabini
48. Mainit Credit Cooperative, Inc.		
49. Matin-ao Agra-MPC	Genaro Sabandal	Matin-ao

Agencies and their Programs in the Lake Mainit Area

Local and international agencies have responded to the cries of people to address the fast-degrading environment and the relevant socio-economic issues and concerns in the area. The list includes all agencies such as: academic research institution, funding institutions, national government and its line agencies, international funding institutions, non-government organizations, local government units and other entities. Their contributions vary in form and component but are vital to sustain the potentials of Lake Mainit. Extensive data about these agencies may not be available, but their mere presence in Lake Mainit signifies their important role and participation in the positive development of the socio-economic, political and cultural dimensions of the area. A listing of these agencies, a description of their projects and target areas is in [Table 17](#). A total of 45 agencies have poured resources into the lake, undertaking interventions that fall in any of the six broad categories mentioned in this report.

Table 17. Agencies undertaking interventions in Lake Mainit.

Name of Agencies	Nature of Intervention	Site of Intervention
1. Lake Mainit Development Alliance (LMDA)	<ul style="list-style-type: none"> - Upland Development and Management - River Management - Lake Management - Waste Management 	8 municipalities along Lake Mainit
2. Canadian International Development Agency (CIDA)	<ul style="list-style-type: none"> - Building construction - Implementation of ESWM - Concept on sustainable development - Strengthening capability building - Info-Book on gender-based profile 	Lake Mainit areas Butuan City Surigao del Norte
3. AusAID - PACAP	<ul style="list-style-type: none"> - Community assistance program - Health interventions - Biodiversity conservation - Resource management - Construction of gabions and bamboo plantation - Solid waste management project 	Surigao del Norte areas Lake Mainit areas Alegria and Kitcharao Mainit
4. UNDP Small Grants Programme	<ul style="list-style-type: none"> - Biodiversity conservation - Resource management - Strengthening capability building 	Lake Mainit areas
5. Spain – Technical Assistance Facility	<ul style="list-style-type: none"> - Food sufficiency improvement 	Jabonga
6. PCAMRD-ATMED and MSU-Naawan	<ul style="list-style-type: none"> - Limnological assessment 	Jabonga, Kitcharao, Mainit and Alegria
7. Australian Agency for	<ul style="list-style-type: none"> - Community development 	Surigao del Norte

International Development (AusAID)	- assistance - Infrastructure and health services	
8. Hassall and Associates International	- Community development assistance (PACAP-FOCAS)	Surigao del Norte and Agusan del Norte
9. DA-BFAR Caraga Region	- Biological and fisheries assessment - Bottom set gill net distribution - Tilapia pond culture - Fish solar dryer - Tilapia and carp fingerlings dispersal - Tilapia and carp studies on - Interim evaluation of ADP-Surigao del Norte	Lake Mainit Jabonga Jabonga Jabonga and Kitcharao Kitcharao Kitcharao Surigao del Norte
10. LGUs of Surigao del Norte and Agusan del Norte	- Resource conservation and management - Community development assistance - Delivery of basic socio-economic services	Surigao del Norte Agusan del Norte
11. MSU – Iligan Institute of Technology	- Limnological and biological assessments	Lake Mainit
12. Christian Aid, Oxfam-Great Britain, Save the Children – UK, and Voluntary Services Overseas	- Community development assistance	Lake Mainit areas
13. British Department for International Development – Development Assistance to Mindanao	- Community development assistance	Lake Mainit areas

14. International Fund for Agricultural Development (IFAD)	- Farm-to-market roads construction	Jabonga
	- Water system construction	Kitcharao
	- Drainage canal construction	Kitcharao
	- Construction of rural water system	Alegria
	- Road rehabilitation	Mainit
	- Livelihood assistance projects	Jabonga
	- Food processing, Hog fattening, Rattan craft	Kitcharao
15. Foundation for the Philippine Environment	- Biodiversity conservation	Lake Mainit municipalities
	- Research	
16. Office of Sen. Aquilino Pimentel, Jr.	- Eco-tourism center	Jabonga
17. United States Agency for International Development	- LGU Performance Survey	Surigao del Norte
	- LGU Performance Survey	Agusan del Norte
18. Department of Public Works and Highways	- Road system	Jabonga and Mainit
	- Flood control survey	Kalinawan river
	- Circumferential road system	Jabonga
	- Farm-to-market roads	Alegria
19. Department of Finance	- Water system improvement	Kitcharao and Alegria
	- Alley and Diversified Cropping with Livestock	Kitcharao
	- Floating fish cages	Kitcharao
	- Abaca production, Swine Production and Microwatershed	Alegria
	- Tree Plantation, Lakegrass Protected Area	Kitcharao
	- Lakeshore Fish Sanctuary	
20. Department of Environment and Natural Resources	- CBFMA	Jabonga
	- Certificate of Stewardship	Jabonga
	- Water system improvement	Kitcharao and Alegria

	- Construction of water reservoir	Jabonga Jabonga
	- Orchard/Fruit tree plantation and poultry	Kitcharao Kitcharao
	- Alley and Diversified Cropping with Livestock	Alegria Jabonga
	- Floating fish cages	Jabonga and Kitcharao
	- Abaca production, Swine Production and	Kitcharao
	- Lake Mainit Watershed subproject Reforestation	
	- Tree Plantation, Lakegrass Protected Area	
	- and Lakeshore Fish Sanctuary	
21. Solar Power Technical Support (SPTS)	- Solar power electricity	Jabonga
	- Water system improvement	Jabonga
	- Coco virgin oil production	Jabonga
	-	
22. World Bank	- Water system improvement	Kitcharao and Alegria
	- Potable water system	Mainit
	- Alley and Diversified Cropping with Livestock	Kitcharao
	- Floating fish cages	Kitcharao
	- Abaca production, Swine Production and	Alegria
	- Tree Plantation, Lakegrass Protected Area and Lakeshore Fish Sanctuary	
	- Microwatershed	
	- Agroforestry	
	- Tree Plantation	
	- Lakegrass Protected Area	Kitcharao
23. Kapit-bisig Laban sa Kahirapan (KALAHI)	- Construction of day care center	Jabonga
	- Farm-to-market road	Jabonga
24. Ahencya Espanyol Cooperacion Internacional (AECI)	- Eco-tourism center construction	Jabonga Jabonga
	- Farm Level Grain Center	

25. Asian Development Bank	- Farm-to-market road	Kitcharao
	- Lake Mainit Watershed subproject	Jabonga
	- Reforestation	Jabonga and Kitcharao
Department of		
26. Agriculture	- Community irrigation system	Kitcharao
	- Municipal warehouse establishment	Mainit
	- Lakewall repair	Mainit
	- Food processing	Mainit
	- Acquisition of farm tractors	Kitcharao
	- Solar and Mechanical dryers	Kitcharao
	- Mechanical facilities	Kitcharao
	- Marketing contacts	Kitcharao
	- Carabao dispersal	Mainit
	- Seeds and plant materials distribution	Mainit
27. National Economic Development Authority (NEDA)	- Farm level grain center	Jabonga
	- Concept on sustainable development	Butuan City
	- Strengthening capability building	
28. Agrarian Reform Infrastructure Support Program (ARISP II)	- Farm-to-market roads	Alegria
	- Communal irrigation system	Alegria
	- Construction of rural water system	Alegria
29. National Irrigation Administration (NIA)	- Communal irrigation system	Alegria
	- Communal irrigation system	Mainit
	- Communal irrigation system	Kitcharao
30. LOGOFIND	- Completion of public market	Mainit
31. INFRES	- Farm-to-market roads	Kitcharao
	- Fish cage development	Jabonga

32. Department of Social Welfare and Development (DSWD)	<ul style="list-style-type: none"> - Microlivelihood projects - Indoor/outdoor facilities, day care centers, Evaluation of ADP-Surigao del Norte - Self-employment Assistance project - Skills training in soap making - Alamang Processing 	<ul style="list-style-type: none"> Mainit Mainit Surigao del Norte Jabonga Jabonga Jabonga
33. PATSARRD	<ul style="list-style-type: none"> - Swine production - Native chicken raising - Goat dispersal - Vegetable production - Dried fish production - Organic fertilizer training 	<ul style="list-style-type: none"> Mainit Mainit Mainit Mainit Mainit Mainit
34. Spanish Government	<ul style="list-style-type: none"> - Rattan production 	<ul style="list-style-type: none"> Mainit
35. Department of Health	<ul style="list-style-type: none"> - Ligtas buntis program - Reproductive age planning - Prenatal check-up - Immunization and vaccination - Family planning and birth control dissemination - National TB program - Schistosomiasis Treatment - Leprosy, Malaria & Filariasis treatment - Iron and Vit A supplement 	<ul style="list-style-type: none"> Jabonga Jabonga Jabonga Jabonga Jabonga Jabonga Jabonga Jabonga Kitcharao
36. CULION Foundation, INC	<ul style="list-style-type: none"> - Iron and Vit A supplement - Prenatal care program - Construction of Municipal Health Office 	<ul style="list-style-type: none"> Kitcharao Kitcharao Kitcharao
37. UNICEF	<ul style="list-style-type: none"> - Schistosomiasis Treatment - Prenatal care program - Iron and Vit A supplement 	<ul style="list-style-type: none"> Jabonga Kitcharao Kitcharao

