NEDA KR2 Productivity Enhancement Program
Project Proposal Template

Part A.

Project Title: **Management of Marine Protected Areas in the Davao Gulf Area**
Project Proponent: **Davao Integrated Development Program, a Local Government Initiative.**
Project Cost: PHP 7,950,000.00
Project Duration: 3 years

Part B.

1. Project Background:

Today, overfishing is the leading threat to our marine ecosystem. Less than 5 percent of the Philippines' coral reef ecosystems remain in pristine health, and there are fishing grounds that contain a mere 10 percent of the fish stock present just 50 years ago. Establishing Marine Protected Areas will help regulate the fishing areas and other potentially destructive activities thereby benefiting also our fish habitats and coral reefs.

Marine protected areas (MPAs) were established in the Philippines as early as 1974. Initial models in Sumilon and Apo Islands and others set forth a framework for coral reef management that has been shown to enhance fish yields to traditional fishers as well as protect and maintain near shore coral reef habitats for biodiversity and multiple economic uses (Russ and Alcala 1996; White and Vogt 2000; White et al. 2000; White et al. 2002). Devolution of authority for management of natural resources to Local Government Units in 1991 was the national policy shift that has supported localized management efforts and many more MPAs ordained by coastal municipalities and cities.

The House of Representatives in the Philippines approved a measure that encourages all coastal Local Government Units to initiate their own marine protected area, while also preserving existing ones. The measure, known as the "***Marine and Coastal Resources Protection Act of 2011***," provides the establishment, maintenance and management of marine protected areas (MPAs) in all coastal areas and ensures the participation of the community through a management scheme that accommodates all the stakeholders. This new piece of legislation really builds on the Philippines' significant experience in Integrated Coastal Management.

This legislation ensures that all coastal Local Government Units (LGUs) are encouraged to initiate their own MPA as a stepping stone to taking control of the coastal resources within their jurisdiction and close the 'open access' problem of the world's oceans, by asserting a property right, defining a system for management (no take within a core zone) and defining roles between communities in a co-management agreement partnership with the Local Government Units to effectively manage the MPA.

In Region XI, the Davao Gulf Area, which is located in the Southeastern part of Mindanao, is one of the most diverse marine ecosystems in the world according to the World Wide Fund for Nature – Philippines (WWF).

The Davao Gulf has a water area of 10,500km^2 and a total catchment area of 5,132 km^2 which is derived from the various watersheds of Davao del Sur, Davao del Norte, Davao Oriental, Compostela Valley and Davao City. The average depth of the Gulf is 17 meters. Its volume is approximately 112x109 m^3. Its widest point is approximately 160 km while coastline is approximately 520 kms.

Reef and mangrove species, cetaceans and host of invertebrates contribute to the natural diversity of the Gulf. Endangered species such as Hawksbill Turtles, Leatherback Turtles and Dugong (Sea cows) have been sighted around the area. (Davao Gulf Framework Plan 2005-2014).

Now, according to DENR XI, there are 54 small community-based and Local Government supported MPAs existing

in the Davao Gulf but only a few (10 or less) MPA Management Plans were completed and well managed or managed at all.

2. Project Objectives

The primary objective for establishing MPAs is to sustain fisheries utilization in the adjacent fishing areas and protect and conserve ecosystems. MPA provide habitat and protection to large and reproductive mature individuals of various marine species, and are important sources of eggs and larvae that may settle in MPA areas.

The project aims to improve MPA management in the ten (10) Pilot areas in Davao Gulf through the application of economic incentives, information sharing and integrated coastal management.

