

Fisheries Policies and Management in Panguil Bay

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ABSTRACT

Public policies on fisheries as contained in national and local legislations are examined to determine how they are transformed into management actions at the local government level in Panguil Bay, northern Mindanao Island, Philippines. The study employed document analysis, key informant interviews, participatory community discussions, and field validation of reported intervention programs and coastal resource management initiatives. The general policy on fisheries has shifted in recent time from the primary concern to increase production to resource management and sustainability. Several interventions have been introduced to stop the rapid decline of the coastal and fishery resources, alleviate the worsening poverty of the fisherfolk, and restore the integrity of the marine environment. Intervention programs to capacitate local government units in curbing illegal and destructive exploitation of the bay hardly made a dent on the problem. Some poverty alleviation projects showed promises but most generally failed because of poor sustainability studies and mismanagement. Restoration efforts for the resources and the environment also failed because of poor site choices, dysfunctional management, and lack of political will. Because the bay is a shared resource, its co-management by various users and stakeholders appears to be its only option for survival. A supra-management body needs to be established from among the local government units in the bay to integrate, harmonize, and put synergy in their fragmented efforts to restore its productivity and make fisheries a viable and sustainable industry in the area.

Keywords: Participatory, sustainability, intervention programs, and poverty alleviation,

INTRODUCTION

Policies are decision-making frameworks in management. They set directions, provide strategic courses of action, and define expectations in addressing changing realities in the environment.

Public policies on Philippine fisheries are reflected in state legislations that translate into national programs and regulatory strategies the constitutional mandate on equity in resource access and use, the maintenance of ecological balance, and the sustainable management and development of the country's marine and coastal resources.

National policies are reiterated or reinforced by local ordinances to suit varying conditions and concerns.

Over the years, a number of laws and legal proclamations have been passed or issued to amend or replace existing ones, or serve as new vehicles for evolving government policies on the fisheries and marine resources of the country. The most recent and comprehensive law on fisheries is the Fisheries Code of 1998 (R.A. 8550). Also contributing in shaping the general policy in fisheries resource management are the Local Government Code of 1991 (R.A. 7160) and the National Integrated Area Protected System (NIPAS) law of 1992 (R.A.7586). From the wellsprings of national laws came also administrative issuances with the effect of law from such government agencies as the Department of Agriculture – Bureau of Fisheries and Aquatic Resources (DA-BFAR) and the Department of Environment and Natural Resources (DENR) that transform policies into specific programs or strategic courses of action at ground level.

The study examined the transformation, and the consequent outcomes, of public policies in fisheries into intervention programs, governance and management actions to protect and conserve the resources and sustain the productivity of Panguil Bay, northern Mindanao Island, Philippines.

METHODS

The study was carved out from the section on policy and institutional arrangements in the conduct of FRMP-funded 2005 project on resource and socio-economic assessment of Panguil Bay.

Data were generated using document analysis, key informant interviews, participatory community discussions, and field validation of reported intervention programs and activities. Covered in document analysis were relevant fishery and environmental laws and executive issuances, local ordinances, LGU plans and annual reports, national agency and non-government organization (NGO) performance reports, and other related documents. Interviewed key informants included provincial governors, mayors, Sangguniang Bayan/Panglunsod/Panlalawigan chairs on fishery and environment committees, Barangay chairpersons, municipal agriculture officers, and officers of the Philippine National Police (PNP), Fisheries and Aquatic Resources Management Councils (FARMCs), Bantay Dagat associations (BDAs), non-government organizations (NGOs), and people's organizations (POs).

Community participatory discussions, attended by at least 15 fishers, seaweed growers, senior citizens, teachers, and other stakeholders in FRMP-assisted communities, were conducted to discuss issues and problems affecting livelihood, resource management, law enforcement, and the plight of various government intervention programs.

Finally, actual field observations and photo-documentation were made on reported livelihood projects, marine sanctuaries, and mangrove rehabilitation projects. An

inventory and examination of law enforcement facilities and equipment that FRMP granted to local government units was also conducted.

RESULTS AND DISCUSSION

Paradigm Shift: From Resource Exploitation to Resource Management

Early government policies viewed fisheries primarily as an economic resource that needs to be secured from destructive human activities to sustain it as a source of revenue, food, livelihood, and income to a growing population. To this end legislations and administrative issuances were focused on increasing production, conservation, and protection of the resources by prohibiting and outlawing destructive fishing activities particularly in shallow municipal waters. The policy to increase production collided, however, with the policy on resource conservation. The massive effort to increase production led to overfishing, decline in fish stock, degradation and destruction of critical habitats, and the worsening poverty of small fishers. In the early 70s and 80s, for instance, the mangroves rapidly succumbed to massive fishpond development with government support to meet increasing fishery production targets.