38. Mainit National High School	- Tree plantation	
39. Surigao Norte College of Agriculture and Technology	- Technical supports on tilapia culture	Mainit
40. XU-Research Institute for Mindanao Culture	- Evaluation of ADP-Surigao del Norte	Surigao del Norte
	- Info-Book on gender-based profile	Surigao del Norte
	- Performance program survey	Agusan del Norte
	- Assessment of the Effects of Oplan Kontra Sistem	Surigao del Norte
41. World Vision - SNPIDA	- Evaluation of ADP-Surigao del Norte	Surigao del Norte
42. ANESVAD-AHENCYA ESPANYOL	- Health centers	Kitcharao
	- Vaccination and immunization	
43. Philippine Charity Sweepstakes Office	- Regular outreach programs on health	Kitcharao
44. Philippine Military	- Outreach programs on health	Jabonga
45. Department of Agrarian Reform	- Construction of water system	Jaliobong, Kitcharao
	- Construction of drainage canal	Mahayahay, Kitcharao San Juan,
	- Farm to Market Road: ARC Project	Alipao & San Pedro

Funding Agencies and their Programs in Lake Mainit

Funding institutions here and abroad have infused money to fund projects of the many organizations that share the vision of harnessing, developing and tapping the rich natural and human potentials of the lake. The listing here may not be complete because information on some projects does not include specific amount and source of funds, just

as information obtained for some funding agencies does not include specific projects and exact fund allocation. Some international institutions provided funds for very broad programs, making it difficult to estimate exact amount released for a given project under a broad program. Nevertheless, despite these gaps, relatively sufficient information on the funding agencies is outlined here. [Table 18](#) lists the funders of the various projects in the Lake Mainit area. They include international groups as well as government agencies and the LGUs. Some of the major sources of funds for the projects in the Lake Mainit area include the following:

1. **Canadian International Development Agency (CIDA)** – a Canadian-based funding agency that provided money for the construction of a building for the Lake Mainit Development Alliance (LMDA) and supported the implementation of ecological solid waste management in the areas along Lake Mainit. It also funded the formulation of An Info Book on gender-based profile and women’s situationer in Caraga growth centers and other interventions that centered on the welfare of the people in Lake Mainit areas. In the latter’s program, the activities focused on having a gender profile (i.e. population characteristics, employment, education, health, migration, land ownership, household characteristics), women situationer (i.e. nuptiality and fertility pattern, family planning, reproductive health, domestic violence, women in decision-making, task allocation), and women’s community involvement and participation. The general focus of the program is mainstreaming gender and development, and women’s participation in the Caraga Region.
2. **United Nation Development Program (UNDP) - Small Grants Programme** – funded projects related to biodiversity conservation and resource management. These projects aimed to conserve the biodiversity in the lake’s influence areas and restore its different life support systems. Specifically, the funds are to contribute and enhance agricultural and fishery production on a sustainable equitable basis, and to address environmental conservation and development in the community. Projects under this program use the landscape approach, addressing the upland, lowland and freshwater

ecosystems of the lake. The activities included capacity building, forest and lake ecosystems conservation, protection and management, policy advocacy and livelihood (animal raising, fish culture, and sustainable agriculture) projects. To alleviate poverty, projects are broadly categorized into building partnerships towards sustainable human development, support to asset reform through the Comprehensive Agrarian Reform programme, development of indigenous communities, strengthening of institutional mechanisms for convergence of poverty alleviation efforts: development of an integrated poverty monitoring and indicator systems, empowerment of indigenous people for sustainable management of ancestral domains, promoting multi-sectoral and community-based approaches to HIV prevention and care in the Philippines, increasing awareness and understanding implications of HIV/AIDS, an microfinance support project.

3. **Spanish Government Agencies: Instituto de Promocion y Apoyo al Desarrollo (IPADE) and Agencia Española de Cooperacion (AECI)** - the former institution implemented a project called Program of Infrastructure and Promotion of Economic Sector in Rural Areas – Sustainable Rural Development Project (PIPESRA). The aim of the project is to contribute to sustainable rural development in the Caraga Region in a wide range of initiatives that would alleviate poverty. Policy advocacy is always a component to achieve a long-lasting change. The project recognizes that wrong decisions made at the household and local community leadership structures are one of the root causes of poverty. Its target beneficiaries are the fisherfolk, farmers, women and the tribal communities. Some components of the IPADE's projects are funded by AECI. Among these are the provision of post-harvest facilities, construction of eco-tourism center, farm level grain center, rattan handicraft production shop, fish trading, marketing and information complex in the municipalities of Jabonga, Kitcharao and Mainit.
4. **Australian Agency for International Development (AusAID) and the Philippines-Australia Community Assistance Program (PACAP)**- pursued the goal of poverty reduction through three broad objectives: (1) to improve economic governance in key

Philippine Government agencies in order to create an environment for broad-based growth, and improved fiscal and economic management; (2) to strengthen security and stability through counter-terrorism capacity building and support for the Mindanao peace process; and (3) to improve the living standards of the rural poor in the southern Philippines by increasing the quality of, and access to, education and training and by addressing local-level constraints to rural income growth and human development through an area-focused approach in Northern Samar, Bohol, Misamis Occidental, Surigao del Norte and Agusan del Sur. These three strategic objectives are closely intertwined. Progress on governance and security issues are pre-requisites for sustainable rural development, while security and stability have major impacts on the environment for private sector engagement. The geographic focus of the Australian aid program continues to be in the southern Philippines, particularly Mindanao. Among the interventions supported by AusAID is livelihood assistance to agri-fishery-based micro-enterprise, matching grant program for health (including health and dental cares) and others. Recently, AusAID launched its new program named [Philippines-Australia Community Assistance Program \(PACAP\)](#). PACAP is a bilateral development program of the Government of the Philippines and the Government of Australia. The goal of the Program is to reduce poverty and improve the standard of living of poor communities through sustainable economic and social development. PACAP has two main program delivery mechanisms namely, [Focused Community Assistance Scheme \(FOCAS\)](#) and the [Responsive Assistance Scheme \(RAS\)](#). FOCAS comprises a suite of strategically linked, but separately funded activities aimed at improving livelihoods, increasing local appreciation of the community's environmental impact, and improving community advocacy. The approach is multifaceted and multi-stakeholder, involving the local government, national government agencies, NGOs/POs and the private sector to develop a series of priority interventions, and to be responsible for management and evaluation of each FOCAS. The strategy will not only implement community-initiated development activities but will also encourage capability building of service providers, and strengthening of LGU, NGO and PO networks. Its strength is that it is context-

sensitive and it avoids a one-size-fits-all approach. Very recently, PACAP, in coordination with LMDA supported a consultation meeting with the POs and the NGOs in the Lake Mainit area to generate issues and concerns that will serve as the basis for program development. It also funded the construction of gabions and bamboo plantation in Kitcharao to address the need to stabilize riverbanks.

5. Department for International Development (DFID) - Development Assistance to Mindanao thru Small Grants Scheme by the British Government - worked in partnership with governments committed to international targets and also with business, civil society and the research community towards achieving these goals: (1) eradicate extreme poverty and hunger, (2) achieve universal primary education, (3) promote gender equality and empower women, (4) reduce child mortality, (5) improve maternal health, (6) ensure environmental sustainability, and (7) develop a global partnership for development. Under the development assistance to Mindanao on Small Grants Scheme, the Embassy supports a number of development projects that benefit the marginalized farmers and fisherfolk, including abused women and children, Muslims and Indigenous tribes, and communities affected by conflict. The Embassy works in partnership with local and international NGOs, other social and civic organizations and local governments, private companies and other donors for the purpose of carrying out activities that uplift the welfare of children and women, development of agriculture and livelihood, and protection of the environment. While the information states that funds are given to projects in the Lake Mainit area, there is no mention of the exact nature of the project.

