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# THE OCEANS AND FISHERIES PARTNERSHIP

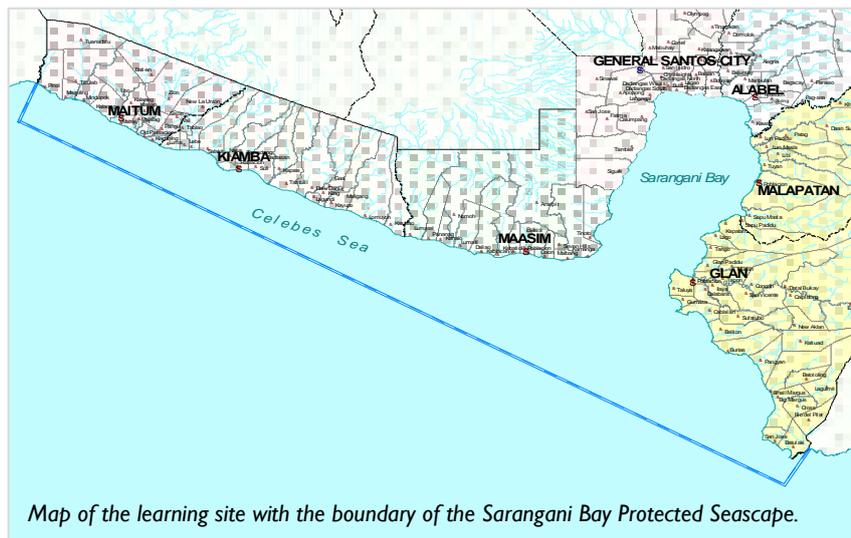
## LEARNING SITE: GENERAL SANTOS CITY, PHILIPPINES

### OVERVIEW

The Oceans and Fisheries Partnership (USAID Oceans) conducted a study on the Rapid Appraisal of Fisheries Management Systems in the Philippines, undertaken by WorldFish, an international research organization that harnesses fisheries and aquaculture to reduce hunger and poverty across the globe. The study, conducted in early 2017, aimed to assess the status of the capture fisheries subsector in the Sarangani Bay and nearby Sulawesi Sea area, with focus on the conduct of a structure-conduct-performance (SCP) analysis for major tuna species caught in the fishing area. Consistent with the objectives of the USAID Oceans Program, it sought to identify potential points of intervention in the production and market chains and provide critical information from these leverage points. The project piloted the use of the Rapid Appraisal for Fisheries Management (RAFMS) framework within the value chain context to profile the capture fisheries and tuna industry in the area, as well as determine gaps toward the development of a Catch Documentation and Traceability (CDT) system. These outputs will contribute to strengthening of fisheries management system in order to address the issues of IUU fishing and the development of a sustainable catch and traceability system in support of the goals of the USAID Oceans program.

### FINDINGS

The Sarangani Bay is found in Southern Mindanao and bounded by six coastal municipalities of the Sarangani province, namely: Maitum, Kiamba, Maasim, Alabel, Malapatan, Glan, and General Santos City, South Cotabato. The Bay opens to the south, facing the Celebes/Sulawesi Sea. As a protected seascape, established under Presidential Proclamation 756 (1996/), the Sarangani Bay Protected Seascape (SBPS) is part of the National Integrated Protected Areas System (NIPAS) of the Philippines. The Bay has rich coastal ecosystems and productive fishing grounds, particularly for pelagic fishes like tunas and other tuna-like species.



Map of the learning site with the boundary of the Sarangani Bay Protected Seascape.

General Santos City is known as the tuna capital of the country because of its fish port, where hundreds of tons of tunas and tuna-like species caught mostly from the Sulawesi seas are being landed.

### RAPID ASSESSMENT OF THE STATUS OF FISHERY IN SARANGANI BAY

The municipal fishery is predominantly multi-species and multi-gear, but fishers report that their catches are mostly from the Celebes Sea (83%) and Sarangani Bay (17%). Small pelagics like squid (*Loligo oyii*) and scads (*Decapterus sp.*, and *Selar sp.*) dominate the catches, but fishers also catch large pelagics like skipjack, bullet tuna, and yellowfin tuna. Municipal fishers favor the multiple hook and line, the mixed gear-drift gill net-troll line combination, and the troll line (alone) among the variety of gear available to them. Yields have been relatively stable between 8000 to 10,000 mt from 2011 to 2014. A record surge was noted in 2015, with yield reaching more than 30,000 mt. Normal catch rates range from less than 5 kg per trip in the inner part of the bay, to 10 to 20 kg in the outer bay. Fishers report that their catches have been declining since the late 1990s, with NSAP data reporting a downtrend beginning in 2005. Fishers blame a reduction in fish stock (depletion) but also blame the numerous Fish Aggregating Devices (FADs) scattered throughout the bay mouth, which allegedly prevent the fish from entering the bay.

Commercial fishery has been on the uptrend from 2007 to 2016, based on annual landings at the General Santos City Fish Port Complex (GSCFPC) with fish harvested from the Moro Gulf (41%), international waters (29.99%), and off of Mati (24.6%). Fishers bring in mostly skipjack, yellowfin, and mackerel scad using purse seine (47%), ring nets (42%), and

handlines (11%). Over the same time, fishing effort has increased as seen in the increases both in gross register tonnage (GRT) and the annual total number of vessels landing at GSCFPC. These two records alone seem to paint a positive picture of the commercial fishery in the area. However, the mean catch per unit effort (CPUE) per year dropped eight-fold from a high of 156 mt/GRT in 2010 to the low of 19 mt/GRT in 2013 – a condition indicating overexploitation. The CPUE has risen over three years to 32 mt/GRT in 2016 but is still far from the 2010 level.

