

# Institutional Arrangements and Processes in Marine Fishery Reserves-Sanctuaries Establishment in Lagonoy Gulf

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Date submitted: April 18, 2006; Date accepted: September 13, 2006

## ABSTRACT

This paper described the processes and institutional arrangements of MFR-S' establishment in Lagonoy Gulf from period 1993 to 2004. The analysis made use of primary and secondary data mainly derived from key informant interviews and participatory resource assessment (PRA).

Results showed that the establishment of Marine Fisheries Reserve-Sanctuary in Lagonoy Gulf started in 1993. During the ten-year period between 1993 and 2004, a total of 8 MFR-S were established with majority in Albay and the least in Camarines Sur. Two categories of institutional arrangements were identified in the gulf, namely: LGU-initiated and community-initiated, commonly facilitated by external agents during the project's incipient stage. Three types of institutional partnership emerged namely: Local Government Unit-Non-Government Organizations/ National Government Agencies (LGU-NGOs/NGAs) and people's organization (PO)-academe partnerships. The institutional arrangement and type of partnership determine the process and mechanism of implementation of MFR-S in Lagonoy Gulf. An academe-facilitated process focuses on research as starting point. NGO-facilitated process starts generally with community organizing, while NGA mostly proceed with policy implementation. The community-academe partnership is strong in the preparatory and planning phase. The LGU-NGO/NGA partnership on the other hand, is strong in the ordinance adoption phase.

Some factors could derail or facilitate the development of the establishment process in the logical order, these are: the capability of the LGU, the agenda and the long-term commitment of external agents, The interplay of these hindering and facilitating factors in the establishment process of MFR-S developed a 3-phase logical establishment process model for Lagonoy Gulf consisting of the following phases: (1) preparation and planning; (2) ordinance approval; and (3) implementation and management. This typology evolved two distinct types of mechanism of implementation, namely: (i.) a mechanism where the MFR-S planning preempts the ordinance for its establishment; and (ii.) a mechanism where the MFR-S planning precedes the ordinance for its establishment. The former type of implementation mechanism featured an enactment of ordinance establishing the MFR-S followed by a community consultation and

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management planning. The scheme resulted to the non-integration of the MFR-S management plan into the ordinance that established it. While the latter type of implementation mechanism featured a community consultation and MFR-S establishment (barangay CRM) followed by the enactment of an ordinance establishing an MFR-S by the municipal government. The scheme resulted to the integration of the MFR-S management plan into the ordinance that established it.

A more appropriate and effective MFR-S establishment process could be evolved from the Lagonoy Gulf experience by placing the different institutional arrangements, phase sequence and process typologies at appropriate periods capitalizing on their respective strengths.

*Keywords:* Institutional Arrangements, Marine Fisheries-Reserve Establishment Process, Coastal Resource Management, Lagonoy Gulf

## INTRODUCTION

Lagonoy Gulf is the largest and the most resource-rich fishing ground in the Bicol Region. It is bordered by the three provinces of Camarines Sur, Catanduanes and Albay, comprising 486 barangays in 14 coastal municipalities. Existing literature described in dramatic terms the issues of poverty and degradation of coastal environment in Lagonoy Gulf. In the last decade, several coastal resource management projects have been introduced in the gulf to comprehensively address these issues.

Marine fishery reserve-sanctuary (MFR-S) establishment is an effective tool for resource generation within the framework of coastal resource management (Hermes, 2003). Most of these MFR-S serves as a management tool and entry point for coastal resource management in Lagonoy Gulf to effect sustainable development. As one CRM practitioner puts it, "sustainable development entails more than the environmental protection of the coastal systems. It is a process in which policies are designed to bring development that is economically viable, socially just, politically participatory and ecologically sustainable. It depends among others, on the effectiveness of the institutional arrangements as well as interactions among entities involved in the management area". This necessitates institutional analysis to determine the way in which these resources can be better managed to meet the needs of the present generation without compromising the future generation of their own needs.