6. International Fund for Agricultural Development (IFAD) – works on the principle that to be successful, poverty-reduction policies must focus on rural areas. To overcome disadvantages stemming from remoteness, lack of education and health care, insecure and unproductive jobs, high fertility and (often) discrimination as women or ethnic minorities, the rural poor need the following: legally secure entitlements to assets (especially land and water), technology (above all for increasing the output and yield of food staples), access to markets, opportunities to participate in decentralized resource

management, and access to microfinance. Such policies not only promote economic growth but also help alleviate urban poverty. A sustainable reduction in poverty calls for the creation of a pro-poor policy environment, and allocation of a greater volume of resources targeted to the poor with greater effectiveness. This needs to be complemented by better partnership among government, civil society and the private sector so that the poor are empowered to take responsibility for their own development. The interventions of IFAD include construction of farm-to-market roads, construction of water system, construction of drainage canal, rehabilitation of road with spillway bridge and livelihood assistance projects such as food processing, hog fattening and rattan craft production

7. **Foundation for the Philippine Environment (FPE)** – has been assisting community-based resource management projects that empower communities for biodiversity conservation and sustainable resource management. It envisions communities that responsibly care for, and live in harmony with, the environment. The Foundation funds the Lake Mainit Biodiversity Conservaton Project of the Caraga Consortium for Environmental Protection and Sustainable Development (CCEPSD).
8. **United States Agency for International Development (USAID)** – funded projects on local government support program for the Caraga Region, particularly on the delivery of health services. The activities include the investigation of contraceptive practices, immunization, Vitamin A supplementation, tetanus toxoid coverage, awareness and utilization of iodized salt, acute respiratory infection and diarrheal occurrences among children 5 years and below. The program is through the initiatives of the Department of Health in a program named LGU Performance Program (LPP), which is collaborated by Xavier University – Research Institute for Mindanao Culture (RIMCU) as its research assessment and survey arm of the program.

Table 18. Funding institutions and their partner agencies, funded projects and amount of funding for projects in the Lake Mainit area.

Name of Funding Institutions	Funded Projects	Amount Released	Partner Agencies
1. Canadian International Development Agency (CIDA)	<ul style="list-style-type: none"> - Building construction - Implementation of ESWM - Concept on sustainable development - Strengthening capability building - Info-Book on gender-based profile 		<ul style="list-style-type: none"> LMDA LMDA NEDA RIMCU, LGU
2. Lake Mainit Development Alliance (LMDA)	<ul style="list-style-type: none"> - Lake Mainit Limnological Assessment Project - Agroforestry 	<ul style="list-style-type: none"> P250,000 P55,000 	<ul style="list-style-type: none"> MSU Naawan - FSTDI LGU-MAO
3. AusAID - PACAP	<ul style="list-style-type: none"> - Construction of gabions and bamboo plantation - Sanitary landfill - Livelihood assistance to agri-fishery based micro-enterprises - Prenatal Care and Post Partum - Iron and Vitamin A supplement for children - Matching grant program for health 	<ul style="list-style-type: none"> P982,702.50 P1.80 M P20,000 	<ul style="list-style-type: none"> LGU LGU LGU LGU-MHO, DOH LGU-MHO, DOH LGU-MHO
4. UNDP Small Grants Programme	<ul style="list-style-type: none"> - Biodiversity conservation - Resource management - Strengthening capability building 	<ul style="list-style-type: none"> US\$32,231 US\$44,045.75 	<ul style="list-style-type: none"> AFBHFI, AID Fndn, and LGUs in Lake Mainit
5. Spain – Technical Assistance Facility	<ul style="list-style-type: none"> - Food sufficiency improvement 	<ul style="list-style-type: none"> US\$32,231 (entire project) 	<ul style="list-style-type: none"> NEDA
6. DA-BFAR Caraga Region	<ul style="list-style-type: none"> - Fish and vegetable processing 	<ul style="list-style-type: none"> P50,000 	<ul style="list-style-type: none"> DLR/ PANRO

	- Bottom Set Gill Net: 200 units	P400,000	BFAR, PFO
	- Pond culture of tilapia	P2,000	BFAR, PFO
	- Fish Solar Dryer	P176,000	BFAR, PFO
7. Department of Agriculture	- Farm Mechanization: Farm Tractors	P1, 000.000	LGU
	- Carabao dispersal	P300,000	LGU-Siargao
	- Upland development	P50,000	MAO
8. LGU-Jabonga	- Improvement of great lake resort	P500,000	MTO
	- Construction of new municipal building	P11,900,000	SPTS and Prov
	- Improvement of the Mun. Gym	P500,000	
	- Establishment of coco virgin oil	P250,000	
	- Self Employment Assistance Project	P18,000	Prov & DSWD
	- Skills training on soap making	P5,000	
	- Alamang Processing Alternative	P3,300	Prov & DSWD
	- Operation Timbang & Feeding of Moderately & Severely Malnourished Children	~ P10,000	Prov & DSWD
	- Chlorination of water from the source		RHU
	- Establishment of Nursery for fruit tree propagation	P55,000	LMDA
9. LGU-Kitcharao	- Construction of water system	P3,589,612	DAR-IFAD
		<i>(total project cost)</i>	DAR-IFAD
	- Construction of drainage canal	P1,789,640	DA,MAO
		<i>(total project cost)</i>	
	- Farm Mechanization: Farm Tractors	P200,000	
10. LGU-Mainit	- Municipal warehouse establishment	P1, 000,000	DA
	- Communal Irrigation	P500,000	NIA

	System		
	- Binhian ng Bayan program	P25,000	MAO
	- Micro livelihood projects	P250,000	DSWD
	- Swine artificial insemination	P150,000	MAO
	- Seeds and plant materials distribution	P50,000	DA,MAO
Department for International Development			British
11. (British)	- World poverty alleviation program		NGOs
12. International Fund for Agricultural Development (IFAD)	- Farm-to-market roads construction	P5,700,000	LGU DAR and
	- Construction of water system	P3,589,612	LGU Equity DAR and
	- Construction of drainage canal	P1,789,640	LGU Equity GOP, MLGU
	- Road rehab with spillway bridge	P2, 250.000	& Community
	- Livelihood assistance projects	P250,000	LGU
	- Food processing, Hog fattening and Rattan craft	P120,000	LGU-DAR-NMCIREMP
13. Foundation for the Philippine Environment (FPE)	- Lake Mainit Biodiversity Conservation Project	P749,980	CCEPSD
	- Community organizing		
	- Resource management		
	- Advocacy		
	- Livelihood		
14. Office of Sen. Aquilino Pimentel, Jr.	- Eco-tourism center		Convergence, Mamanwa
15. United States Agency for International Development (USAID)	- LGU Performance Survey		RIMCU,
	- LGU Performance Survey		LGU, DOH

16. Department of Public Works and Highways	- Road system	P1.20 M	LGU
	- Flood control survey		CARBDP
	- Circumferential road system	P14.5 M	Natl Govt
	- Farm-to-market roads		DAR
17. Department of Finance (DOF)	- Water system improvement	P47,451,000	WB, DENR & LGU
	- Alley and Diversified Cropping with Livestock	P1, 150,000	WB, DENR & LGU
	- Floating fish cages	P3,839,864	WB, DENR & LGU
	- Abaca production, Swine Production and	P24,100,000	WB, DENR & LGU
	- Microwatershed Agroforestry,	P12,000,000	WB, DENR & LGU
	- Tree Plantation, Lakegrass Protected Area and Lakeshore Fish Sanctuary		
18. Department of Environment and Natural Resources	- CBFMA	P30,000	LGU
	- Certificate of Stewardship	P15,000	
	- Construction of water reservoir Orchard/Fruit tree plantation and poultry		
	- Lake Mainit Watershed subproject Reforestation	P3,223,200	ADB & JBIC
	- Tree Plantation, Lakegrass Protected Area and Lakeshore Fish Sanctuary		
19. SPTS	- Solar power electricity	P11,000,000	Prov. & Mun. Govt
	- Water system improvement	P200,000	Prov. & Mun. Govt
	- Coco virgin oil production	P250,000	Prov. &

