

Socio-Economic Issues of Urban Small-Scale Fisherfolks in Cagayan de Oro City, Philippines

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ABSTRACT: The fisheries sector in the Philippines contributes significantly to the country's national economy in terms of income and employment. However, small-scale fisherfolks (SSF) remain the poorest and the most marginalized people in the country. Cagayan de Oro (CDO) has eleven barangays (districts) located in the coastline approximately 24.31 kilometers along the Macajalar Bay. CDO has 24 community-based fisherfolk associations. This study aimed to find out the socio-economic concerns of SSF and what kind of assistance they have received from the government. The study focused only in 3 barangays and it employed the qualitative approach where Focus Group Discussion (FGD) was used for data collection. Results showed that they have received various forms of assistance from the government within the last 10 years from the time of the study however most of the projects failed. "Bantaydagat" is less capable in protecting sea territory from intrusion of commercial fishing which is a huge threat to their livelihood and food security. SSF lack basic fishing equipment and they have no legal rights in the areas they reside. Therefore, the government must consider creating a management system for all poverty alleviation programs to ensure sustainability and achieve economic improvement among SSF of CDO.

Keywords: small-scale fisherfolks, food security, Focus Group Discussion, socio-economic issues of small-scale fisherfolks, project management

I. INTRODUCTION

The Philippines is a maritime nation that comprises 7,641 islands (new count from 2016) and has 679,800 and 2,263,816 square kilometers of territorial sea and Exclusive Economic Zone respectively. Considered the center of global coral ecosystem biodiversity, the Philippine waters contain almost 10% of the world's coral reefs, large swaths of mangrove forests and more Marine Protected Areas than any other country (RARE). In 2012, the Philippines ranked among the major fish producing countries in the world with a total production of 3.1 million tons of fish, crustaceans, mollusks and other aquatic animals (FAO, 2014).

Fisheries are economically, culturally, socially and ecologically important to all Filipinos (Green et al., 2003) and contribute significantly to the country's national economy in terms of income and employment. Total fish production was estimated at 4.65 million metric tons in 2015 and the fisheries sector contributed almost 4.33 billion dollars to the country's economy (BFAR, 2016). The sector employed an estimated 1.6 million people nationwide, contributing 1.5% to the gross domestic product in 2015 (BFAR, 2016; PSA, 2017a). However, SSF remain the poorest and the most marginalized people in the Philippines. Where 28 out of 100 Filipinos are poor, this ratio becomes 41 out of 100 for SSF (Courtney, 2016). The average wage and salary of a worker in the Philippines is 334 pesos per day while an ordinary Filipino fisher earns 195 pesos per day (Courtney, 2016). Eighty-five percent of Filipino SSF rely on the ocean to provide income and food (RARE). Their families and communities are critically dependent on fish for food and livelihood security and they are extremely vulnerable to external pressures and shocks (FAO).

A number of articles talked about the highly important role of small-scale fisheries in food security and poverty reduction (FAO; SEARCA; Courtney, 2016). The Food and Agriculture Organization (FAO) of the United Nations has clearly recognized the essential function of small-scale fisheries in reaching zero hunger at the global level by 2030, as set out in the Sustainable Development Goals. The FAO's SSF guidelines indicated food security

as a top priority which is stated in its first objective: "To enhance the contribution of small-scale fisheries to global food security and nutrition and to support the progressive realization of the right to adequate food". For many people in developing countries, fish and other seafood caught by small-scale fishers are particularly important for their health. Without it, many could not afford to eat enough proteins, omega-3 fatty acids, or essential micronutrients such as vitamin A, iron, calcium, vitamin D, zinc and iodine on a regular basis. But despite small-scale fisheries' importance to food security and nutrition, many fishing communities continue to be marginalized, and their contribution to food security and nutrition is not fully realized.