The passing of the Local Government Code in 1992 devolved the authority as well as the responsibility of managing municipal waters to LGUs. As a tool for coastal resource management, the establishment of MFR-S has been supported by some LGUs, research institutions, NGOs and by multilateral and bilateral donor organizations, employing various strategies and approaches. The Fisheries Code enacted in 1998 which granted the LGUs the jurisdiction and authority to manage, conserve, develop, protect and utilize and dispose all fish and fishery aquatic resources within their respective municipal waters provided coastal communities in Lagonoy Gulf greater autonomy in MFR-S management. The new code institutionalized the role of local fishermen and resource users in the community based planning and implementation of policies and programs in coastal resource management by the creation of Barangay Fisheries and Aquatic Resources Management Councils (BFARMCs). Some MFR-S implementers capitalized on this development in pursuing MFR-S management. The impetus for MFR-S establishment in Lagonoy Gulf was further complemented by the Agriculture and Fisheries Modernization Act (AFMA) that upheld the principle of sustainable development and people empowerment, among others, in fisheries development.

The implementation of the Fishery Sector Program (FSP 1) from 1991 to 1997 in 12 bays in the country with the support of Asian Development Bank (ADB) generated and initiated CRM plan for Lagonoy Gulf. The program pursued as a strategy, the generation of

bay wide CRM plans through the involvement of fishing communities by contracting non government organizations (NGOs). The gulf wide project together with the national policy efforts helped establish the first generation of MFR-S in the gulf. A continuation of the FSP, the Fishery Sector Resource Management Program (FRMP) in 1998-until present year, succeeded these efforts to achieve sustainable development of the fisheries sector and the reduction of poverty among municipal fishermen in the gulf through a series of interventions to reverse the trend of fisheries resource depletion in municipal waters and address the issues on poverty. Fisheries resource management as one of the components of the program supported MFR-S establishment as a key CRM strategy.

These developments together with their respective socio-political and geographic conditions shaped the institutional arrangements and processes of MFR-S establishment in Lagonoy Gulf in the last ten years. The progress, the institutional arrangements and the processes involved in the course of the establishment and management of this MFR-S were not documented. With their potential as an effective tool for resource management, there is a need to gain insights from various MFR-S establishment experiences to improve the process and develop models that will ensure a relative degree of success.

This paper described the process and institutional arrangements involved in establishing MFR-S in Lagonoy Gulf from period 1993 to 2004.

## METHODOLOGY

Participatory resource assessments using focus group discussion and key informant interview were conducted

in six MFR-S sites in Lagonoy Gulf to gather primary data. Document analysis using technical reports, municipal ordinances, project evaluation papers, brochures and similar publications covering MFR-S established from 1993 to 2004 were used to enhance the quality of the data. Case studies of establishment processes and institutional arrangement of MFR-S establishment in Atulayan Island, San Miguel Island and Agojo representing the provinces of Camarines Sur, Albay and Catanduanes respectively were done.

## RESULTS AND DISCUSSION

### Marine Fishery Reserves-Sanctuaries Established in Lagonoy Gulf

Table 1 shows the historical sequence and provincial locations of MFR-S in Lagonoy Gulf from 1993 to 2002. The first to be established were the MFR-S in Atulayan Island, Sangay, Camarines Sur, Agojo in San Andres, Catanduanes and Gaba, in Rapu-rapu, Albay. The latest is the MFR-S in Bato, Batalay, Catanduanes. Three MFR-S were established in 1993, while only one was established in 1998. Between 2001 and 2002, three MFR-S were established (David, et al. 2004). From 1993 to 2002, a total of 8 MFR-S projects have been implemented in Lagonoy Gulf. Five of these are in Albay, two are in Catanduanes and one is in Camarines Sur.

The pioneer MFR-S such as Atulayan Island and Agojo were established within the implementation period of the FSP 1 in Lagonoy Gulf. In contrast, the younger MFR-S were established at the height of the FRMP implementation between 2001 and 2002. Only one MFR-S (Malinao) was implemented through the Community-Based Coastal Resource Management

