

INSTITUTIONALIZATION OF COASTAL AREA AND FISHERIES CO-MANAGEMENT  
IN WESTERN VISAYAS, PHILIPPINES

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A B S T R A C T

The paper examines and evaluates fisheries co-management arrangements in enhancing organizational resilience and social equity at the municipal and city level in Western Visayas, Philippines in the 1992-1998 and the post-1998 periods. Field visits and interviews, conducted intermittently from April 2001 to March 2002, reveal that a perceived deterioration and degradation of coastal and fisheries resources among policymakers, as well as small-scale and commercial fishers, gave rise to assertive local policy networks to promote resilient and equitable co-management regimes in the late 1990s. On the other hand, statistical analysis (using t-test and one-way ANOVA) of the perceptions of sampled households reveal that a general improvement in co-management indicators of organizational resilience and the promotion of social equity in the post-1998 period had been achieved. The paper notes that since 1992, centralized fisheries-related policy making was replaced by policy networks and alliances lead by local government executives and lawmakers of Sagay City and Concepcion. In general, the institutionalization of co-management efforts in Western Visayas, Philippines has provided a discursive arena for various actors and stakeholders, at the national and local level, to adapt to the complex interaction of socio-political, economic and ecological systems.

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I. Introduction

In the Visayan Sea area, the most productive marine resource system in the Philippines<sup>2</sup>, a number of strategically located municipalities play key roles in fisheries resources management. This paper focuses on the complex (since various human and natural systems interact across space and time) coastal area and fisheries co-management institutions in Concepcion, Iloilo Province and Sagay City in the Province of Negros Occidental (consult Figure 1 for study site locations). The municipality of Concepcion in Iloilo exemplifies a Hiligaynon culture that provides leadership to a seven-member inter-municipal fishery and resource management council in northeastern Iloilo called the Northern Iloilo Alliance for Coastal Development (NIACDEV). The municipal mayor of Concepcion, who is a medical doctor, recently won as most outstanding local chief executive in the Philippines for 2001. The City of

Figure 1. Location Map of Study Sites (red dots)

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<sup>2</sup> Commercial and municipal fisheries production in the Visayan Sea was pegged at 88,616 metric tons or 11.28 percent of total production in the country (DA-BFAR 2000).



Sagay in Northern Negros Occidental, on the other hand, is a Negrense culture (close to Hiligaynon) that has taken a leading role in the recent organization of the Northern Negros Aquatic Resources Management Advisory Council (NNARMAC), an inter-municipal/city council (two cities and five municipalities in all) to manage and develop the coastal and marine resources of northern Negros Occidental. In 1996, Sagay City won the “Galing Pook” (literally translated as “excellent locality”) national award for the conservation and management of its coastal and fisheries resources.

In 1999 Concepcion and Sagay were included in the Integrated Visayan Sea Program, covering four provinces and jointly funded by the German and Philippine government. Preliminary workshops/dialogues among all the different cultural groups and major stakeholders in the Visayan Sea area were conducted in preparation for project implementation. The Visayan Sea Program exemplifies the first attempt in the Philippines to scale up fishery co-management at the interprovincial level, aimed at enhancing the capacity of local government units to manage a

common resource base.

## II. Main Objectives and Interests

The focus of the paper is on coastal area and fisheries co-management arrangements at the municipal and/or city level in Western Visayas before and after 1998. Of primary interest is a comparison of the 1992-1998 period, where coastal and fisheries management adhered to the provisions of the 1991 Local Government Code and Presidential Decree 705 (Fisheries Code), as compared to the post-1998 period where that saw the enactment of the 1998 Fisheries Code (repealing PD 705) and the Agricultural Fisheries Modernization Act (AFMA). Emphasis is also given on the process and the role of the study sites on scaling up of co-management efforts at the intermunicipal and interprovincial level. Specifically, the objectives in this paper presentation include:

1. To describe and compare the degree or level of institutional resiliency<sup>3</sup> of the coastal and fisheries co-management systems in Concepcion and Sagay before and after 1998.
2. To describe and compare the degree or level of social equity<sup>4</sup> among fishing households and stakeholders involved in coastal and fisheries co-management systems in Concepcion and Sagay before and after 1998.

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<sup>3</sup> Defined by the Fisheries Co-Management Project of The World Fish Center (formerly ICLARM) as the ability of institutions to absorb and deal with changes and shocks while still providing stability and meaning to social behaviour. The four dimensions of institutional resiliency is legitimacy, attitudes towards measures, compliance and robustness.

<sup>4</sup> Referred to by the Fisheries Co-Management Project to describe the degree to which the outcomes of the co-management process are fairly distributed among different groups and stakeholders in the fishery sector.