Mun. Govt

20. World Bank	- Water system improvement	P47,451,000	DOF, DENR & LGU
	- Alley and Diversified Cropping with Livestock	P1, 150,000	DOF, DENR & LGU
	- Floating fish cages	P3,839,864	DOF, DENR & LGU
	- Abaca production, Swine Production	P24,100,000	DOF, DENR & LGU
	- Tree Plantation, Lakegrass Protected Area and Lakeshore Fish Sanctuary Microwatershed Agroforestry,	P12,000,000	
21. KALAHI	- Construction of Marketing Center	P134,572.16	DSWD, CIDSS
	- 2 school buildings and 2 DCCs	P982,416	DSWD, CIDSS
	- Road Rehabilitation/Improvement	P1,261,727	DSWD, CIDSS
	- Road Rehabilitation/Improvement	P2,064,300	DSWD, CIDSS
	- Road Improvement/Upgrading	P2,425,152.5	DSWD, CIDSS
22. AECI	- Eco-tourism center construction	P11,000,000	Convergence & Sen.
	- Farm Level Grain Center		Pimentel's Office LGU
23. Asian Development Bank	- Farm-to-market road	P3 ,000,000	LGU- INFRES
	- Lake Mainit Watershed subproject	51,978,081.53	DENR
	- Reforestation	13,187,069.47	DENR
24. ARISP II	- Farm-to-market roads	P14,500,000	DAR-DPWH
	- Communal irrigation	P3,000,000	NIA

	system		
	- Construction of rural water system	P4,500,000	DAR-LGU
25. National Irrigation Administration	- Communal irrigation system	P500,000.00	LGU
26. LOGOFIND	- Completion of public market	P9, 000,000	LGU
27. INFRES	- Fish cage development	P476,000	
28. Department of Social Welfare and Development	- Microlivelihood projects	P250,000	LGU
	- Relief Augmentation Assistance	P6,423.25	LGU
29. PATSARRD	- Swine production	P60,000	DLR/LGU
	- Native chicken raising	P9,000	DLR/LGU
	- Goat dispersal	P60,000	DLR/LGU
	- Vegetable production	P10,000	DLR/LGU
	- Dried fish production	P35,000	DLR/LGU
	- Organic fertilizer training	P60,000	DLR/LGU
30. Spanish Government	- Rattan production	P1, 000,000	LGU
31. Department of Health	- Ligtas buntis program		LGU, PHO,
	- Reproductive age planning		RHU, CFI
	- Prenatal check-up		
	- Immunization and vaccination		
	- Family planning and birth control dissemination		
	- National TB program		
	- Schistosomiasis treatment		
	- Leprosy, Malaria & Filariasis treatment		
- Iron and Vitamin A supplement			
32. CULION Foundation, INC	- Iron and Vitamin A supplement		LGU, PHO,
	- Prenatal care program		RHU, CFI, UNICEF LGU, PHO,

			RHU, CFI, UNICEF
33. World Vision - SNPIDA	- Evaluation of ADP-Surigao del Norte	RIMCU, LGU	
34. ANESVAD-AHENCYA ESPANYOL	- Health centers - Vaccination and immunization	RHU RHU	
35. Philippine Charity Sweepstakes Office (PCSO)	- Regular outreach programs on health	RHU, DOH, PHO	
36. Philippine Military	- Outreach programs on health	RHU	

Issues and Concerns Confronting the Stakeholders

The various forms of interventions were introduced to address the needs of the people around the lake but they have not really brought about a promising, stable and sustainable lake ecosystem where people could already sit comfortably. In the present survey, the respondents articulated some issues and concerns continually confronting them. The resolution and satisfaction of these are deemed necessary to a successful implementation of lake management projects. They should therefore be a key input to the formulation of a lake development framework. In general, there is a great recognition of the many benefits provided by the lake and that this resource is in fact the sole source of life for many people in the area. But its sustainability is threatened by many activities that are intertwined to poverty. A summary of the issues and concerns identified by the POs include the following:

- illegal logging (especially timber poaching and indiscriminate cutting of trees)
- weak law enforcement
- illegal fishing (e.g. use of fine mesh nets and cyanide)
- quarrying of limestone

- illegal mining
- problem on solid waste management (i.e. improper solid waste management, absence of garbage cans and trucks, indiscriminate disposal of garbage to anywhere)
- siltation that caused overflowing and stagnation of water
- deforestation
- watershed issue particularly on the conflict of leadership in CADC areas
- lack of viable livelihood projects that results to low income among of the people
- flooding of ricefields.

The issues perceived by the POs are parallel to those presented by LMDA that, in addition to the above, identified the following:

- continuing degradation of forestlands (no taxes could be imposed because the activities are illegal)
- increasing population growth in lakeshore (creating the problem on waste disposal, basic services and household settlement)
- use of agro-chemicals that causes the disappearance of some endemic fish species.

Considered a controversial issue is the proposed hydroelectric power plant. While there are no details about the proposed project, a number of PO representatives think that the establishment of a plant would address the problem of flooding of ricefields, particularly in Alegria, as it would reduce the volume of lakewater. Citing Iligan City as an example where people never complained of ill effects of the plant, they believe that the plant would not cause water pollution but instead would bring economic benefits to the people. A good number of PO representatives however believe otherwise. The opening of a hydropower plant would threaten the endemics in the lake because such project would alter and destroy the feeding and nursery grounds of the fish, and would further degrade the lake resources. It also would alter the socio-economic and cultural significance of the lake. While the proposed plant is still subject to the rigorous processes of evaluation, impact assessments and public consultations, there is a need to disseminate

information on its potential negative impacts on the lake, addressed especially to those who welcome the proposal and those who remain undecided on it.

Addressing the Issues and Concerns

The representatives of the POs and NGOs and key officials around the Lake Mainit area are optimistic that the issues and problems can be resolved and addressed. The recommendations generated from the survey are summarized as follows:

1. strict enforcement of environmental laws
2. tree planting and reforestation along the buffer zones, lakeshore, riverbanks and forest lands
3. financial assistance to livelihood projects,
4. PO capability-building
5. deputization of training and seminars by BFAR and DENR
6. coop pre-membership education seminars
7. formulation and implementation of solid waste management plan
8. intensify IEC on environmental issues
9. strong political will among the leaders
10. prohibition on the extraction of sand and gravel
11. acquisition of funds from funding agencies
12. agroforestry adopting specifically SALT technology.

There is a consensus that lack of political will among the leaders is key to the very weak implementation of environmental laws. Some leaders are allegedly owners and protectors of illegal activities. Tapping all sectors in the society is perceived as a better strategy of implementation. Line agencies like the PNP and DILG must be included in the whole implementation program of a project.

Corruption, too much politicking and petty political squabbles contribute to failure of intervention projects. These contribute to insufficient livelihood projects that, in turn, further encourage illegal activities. While generation of more livelihood projects with a better implementation scheme is achievable for NGOs and POs, addressing

problems related to political motivations of the leaders is difficult. In fact, the respondents could not generate recommendations except to mention that they should not be elected again.

NGOs and the Need for Networking, Coordination and Effective Implementation

While implementation of past and ongoing interventions is played by both government and non-government organizations, the NGOs are recognized as key players in the overall development program of the lake. Only twelve NGOs, all in one accord to sustain Lake Mainit, have been identified to operate in the area. Yet, these NGOs have not really networked and coordinated with each other in their activities despite singleness of ultimate objectives and the smallness of the area covered. Thus, in a number of cases, interventions are duplicated. For example, in Cantugas, Mainit, four NGOs, namely: REACH Foundation, Convergence, Caraga Consortium and a certain NGO from Agusan conducted a seminar at different times but all on farming systems. In the end, the activities did not get much participation from the community because the people were already saturated on a repeated training and seminar. This case is a classic example of waste of resources due to lack of coordination among the implementors of a project.

In an interview with a leader of the Mamanwa tribe, the perceived lack of coordination was also cited as partly responsible for the growing apathy towards intervention projects. Different groups come introducing different projects (e.g. training) but they are sometimes scheduled either simultaneously or successively or without regard of the group's other activities. Sometimes, a training in a week is followed by another training the following week and another one a week after, all on the same or very related fields (e.g., farming). In these activities, the same individuals (often the leaders) are the participants. In their desire to see concrete outputs or results of a project, which according to them are still wanting, they have become tired of seminars, even if such are totally different from each other in nature.

Many of the interventions have not necessarily addressed the real issues and concerns of the communities. While it is difficult to pinpoint the blame, there is a need

for the implementors to analyze the roots of the problem of target groups. This requires a constant communication between the implementing NGO, the partner POs and the target beneficiaries. The NGO that is the main actor in project implementation should first launch a real need-analysis before undertaking actual project activities. A representative of an NGO operating in the Lake Mainit area commented that never again should the Mamanwas be made beneficiaries of a project because they do not take the interventions seriously. For example, some 220,000 hectares of ancestral lands claimed successfully by the group through the initiatives of the NGOs were later leased to some entities despite the mandate of the law that ancestral lands cannot be leased. They sell the houses that are built for them as they move to another place of abode. In many cases, partner POs stop engaging themselves in the interventions when the implementing NGO leaves, totally collapsing the intervention that was started. Evidently, there is no sustainability in interventions that end up such as this. Why sustainability is not achieved requires some in-depth analysis of the whole project.