Year	Program	Existing Legal Framework	MFR-S	Province
1993	FSP	PD 704, LGC 1992	Gaba, Rapu-rapu	Albay
1993	FSP	PD 704, LGC 1992	Atulayan island, Sangay	Camarines Sur
1993	FSP	PD 704, LGC 1992	Agojo, San Andres	Catanduanes
1998	FSP	RA 8550, AFMA, LGC 1992	Sagurong, San Miguel island	Albay
2002	FRMP	RA 8550, AFMA, LGC 1992	Tiwi	Albay
2002	CBCRMP	RA 8550, AFMA, LGC 1992	Malinao	Albay
2002	FRMP	RA 8550, AFMA, LGC 1992	Ponco-Baranca, Bacacay	Albay
2001	FRMP	RA 8550, AFMA, LGC 1992	Bato, Batalay	Catanduanes

Table 1. Time line and provincial locations of MFR-S in Lagonoy Gulf

Project (CBCRMP) of the Department of Finance within the same period.

The existing legal framework and program interventions shaped the institutional arrangement and process of the MFR-S in Lagonoy Gulf. The Presidential Decree (PD) 704 and the Local Government Code of 1992 were the existing institutional mechanisms when the MFR-S in Atulayan Island in Sangay, Camarines Sur, Agojo in San Andres Catanduanes and Gaba in Rapu-rapu, Albay were established. Environmental protection is the more influential agenda that shaped the establishment process of these pioneer MFR-Ss. The implementation of fishery ordinances, policy implementation and LGU-initiation of the project characterized the establishment process of most of these MFR-Ss. When the Local Government Code of 1992 devolved the right to manage the municipal fisheries to the local government units (LGUs) from Bureau of Fisheries and Aquatic Resources (BFAR), the LGU of Sagñay, at the initiative of BFAR, established the first MFR-S in Lagonoy Gulf in Atulayan Island. The implementation of the Fisheries Sector Program (FSP 1) in 1995 and the Fisheries Resource Management Project (FRMP) in 1998 by the Department of Agriculture (DA) -BFAR in Lagonoy Gulf which viewed coastal resource management as an approach to address the problems faced by the marine resources had brought to fore the concept of multisectoral collaboration between NGO, academe, people's organization (PO) and the establishment of MFR-S as one of the strategies in coastal resource management (Pelea, et al, 2004). Project components of these programs included fisheries resource management and community-organizing activities in

coastal communities carried out by non-government organizations (NGOs).

Environmental governance is the more influential agenda that shaped the establishment process of the most recent MFR-S in Albay such as those in San Miguel Island in Tabaco, Tiwi, Malilipot and Malinao. These were established when the Fisheries Code (FC) of 1998 and the Agriculture and Fisheries Modernization Act (AFMA), aside from the Local Government Code (LGC) of 1992 were the existing legislative mechanisms. Community participation in MFR-S establishment characterized the establishment process of most of these MFR-Ss.

**MFR-S Establishment Institutional Arrangements and Processes**

The establishment of MFR-S in Lagonoy Gulf fall under two categories -LGU-initiated or community-initiated and commonly facilitated by external agents. The establishment process of MFR-S in the gulf was facilitated by external agents during the incipient stage. These external agents take the form of the national government agencies (NGA) i.e. the Bureau of Fisheries and Aquatic Resources (BFAR) and the Department of Environment and Natural Resources (DENR) among others, the academe or research institutions i.e. Bicol University Tabaco Campus (BUTC) and non-government organizations i.e. Development Research and Resources Productivity, Inc. (DRRP), Community Empowerment and Resources Development (CARE-CERD), Bicol Cooperative Development Center (BCDC) and Aquinas University of Legaspi-Center for Extension and Research (AUL-CRES) (Table 2).

	Albay			Cam. Sur		Total
	SMI	Tiwi	Malinao	Bacacay	Atulayan	
Leading entity						
Community	1	1	1	1	-	4
LGU	-	-	-	-	1	2
External agent						
NGA	-	-	-	-	1	1
NGO	-	1	1	1	-	4
Academe	1	-	-	-	-	1