As the resource fell the income of the municipal fishers also dropped to an unsustainable level. The poverty of the fisherfolk had been, however, perceived by policy makers and planners to have resulted from lack of access to the resource due to lack of capital. Thus, past government policy to address the poverty issue (e.g., BFAR Blue Revolution, *Biyayang Dagat*, and the Livelihood Enhancement for Agriculture Program) came in the form of soft loans to enable them to acquire more kinds and units of fishing gears, boat engines, and other fishing paraphernalia. Instead of solving the problem, such approach only aggravated the over-extraction of the resources in the municipal waters leading to a diminishing fish supply and the dwindling income of small fishers.

The advent of R.A 8550 puts fisheries as a resource in a different perspective: the resource is viewed as an asset that needs to be replenished, maintained, and sustained to generate not only incomes for fishers but also other benefits (economic, environmental, recreational, aesthetic, etc) to other stakeholders and the general public. Thus, while the past concern in stopping or curbing destructive exploitation remains in place, equal if not greater emphasis is now placed on the holistic management of the resource. This paradigm shift in policy also shifted the greater burden of management responsibility, in accord with the Local Government Code (R.A. 7160), from the national to the local governments, particularly from the Department of Agriculture – Bureau of Fisheries and Aquatic Resources (DA-BFAR) to the city and municipal governments.

The Fisheries Code of 1998, moreover, gives new dimension to the concept of resource management. The Code underscores the importance of community participation, particularly in the protection, conservation, and management of the fishery and coastal resources.

Policy and Intervention Programs

In recent years, fisheries policy on sustainable development and resource management found expression in two major important government intervention programs: The Fishery Sector Program (FSP) (1989-1994) and, its sequel, the Fisheries Resource Management Project (FRMP) (1999-2004). The intervention program pursued under FSP and continued under FRMP addressed the interconnected issues of environmental degradation, resource depletion, and the vicious poverty of the fisherfolk. In addressing them the program adopted the combined strategy of building and strengthening the capacity of LGUs for effective and responsible governance; of developing the capacity of fishing communities as co-managers of the coastal resources; of reducing fishing pressure by the development of new livelihood opportunities to fishers; and of enhancing and restoring the integrity of the resources and the coastal environment.

On top of these government intervention programs, some donor countries have also extended financial and technical assistance to local initiatives that pursue resource management and poverty alleviation. On the frontline of this endeavor are the USAID-DENR Coastal Resource Management Project (CRMP) in Central Visayas and some areas in Luzon; the Philippine-Canada Local Government Support Programme (LGSP) that extends assistance to local government units (LGUs) along improved governance and resource management; the Philippines-Australia Community Assistance Project (PACAP) that provides financial support to coastal management initiatives in Northern Mindanao through non-government organizations; and the USAID-DENR Philippine Environmental Governance (EcoGov) project in northern Luzon, Visayas, and southwestern Mindanao that works to enhance the capacity of LGUs and coastal communities to manage their fishery and coastal resources.

Of the several externally funded programs, only the LGSP had the opportunity to have its presence felt in Panguil Bay. The bay, however, was among the 18 bays that were covered by the FSP and FRMP interventions throughout the country.

Fisheries Management in Panguil Bay

By legal definition, Panguil Bay is a municipal water (R.A.7160 and R.A. 8550). It is a resource (Fig. 1) shared by three administrative regions (Regions, 9, 10, and 12), three provinces (Lanao del Norte, Misamis Occidental and Zamboanga del Sur), and 12 municipalities (Aurora, Tambulig, Bonifacio, Tangub City, Ozamiz City, Clarin, Maigo, Kolambugan, Tubod, Baroy, Lala, and Kapatagan).

The bay, which used to be one of the richest semi-enclosed bodies of waters in the country, landed in the 1990 government list of 12 most heavily exploited and degraded bays throughout the land (FSP, 1991). It was therefore one of the subjects of government interventions under the Fishery Sector Program and the Fisheries Resource Management Program.

As a shared resource Panguil Bay is an ideal site for integrated management as contemplated in Section 16 of the Philippine Fisheries Code of 1998. To date, however,

the management of the bay remains fragmented based on political subdivisions, and pursued independently and separately by the local government units in the area. This is abundantly shown by the hodgepodge of local legislations that individually addressed the same common problems and issues that affect everyone in the bay. The LGUs in the area failed in adopting a unified and enforceable fishery ordinance in the entire bay in the absence of a supra-management authority to harmonize and integrate their actions.