### 3. Provide insights for the scaling up of coastal area and fisheries co-management in Western Visayas.

Note that in this paper key terms and models are discussed as simple as they need to be, but hopefully not simpler. “Co-management” refers to a “means” or a conscious effort of state, civil society and even market actors to share rights and responsibilities between and among various actors or stakeholders in a given time and space. “Social equity,” on the other hand, pertains to the just and socially acceptable distribution of costs and benefits of a given co-management system. Finally, the term “resilience” describes a situation wherein a co-management system is able to adapt to changes or shocks across time and space. The discussion now shifts into an explanation of the method used to describe and explain the development of the complex co-management system operating in the research sites.

#### A. Qualitative Indicators of Co-Management

The research project was conducted from April 2001 to September 2002. Both secondary and primary data were used for this paper. Secondary data sources were obtained from national, provincial and municipal reports and files on legal documents, socio-economic profiles and fisheries management systems of Concepcion, Iloilo Province and Sagay City, Negros Occidental Province. Primary data were gathered through in-depth interviews of fishers and stakeholders on their experience and perceptions on the municipal/city and inter-regional fishery co-management systems (i.e., management frameworks, plans/strategies, resources and outcomes).

In preparation for the gathering of quantifiable data on local perceptions of co-management equity and resilience, stratified random sampling method was utilized to determine the respondents from the various coastal villages in Sagay and Concepcion. Key informants from other stakeholders (i.e., state, civil society and market organizations) were also be interviewed. The interviews were validated through informal focused group discussions and participant observation that were documented through note-taking. The quantitative and qualitative data sets provided important information on co-management dynamics before and after the implementation of the 1998 Fisheries Code, as well as the Agricultural Fisheries Modernization Act (AFMA).

#### B. Quantitative Indicators of Co-Management

The majority of the field data and interviews were gathered by three researchers from April to May in 2001 and 2002. Seven barangays (villages) were included in the field study. Barangay selection was stratified by choosing two municipalities (i.e. Concepcion, Iloilo and Sagay, Negros Occidental) that are at the forefront of natural resources co-management activities and inter-municipal coalitions in the Visayan Sea area. Four barangays were sampled in Sagay City. Between seven to eight households were visited in Sagay with one or both household heads participating in the interview. On the other hand, three barangays were sampled in Concepcion. Ten households per barangay were visited.

The degree of change in perceptions on levels of resiliency in the fisheries co-management regime and levels of equity outcome of the co-management regimes in the study sites before and after 1998 were assessed through household interviews using key quantitative measures. The interview questions were organized around six themes, namely: fisherfolk acceptance of plans or programs and compliance; perception on capacity of the management system to promote networking and local self-reliance. involvement in the implementation and monitoring of projects and programs of the management system. benefits derived by fisherfolks from the management system and project/program interventions. overall assessment of the participants using a four-level scenario of co-management dynamics.

Mean values for the difference between each impact indicator for post-1998 and pre-1998 time period were obtained and the paired comparison t-test were calculated (with the aid of a statistical computer program called “E-Views”) to determine whether the main differences between the two time periods are statistically significant. The relationships between the policy impact indicators and some independent variables (i.e., policy experience and other socioeconomic variables), specified as determinants of policy outcomes, were then calculated.

A major challenge in the policy evaluation undertaken in this study lay in confidently identifying cause and effect relationships--the attribution problem. The causal relationship between the

efforts of a coastal management policy and the impacts of the policy on institutional resilience and equity could prove to be tenuous. A coastal and fisheries management policy is usually, across time and space, always one among many forces acting upon society and the environment. The pressures that influence, and sometimes drive, both the intermediate and final outcomes that a coastal management program is striving to achieve are numerous and complex. To address this issue extraneous information were used from a wide array of multidimensional factors to qualify the results of the qualitative and statistical analysis.

#### D. Synthesis

The content analysis of related literature and documents, together with insights gained from interviews and focused group discussions, served to validate the results of the quantifiable indices of co-management resilience and equity across two periods. To generalize the results of the quantitative and qualitative data sets, the outcomes of co-management partnerships in the study sites before and after the 1998 period were compared and plotted using a simple four-quadrant matrix of the depth and scope of co-management partnership between and among state, market and civil society actors in coastal area and fishery co-management systems. The various data sources for this study were reviewed and analyzed together so that findings were based on convergence of information from different origins. The development of converging lines of inquiry through the process of triangulation allowed for the corroboration of evidence. Aside from the use of multiple sources of data, this paper was enriched by the different perspectives brought by each of the research team members composed of a political scientist, an economist and a psychologist. The use of triangulation and multidisciplinary in the research process attempts to reduce biased conclusions and overcome the limitation of looking at the research topic using a specific method or from a single academic discipline.