3. Project Components and Outputs, and Inputs

3.1 Nature of Productivity Enhancing Technology of the Project	**Description/ Explanation**
[x] Application for Best Practices [ ] Piloting New Technology [ ] Commercialization of Existing Technology [ ] Others (specify) _____	Marine Protected Areas (MPAs) is an important tool for biodiversity conservation, fisheries management habitat restoration and tourism development. The enforcement of the MPAs is best done thru co-management with the community. For this purpose and common understanding, MPAs will consist of "no-take" zone with some type of buffer or other nearby zones within which extractive and non-extractive uses are regulated. The fundamental principle of co-management is that it involves resource users and policy makers in the process of joint decision-making. The Tubbataha Marine Park Management Council demonstrates the potential of co-management and multi-sectoral management to ensure balance representation from stakeholder groups. With co-management approach, efforts will require future attention to developing larger-scale initiatives, reconciling local and global management agendas, balancing of local and scientific knowledge, and developing conflict resolution strategies.

3.2 Project Components and Outputs

COMPONENT	OUTPUT
1. MPA Institutionalization	- MPA management plan incorporated in the LGU development plan - Management body capacitated for financial management as needed - Budget from local government allocated for MPA management - Illegal and destructive activities stopped and within the vicinity of MPA
1. MPA Management Plan Enforcement	- Installed permanent marker buoys and anchor buoys - Continued information and education program about MPA functions/benefits - MPA outpost and other structures constructed and maintained - Environment friendly enterprises and/or fees initiated as part of MPA (eco-tourism) - MPA used as a study tour site, residents advocate for MPAs - Seagrasses conserved as habitat of Dugong and Pawikan nesting areas protected - Regularized patrolling and surveillance

3.3 Project Inputs

- Trainings, Promotions and IEC: Resource Persons, Training Materials, Posters, brochures, etc.
- Installation of Marker Buoys and Anchor Buoys: logistics materials
- Bio physical Inventory and Assessment: equipment, marine experts, survey tools, water test equipments
- Establishment of Turtle/Dugong and Marine Information Center: building, mangrove catwalks, multi-media facilities, hatchery
- Surveillance: Patrol Boat and accessories
- Fabrication of Artificial Reefs : Logistic materials
- Enterprise Development: tools, resource person, souvenir and handicraft materials

4. Project Location

Location: Davao Gulf Area	**Description/Justification**
1. Punta Dumalag, Matina Aplaya, Davao City 2. Sta. Cruz Marine Protected Area (Dapia and Isla Reta, Sta. Cruz, Talicud, Island Garden City of Samal) 3. Dadatan, Talicud Island, Island Garden City of Samal 4. Linosutan, Talikud Island, Island Garden City of Samal 5. Cogon, Talikud Island, Island Garden City of Samal 6. Sanipaan, Tambo, Babak, Island Garden City of Samal 7. Balet, Babak District, Island Garden City of Samal 8. Camudmud, Babak, Island Garden City of Samal 9. Tuban-Tagabuli, Sta. Cruz, Davao del Sur 10. Bato, Sta. Cruz, Davao del Sur	Davao Gulf is 10th among the 24 statistical fishing areas in the country, according to BFAR's Report, with 22MT average volume of fish for the last five years. It is home to 5-7 known species of marine turtles, 53 genera of corals and feeding ground of dugong and butanding. Davao Gulf is also an important resource for the residents, thus it needs to be conserved, managed and protected. Out of the 54 declared MPAs in the Davao Gulf, only 10 Areas have completed their MPA Management Plans. One from Punta Dumalag, Davao City, seven (7) from the Island Garden City of Samal and one (1) from Sta. Cruz. Samal Island is the heart of the Davao Gulf. Punta Dumalag Marina Protected Area was formally established in 2007 through City Ordinance No. 0375-07, series of 2007. Operationally, efforts on Marine Turtle Conservation started as early as 2001 in Punta Dumalag, Matina Aplaya, Davao City but it was through the initiative of the ECOGOV 2 Project that the site was declared as protected area to include mangroves, seagrasses and coral reef resources within the 37 hectare MPA. (Punta Dumalag Marine Protected Area Management Plan, 2009-2013). The Island Garden City of Samal issued Ordinance No. 2010 – 160 for the Establishment and Management of MPAs. Sta. Cruz MPA is divided into two areas: Dapia Marine Sanctuary which covers an area of 22.45 hectares with buffer zone extending from the boundary up to 50 meters, and Dugong Sanctuary located in Isla Reta which covers 20.93 hectares. Dadatan Marine Sanctuary covers two areas: Mansud MPA which covers an estimated area of 5 hectares and Dadatan Coral Garden with an area of 26 hectares. Linosutan Coral Garden and Marine Park covers 35.5 hectares encompassing coral reefs, seagrass beds and sandy substrates. Cogon Fish Sanctuary covers an area of 34.88 hectares. Besides the MPA is the Coral Garden. The Sanipaan Marine Park covers the whole Vanishing Island with a total area of 158 hectares and subdivided into four zones (Marine Sanctuary, Multiple Use Zone, Mangrove Protection and Rehabilitation Zone, Eco-tourism/ Recreation Zone). Camudmud MPA covers an area of 30 hectares encompassing coral reefs, seagrass beds, mangroves and sandy substrates.