**Table 2**  
**Institutional Arrangements of MFR-S Establishment in Lagonoy Gulf**

Majority, or four out of six of the MFR-S in Lagonoy Gulf have been established through the initiative of the community or the fisherfolks themselves. While only two were initiated by the LGU or the municipal government. Community-initiated MFR-S establishment process appeared to be a common feature in Albay Province. On the other hand, LGU-initiated MFR-S establishment seemed to be a common arrangement

in the provinces of Catanduanes and Camarines Sur. As to the external agents that facilitated these MFR-S in the incipient stage, the NGOs dominated in most of the MFR-S establishment in Albay particularly under the FRMP implementation period. While one out of the six MFR-S in Lagonoy Gulf was established with the NGA and the academe as external agents. For instance, the BFAR, a national government agency, facilitated the LGU-initiated MFR-S establishment in Atulayan Island, Camarines Sur, and the Bicol University, an academe, served as the external agent that facilitated the community-initiated MFR-S establishment in San Miguel Island, Tabaco, Albay. Along with these establishment processes emerged three categories of institutional collaborations in MFR-S establishment in Lagonoy Gulf namely: PO-Academe, LGU/NGA-PO and LGU/NGO-PO collaborations. The PO-Academe partnership, represented by the San Miguel Island-Marine Fishery Reserve Council (SMI-MFRC) and Bicol University, Tabaco Campus tie-up in Albay proceeded by way of community-initiated activity implemented with the help of the academe (BUTC) as an external agent. The LGU-initiated activity featured the LGU/NGA-PO partnership represented by Sagñay LGU/ BFAR and Fisherfolks tie-up in Atulayan Island, Sagñay Camarines Sur, with an NGA (BFAR) serving as external agent. Similarly, a process of establishment where the LGU initiated the establishment of an MFR-S with an NGO (CARE) as external agent and in partnership with the fisherfolks featured the LGU/NGO-PO partnership represented by the San Andres LGU/ Care Philippines and Agojo Community mangrove Development Organization (ACOMDO) tie-up in Agojo, San Andres, Catanduanes.

### **Phases and Mechanisms of Implementation**

The institutional arrangement and type of partnership determine the processes and mechanisms of implementation of MFR-S in Lagonoy Gulf. The processes could be summarized into three general phases: (i.) preparation and planning; (ii.) adoption/ ordinance proposal and endorsement; and (iii.) management and monitoring. These phases and their respective activities that often overlap together are presented in Table 3. The phases in the establishment process of the six MFR-S studied involved one or

combinations of activities. In these activities, the facilitation of external agents varies in terms of degree of involvement. The community-initiated and academe-led partnership as represented by SMI-MFR-S, PO-BUTC tie-up was more extensive in the preparation and planning phase in terms of activities in the MFR-S establishment process. The involvement of the academe was seen all throughout the phases. On the other hand, LGU-initiated and NGO/NGA-facilitated partnerships have relatively less extensive preparatory activities, usually dominated by public hearings of proposed ordinance, community organizing and LGU-NGA coordinative works. The involvement of LGU and NGOs as external agents was seen more particularly in the incipient stage and in the preparatory phase. The LGU-initiated process featuring either an NGO or NGA tie-up appeared to be characterized by relatively extensive activities in the ordinance adoption phase. Both processes however, did not differ much in the number of activities in the management phase. Some activities such as resource assessment, creations of management plan in the preparatory phase and communication of results to stakeholders in the management and monitoring phase were more pronounced in the academe-facilitated MFR-S establishment process.

Sequencing the activities involved in the MFR-Ss establishment showed that resource and socio-economic assessments were the most common activities under the preparation phase of community-initiated, academe-facilitated institutional arrangement. Meanwhile, community organizing was the most common starting point of LGU-initiated NGO-facilitated arrangement. An LGU-initiated, NGA-facilitated arrangement was characterized by ordinance enactment as a common activity in the preparation phase (Table 4). The academe-facilitated process focused on research as starting point. On the other hand, the NGO-facilitated process usually starts with community organizing. The LGU-initiated process proceeds with enactment of ordinances and enforcement.