This study is heavily influenced by the framework of the Fisheries Co-Management Project of The World Fish Center and the paradigm of sustainable development. In the context of this project, co-management and sustainable development is simply a situation in which two or more actors/stakeholders negotiate and define a fair sharing of the management functions, entitlements and responsibilities in the increasingly vulnerable and complex coastal bioregions of Western Visayas, Philippines. The focus of the study is to assess levels of resilience (i.e., the ability of institutions to adapt to changes and shocks while still providing stability and meaning to social behaviour) and equity (i.e., the degree of fair distribution of the costs and benefits of management among stakeholders) in two local government units facing the Visayan Sea in Western Visayas, Philippines in the hope of unlocking key factors that can improve the lives of subsistence fishers. As such, this author adopted a “civic science” stance in the conduct of research. Civic science is a form of science that is deliberative, inclusive, participatory, transparent, open to learning from errors, builds consensus, designed to promote equity and minimizes losers. Its purpose is to reveal that various political and interest groups in society have to be involved in decisionmaking if more equitable decisions are made by increasingly more resilient institutions to address complexity and integrated/broad concerns (O’Riordon 2000). These themes were presented by the first author in lecture presentations to multi-stakeholder policy forums on coastal area and fisheries management in the provinces of Negros Occidental and Iloilo during the 13<sup>th</sup> National Statistics Congress held in October 2002. Initial policy-related findings of this study were also presented in the 2002 Philippine Political Science Association Conference in Cebu City in November 2002.

### III. Results and Discussion

#### A. Institutional Context

The Philippines is a Southeast Asian archipelago of more than 7,100 islands with close to 76.4 million inhabitants (NSO 2001). With a high population growth rate of 2.32 since 1990, the Philippines is home to a unique blend of Malay, Chinese, Spanish and American cultural pattern known to the world as the Filipino nation. The Philippine state claims an exclusive economic zone of 200 nautical miles from its

shores and the country occupies an area that stretches for 2.2 million square kilometres<sup>5</sup>. The country's traditional fishing grounds, however, constitute a relatively small 126,500 square kilometer area (Dolan 1993). Coastal waters support more than 450 coral and 2,300 fish species. An estimated 30% of coral reefs, 50% of mangrove forests and merely 10% (one million hectares) of old growth forests are intact (USAID 1998).

The fisheries sector is an important part of the socio-economic condition of the country accounting for 68 percent of the Filipino diet. Total fish production in 2000 was 2.868 million metric tons (DA-BFAR 2000). Recent fish production figures reveal that 32 percent (down from the 33.4 percent figure in 1997) was caught by some 675,677 municipal and subsistence fisherfolks who are among the poorest of the poor. Another 32 percent of the catch came from the approximately 56,714 commercial fisherfolks. Finally 36 percent (up from the 34.6 percent figure in 1997) of total catch was provided by the aquaculture industry with 258,480 workers. An increase of 5.57 percent in total fisheries production was achieved in 2001 as compared to 2000. The volume of fish unloading from commercial and municipal landing centers went up by 3.18 percent and 2.49 percent, respectively. On the other hand, a remarkable production growth of 10.31 percent was realized from aquaculture, indicating its recovery from the luminous bacteria infestation in the past decade (DA-BFAR 1998, DA-BAS 2002).

The Philippines is considered to be the 12th largest fish producer in the world contributing more than 2.3 million metric tons of fish or 2.1 percent to the total world catch (DA-BFAR 1997). Fishery exports, usually composed of tuna, shrimps/prawns, seaweeds and other reef fishes are usually destined to the Japan, the United States (and Canada), Hong Kong and some European Union countries. In 2000, fishery exports comprised 6.3 percent of foreign earnings providing the country with a positive trade balance of US\$412.98 (DA-BFAR 1998, 2000).

The cumulative consequences of policies, governmental programs and plans with impact on the environment, the economy and social development has not been properly documented in the Philippines. Available data are only on environmental impact assessment (EIA) studies that are project and program based and/or resource and ecological assessment (REA) studies on existing resources that serve as baseline information that will help in understanding the dynamics of an ecosystem, identify alternative livelihood projects and help in policymaking. Nonetheless, on a macro level there is enough evidence to argue that both national and international factors created a policymaking framework that helped perpetuate unsustainable resource use, inefficiency and inequitable distribution of benefits to the people.

The Philippine experience in the fisheries sector indicate a statist and “top-down” resource management style. This system which prioritized production and growth to the detriment of resource conservation and equity have failed as a substitute or compliment to traditional resource management systems of pre-colonial era. It should also be noted that such fisheries management system had been heavily influenced by the temperate scientific method of calculating maximum sustainable yield (MSY) of a few species. Authoritative studies show, however, that these models have limited usefulness in tropical fisheries with its multi-species nature (Pomeroy 1995).