A partial answer to the question on sustainability was achieved in the course of the survey. In a brief discussion with the Mayor of Jabonga, the mayor was very quick in citing a community of Mamanwas in one of the barangays in his municipality. Having heard of the objectives of the survey, he referred the team to the barangay captain who graciously accompanied and introduced us to the Mamanwa leader. The conversation with the tribal person shed light on what and how interventions should be carried out. He appeared very happy and satisfied of the projects involving his group, an impression that is contrary to what another tribal leader in another barangay claims. He pointed out the need to identify the real root of the problems before introducing projects. For Mamanwas, security of abode is historically the problem. They do not have a security of the land they occupy. He affirmed that indeed the tribe is nomadic, not because of their own choice but because they are forced to be so. According to him (which he also claims as a real experience of his family since he was a little kid), the tribes are driven from their lands primarily because they do not have land titles that would secure their claim of ownership. When a settler, an invader or a lowlander comes with a title and a legal threat, there was

no choice but to move and find a new place, a place that is later also claimed by another owner with a legal title. Having identified the root of the problem, the tribal leader discussed the need for a secure place with the provincial LGU before introducing any other form of intervention. The LGU provided the land where the Mamanwas built their houses, now without the threat of someone with a title coming in to displace them. Henceforth, NGOs intervened by opening avenues for livelihood and health care, interventions that he said are relatively succeeding because the people feel that the root of their problem had been addressed. They have even started buying refrigerators and TVs and karaokes, among others, because they are assured that they will no longer be driven out from their abode. When asked what sort of intervention is needed by his community should an NGO come in, the leader was quick in mentioning literacy for the adults because the other needs are already addressed by the NGOs presently operating in their area. The case is a classic example of issue-specific or need-based intervention. The message is very clear: that an NGO, a PO or any other group intending to introduce projects should first identify the root/s of the problem rather than address the issue that is seen from the surface.

There is a need for NGOs to be immersed and make themselves known to the local community. This will support their clamor that foreign funding institutions should tap the NGOs that are locally operating in the area rather than those NGOs that are based outside of the Lake Mainit area. Such would ensure contextualization of the projects and would avoid duplication of activities. This strategy would also avoid conflict and competition between and among NGOs wanting to introduce interventions in the same area.

Obviously, there is a need for a coordinating body to coordinate the activities of the NGOs and their partner POs, as well as the LGUs to ensure a more efficient implementation of projects in the area.

People's Perception on the Interventions in Lake Mainit and Their Recommendations

Various sectors of the society were solicited information about their personal perspectives on the interventions in Lake Mainit. A semi-structured survey questionnaire was used. The respondents, considered to be key informants, were requested to fill some information written in the questionnaire. Almost all the respondents said that the people know the existence of the project in their areas. They even claimed to have understood and have approved the objectives of the projects. However, they believed that public consultation prior to the implementation of the project was very limited. In the end, even if they understood the objectives of the project, people were reluctant to participate because they were not consulted at the pre-implementation phase.

The impacts of the interventions are variable. While these were not determined quantitatively but deduced from interviews and survey, many claim that the projects have improved their economic situation. The livelihood projects initiated by the LGUs raised their income. There is also an increase of business and job opportunities, and increase in the revenues of local government. Capabilities of LGUs and FARMCs to manage resources are enhanced and these are expected to bring about improved protection and conservation of the lake resources. The educational campaign and information dissemination activities have increased environmental awareness of the public. Farm-to-market roads have reduced the pressures on the labor-extensive delivery of farm products.

On the other side, a number of respondents are not very happy of the projects in their localities. The prohibition of some activities to protect the habitat has pushed some people to engage in other activities that are either illegal or destructive such as mining, quarrying and illegal fishing. Some families that do not like the project or have interpersonal problems with other project participants end up withdrawing their support and cooperation. Some members of the Mamanwa tribe claim inadequate support. One interviewee openly expressed her suspicion that her tribe is just taken advantage of by groups seeking for funding assistance from agencies that are interested on IPs.

In many parts of the lake area, slow completion of infrastructure projects causes inconvenience to commuters and the public in general. Road traffic interferes the delivery of goods to the market. Unsustained financial assistance to livelihood projects eventually led to the projects' total failure.

Some of the projects are still on-going, especially the construction and rehabilitation of farm-to-market roads but a number of these are halted without certainty of resumption. There are also projects that are already approved but not yet implemented for lack of funds. These sorts of projects are treated with sarcasm by some respondents. Project proposals that are deemed to be very appropriate for a given issue could not be approved for lack of funds.

While lack of sufficient funds is perceived as a major hindrance to completing and sustaining interventions, corruption and massive politicking are hindrances as well. Barangay captains who handle LGU-initiated projects would often engage their relatives and close friends only. Such a practice encourages corruption; transparency and accountability become a problem.

In some areas, security and peace are still a problem. The alleged presence of NPAs prevents some implementers from fully immersing in communities or has caused projects to be prematurely terminated. Construction of farm-to-market roads is slowed down or halted when some landowners refuse to sign the right-to-way agreement.

To achieve better success in implementing projects, the respondents believe that the following should be given consideration:

1. different agencies should be tapped for a given project, pooling their resources to ensure that a project is completed instead of halted in the middle of implementation.

2. where funds are insufficient for all activities, projects that are of general interest should be given priority.

3. project implementation should be supported by implementing appropriate laws like apprehension of bad elements that hinder fieldwork.

4. the terms of implemented projects should be made clear to the beneficiaries to avert conflicts that are divisive to the community.

5. the community should be informed of the project prior to implementation.

Some respondents mentioned specific needs like construction of day-care centers and generation of livelihood projects for the day-care workers and women. Tree planting and establishment of nurseries are strongly recommended. To address issues in the uplands of the Lake Mainit area, measures should involve a reward system for forest rangers, deputization of PO and local leaders as forest rangers, a system that will encourage people to report timber poachers, and a policy support from the LGU that will penalize violators of existing laws. Successful interventions in the area should be documented and made public to provide the surrounding communities with models that can be duplicated in their own locality.

The Lake Mainit Development Alliance

In 1999, the Lake Mainit Development Alliance (LMDA) was organized through a Memorandum of Agreement between and among the two provinces of Caraga Region, eight municipalities and selected national line agencies. It has a Project Management Office based in Kitcharao. The Regional Development Council per RDC Resolution No. 11 series of 1999 legally recognized the formation of the alliance.

LMDA aims to support and assist the LGUs in effective and efficient delivery of basic services, and in the enforcement of environmental laws and policies to ensure the sustainable development and management of Lake Mainit. This is through the promotion of ecological and recreational values, conservation, protection of natural resources, enhancement of economic activities, and people empowerment for the improvement on the quality of life of its constituents. Specifically, LMDA's commitments are:

1) to conserve the aquatic resources and to enhance their economic, ecological and recreational values, and

2) to promote greater involvement of the government, the private sector, local communities and other stakeholders in the sustainable management of the Lake and other critical resources.

The interventions proposed and implemented by LMDA fall under any of the following:

1) Upland Development and Management that is comprised of forest resources assessment, lumad and dumagat capability building, forest land use and watershed management planning, nursery establishment, reforestation or plantation establishment, agro-forestry development, tree park and eco-tourism development;

2) River Management that includes the program on riverbank stabilization, rechanneling of Aciga and Bangonay rivers, deepening of Kalinawan river, construction of riverbank protections or structure, river tour, inventory and evaluation and marsh rehabilitation;

3) Lake Management that includes lake resources assessment, establishment of fish sanctuary, establishment of water quality monitoring, freshwater fish culture, fish seeding and strengthening of FARMCs;

4) Waste Management that includes the establishment of sanitary landfill, establishment of garbage collection system, reuse and recycling of waste and marketing, establishment of municipal sewerage system, establishment of water quality monitoring system and monitoring and inspection of SWMS; and

5) Institutional Strengthening that includes Lake Mainit information system, Lake Mainit training project, LMDA IEC project and Lake Mainit stakeholders congress.

To date, LMDA's specific accomplishments include, among others, seedling plantations, establishment of fish sanctuary, fish culture in cages, FARMC strengthening and water quality monitoring. As an alliance, it does not only coordinate with some organizations undertaking projects in the area but is a project implementor as well. In fact, its PMO has submitted proposals and subsequently acquired funds for some specific projects.

The alliance is a potential coordinating body that coordinates activities in the Lake Manit area. Very recently, it facilitated the gathering of the POs as well as the NGOs to discuss matters pertaining to Lake Mainit. While the initial meetings are part of the FOCAS strategy of PACAP, the formation of an NGO network is viewed as a necessity and as an avenue for exchange of information among NGOs. This effort is a step towards addressing the need to coordinate the activities of the different organizations operating in the area to avoid problems of duplication, competition and neglect previously mentioned for NGOs. LMDA may be able to perform a coordinative function. But at present, it can be viewed as a group like any other NGO the fact that it also submits proposals for projects and activities that are typically implemented by NGOs. As such, it may not be an effective coordinating body.