	Marine Project for Liguid in Brgy. Balet was launched on March 10, 2006. There were five (5) zones identified in 102.53 hectares: core and buffer zone, rehabilitation zone, sustainable use zone and eco-tourism zone. The Tuban-Tagabuli MPA Management Plan covers a period of five years from 2009-2014. It is located at Pasig, Sta. Cruz, Davao del Sur with a total area of 50 hectares. Bato MPA has a total area of 25 hectares and it is located at the northern part of Pasig Islet, Sta. Cruz, Davao del Sur.
5. Social Preparation and Acceptability of Project	
☒Social Preparations and Acceptability Guide ☒Community was consulted in the identification of the Project ☒Community is supportive of the project ☒Legal aspects are considered in the project design ☒Cultural nuances are considered in the project design ☒Environmental considerations factored-in in project design	**Descriptions/ Explanation** This project proposal is a callout from the different MPA Management Plans in the Davao Gulf. These have corresponding city ordinances declaring their protection, rehabilitation and management. The Punta Dumalag Marine Protected Area Management Plan 2009-2013 was subjected to a public hearing on March 31,2007 and unanimously approved by the stakeholders of Matina Aplaya, Davao City. Island Garden City of Samal approved the Management Plans for 6 areas last January 26, 2010. The establishment of MPAs within the municipal waters of Sta. Cruz, Davao del Sur was approved through Municipal Ordinance #6, series of 2008.
6. Project Cost and Financing	
6.1 Project Cost	**7,950,000.00**
a. Investment Cost	
i. Development Cost	3,400,000.00
ii. Building and Equipment Cost	3,250,000.00
iii. Pre-Operating Cost	300,000.00
b. Operating Cost	1,000,000.00
6.2 Sources of Funds	
a. KR2 Funds	6,950,000.00
b. Equity	1,000,000.00
7. Project Economic Cost and Benefits	MPAs are a microcosm of the Philippines where the coastal natural resource base holds much potential to improve the incomes and quality of life of people if only it is protected and managed for sustainable use. These benefit-cost ratios assume increasing investment in management of coastal resources. Unfortunately such management is not immediately forthcoming and requires expertise, dedicated people and programs. These costs can all be justified in economic terms as for MPAs where the annual incremental benefits from coral reef and wetland generated fisheries and tourism are much more than the associated costs.