The 1987 Philippine Constitution, however, contains provisions that are gradually providing a context for the promotion of people’s participation or “bottom-up” strategies in development activities and devolution of basic services through policy and institutional reforms at the various political and economic units (Fernandez 1997, 1998). In consonance with the letter and spirit of the 1987 constitution there are three major national policies that govern management and conservation of fisheries. The Local Government Code (LGC) of 1991 provides the initial enabling legislation for co-management. The Philippine LGC devolves from the national government agencies to local government units (LGUs)

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<sup>5</sup> Coastal waters of 266,000 square kilometers and oceanic water of 1,934,000 square kilometers. The coastline is pegged at 27,000 square kilometers within the ten to twenty fathom depth where reef fisheries occur (BFAR 2000).

functions such as social welfare services, health care, reforestation, agricultural and fishery services and environmental management.

A second important enactment is RA 8550 or the Fisheries Code of 1998 which took effect a month after the implementation of AFMA. The Fisheries Code replaced PD 704 and in effect, previous legislation, executive orders, rules and regulations that are inconsistent with the new Code are repealed or modified accordingly. The Fisheries Code aims to harmonize strategies for the development and conservation of fisheries and aquatic resources in the country, while integrating all laws pertinent to it, through the creation of a national advisory council and various multi-actor municipal/city advisory councils for fisheries and aquatic resources.

A third major legislation is RA 8435, otherwise known as the Agricultural Fisheries Modernization Act which became law in September 1998. The Act aims to prescribe measures to "modernize the agriculture and fisheries sectors of the country in order to enhance their profitability, and prepare said sectors for the challenges of globalization, through an adequate, focused and rational delivery of necessary support services...funds..." The AFMA is therefore focused on international competitiveness and industrialization. Such outward looking focus is reflected in its five major provisions, namely: production and marketing support services; human resource development; research, development and extension; rural non-farm employment, and; trade and fiscal incentives. Budgetary constraints at the national level, however, has stalled the full implementation of AFMA and its programs/projects.

The recent trend, therefore, in coastal area management and development thinking in the Philippines is the promotion of cooperative or co-management arrangements among various stakeholders. Cooperation or co-management refers to various levels of institutional partnership between local- and state-level management systems.

#### **B. Co-Management in the Study Sites**

##### **1. Sagay City, Negros Occidental**

Sagay City is composed of 24 barangays with a total land area of 33,034.00 hectares. Majority of its residents engage in agriculture as a basic means of livelihood. Sagay City's planning documents and discourse point toward a continued focus on agro-industrial growth. A total of 26,688.559 hectares or about 70 percent of its land area is devoted to agricultural. Sugar cane production and processing ranks first in land use with 19,370.449 hectares or 73 percent of agricultural area, followed by fishponds with 2,257.55 hectares, and rice with 987.76 hectares. Marine fishery resources, comprised of vertebrates (fin fishes) and invertebrates (crustaceans, mollusk and echinoderms) species play an important role in the social and economic dynamics of Sagay, providing food and livelihood. Fishing activities within the locality are: small scale and municipal fishing; collection/gathering of shells in Barangay Molocaboc; fish and fry collection in Old Sagay, Bulanon, Vito and Molocaboc.

In June 1995, almost the entire municipal waters of Sagay, with an area of more than 32,000 hectares, was declared as a marine reserve through Municipal Ordinance Number 5.<sup>6</sup> In April 2001, the SMR was elevated as part of the National Integrated Protected Areas System (NIPAS) under Republic Act 7586.<sup>7</sup> The law attempts to address the problem of protected area management in Sagay by espousing the twin objective of biodiversity conservation and sustainable development. The composition of the consolidated management body is a mix of government (mostly from Sagay) and civil society representatives.

There are 1,768 subsistence fishers in Sagay utilizing 'hook and line' and other passive fishing methods. Surveys conducted by the SMR Office indicate an increase in fish catch by these fisherfolks.

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<sup>6</sup> The 1992 Local Government Code mandates that a minimum of 20 percent of coastal waters should be identified as a protected area.

<sup>7</sup> On 1 June 1992, the NIPAS Law was enacted as a mechanism to protect biodiversity and to minimize species extinction.

With an average of twenty (20) fishing days per month, 1997 records indicate that the average catch per for each day of fishing was 3.27 kilograms. In 1999 the average catch per day rose to 3.76 kilograms.