Attempt to address this concern in the past led to the formation the Panguil Bay Development Council (PBDC) in 1988. The PBDC was a tri-region, tri-province advisory council, composed of local government units, agencies and institutions, fishers and fishpond operators, and other stakeholders in the bay area, whose chairmanship was rotated among the governors of the three provinces (MSU Naawan, 1996). The Council lost its momentum over time and became inactive since 2001 after a failed attempt to secure from Malacañang an Executive Order to "legitimize" its existence.

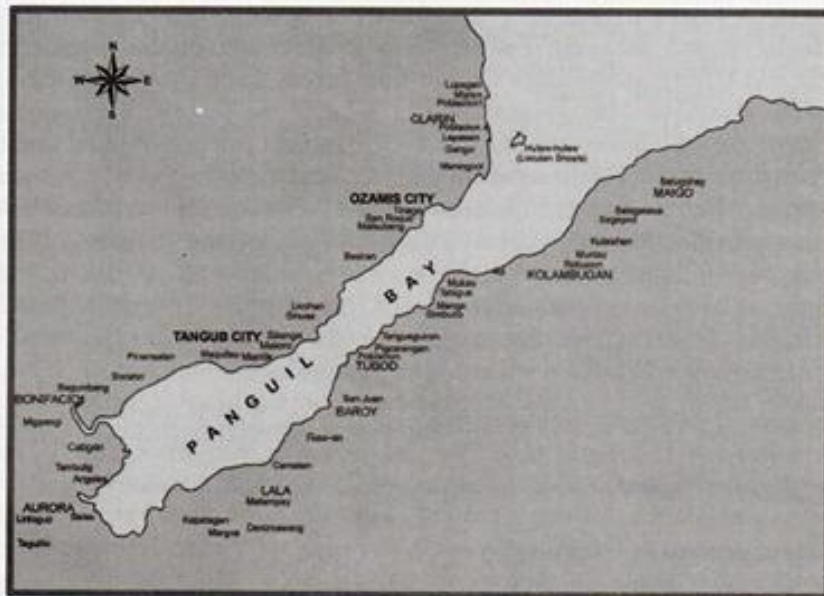


Figure 1. Location map of Panguil Bay.

Local Laws and Basic Fishery Ordinances

A cursory examination of local ordinances shows that most local laws on fisheries are addressed individually and separately to the many destructive fishing practices in the bay. Only three LGUs - Ozamiz City, Tangub City, and the Municipality of Maigo - have so far enacted a basic fishery ordinance as mandated by the Fishery Code of 1998. The ordinance sets the direction of the LGU in the comprehensive management, utilization, and development of its coastal resources.

An examination of the existing basic fishery ordinances in the bay shows that the three have generally complied with the policy requirements of holistic resource

management in their respective territorial waters. All prescribe for the zoning of the coastal waters for specific uses, the establishment of marine protected areas, regulations of access to resources through registration and licensing, taxation, prohibition of many destructive fishing practices, and enforcement.

Of the three LGUs, the City of Ozamiz is making headways in its implementation of its basic fishery ordinance. It has enforced the compulsory registration of fishers, fishing vessels and gears, as well as fish hatcheries and fishponds. Non-transferable licenses and permits are also required from resource users before they can engage in their trades. The City government has imposed color-coding of motorized and non-motorized boats with accompanying plate numbers and other identifying marks. From the initial enforcement of its fisheries code in 2004, the City was able to generate revenues amounting to P265,000.00 that were placed in a trust fund for fisheries enforcement and management.

But like the other LGUs with the basic fishery ordinance, the development and execution of policies for specific resource uses in some of the City's zoned areas have remained weak. For instance, the zone for seaweed farming has not been enforced resulting in uncontrolled expansion of the economic activity in other zones. There are also zones whose areas overlap and whose purposes and activities are on head-on collision, such as the operation of beach seine in government marine reserves and artificial reef zones. It is not also clear in what zone the operation of *sanggab* (giant filter net) is located, since under the local fishery code its operation is no longer prohibited but simply regulated.

Indeed, common to the basic fishery ordinances of Ozamiz City and Tangub City is the provision on the highly destructive *sanggab* fishing that apparently demands rethinking and policy reexamination. Sec 1, Art 9 and Sec 43, Art 10, particularly No.1, of the City Fisheries Code of Ozamiz and the Comprehensive City Fisheries Ordinance of Tangub, respectively, state, to wit:

"It shall be unlawful for any persons, entities, organizations or corporations to engage in the following activities:

1. Fishing with the use of filter net or *sanggab* with bunt/bag mesh size of less than three (3) centimeters..."

The provision does not, in effect, prohibit but simply regulates the operation of *sanggab*. It allows *sanggab* fishing as long as the gear complies with the bunt/bag mesh requirement of not less than 3cm. This is a complete turn-around for Ozamiz City that has repeatedly banned *sanggab* (1977 and 1996) to last for several years in its territorial waters.