Economic Cost	Economic Benefits
Investment Cost on: - Trainings, Promotions and IEC: Resource Persons, Training Materials, Posters, brochures, etc. - Installation of Marker Bouys and Anchor Bouys: logistics materials - Bio physical Inventory and Assessment: equipment, marine experts, survey tools - Establishment of Turtle/Dugong and Marine Information Center: building, mangrove catwalks, multi-media facilities, hatchery - Patrol Boat and accessories for surveillance - Fabrication of Artificial Reefs : Logistic materials - Enterprise Development: tools, resource person, souvenir and handicraft materials	- Increased the coastal community's awareness of the condition of their environment and resources and their collective responsibility to manage the environment at a sustainable level. - Developed in people a sense of ownership over the resources, and helped the community recognize their part in the problem and take collective responsibility for managing and protecting these resources. - Provided opportunities for local participation that involves men and women making decisions and taking action using the CRM process of problem identification, planning, implementation and monitoring. - Enabled the community to form alliances for advocacy and sharing of resources and technologies - Built and sustained organizational structures for coastal resource management; - Provided the social preparation required by other CRM participatory tools - Created positive change in the values and behavior of individuals and the community, particularly in their perception and relationship toward the natural environment - Maintained behaviors which are friendly to the environment - Moved the community to actively participate in conservation and resource management and resource management programs - Enabled the community to assert their right to use and manage their resources and the benefits that can be derived from these resources.

8. Project Sustainability	Description/Explanation
Project Sustainability Guide	LGU is willing to fund the operation and maintenance through the provision of gasoline and other support needed by the project. From the start of the project, all stakeholders are involved in the formulation of the management plans and its implementation. MOA will be signed between the LGU and the community organization stating the roles and responsibilities of both. The LGU can charge users' fees for the operation and maintenance of the area so as to sustain the activities of the MPAs.
☒The LGU is committed to pursue project operation beyond the support of KR2 Funds	
☒Mechanism is in place for technology transfer from the LGU to the community	
☒The community is ready and willing to assume the responsibility of project operation	
☒The LGU is willing to regularly monitor project operation even after project operation is transferred to the community	

9. Project Work and Financial Plan Activity	Period of Implementation	Cost	Responsible Entity
I. MPA Institutionalization 1. Conduct of IECs to local officials 2. Conduct of IECs to the community 3. Formation of the team for patrolling and surveillance	Year 1 2 months	300,000.00	DIDP – LGU – NGAs (DENR,BFAR, NEDA)
II. MPA Management Plan Enforcement			
1. Trainings, Promotions and IEC - Basic Skills Training on Underwater Resource Management - Underwater Resource Monitoring and Assessment - Skills Training on Coral-Fish – Coral Life Identification - Advance Training on Habitat Assessment, Visual Documentation - Enterprise Development Training/ Workshop	Year 1	Tools and Equipments – 750,000.00 Training – 20K x 5 trainings x 10 pilot sites = 1,000,000.00 Promotional / IEC Materials (posters, flyers, guidebooks) – 1,000,000.00	
2. Installation of Marker Bouys and Anchor Bouys	Year 1	Materials: 50K x 10 = 500,000.00	LGU and community
3. Bio physical Inventory and Assessment - underwater photo digital videocam documentation	Year 1	Oxygen / Equipment Rentals = 10K x 10 sites = 100,000.00	DIDP – LGU – NGAs
4. Establishment of Turtle/Dugong and Marine Information Center (visitor Center)with Multi-media Facilities	Year 2	150K x 10 = 1,500,000.00	DIDP – LGU – NGAs
5. Patrol Boat and accessories for surveillance (flashlight, binoculars, megaphone, raincoats, etc)	Year 1	100K x 10 sites = 1,000,000.00	LGU and Community
6. Fabrication of Artificial Reefs	Year 2	50k x 10 sites = 500,000.00	LGU and Community
7. Enterprise Development	Year 2	30k x 10 sites = 300,000.00	LGU and Community
8. Resource Habitat and Reef Rehabilitation and Monitoring	Year 1-3	100k x 10 sites = 1,000,000.00	LGU and Community
TOTAL		**PhP 7,950,000.00**	