Sagay City, under the leadership of a political clan since the 1950s, is a founding member of the NNARMAC, an inter-municipal/city fisheries management council registered as an NGO in May 2000. The council was created to by local government partners to jointly consolidate and coordinate all efforts towards the preservation and protection of marine/aquatic resources, as well as the rehabilitation of inland waters, waterways, rivers, etc. Among others, the functions of NNARMAC include the coordination, creation, and strengthening of management bodies in the municipality (FARMCs), monitoring of activities within marine and inland waters of the member municipality, advisory role to the local chief executives, Sangguniang Bayan (municipal legislative body), and FARMCs of participating municipalities.

As members of the NNARMAC, member cities/municipalities commit between PhP 100,000 (for municipalities) to PhP 200,000.00 (for cities) towards coastal and fisheries projects/programs within their respective political territories.

## 2. Municipality of Concepcion, Iloilo

The municipality of Concepcion has a total land area of 9,702.04 hectares comprising 2.0804% of the total land area of the province of Iloilo. A considerable portion of the Concepcion includes 16 islands composed of 11 barangays. of all these islands comprises 40% of the total area of Concepcion. The municipality's major economic activity is farming and fishing. An upward trend is seen in fish processing due to the existence of two crabmeat-processing plants in the island barangay of Igbon and two fish processing plants. Fishing is also a flourishing industry as indicated by the completion and operation of the Municipal Fish Port in 1999.

Concepcion is consolidating its resources and institutionalizing its integrated coastal resource management plan and initiatives. A coastal zonation plan was recently enforced in Concepcion. No trawl and hulbot-hulbot fishing is allowed within 2 kilometers from island boundaries, including Baliguian Island. Zones where local trawlers and commercial fishers could operate was previously allowed by the municipal government due to the strong lobby of commercial fishers and their political network. The 15 commercial fishing operators paid PhP5,000 pesos a month to fish within the 10.1 to 15 kilometer area off the coast of Concepcion's waters. The practice has since been adjudged illegal under the 1998 Fisheries Code and have been disallowed due to the mounting protest by local fisherfolk organizations and the support of the Governor of Iloilo. Concepcion is a key player in the founding of the NIACDEV in 1998. NIACDEV's membership composition, functions, management style and strategies is similar to that of NNARMAC in Negros.

## C. Co-management Indicators

Statistical results indicates that there is a perceived rise in the overall performance of the co-management system in Sagay and Concepcion after the 1998 period. The overall assessment in the post-1998 period remains limited with a rating of "fair" implying that the research participants observed that interaction of governmental and non-governmental agents with fisherfolks remain limited. In Sagay, this perception is consistent with the fact that fisherfolks and their organizations are not represented in the SMR-PAMB, the highest policymaking body for the municipal waters of Sagay. The same can be said in Concepcion as formal organization of FARMCs only started last April 2002.

Consequently, even focused group discussion with various stakeholders, particularly in Sagay, reveal that the role played by that local stakeholders within the co-management regime remain basically unchanged. Such phenomenon prompted "Kapit Bisig," a registered civil society organization in Barangay Himogaan, Sagay (with more than 100 members) to successfully lobby for a larger role in protecting their coast. Himogaan is located in the easternmost coastal point of Sagay and residents complained in 2001 that poachers remained free to roam in their area due to the inability of SMR-PAMB field officers to apprehend the culprits in a timely fashion. As a response the provincial and municipal government furnished 35 handsets to key Kapit Bisig members who were deputized as baywatch volunteers that will relay important information about the movement of poachers to the SMR

Office. In the island context of most of Concepcion's barangays, on the other hand, attempts to organize local stakeholders remain hampered by the lack of equipment and trained personnel to perform secretariat and technical functions. At present, Concepcion only has one full time staff that serves as Coastal Resource Management (CRM) Officer. Hired only in 2001, the officer has to struggle to get additional funding and personnel from the municipal government to perform the multiple tasks assigned by the Mayor.

As a first step in the statistical analysis, mean values for the difference between each impact indicator for post-1998 and pre-1998 time period is calculated, and the paired comparison t-test is calculated to determine whether the main differences between the two time periods are statistically significant. The t test provides an answer to this statistical question: Are the two sample means enough different to allow the researcher to conclude, with a high degree of confidence, that the population means are different from one another?

The t test is used to compare the means of two groups. If the two sample means are far enough apart, the t test will yield a significant difference, thus permitting the researcher to conclude that the two populations probably do not have the same mean. To decide whether the sample means do differ enough, we will compare the calculated t value with an appropriate critical value. If the calculated t value, disregarding the plus or minus sign, is larger than the critical value, we are then able to say that a significant difference exists between the two sample means. On the other hand, if the calculated t value is less than the critical value, we will be forced to conclude that the two sample means are not significantly different from one another.