The FAO has broadly characterized fisheries that are small-scale as a dynamic and evolving sub-sector employing labour-intensive harvesting, processing and distribution technologies to exploit marine and inland water fishery resources. As defined under Republic Act (RA) 8550 otherwise known as the Philippine Fisheries Code of 1998 and as amended by RA 10654, municipal fisheries is traditional, artisanal or subsistence that involves the use of vessels with 3 gross tons or less as well as fishing operations that do not use fishing boats. SSF are also referred to as municipal fisherfolks.

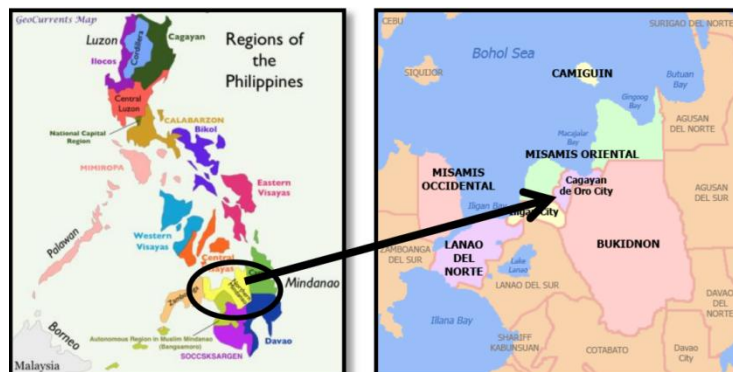


Figure 1. Location of CDO in Northern Mindanao (Adapted from Doczi, 2015).

CDO is a coastal highly urbanized city located in Northern Mindanao (Region 10) as shown in Figure 1 and it is the capital of the region. It has a land area of 412.80 square kilometers with 80 barangays (districts). Eleven of them are coastal with approximately 24.31 kilometers coastline located along the Macajalar Bay (Figure 2). The bay is a major fishing ground in Northern Mindanao. It is 50 kilometer wide at the mouth and 30 kilometer long, with an area approximately 1000 square kilometer. It is the gateway to Northern Mindanao, with heavy, medium, to light industries, with rapid development and strong coastal migration (Macajalar Bay Development Alliance). A growing population along its coastline means more and more people are becoming dependent on the health and sustainability of the bay. CDO has 24 community-based fisherfolk associations with a total of 1,070 registered fishers (as of 2017) under the Fisherfolk Registration System of the Bureau of Fisheries and Aquatic Resources (BFAR) of the country. The main objective of this study was to find out the socio-economic concerns of SSF in CDO and what kind of assistance they have received from the government.

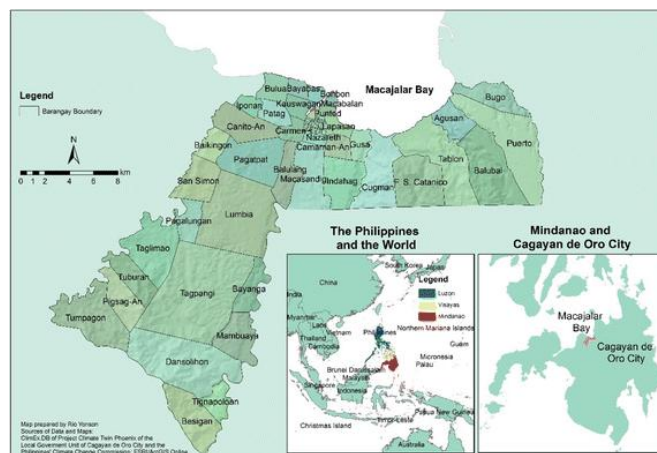


Figure 2. Coastline barangays of CDO along Macajalar Bay.

II. Materials and Methods

The study focused only in barangays Agusan, Cugman and Bonbon. It employed the qualitative approach and FGD was used as the main tool for data collection. The Agricultural Productivity Operations Office of the City Government of CDO organized the SSF associations of the said barangays. FGD was conducted independently for each barangay and their responses were recorded. SSF were interviewed using a set of questions. It elicited narrative information underlying the participants' experiences and understanding and the researchers attempted to make sense of, or interpret, social reality in terms of the meanings the participants ascribed to it. Thematic interpretation was adopted as the main interpretive method. Profiling of SSF was also undertaken and they were assured of anonymity. They were asked to sign the Free Prior Informed Consent form, indicating therein that the data obtained from the discussions will be used for research purposes only.