10. Project Design Summary			
Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Assumption
Goal Sustainably manage coastal resources; reverse their degradation, and reduce extensive poverty in coastal communities	Improved and well managed coastal resources, and 30% improvement in productivity and biophysical state of resources (year20)	- Coastal resources, ecological, and socioeconomic assessment - Stakeholder workshops, project review missions, project completion review and survey	Sustained Government commitment to coastal resource management and poverty reduction.
Purpose Improve MPA management in the ten (10) Pilot areas in Davao Gulf through the application of economic incentives, information sharing and integrated coastal management. Conserve and manage coastal resources and rehabilitate degraded coastal resources	10% improvement over baseline in fisheries resources; 10% improvement in hard coral cover; and 20% improvement in mangrove density in MPAs; 10% increase over baseline in fisherfolk household income.	Steering committee meeting and stakeholder workshops, and project evaluation report Institutional assessment, project review, and project completion report Socioeconomic Survey and assessment Resource and ecological survey and assessment coastal and marine habitat monitoring reports project impact assessments, and project completion report	Consistent MPA and ICRM and poverty reduction policies Consistent political will and ICRM policy Available techniques and livelihood opportunities Stable coastal population Active participation of communities and the private sector Continuous government commitment Effective enforcement of regulations and other policy instruments

Output Policy environment and legal framework for Marine Protected Areas in Davao Gulf rationalized, institutionalized, capacities strengthened, and governance improved MPAs institutionalized and functional at the local levels, and coastal ecosystems and resources in the threatened areas of biodiversity are protected and managed Alternative and supplementary livelihoods provided	Increased stakeholder participation in major policy decisions, and resource and budget allocation for MPAs (year 4) 547.29 ha of the 10 MPAs in the Davao Gulf are managed with active participation of communities (year 6) Incidence of illegal fishing, threats to marine habitats, and encroachments to foreshore areas reduced by 50% (year 6) At least 30% increase in fish density and 5% increase in fish species richness over baseline in no-take zones (year 6) 10 enterprises are established, of which at least 60% remain operational beyond their first year of operation (year 6) The enterprises provide supplemental employment opportunities to whom at least 30% are women (year 6)	Legal instruments LGUs' MPA reports and project impact assessment MPA Management Plans and LGU budget documents Records of ICRM organizations Reports of participatory and scientific assessments, and project impact assessment Records of ICRM and community organizations, and project impact assessment Records of community organizations, and training reports	Continued commitment of national and local governments to ICRM and biodiversity Sufficient number of qualified personnel will be available for training when required National Government is committed to providing performance-based incentives Community-led implementation of MPAs and biodiversity Adequate coverage of nongovernment organizations (NGOs) and rural finance institutions LGUs have competent staff to lead, support and sustain MPA initiatives. **Risks** Lack of political commitment Breakdown of peace and order

Activities	Inputs
MPA Institutionalization 1. Conduct of IECs to local officials 2. Conduct of IECs to the community 3. Formation of the team for patrolling and surveillance	Resource Persons, Logistics /tools, promotional materials, exhibits
MPA Management Plan Enforcement 1. Trainings, Promotions and IEC - Basic Skills Training on Underwater Resource Management - Underwater Resource Monitoring and Assessment - Skills Training on Coral-Fish – Coral Life Identification - Advance Training on Habitat Assessment, Visual Documentation - Enterprise Development Training/ Workshop	Resource Persons, Logistics /tools, promotional materials, equipments
2. Installation of Marker Buoys and Anchor Buoys	Materials for Marker buoys and anchor Buoys
3. Bio physical Inventory and Assessment	Technical Persons, Mask, survey tools and equipments
4. Underwater Photo Digital Videocam Documentation	Underwater Photo Digital Videocam Equipment
5. Establishment of Turtle/Dugong and Marine Information Center (visitor Center)with Multi-media Facilities	Building, IEC Materials, Multi-media materials
6. Surveillance Monitoring	Patrol Boat and accessories for surveillance (flashlight, binoculars, megaphone, raincoats, etc)
7. Fabrication of Artificial Reefs	Artificial Reefs materials
8. Enterprise Development	Resource Persons, Tools and materials
9. Resource Habitat and Reef Rehabilitation and Monitoring	Resource Persons, mangrove seedlings, ARs, boats, survey equipments, record materials