The results show a significant increase at the 0.05 level of significance ( $p < 0.05$ ) in perceived levels of all indicators (i.e. the chances that no difference exists between the two population means are less than 5 out of 100) except for rating for the capacity of fishery management system and acquisition of livelihood tools or materials. The indicators that show a significant increase in: overall assessment of the co-management system; participation in planning and design; consultation in plans/programs; attendance in organized meetings; acceptance of fisheries system; acceptance of fisheries projects; compliance with fishery laws; delegation of management responsibilities to fishers/stakeholders; contribution of labor; contribution of money; contribution of materials; assistance in monitoring/ assessment; acquisition of fisheries-related livelihood or management skills; acquisition of non-fishery livelihood or management skills, and ;received funding or loan.

On the other hand, for multivariate analysis, we examine the second step in the statistical analysis focusing on the relationship between policy impact indicators and the independent variables identified as determining variation in perceived levels of indicators. The independent variables include basic social variables such as age, sex, civil status, religion, years of formal education, household size, years the respondent lived in the community, and place of origin (whether Sagay or Concepcion). Job-related variables include occupation, and whether or not the respondent had other occupation. Income-related variables include gross annual income, whether or not the respondent had other sources of income, whether or not fishing is the most important income source, and whether or not the household received income from someone living outside the household (e.g. remittances from abroad or from relatives living in the city). The cooperation-related variable is whether or not the respondent is a member of fisheries organization.

The results of ordinary least squares estimation with overall assessment of the co-management system as dependent variable indicate that only gross annual income is statistically significant (at 0.10 level of significance,  $p < .10$ ). Gross annual income is positively related with favorable assessment of the co-management system. Statistical results also show that respondents with other sources of income are more likely to perceive that there is delegation of management responsibilities to resource users and the regression coefficient is significant at 0.10 level. The other independent variables are not statistically significant even at 0.10 level. Moreover, male respondents, married respondents, fishers, respondents whose most important source of income is fishing, respondents whose household receive income from



outside the household, and members of fisheries organization are more likely to comply with fishery laws.

In general, the statistical results and analysis reveal that there is still a lot of room for improvement in the development of resilient and equitable co-management systems in Sagay and Concepcion. The enhancement of local community and fisherfolk participation in current management efforts, as well as the provision technical support and financing, can go a long way in meeting growing expectations of various stakeholders.

#### IV. The Commons and Policy Networks

The analysis of secondary and field data in the Philippines has revealed that at the national, regional local contexts, coastal areas and fisheries resources have been subjected to a “tragedy of exclusion and enclosure” rather than a “tragedy of the commons.” In this process colonial interests and business and/or multilateral institutions with the aid of the state, denied grassroots civil society actors and their institutions access to common property resources that may be regulated by communal rules and practices. In effect, local commons and management regimes were taken over by allied or networked private or business interests using the legal-political powers of the state, or; the state for large-scale commercial exploitation by its own agencies and other private enterprises.<sup>8</sup> The policy model of “command and control” guided economic and natural resource development initiatives well after the end of World War II. Policymakers viewed “development” as a process in which modernization, industrialization and gross national product growth would lead to increasingly prosperous and democratic societies. The means to achieve these lofty goals was to address “gaps” in the development process through the means of public investment and centralized national planning that saw the pouring in of foreign assistance funds and expertise, as well as the construction of needed infrastructure. Unfortunately, policymakers and analysts did not pay much attention to the setting up of checks and balances to central power through fair and open legal system, transparent procedures and an active civil society. The result of the policy and practice of development and management has been dismal in improving socio-politico-economic and environmental conditions. The ouster of the Marcos dictatorship in 1986, however, provided legislation and legal space for the reinvigoration of decentralized policy and management activities.

What has become more pronounced since the enactment of the Local Government Code of 1991 and the Fisheries Code of 1998 has been the ability of peoples’ organizations acting independently or in concert with local government and/or civil society organizations to coordinate the use of official local, national and even international forums (face-to-face or through virtual reality) with determined and creative local direct action. This has happened in the wake of decreased local livelihood opportunities due to environmental deterioration or encroachments from public and private interests that extract natural resources. The cases of Sagay and Concepcion illustrate that the crisis of coastal and fisheries resource deterioration and degradation, perceived by local leaders and communities as more pronounced in the 1970s and 1980s, gave rise to assertive local policy networks to create resilient, and hopefully, equitable co-management regimes. Interviews and statistical analysis reveal that in leading hubs of coastal area and fisheries development in Western Visayas, there is a general improvement in co-management indicators in the post 1998 period. The veering away from the centralized control of national government has been spearheaded by policy networks and alliances lead by chief executives of Sagay City in the province of Negros Occidental and Concepcion in the province of Iloilo.