Evidently, this regulation is difficult, if not impossible to enforce. One has to examine the hundreds of *sanggab* in operation to determine whether they have complied with the bag mesh size requirement. On the other hand, it is common knowledge that even if the mesh of the *sanggab* bag is increased beyond 3cm the force of tidal current and the entry and accumulation of flotsams in the bag may constrict the mesh to 0cm, negating thus the intent of the law. Studies conducted by MSU Naawan (1982) showed

that *sanggab* could trap the very small larvae and even the tiny eggs of fish and crustaceans.

Fishery Law Enforcement

Under FRMP, DA-BFAR extended special assistance along fishery law enforcement to eight LGUs, in the bay, namely, Maigo, Kolambugan, and Kapatagan in Lanao del Norte; Aurora and Tambulig in Zamboanga del Sur; and Bonifacio, Tangub City, and Ozamiz City in Misamis Occidental. In this regard, DA-BFAR assisted the organization of and provided trainings to the Fisheries and Aquatic Resources Management Councils (FARMC), fisheries law enforcement teams (FLET), and coast watch organizations in the area. The LGUs were also each provided with high-powered patrol boats (four so far were released as of December 2005), two-way radio communication equipment, two motorcycles, two-computer sets, and some binoculars to improve their capabilities for fishery law enforcement (Fig. 2).



Figure 2. Fishery law enforcement facilities and equipment in Panguil Bay. In counter clockwise order from bottom left corner: radio communication systems; motorbike for law enforcers; fish sanctuary billboard posted at Maigo along national highway; and the patrol boat docked at Ozamiz City port.

Notwithstanding the intervention, much remains wanting on the enforcement of fishery and environmental laws in the bay. The zeal in enforcement varies from one LGU to another. There is an apparent correlation between strict fishery enforcement and the presence of a community-managed or LGU-supported marine sanctuary or mangrove reserve in municipal waters. FLETS and Bantay Dagat Associations are relatively well

organized and active in these areas compared with those without or with non-operational MPAs. In general, however, the effectiveness of these community-based law enforcement bodies is hampered and dulled by the absence or lack of incentives, inadequate training in the whole facets of law enforcement, and absence or inadequate surveillance facilities and equipment.

Reports on apprehension and filing of cases in courts were very scanty. Fishery violations were usually settled amicably at the barangay level with token fines or penalties or, if they ever reached the court, were also resolved often through the intercession of local politicians for "humanitarian" reason.

On the other hand, the FRMP intervention in organizing communities was slanted towards developing alternative income sources rather than in empowering the coastal communities as co-managers of the local government in the management of coastal resources. Thus, in Panguil Bay, CRM is primarily LGU-driven with little or no participation at all of the coastal population.

Resource Management Interventions

While many of the LGUs have yet to come up with their basic fishery ordinance, piecemeal ordinances, nonetheless, had been passed in recent years along coastal resource management that led to the establishment of a number of marine protected areas (MPAs) or fish sanctuaries in the bay. Most fish sanctuaries, however, were riddled with technical and management problems. Some were established in unlikely sites, like the one in Tambulig, Zamboanga del Sur, which almost dries up during low tide. Others, like the Loculan Shoal fish sanctuary within the jurisdiction of Ozamiz City and the Municipality of Clarin, were abandoned when financial support from the interventions of DA-BFAR ended. Some others continued to survive but experienced difficulties in maintenance and protection for lack of logistics, manpower resources, and community participation.

The most popular marine sanctuary in the bay is the 20-ha TAMALA (Taguitic-Margos-Lapinig) Fish Sanctuary in the Municipality of Kapatagan, Lanao del Norte. This sanctuary, which is, legally speaking, a joint concern of the three named adjacent barangays and the municipal government of Kapatagan, has become a household word in Panguil Bay. Fishers from different nooks of the bay spoke glowingly of the success and achievements of TAMALA Sanctuary in restoring the integrity of the aquatic environment and the abundance of fish in the municipal waters. Local fishers reported increase in their catch and the reappearance of long lost native species with the establishment of the sanctuary. MSU Naawan researchers validated this claim by conducting an experimental fishing in the sanctuary in December 2005 (MSUN, 2006). The team caught 5kg of assorted fish using a mini-trawl in a 30min drag. The catch was several times bigger than the 200g caught in Tambulig sanctuary using the same gear and at the same length of time. The MSU research team opined that that the spillover from the well-protected sanctuary might have caused the reported increase in the catch of the fishers of Kapatagan.