III. Results and Discussion

A total of 40 SSF participated in the study and they were mostly married. Majority have elementary level in their education but were not even able to complete the degree. Only 30% have finished high school and none has reached college. Most of them were 51 years old and above. More than 37% have less than 10 years of fishing experience while only 3% have longer than 40 years of experience. Bonbon and Cugman have the highest and the least number of SSF members respectively.

Table 1. Profile of SSF participants

Variable	Category	Frequency	Percent
Sex	Male	23	57.5
	Female	17	42.5
Educational attainment	Elementary level	15	37.5
	Elementary graduate	0	0.0
	High school level	13	32.5
	High school graduate	12	30.0
	College level	0	0.0
	College graduate	0	0.0
Age (years)	20 - 30	3	7.5
	31 - 40	8	20.0
	41 - 50	12	30.0
	51 and above	17	42.5
Civil status	Single	1	2.5
	Married	34	85.0
	Widowed	4	10.0
	Separated	1	2.5
	Lived in	0	0.0
Number of children	None	3	7.5
	1 to 2	9	22.5
	3 to 4	15	37.5
	5 or above	13	32.5
	1 - 10	15	37.5

Number of years as fishers	11 - 20	8	20.0
	21 - 30	8	20.0
	31 - 40	6	15.0
	41 and above	3	7.5

Table 2 below shows the various forms of assistance from the government within the last 10 years from the time of the study. In terms of number of inputs and projects, Agusan is the leading barangay. The study found out that most projects failed and the main underlying cause that can be derived from their narratives is the lack of a sustainable management system. In the study of Perez et al (2012), it clearly emphasized that governance of small-scale or municipal fisheries in the Philippines plays a critical role in the livelihoods of coastal communities. It has highlighted that despite 8 national fisheries plans from 1972 to 2010, 4 major externally funded fisheries programs and thousands of local initiatives, the failures and inadequacies in governance of small-scale fisheries are conspicuous. They are made evident by depleted fishery resources, degraded fish habitats, intensified resource use competition and conflict, post-harvest losses, limited institutional capabilities, inadequate and inconsistent fisheries policies, and weak institutional partnerships according to the said study.

Table 2. Support and assistance from the government

Barangay	Inputs and projects received from the government
Agusan (3 SSF associations with 100 member households)	Fishing nets
	Training on seafood processing and how to increase shelf life
	Equipment for making sardines such as pressure cooker, sterilizer and freezer
	Production of "hito" (catfish) using barrels
	Coral reef rehabilitation using rubber tires
	"Talaba" (oyster) culture
	Fish cage for "bangus" (milkfish) production
Cugman (1 SSF association with 46 member households)	Development of fish sanctuary
	Ten fiberglass pump boats
	Nylon ropes and buoys
	Tilapia fingerlings
	Financial assistance for "bigasan" (rice) program
Bonbon (4 SSF associations with 500 member households)	Fiberglass pump boats
	Fish nets
	Fish landing facility
	Development of 7 hectare fish sanctuary

In any project, management is crucial to success and sustainability. Managing projects has to do with a lot of considerations covering all surrounding factors that include both the hard and soft infrastructures (i.e. commitment and cooperation of members towards the achievement of goals, efficient and effective use of resources such as time and money, adaptation to the natural environment, constant monitoring and feedback mechanism, etc.) Technical expertise and capability are of equal importance when it comes to the marine ecosystem.