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<sup>8</sup> Consult Leonen (2002) for parallel processes of exclusion against civil society and indigenous people organizations in natural resource management in the Philippines. The works of Ostrom (1990), Hawes (1987), Peluso (1993), Bryant and Bailey (1997) further reveal the global scope of political struggles in natural resource access and control.

The policy networks in Sagay and Concepcion are institutional players trade that information and share the burden of decisionmaking. The coalitions establish formal or informal partnerships with other stakeholders, generate and mobilize financial means, coordinate key power brokers in the area, formulate and disseminate a clear and visionary image of the island in its pristine state, and mobilizes large segments of the local population while portraying an image of dynamism and success to the outside world. The network creates order by focusing on coastal area and other related concerns, and simplifying the policy process by limiting the number of problems to be addressed and options to be considered.

On a larger scale such phenomenon was observed in the creation of inter-regional alliances such as the NIACDEV (based in Concepcion, Iloilo) in 1998 and the Northern Negros Aquatic Resources Management Council or NNARMC<sup>1</sup> (based in Sagay, Negros Occidental) in 2000. An inspiration to the creation of NIACDEV and NNARMAC is the establishment and success of an earlier policy network in the mid-eastern portion of Iloilo province called the Banate Bay Resources Management Council Incorporated (BBRMC) in 1996 (Fernandez et al. 2000). But the creation of these larger policy network illustrates the closed and consensual nature of the policy process. It indicates that important policy decisions, such as the creation of the networks, are made in informal settings outside the reach of formal democratic controls such as legislative scrutiny and bureaucratic control.

The increasing importance of such elite configurations in shaping the socio-economic trajectory of Western Visayas is closely associated with certain contemporary processes. First, in the context of globalization, specific local conditions and calls for area-specific development or management strategies are playing a much more important role in the determination of the competitive position of locales and regions. This gives greater prominence to regional networks, relations and institutions. Secondly, the shifting and less interventionist position of the national state (due to decentralization and devolution trends since 1992), and hence the weakening of national regulatory prescriptions, moves the center of gravity for fostering and promoting a growth-oriented political economic-framework to the subnational scale. These have become the pivotal domains for launching proactive development activities. The often non-democratic decisionmaking procedures and mechanisms at these scales of governance turn them into implicit or explicit elite playing-fields that permit shaping territorial trajectories in the image of dominant or hegemonic elite coalitions. These new elite-based and led institutions and networks have become key forms of governance and have—at least to some extent—replaced the Philippine national government (often with its implicit or explicit consent) as rule-making, policy-formulating and implementing, and even executive organizations with powers that influence and shape a broadening range of socio-economic aspects.

The insider information of policy and institutional networks such as those found in Sagay and Concepcion and in the larger regional alliances they forged are significant and have consequently been used effectively. The active and coherent policy and growth networks operates with other local politicians, the media, leaders of public and semi-public institutions (academe, Chambers of Commerce, environmental NGOs, and the like) with a view towards generating a coherent vision and strategy. The underlying rationality, of course, is that the collective promotion of the town/city/municipality/region and forms of cooperation also benefits the individual agent.

But institutional and individual benefits through the activities of larger policy networks can be easily disrupted during local or national elections. In the cases of the NIACDEV and NNARMAC, their co-management efforts were stalled as some key members of the policy networks were unseated in 2001 Philippine elections. Thus, even the capacity of these kinds of policy networks to sustain and effectively scale-up CRM efforts remain uncertain. The phenomenon was not observed in smaller networks found in Sagay and Concepcion due to the absence of local leadership change during the elections. But still there is a growing concern among some key residents of Concepcion that the current gains in co-management and sustainable development may not be sustained in the absence of a potential pool of local leaders like Bañias who encourages community organizing and the setting up of barangay-based management councils.

Nevertheless, the case studies provide evidence that a key factor for attempts to sustain

and scale-up coastal and fishery resource management and development in Western Visayas is the presence and activities of policy alliances and networks. The paper provides a useful perspective to better understand the political and economic processes that affect the nature of local co-management efforts in municipal/city, as well as in larger bioregions in Western Visayas. It is revealed that enabling legislation and decentralized policy alone is insufficient to explain co-management regimes before and after 1998. In fact, wider international and national socio-economic factors and locale elite-based alliances have helped shape policy and decisionmaking in coastal area and fisheries co-management in Sagay, Negros Occidental and Concepcion, Iloilo.