The success of TAMALA is attributed to the local government officials' uncompromising exercise of political will in stopping illegal and destructive fishing activities, their vigilance in the protection of the coastal environment, and the logistic support of FRMP in recent years. TAMALA is, however, an LGU-driven sanctuary with less community participation in management. Community-based management advocates, therefore, hold its sustainability suspect.

On the other hand, most of the mangrove interventions introduced under CEP and FSP experienced zero or very low survival rate. The common problems included poor site selection, the use of seedlings unsuitable to the area, and poor maintenance and protection. The mangrove reforestation project in Mukas, Kolambugan is perceived to be the most successful mangrove rehabilitation intervention in the area. Unknown to many the project is actually undermined by many problems. Despite the ban on the conversion of mangrove areas into fishpond, new fishponds were still being developed within the protected mangrove area. Violators had been hailed to court but the fishpond development continued as respondents managed to secure restraining orders from the court.

From the outside, especially from the seaside, the mangroves look so dense and lush. The appearance, however, is deceptive. Inside the area is actually hollow like a donut. The line of trees that one sees from the outside simply serves as curtain to cover the continuing illegal and destructive exploitation of the resource.



Figure 3. Some livelihood projects in Panguil Bay. Counterclockwise order from bottom left corner: seaweed farming; crab culture; weaving of nipa shingles; and a pose of the stakeholders with the researchers.

Poverty Alleviation

In the area of poverty alleviation, FSP and FRMP introduced a number of livelihood projects in the bay that included crab fattening, fish production in cages, shrimp and crab culture in fishponds, and seaweed farming (Fig. 3). Lately, in Aurora, Zamboanga del Sur side of the bay, FRMP introduced land-based production that showed great promise in income enhancement: an intercropping of banana with sweet potato, cassava, or peanuts. The fish, crab, and shrimp production projects generally failed resulting from, among others, the inadequacy of seed stock, poor site selection, and dysfunctional collective management.

Of the different projects, seaweed farming had, for sometime, truly made a difference in the economic life of the people in terms of income increase and material possessions, especially among the coastal communities of Ozamiz City, Kolambugan, Maigo, and Tubod. Seaweed farming, though, suffered a setback in late 2004 to 2005 from an outbreak of a leprosy-like disease that wiped out almost the entire seaweed plantations in the bay.

Conscientious seaweed farmers blamed the disease outbreak to highly intensified seaweed stocking - hardly six inches between seaweed lines and nodes that resulted in water stagnation and fouling and viral or bacterial infestation.

CONCLUSION AND RECOMMENDATIONS

Despite an apparent rise in resource and environmental consciousness in Panguil Bay, the assault on the fishery and coastal resources continues. Poverty has been tagged as the culprit. For lack of other options for survival many coastal dwellers are forced to extract and overexploit the resources of the bay by any means, causing its rapid and continuing degradation. The situation calls for holistic, participatory action. The policies along this line are already in place. What is lacking is an institutional setting to translate and execute policies into strategic actions.

Because the bay is a shared resource, its co-management by its various users becomes a necessity, if not the only option for sustainability. The local government units from barangay to the provincial level, the fishing communities, and other stakeholders need to define and integrate their efforts for effective management. To reactivate the Panguil Bay Development Council (PBDC) as a supra-management body in the bay is the most expedient approach in this direction. This time the Council must operate as an LGU alliance under a fresh memorandum of agreement (MOA) that clearly prescribes the authority, powers, and responsibilities of the Council over and above the individual members. The MOA must be approved by the member LGU legislative bodies as a legitimate basis for its existence and operation.

An Executive Order from Malacañang to clothe legitimacy to a local development and management council is no longer an assurance of success -- of sustained attention and financial support from Manila, as experienced by the Gingoog Bay Development Council (GBDC) (Adan, 2004). GBDC abandoned its status as a creation of Malacañang and

turned into an Alliance with the imprimatur of the legislative bodies of the members. In this arrangement, the members have pooled together their various resources and have been more successful in linking collectively to external sources of funds for improved delivery of services.

The operation of Panguil Bay Development Council/Alliance may gain technical and logistic support from member NGOs, line agencies of the government, and research and academic institutions. The recently organized Panguil Bay Integrated Fishery and Aquatic Resource Management Council (PB-IFARMC) may be co-opted by PBDC/A to serve as its working arm in fisheries management and enforcement.

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