Socio-economic issues

Intrusion of commercial fishing vessels

Their most common concern is the intrusion of big fishing vessels operating within their areas. They generally call it "commercial" referring to commercial fishing (CF). These vessels come from other places of the province and also from other neighboring provinces. In the Philippines, CF is classified either as small scale, or fishing with passive or active gear with fishing vessels of 3.1 gross tons up to 20 gross tons; medium scale, or fishing with gears and vessels of 20.1 gross tons up to 150 gross tons; and large-scale, or using gears and vessels of more than 150 gross tons (SEAFDEC). According to the SSF, CF is a huge threat to their livelihood most importantly to food security because of the fact that CF can harvest as many fish they can. On a regular basis, SSF can only harvest what is left and this has been the situation for decades already. The average catch of SSF is only 5 kilogram per fishing trip and this is really alarming considering that the National Stock Assessment Program of

BFAR has already indicated that 2/3 of the 12 major fishing grounds in the Philippines are overfished (Lacsamana-Umengan, 2018). The worst is, 75% of the total fishing grounds in the country show indications of overfishing (Lacsamana-Umengan, 2018). Fish stocks are already depleted in many of the country's so-called traditional fishing grounds due to overfishing. Muallil et al (2013) showed that 68% (30 out of 44) of the studied towns in the Philippines have unsustainable fisheries unless 58% of their fishing grounds are protected from illegal fishing activities.

The mere presence of CF vessels in municipal waters is highly suspicious because RA 8550 as amended by RA 10654, or the Amended Fisheries Code, has declared these fishing grounds for the exclusive use of SSF. The law states that municipal fishing grounds are the areas between the shorelines and 15 kilometers toward the sea and these areas are for the exclusive use of small, mostly subsistence fishermen, who have limited capacity to fish in distant waters. CF is generally allowed anywhere in the country's territorial waters, except inside the municipal waters (Lacsamana-Umengan, 2018). CF vessels are not only required to fish outside municipal waters but they are also required to secure commercial fishing vessel license (CFVL) from BFAR, which is subject to renewal every 3 years (SEAFDEC). In reality, there is ample evidence of CF fishing vessels operating in fishing zones which are exclusively reserved for SSF according to FAO so this implies that this scenario is not only happening in the Philippines but in a global scale.

Lack of inputs

Fishing nets, pump boats, nylon ropes and buoys are the basic fishing equipment. If these were all available to each SSF member, it is certain to expect higher productivity. Although the government has provided inputs, they were insufficient simply because the government can only provide limited supply in a given time. On the other hand, the inputs were not distributed directly to the SSF but to their associations so it is the role of the associations to maximize the use of limited resources. This is a serious crisis of survival where everyone is struggling to catch fish, earn income and feed their families.

Lack of manpower

"*Bantay-dagat*" (see guard or sea patrol) are the people guarding sea territory from illegal fishing and they belong to the barangays' administration or management office. They protect municipal waters from illegal fishing particularly intrusion of CF vessels. The problem is, the "*bantaydagat*" only have small boats just like the SSF and only a few manpower is available per shift. They are extremely powerless and incapable in protecting their territory from CF vessels. An experience from Bonbon revealed how SSF were attacked with stones when they attempted to approach a CF vessel.

The FAO is clearly aware that the lack of human, material and physical resources of local fisheries administrations and sub-regional and regional fisheries bodies to monitor, control and manage fishing activities is another reason for the continued occurrence of CF vessels in territories intended only for SSF. Local fisheries administrations, which are often very centralized, are constrained by the lack of personnel and means of transport to monitor fishing activities in the widely scattered settlements to ensure that fishing is practiced in a responsible manner. In most cases, the reporting of illegal fishing activities comes from the local citizenry, communities and groups only when there are conflicts and the fisheries administrations are requested to intervene to resolve the conflict(s).

Housing problem

The other most pressing social concern is housing. Many SSF are residing in coastline areas occupying lands not legally owned by them. So they are considered informal settlers where they can be forced to leave anytime by authorities. This is not an easy situation especially for those having big families and have established permanent house structures.

CONCLUSION

SSF in CDO still remained economically poor even after many years of receiving assistance and support from the government. The government's poverty alleviation programs for SSF should not focus only in providing materials, equipment or infrastructures but should include appropriate project management system which is vital for sustainability. The core ultimate goal of the management system is not only about project sustainability but also to ensure continuous economic improvement in the lives of the SSF.

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