#### V. Conclusion

The current co-management framework in Sagay and Concepcion in Western Visayas is a product of decentralization trends that also influence the trajectory of policy regimes in coastal areas. Interest on decentralization and “participatory” development efforts in the global and national levels have opened up theoretical, legal and financial avenues to create locally-based decisionmaking systems. It has also strengthened the political and economic position of globally alert and locally embedded elite coalitions engaged in the institutionalization of interregional coastal and fisheries programs and projects. In the Philippines, such configuration have been aided by decentralization laws such as the Local Government Code of 1991 and the Fisheries Code of 1998. These legislations have devolved natural resource management functions and finances from the national to the local level. In other words, the co-management systems in Western Visayas are products of a wider and more market-oriented political and economic context and are institutionalized by elite alliances that are supportive of sustainable development and profit-oriented schemes. The legitimacy enjoyed by co-management systems, coupled with the improvement of fish stocks and catch, have in sum resulted in an improved perception of policy performance in the post 1998 period.

The institutionalization of co-management efforts in Western Visayas, Philippines appears to be a discursive arena for various actors and their institutions on the ground. Behind the many actors and institutions, however, are alliances and counter-alliances that help shape and benefit from coastal area and fisheries co-management policies. Notwithstanding the seemingly undemocratic nature of the elite-based policy and institutional alliances, the people still accept these systems. To do otherwise would be to put democratic procedures above the ultimate democratic goal: the improvement of livelihoods and the common good. As long as the livelihood of people are enhanced, no matter how meagre, civil society calls for more participation in the decisionmaking process and increased equity in the distribution of gains from CRM programs or projects will remain muted. In regions and periods of economic privation and insecurity, participatory development and democratization processes do not fare well, giving ample opportunity for informal policy networks to build and benefit from coastal area and fisheries co-management arrangements. But policy networks in Western Visayas need to encourage increased participation of local stakeholders and civil society organizations to sustain resilient or adaptive and area-specific efforts to address complex and integrated problems in coastal areas and the Visayan Sea.

#### R e f e r e n c e s

- Bryant, R.L. and S. Bailey. 1997. Third World Political Ecology. Routledge, London.
- Department of Agriculture-Bureau of Agricultural Statistics (DA-BAS). 2002. Fisheries Situation: January-December 2001. Fisheries Statistics Division, DA-BAS: Quezon City.
- Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR). 2000. Philippine Fisheries Profile. BFAR: Quezon City.
- 1997. 1996 Philippine Fisheries Profile. BFAR: Quezon City.
- 1998. 1997 Philippine Fisheries Profile. BFAR: Quezon City.
- Dolan, R.E. 1993. Philippines: A Country Study. Federal Research Division Library of Congress: Washington, D.C.

- Fernandez, P.R. 1997. The Political Ecology of Forest Loss in the Philippines. DANYAG: UPV Journal of Humanities and Social Sciences 2(1): 3-26.
- 1998. Coastal Zone Management Approaches and Outcomes in the Philippines. In Fisheries Today in the Philippines: Proceedings of the First International Seminar on Development, Management and Conservation of Fisheries and Aquatic Environment of the Philippines, Nakamoto Sogo Co. Ltd.: Kagoshima City, Japan, pp. 47-60.
- Fernandez, P.R., Matsuda, Y. and R.F. Subade. 2000. Coastal Area Governance in the Philippines. Journal of Environment and Development 9(4): 341-369
- Hawes, G. 1987. The Philippine State and the Marcos Regime. Cornell University Press: Ithaca.
- Leonen, M. 2002. Democratization and Legal Forms: Learning from the Indigenous people's Movement in the Philippines. Draft manuscript prepared for the panel on "Governance and Citizenship: Shifts and Challenges," at the 2002 National Conference of the Philippine Political Science Association on the Diversity of Politics and the Complexities of Democratization, Cebu City, November 8-9, 2002.
- O'Riordon, T. 2000. Environmental Science for Environmental Management. Prentice Hall: Essex.
- Ostrom, E. 1990. Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge University Press: Cambridge.
- Peluso NL. 1993. Coercing Conservation? The Politics of State Resource Control. Global Environmental Change 3: 199-217.
- Pomeroy, R.S. 1995. Community-Based and Co-Management Institutions for Sustainable Coastal Fisheries Management in Southeast Asia. Ocean and Management 27(3): 143-62.
- The Constitutional Commission. 1986. The Constitution of the Republic of the Philippines. Printed under the authority of the Commission of Elections of the Republic of the Philippines.
- The Ecologist. 1993. Whose Common Future? Reclaiming the Commons. Earthscan: London.
- The Philippine Local Government Code of 1991
- The Philippine Fisheries Code of 1998
- United States Agency for International Development (USAID). 1998. Environmental Management: Philippines. USAID: Washington, D.C.
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