Since LMDA is an alliance of the municipalities and the two provinces that have jurisdiction over the lake, its status can be elevated to a coordinating body. Accordingly, a request was already made to the Congressmen of Agusan del Norte and Surigao del Norte for them to pass resolutions that would make LMDA a body with functions and roles similar to that of the Laguna Lake Development Authority. The office had also requested the NGOs in the area to provide them with their organization profile so they can be easily located and tapped in case funding institutions require specific areas of expertise for certain types of projects. LMDA claims to already have an environmental management plan for the lake but it should come up with an updated development framework for Lake Mainit with inputs from the various NGOs and POs. At present, some of its activities are similar to the activities of the NGOs and POs or the other way of putting it is that some of the NGOs' activities are similar to what LMDA is implementing. While such parallelism can be rationalized as complementary and/or supplementary, there still is a need to coordinate the activities around the lake to avoid duplications and to ensure that all the issues and concerns are addressed rather than having so many activities but focusing only on a very few issues. As seen, LMDA can be a strategic body. If given such a role, the details should be worked out such that it does not compete with the NGOs in the area in terms of seeking for funds because if this

alliance becomes a coordinating a body, it assumes a position that may be a little bit higher than the ordinary NGO, giving itself an advantage when proposing projects for funding.

What is the Lake Mainit Integrated Area Development Project (LMIADP)?

The proposed Lake Mainit Integrated Area Development Project (LMIADP) underwent the earlier steps of assessment and evaluation but is now set aside for lack of funds. Nevertheless, it is presented in this report as it is still very possible for this proposal to be revived when political environment would allow.

The LMIADP is a pioneering development effort that envisions a holistic and concerted development of the Lake's Influence Areas (LIA), through an integrated approach by providing primary production facilities and improving and protecting the environment. The goals of the project are: (1) to improve the social and economic well-being of the communities in LIA, (2) to attain self-sufficiency in food and other basic needs of the populace, (3) to avert further environmental degradation and enhance environmental quality, and (4) to achieve greater self-reliance by mobilizing natural and other local resources. The project covers Lake Mainit areas including the municipalities of Mainit and Alegria in Surigao del Norte and Kitcharao and Jabonga, both in Agusan del Norte. The total proposed fund as of 1992 is P2.1 Billion, to be funded by the Overseas Development Assistance (ODA) and the Government of the Philippines (GOP). This project is divided into two main categories namely, the governmental projects and the private entrepreneurial projects, amounting to Php 1,977,659,600.00 and Php 167,744,313.00, respectively.

The project is viewed to be developmental and could possibly address the socio-economic and environmental issues and concerns in the areas along Lake Mainit. However, as per record to date, no budgetary allocation has been given to the project. Accordingly, because of too much politicking among the provincial leaders, especially when new governors get elected, project development was discontinued, hence was never implemented. Nevertheless, the Lake Mainit Integrated Area Development Project paved

the entry of other interventions. While none got implemented, the components of the LMIADP are presented here for future reference. Table 19 presents the components of the government projects of the LMIADP.

Table 19. Components of Governmental Projects, Specific Activities and Fund Allocations of the LMIADP

1. Social Services Development Projects

Nature on Intervention	Description	Amount of Funds
1. Social Services Development Program	<ul style="list-style-type: none"> - construction of 16 units Brgy Health Centers - construction of 1 unit Rural Health Center - rehab of 4 Rural health Centers - rehab of 15 Brgy Health Stations - 5-year training of 528 BHW - procurement of medical supplies 	P109, 931,000.00
2. Nutrition Program	<ul style="list-style-type: none"> - construction of 38 day care centers - provision of supplemental feeding 	
3. Sanitation Program	<ul style="list-style-type: none"> - provision of 7,313 water-sealed toilets and water disinfectant facilities for five years 	

2. Education Facilities and Manpower Development

1. School Building and Support Facilities	<ul style="list-style-type: none"> - construction of 48 classrooms - rehab of 40 classrooms - deployment of 48 additional school teachers and other school support facilities 	P13, 788,000.00
2. Practical Skill Development (Adult Education)	<ul style="list-style-type: none"> - training of 5690 out-of-school youth/unemployed adult 	

3. Infrastructure Support Development Program

Nature on Intervention	Description	Amount of Funds
1. Roads and Bridges Development Program	<ul style="list-style-type: none"> - construction of 105.2 km new road - construction and rehab of 509-linear meter bridges 	P668, 260,440.00

2. Water Supply Development program	<ul style="list-style-type: none"> - construction of 16 units deep wells - construction of 4 units shallow wells - construction of 12 units spring development 	P6, 350,000.00
3. Open Channel or Tunnel for Technical Assistance Program (TAP)	<ul style="list-style-type: none"> - construction of 7 units communal system - solve Lake overflowing water affecting 5,000 has. of crop lands during rainy days - reclaim riceland of no less than 2562 has. - controlling water by 3 meters - construction of 3.45 km off-channel as outlet for excess water - requires full blown FS and detailed engineering work 	P117, 030,000.00
4. Mini-Hydro for TAP	<ul style="list-style-type: none"> - requires FS and engineering work 	P4, 745,900.00

4. Agriculture/Fishery Development Program

Nature on Intervention	Description	Amount of Funds
1. Sustainable Agro-Ecological Development Project	<ul style="list-style-type: none"> - approved and funded by Netherlands and Philippine Government (no specific amount) 	
2. Upland Diversified Farming	<ul style="list-style-type: none"> - establishment of 2 nurseries for a 10-yr seedling propagation for 7,828,48 has - financially assisted under the credit scheme of the Countryside Agro-Industrial Dev't Financing Program (CAIDFP) 	
3. Fish Hatchery, Breeding and Acclimatization Facility Project	<ul style="list-style-type: none"> - dispersal and seeding of fry and fingerlings of 4-hectare area for fish culture and Lake waters 	
4. Agriculture and Fishery Livelihood promotion Program for CAIDFP	<ul style="list-style-type: none"> - purse-siene project - bagnet - salt making - swine breeding - poultry hatchery 	P9, 909,358.00
5. Technical Assistance Program (TAP)	<ul style="list-style-type: none"> - in-house training - on-the-job training - pre-cooperative and cooperative formation - cooperative development - training of 4, 932 program beneficiaries for fishery and agriculture livelihood training program 	

6. Small-scale Projects	<ul style="list-style-type: none"> - swine fattening - carabao breeding and dispersal - poultry layer project - broiler production - duck raising - tuna drift gill net - tilapia fish pens - bangus fish pens - orchard and fruit production - vegetables and legumes production 	(the same amount)
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5. Environmental and natural Resources Development Program

Nature on Intervention	Description	Amount of Funds
1. Comprehensive Reforestation Program	- envisions to reforest 11,006.31 has (5 yrs, 8 municipalities)	P836, 911, 422.00
2. Mineral Resource Development Project FS for TAP	- detailed geological studies of the areas - comprehensive exploration surveys identifying metallic and non-metallic minerals	

6. Industrial Development Program

Nature on Intervention	Description	Amount of Funds
1. Investment Promotion Program for CAIDFP	<ul style="list-style-type: none"> - Light and Cottage or Home Industries (coconut vinegar making, rattan craft, stone craft, hollow block making, ice manufacturing, bricks and tiles making and bag making) - Macro/Anchor for Industrial Devt Program (feed mill project, rattan processing plant project, and integrated coconut processing plant) 	P1, 728,000.00
2. Trade promotion program	<ul style="list-style-type: none"> - product quality assurance for buyer's satisfaction and acceptance - products presentation in trade fair exhibits, media announcements and periodical announcements 	
3. Technical Assistance Program	<ul style="list-style-type: none"> - training of 1, 695 target beneficiaries for industrial livelihood training program - participants' acquisition to credit funding scheme of CAIDFP 	

4. Marketing Assistance Program - provision of marketing assistance of products and produced thru a channel distribution, marketing forecast and pricing

LMIADP also includes a set of projects that will be implemented by the private sector, collectively referred to as ‘private entrepreneurial projects’. The main proponent of private entrepreneurial projects is the Countryside Agro-Industrial Development Financing Program (CAIDFP). It extends easy financing and technical support to economic and other livelihood projects. The qualified projects are as follows:

1. Agroforestry Projects – involves the development, maintenance and production of annual, semi-annual and perennial crops for domestic and home use, local markets, processing and for industrial uses, such as:
 - Root crops production
 - Vegetables production
 - Cereals and legumes and
 - Banana and other fruit production.
2. Agro-Livestock projects – engaged directly or indirectly in the profitable production of poultry and livestock or a combination of both, including:
 - Poultry raising for broiler/meat, layer/egg and poultry hatchery
 - Duck raising for egg production, balut/salted egg making and duck breeding/hatchery
 - Hog/swine raising for fattening, breeding and dispersal
 - Cattle/carabao raising for fattening and special breeding projects. This is applicable and proven effective in the area
 - Goats and other livestock raising for breeding, fattening and other related projects
3. Light and Cottage Industry – concerned on the production of home industries utilizing family labor and other light industries such as:
 - Mat/loom weaving, basket making, etc.
 - Wood, bamboo and rattan craft manufacturing