The preparation and planning phase in San Miguel Island MFR in Tabaco, Albay started with a field study on coastal habitats, capture fisheries and socioeconomic condition of the island by the Bicol University College

Phases and Activities	Institutional Arrangements			
	Community-initiated (PO-academe partnership)		LGU-initiated (LGU-NGO, LGU-NGA partnership)	
		Involved external agent		Involved external agent
<b>Preparation and planning</b>				
Resource and socio-economic assessment (RSA)	X	Academe		
Information and education campaign (IEC)	X	Academe	X	NGO
Barangay consultation/public hearings	X	Academe	X	
Community organizing/ selection of representatives of MFR Council (CO)	X		X	NGO
MFR management planning and presentation (MP)	X	Academe		
Coordination, exploratory conference to create MFR				NGA
Drafting and endorsement of barangay resolutions	X	Academe	X	
Capability building seminars		Academe		NGO
<b>Adoption/ordinance proposal and endorsement</b>				
Adoption of barangay resolutions	X		X	
SB session and enactment of ordinance (MO)	X		X	
SB selection and creation of MFR Council representatives, induction; Creation of executive committee to implement ordinance	X	Academe	X	
Publication of ordinance and information dissemination			X	
<b>Management and Monitoring</b>				
Provision of fund and logistics (ME)	X		X	
Operationalization of Bantay Dagat	X		X	
Establishment of PNP detachment	X		X	
Enactment of management mechanisms e.g. MFR-S regulated activities	X	Academe	X	
Provision of physical markers (ME)	X	Academe	X	
Communication of result of socio-economic surveys to stakeholders	X	Academe		

**Table 3. Phases and activities in two types of MFR-S institutional arrangements in Lagonoy Gulf**

of Fisheries in 1995 and 1996. After the field activities, the results of the study were presented formally to the community and the management plan was conceived with the community. Within the same year, the Barangay Council approved the management plan. A year later, more than 233 residents of the island in a general assembly meeting approved the management plan. The second phase was carried out through the enactment of Barangay Resolution No.4, s. 1997 establishing the MFR-S in Barangay Sagurong by the Barangay Council. This was followed by the signing of a memorandum of agreement between the Barangay Council of Sagurong, the BUTC and the Municipal Council of Tabaco for the collaborative management of the MFR-S. A series of activities followed that resulted in the organization of the MFR-S Council, a multi-sectoral governing body of the MFR-S. The representative to the MFR-S Council, which served as the core group was chosen by the community. The

management and monitoring phase in the MFR-S consisted of passing of municipal resolution to allocate fund for the MFR-S markers, the establishment of a Philippine National Police (PNP) detachment in Barangay Sagurong and a dialogue with the community for its maintenance in 1997. The physical construction of markers in the MFR-S and complementary mechanism for managing the MFR-S were accomplished.

Other MFR-S in Albay such as in Tiwi, Malilipot and Bacacay were installed recently and are in progress. Installed in the light of the FRMP and CB-CRM programs, their establishment features a community-initiated process through the NGOs working within the context of the FRMP and CBCRMP project objectives. The preparation phase of MFR-S in these municipalities included the following steps or activities, namely: the conduct of a participatory resource

	Provinces		
	Albay SMI	Camarines Sur Atulayan	Catanduanes Agojo
Process sequencing	RSA>IEC>CO>MP> O>MO*	O>MO>RSA>IEC> MP*	CO>IEC>O>M0>MP*
Partnership	Community-initiated	LGU-initiated	
Initiating institution	Community	LGU	LGU
External agent	Academe	NGA	NGO

\*RSA=Resource and Socioeconomic Assessment; IEC=Information and Education Campaign; CO=Community Organizing; O=Ordinance Proposal and Enactment; MP= MFR Planning; MO=Provision of Fund and Logistics, Monitoring and Evaluation

**Table 4. Sequencing of MFR-S establishment processes in Lagonoy Gulf**

appraisal in the sites; CRM (and MFR-S) planning; and enactment of ordinance for the final establishment of the MFR-S.

The implementation of strategies for MFR-S establishment in Agojo, San Andres, Catanduanes, started from community organizing. Two strategies were employed by the NGOs in community organizing, namely: (1) for barangays without existing organizations, the normal process of consciousness raising and core group formation was adopted; (2) for barangays with existing organization, reorganization and strengthening were made through orientation and values development activities.