- Food processing and preservation
 - Metal craft and iron materials fabrication
 - Coconut oil processing, soap and candle manufacturing
4. AquaMarine Projects - tapped freshwater and marine resource potentials thereby sustaining steady income for fishing communities in the area. This includes aquaculture and fish capture projects.
 5. Macro/Anchor Projects - supported linkages in raw materials, marketing and other small related projects

The total budgetary requirement of the private entrepreneurial projects is P167,744,313, broken down as follows:

1. Agro-Livestock	P19, 641,484.00
2. Aqua-Marine	P24, 950,000.00
3. Agroforestry	P37, 600.000.00
4. Cottage and Light Industry	P23, 870.000.00
5. Macro/Anchor	P53, 000.000.00
6. CAIDFP Support Cost	P8, 682.000.00

SUMMARY AND RECOMMENDATIONS

The present study generated the following important information:

1. Interventions in Lake Mainit ecosystems and the surrounding communities are broadly categorized into infrastructure, livelihood assistance, social and health services, agriculture, biodiversity conservation, and research. A pictorial presentation of these interventions is in Appendix 3.
2. Policy and legal interventions, community organizing and IEC are integral components of many projects around the lake.
3. Twelve NGOs operate and undertake various initiatives for the lake ecosystems and communities.
4. A total of 121 POs are accounted for in the four municipalities considered in this study. Many of these are formed in response to the need of specific projects. Very few have served as partners of the NGOs in the area.
5. LGUs, line agencies like DENR and BFAR, and international organizations and foreign governments like USAID, UNDP, AusAID, CIDA, and the British and Spanish governments provided funds for the various projects around the lake.
6. The amount of funds for the various initiatives ranges from a few thousands to millions of pesos.
7. The indigenous peoples (i.e., Mamanwas) are beneficiaries of a number of projects initiated by NGOs such as Convergence, EDCADS and Aid Foundation.
8. Among the four municipalities, Alegria has the least number of interventions.
9. Some people recognize the contribution of the interventions to their economic upliftment but a number say that politicking, absence of proper coordination, corruption and lack of legal support contribute to the projects' failure in addressing real issues and concerns confronting the stakeholders.

Despite many past and ongoing interventions, the lake ecosystems are still threatened by all kinds of destructive and illegal activities. The issues and concerns raised by the organizations operating in the area are similar to what should have been addressed

by the past interventions. Seemingly, such interventions have not really addressed the real issues in the area. It is therefore strongly recommended that initiatives should harmonize the need for economic development and the need to maintain the integrity of environmental goods and services. To achieve this, a lakewide management framework should be formulated with inputs from all sectors of the lake communities, including the Mamanwas. A common framework that is in place could bring about the following: a) better focus of the interventions; b) funds will be maximized; c) facilitated and institutionalized monitoring and evaluation process; d) better recording as a consequence of centralizated recording; e) avoid duplication of interventions; and f) improved quality of interventions because of institutionalized monitoring and evaluation. A body or an organization that is supported by the provinces of Agusan del Norte and Surigao del Norte such as LMDA should coordinate the activities to ensure that they are anchored on a common framework. It is very necessary though that the role of such body be clarified among the NGOs so it does not come out a competitor in sourcing out project funds.

The NGOs and POs in the area should be strengthened. Potentially, projects fail because the implementing NGO itself is not very capable in handling such projects. There is a need to regularly evaluate the organizational structure of implementing NGOs and the capability of its staff to undertake interventions. Otherwise, project money could just become a source of livelihood for the NGO staff.

Foremost is the need for legal support behind all these interventions. NGOs should aim to work out the passage of policies and ordinances that will strengthen implementation of projects. Otherwise, efforts to protect the communities and ecosystems would 'not have teeth'.

Appendix 2. Information data sheet

SURVEY ON THE INTERVENTIONS IN LAKE MAINIT

Province: _____
Municipality: _____
Barangay: _____

Date: _____
Interview No.: _____
Interviewer: _____

A. PERSONAL DATA

1. Name of Respondent: _____
2. Sex and Age: _____
3. Name of Agency/Organization: _____
4. Designation: _____

B. GENERAL INFORMATION

1. Which of the following interventions are present in your area?

- | | |
|--|--|
| <input type="checkbox"/> Infrastructure projects | <input type="checkbox"/> Health services |
| <input type="checkbox"/> Biodiversity conservation | <input type="checkbox"/> Agriculture |
| <input type="checkbox"/> Microfinancing | <input type="checkbox"/> Education |
| <input type="checkbox"/> Community organizing | <input type="checkbox"/> IPs interventions |
| <input type="checkbox"/> Livelihood programs | <input type="checkbox"/> Researches |
| <input type="checkbox"/> Sports, cultural developments and tourism | |

2. Who are the implementors of the interventions?

- | | |
|---|--|
| <input type="checkbox"/> LGU | <input type="checkbox"/> NGO |
| <input type="checkbox"/> Government agencies | <input type="checkbox"/> Academic institutions |
| <input type="checkbox"/> Others (specify) _____ | |

3. Who are the target beneficiaries of the interventions?

- | | |
|---|---|
| <input type="checkbox"/> Youth | <input type="checkbox"/> Women |
| <input type="checkbox"/> Elderly | <input type="checkbox"/> Children |
| <input type="checkbox"/> General public | <input type="checkbox"/> Others (specify) _____ |

4. What agencies provided the funds for the interventions?

- LGU (IRA) Government agencies
 NGOs (specify name) _____ Foreign-assisted projects (specify name) _____
 Others (specify) _____

5. How much funds are allocated for the interventions?

- below P1 million P1M – P2M
 P2M – P3M more than 3 million
 Others (give specific figures) _____

C. KNOWLEDGE, PERCEPTION AND ATTITUDE TOWARDS THE INTERVENTIONS

1. Do people in the community know the existence of the interventions in your area?

- Yes No Maybe

2. Do the constituents understand the objectives of the interventions?

- Yes No Maybe

3. Does the project satisfy the general interests of the public?

- Yes No Maybe

4. Do stakeholders approve the existence of the project?

- Yes No Maybe

5. Are the stakeholders supportive of the interventions?

- Yes No Maybe

D. GENERAL ASSESSMENT OF THE INTERVENTIONS

1. In your opinion, what has the project done to you as a resident of the area?

POSITIVE

NEGATIVE

2. What are the impacts of the interventions to the general public, especially to the target beneficiaries?

POSITIVE

NEGATIVE

3. a.) What is the present status of the interventions?

b.) What activities are going on in relation to the intervention?

4. What problems are or were encountered in the implementation of the interventions?

5. What recommendations can you make for the interventions?

Thank you!

Appendix 3. Graphical presentation of interventions in Lake Mainit area. Legend is in succeeding page.

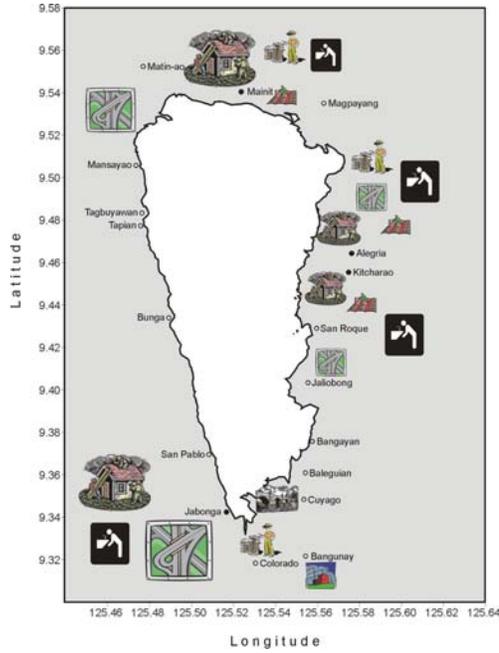


Figure 1. Infrastructure Interventions

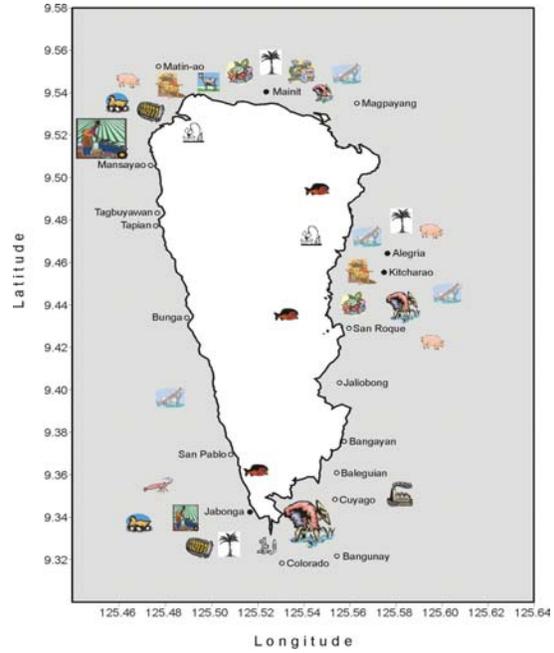


Figure 2. Livelihood Interventions

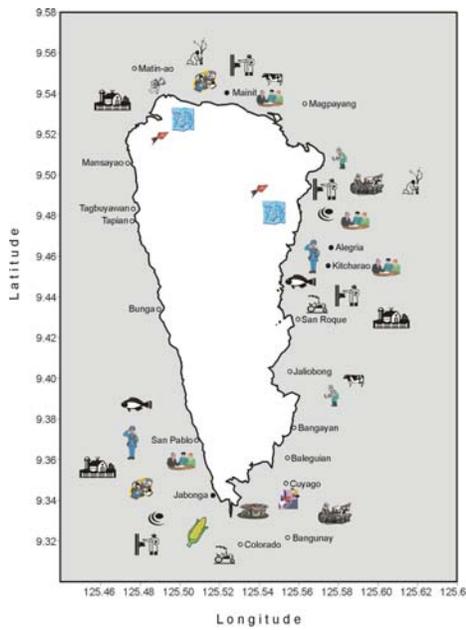


Figure 3. Agricultural Interventions

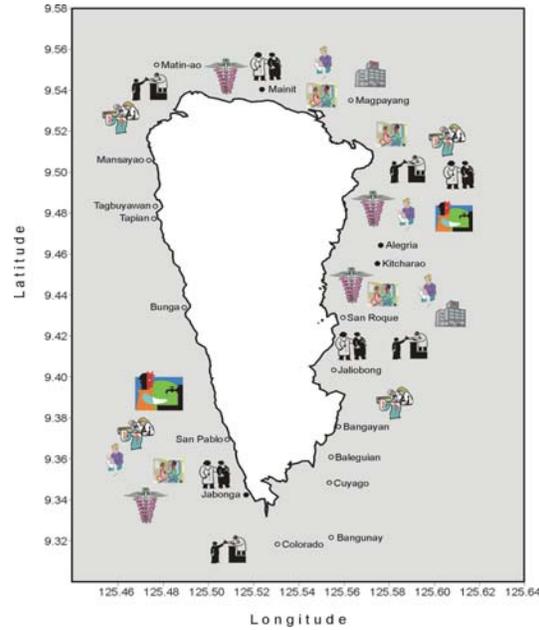


Figure 4. Health Interventions

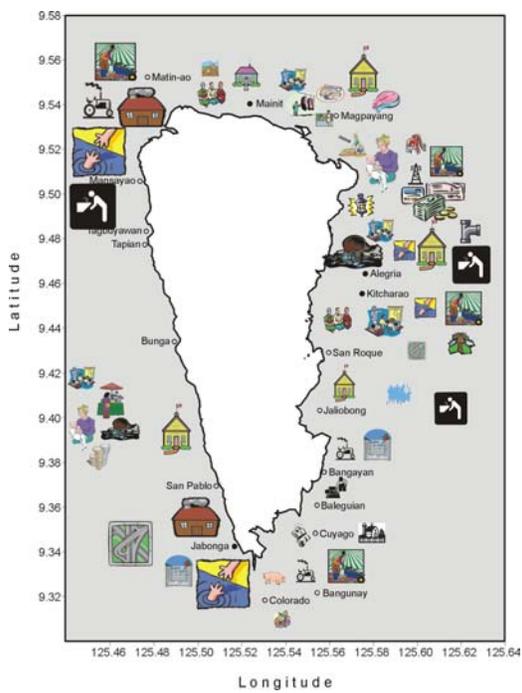


Figure 5. Social Interventions

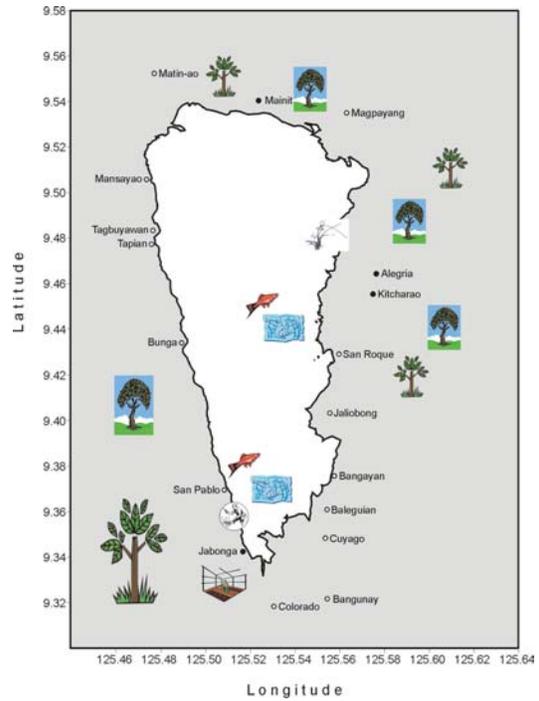


Fig. 6. Biodiversity Conservation Interventions

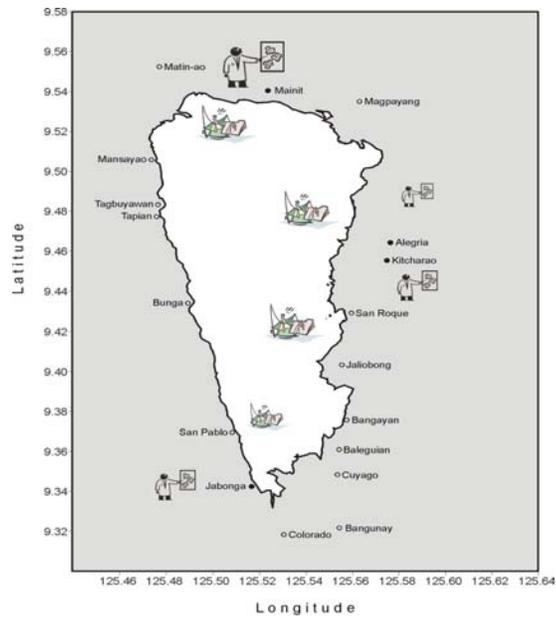


Figure 7. Research Interventions

Legend:



Farm to Market Roads, road system, rehabilitation of roads



Infrastructure (School building, Farm level grain center, Gabions, Warehouse, Lake wall and Eco-tourism center)



Waste Management, Dumpsites, disposal



Water irrigation system



Potable water system



Flood control, flood control survey, inundation survey



Solar power electricity



Self-Employment Assistance- Kaunlaran



Native chicken production, poultry



Hog raising, swine production, hog fattening



Fish processing, dried fish making



Furniture making, rattan craft



Goat production, dispersal



Vegetable production, Ampalaya production and processing



Rattan replanting, Abaca production



Organic fertilizer training with capability building



Diversified cropping, Binhian ng Bayan program, Food sufficiency



World Alleviation fund, Community assistance



Fishing gears



Floating fish cages



Coco virgin oil



Soap making



Alamang processing



Fish solar drier



Bantay Danao



Upland development



FAO rehabilitation program, Strengthening, Capability building



Animal health care, deworming, vaccination & immunization, insemination



Animal dispersal, Carabao dispersal



Catch survey monitoring



Fish Sanctuary



Fingerling dispersal, seeding (Carp & Tilapia)



Post harvest training



Rotational cropping of rice and corn, HVCC



Small water impounding project



Law enforcement, apprehensions, deputized of warden



Inland fisheries, Pond culture



Farm mechanization, Provision of farm equipments, Pre/Post harvest facilities



Loan grants for rice production (QUEDANCOR)



Corn sheller



Medical information drive, IEC



Medical outreach programs



Basis medical services, prenatal, case finding, treatment



Operation Ligtas Buntis



Supplemental feeding, vitamins supplement, iron supplement



Medical Check Ups



Municipal hospitals, District hospitals



Sanitation program, Chlorination of water



Relief assistance, Relief augmentation



Emergency shelter assistance



Senior citizen center



Farm inputs



Core shelter



Training, CVRD training, Disaster capability building training,
CVM training, BTWG orientation



Meat processing



Food processing, Food for work



Day care center, DCPC



Buy & sell of agricultural products



Moliedo processing



Stone masonry line canal construction



Jetmatic pump installation



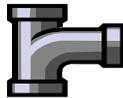
Street light project



Transmission line project



Socialized credit scheme



Installation of G.I. pipes



Drainage system



Footbridge



Spring development project



Water reservoir



Multi-purpose drying pavement



Garment making



Cash for work



Mini-market building, Marketing center



Tree plantation



Agroforestry, Fruit trees



Lakegrass protected area



Probation of fishing gears



Nursery for seedlings



Aquatic research



Inland research, Social, LGU, Health research