The preparation phase of MFR-S establishment in Atulayan, Sangay, Camarines Sur proceeded from the encouragement of the Bureau of Fisheries and Aquatic Resources upon Sangay LGU in pursuance of the provisions of RA 1790 in 1993 (Lauraya et al, 2003). Heeding to the agency's insinuation to promote coastal resource protection in the municipal waters of Sangay, the Sagñay LGU conducted general assemblies at the barangay level to illicit issues from the barangay as an input for the draft ordinance that established the MFR-S. A series of public hearings were made at the barangay level which was done prior to the submission of proposed ordinance to the Sangguniang Bayan. After the hearings, the Municipal Council passed the ordinance marking the completion of the second phase in the process. The management phase consisted of activation of the Bantay Dagat patrol to monitor the compliance of the ordinance and the allocation of fund.

Based on a published literature, the process of establishing and implementing MFR-S must proceed from the following logical model (Balgos et al, 2000; Berkes, et al, 2001):

1. Community entry and preparation
2. Planning and ordinance formulation
3. Ordinance approval
4. Implementation and adjustment

Each phase of the establishment process is associated with specific activities: phase 1 involves appraisal (issue identification and baseline assessment) and core group formation; phase 2 involves public education, capacity building; community consultation, ordinance formulation and drafting of management plan; phase 3 involves MFR-S establishment, MFR-S program preparation and budgeting, and; phase 4 involves management and monitoring, and establishment.

The omission of some supporting factors in the establishment process of most MFR-S throughout the three provinces of Camarines Sur, Albay, and Catanduanes prevented them from pursuing the logical model. These were manifested in the LGU-initiated MFR-S establishment process' absence of appraisal (baseline assessment) and core group formation and management planning which derailed phases 1 and 2 in the ideal logical model. Some of the factors that hindered the LGU from pursuing the process include the lack of capability of LGU personnel to conduct baseline assessment and the agenda of the key agencies

involved. Most LGU personnel have not had proper training on the conduct of scientific assessment of coastal habitats and do not have the know-how to interpret and infer implications for management from the findings. On the other hand, the community-initiated process in San Miguel Island MFR-S manifested the MFR-S establishment process in Lagonoy Gulf that almost identically followed the logical model. The process was facilitated by a technically capable external agent i.e. Bicol University, Tabaco Campus, that provided a long-term commitment to the project as well as the sharing of responsibility and authority between the LGU and the community.

The interplay of these hindering and facilitating factors in the establishment process of MFR-S developed a 3-phase logical model for Lagonoy Gulf consisting of the following: phase 1, preparation and planning; phase 2, ordinance approval; and phase 3, implementation and management. This typology of MFR-S establishment process in the gulf showed two distinct types of mechanism of implementation, namely: (i.) a process where the MFR-S planning preempts the ordinance for its establishment; and (ii.) a process where the MFR-S planning precedes the ordinance for its establishment.

In LGU-initiated and NGA facilitated MFR-S establishment process, e.g. Atulayan MFR-S, Sagñay, Camarines Sur which was established when the old fisheries law (PD 704) was in effect, the phase on MFR-S adoption and proposal of an ordinance for its establishment preempts the preparation and planning phases. The mechanism of implementation characteristic of this type of establishment process featured an enactment of ordinance establishing the MFR-S followed by a community consultation and an MFR-S management planning. This resulted to the non-integration of the MFR-S management plan into the ordinance that established it. The municipal government had assumed the main responsibility of establishing and operating the MFR-S while the fisherfolks and the barangay council in the area that hosts the MFR-S had only a supporting role. The non-functional status of Atulayan MFR-S, Sagñay Camarines Sur in the previous years has been attributed for the absence of organized community effort to

implement the fishery ordinances at the barangay level (Lauraya, et al, 2003) (Table 5). However, one outstanding feature of the LGU-initiated process is that the establishment of MFR-S was achieved in a very expeditious manner. This was attributed to the administrative power and existing resources of the LGU that obliged local community officials to establish the MFR-S and to implement law enforcement in their area of jurisdiction.

In the community-initiated and academe facilitated establishment process, e.g. San Miguel Island, Tabaco, Albay (SMI-MFR-S), and to some extent, the rest of the most recent NGO-facilitated MFR-S in Albay which were established during the FRMP and CBCRMP periods, the phase on MFR-S preparation and management planning precedes the MFR-S establishment and ordinance adoption phases.. The mechanism of implementation of this type of establishment process featured a community consultation and MFR-S establishment (barangay CRM) followed by the enactment of an ordinance establishing an MFR-S by the municipal government. This resulted to the integration of the MFR-S management plan into the ordinance that established it. A participatory process allowed the community a full say in developing the management plan of SMI-MFR-S in Tabaco Albay. The presence of organized community effort that resulted from participation in management planning of the stakeholders was attributed to the functional status for the MFR-S.

## CONCLUSION

The description of institutional arrangements and process in establishing MFR-S in Lagonoy Gulf provided some insights that will help in improving MFR-S establishment activities in the future. In Lagonoy Gulf, the type of the initiating entity and the external agent that is going to be involved more or less influenced the direction of the MFR-S establishment process. The LGU-initiated arrangement displayed a top-bottom process of MFR-S establishment using its bureaucratic resources and administrative power. The community-initiated activity exhibited a bottom-top process developing community responsibility through power sharing between the LGU and the fisherfolks.

Typology of Institutional Arrangement and Process	MFR Establishment mechanism	Process Outcomes			
		Participatory process in management planning	Core group development process	Implementation process	Institutionalization of MFR-S Fund
Community-initiated	Ordinance preempts planning	Presence of community involvement in management planning	Core group internally facilitated	MFR-Council and SBC tasked with overall management of the MFR-S; presence of Community effort to manage MFR-S	Presence of enabling mechanism through Municipal Ordinance
LGU-initiated	Ordinance Precedes planning	Lack of management plan, Absence of community involvement in management planning	Core group externally facilitated; Technical staff of the LGU assigned the role of core group	The LGU tasked with the main implementation; The role of Barangay Council relegated to support role	Absence of enabling mechanism; fund direct from the Mayor's fund

**Table 5**  
**Mechanisms involved in the implementation and process outcomes of MFR-establishment in Lagonoy Gulf**

Among the external agents, the academe provides the most extensive involvement. The technical capability of the academe and its pioneering spirit provided the greater advantage as an initiating partner institution. External agents differed in their approaches to facilitate MFR-S establishment process in the gulf. The institutional mandate and the technical expertise of the external agent determine their process of entry and the sustainability of the MFR-S.

LGU-initiated and NGA/NGO facilitated process is strong in the ordinance adoption phase. Its administrative power demonstrated greater capability to facilitate organization and mobilization of available political and financial resources to institutionalize the project. Community-initiated and academe facilitated process is strong in the preparatory and planning phase. It manifested a strong grassroots support that emanated from an understanding of community context offering great potential for sustaining the project. While the activities in the process are situation-dependent and do not necessarily require being sequential, the conduct of baseline assessment that is primarily responsible in

eliciting collective reflection of necessity and support for the establishment of the project is a key preliminary activity in the preparation and planning phase.

The lack of technical capability of LGU personnel and the focus for policy implementation of the institutions involved could derail the implementation of some important phases and activities. But the presence of a technically competent external partner with long-term commitment could facilitate the implementation of most of the critical preparatory phases.

Given the dynamic political and socio-cultural context and diverse institutional mandates of collaborating external agents in Lagonoy Gulf, relevant institutional arrangements and phase sequence could be developed from its MFR-S establishment experience. A more appropriate and effective MFR-S establishment process could be evolved from the Lagonoy Gulf experience by placing the different institutional arrangement and process typologies at appropriate periods capitalizing on their respective strengths. The appropriateness of a community-initiated and academe-facilitated institutional arrangement with NGA support was

highlighted during the preparatory phase when community support is still weak and the need to strengthen their capability and encourage participation is crucial. The LGU-initiated and NGAs/NGOs facilitated process was highlighted when law enforcement is weak and the need for the institutionalization of management mechanisms are critical.

## ACKNOWLEDGMENTS

We wish to acknowledge the following for their support: Bureau of Fisheries and Aquatic Resources-Fisheries Resource Management Project (BFAR-FRMP), Bureau of Fisheries and Aquatic Resources, Region V Office, Prof. Vic Soliman, Project Leader, Lagonoy Gulf Socioeconomic and Resource Assessment Project.

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