The following table summarizes key socio-economic information assessed for each Local Government Unit:

LOCAL GOVERNMENT UNITS (LGUs)								
Characteristics	Alabel	Glan	Kiamba	Maasim	Maitum	Malapatan	Gensan City	Total
<b>Population (2015)</b>	80,359	118,263	61,058	59,468	44,595	76,914	594,446	1,035,103
<b>Income class</b>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	1 <sup>st</sup>	-
<b>Poverty incidence (%) (2012)</b>	45.90%	49.00%	36.40%	44.10%	39.80%	53.10%	19.30%	-
<b>Coastline length (km)</b>	12	66	39	43	24	18	30	232
<b>No. of coastal villages</b>	3	16	13	12	7	6	9	66
<b>No. of fishers (2014)</b>	1,320	62,509	38,576	8,839	1,270	7,105	15,334	134,953
<b>Major economic activities</b>	1. Trade 2. Agri-business 3. Aquaculture 4. Fishing	1. Tourism 2. Agri-business 3. Fishing 4. Trade 5. Transportation	1. Fishing 2. Agri-business 3. Trade 4. Tourism	1. Fishing 2. Agri-business 3. Aquaculture 4. Industries (power plant and shipyard) 5. Tourism	1. Fishing 2. Agri-business (including plantations) 3. Aquaculture 4. Tourism	1. Fishing 2. Agri-business 3. Aquaculture 4. Tourism	1. Wholesale and retail trade 2. Transport, communication and financial 3. Agribusiness 4. Fishing 5. Manufacturing	

## SOCIO-ECONOMIC AND SCP ANALYSIS

Three municipal players are central in the value chain for tuna and tuna-like species in Sarangani. They are the *municipal fishers*, *financiers cum consolidators cum wholesalers*, and *retailers*. Using various fishing gear, municipal fishers catch tuna and tuna-like species within the vicinity of Sarangani Bay. With the exception of those who use de mano (non-motorized bancas), more and more of fishers are venturing beyond municipal waters to fish in the Celebes Sea, Moro Gulf, and Sulu Sea. Some even report that they fish in the waters off Mati in Davao del Norte.

Most fishers borrow starting capital from financiers and often sell their catch back to the financier, who is also a consolidator and then a wholesaler. All players relate to each other in the pervasive and high trust “suki” system – driven in part by their residence in the same community, by the willingness of financiers to wait for their payment, and eventually, by the indebtedness or “utang na loob” inherent in the system which is based as well on “loyalty” and trust that each supplier brings in quality product (i.e., fresh fish) and correct weight.



Tuna is weighed and classified at the General Santos Fish Port Complex as brokers assess the day's catch.

## FISHERIES GOVERNANCE

Fisheries governance is a joint undertaking between the national government (through the Philippine Bureau of Fisheries and Aquatic Resources) and the local government units of six municipalities of Sarangani Province and General Santos City. Fisheries management falls under the Office of the Municipal/City Agriculturist, except in Maitum where it falls under the Municipal Environment and Natural Resources Office (MENRO). With BFAR, municipalities have institutionalized their Municipal Fisheries and Aquatic Resources Management Councils (FARMCs). Fishery law enforcement is largely the function of a BFAR-trained team called Fishery Law Enforcement Team (FLET) and of groups of Deputized Fish Wardens (DFWs). People's Organizations

(POs)/Fisherfolk Association (FAs) have been organized to be partners in implementing fisheries-related projects of BFAR, other line agencies, and non-government organizations (NGOs). Most were organized in order to avail of funding support for livelihood programs. However, combined data from the Offices of Municipal/City Agriculturist and the Provincial Agriculturist show that except in General Santos City, most POs are inactive. The Sarangani Bay Protected Area Management Board (PAMB) was established in 1996 to serve as a site-policy making body.

Government support programs fall under three broad categories: Fisheries law enforcement, livelihood assistance, and conservation and protection. Local government units around SBPS also implemented the FISH-R and BOAT-R programs of BFAR to register fisherfolk and fishing boats toward regulating fishing effort. Although policies governing tuna and other pelagic resources in Philippine and other waters are in place, FGDs and KIs with various stakeholders surface several issues. These include conflicts in resource use, especially between the small-scale municipal fishers and the commercial fishers. Some groups take issue with their being classified as commercial fishers. Inconsistencies in the application of laws (i.e., what gear is legal or illegal; application of fishing bans, use of FADs, etc.) were also pinpointed.

## RECOMMENDATIONS

Following the conduct of analyses and assessments, the following recommendations were made for consideration and integration into USAID Oceans' approach and implementation.

### RAPID ASSESSMENT OF THE STATUS OF FISHERY IN SARANGANI BAY

- A deeper catch analysis of the municipal fisheries sector is needed to determine the impact of overfishing and the declining catch in all the local fishing grounds near the Sarangani province.
- A detailed CPUE analysis using different fishing effort such as the number of fishing days is highly recommended to verify further the result of this exercise.
- An analysis of the time series, length frequency data is also recommended to determine the changes in the exploitation rates and fishing mortalities.
- It is also recommended to estimate the MSY using the surplus production model to determine the optimum level of effort that produces the maximum yield that can be sustained without affecting the long-term productivity of the stock called the MSY in various fishing grounds that contributes to the tuna industry of Sarangani province.

These analyses will be carried out in collaboration with the National Stock Assessment Program of BFAR.

### SOCIO-ECONOMIC AND SCP ANALYSIS

- To address municipal fisher's plight for start-up capital and resources, a rural "bank on wheels" can provide the daily funding needs of fishers, with very minimal interest. While the fishers do not pay interest to financiers, the additional cost of paraphernalia purchased from financiers reduces the fishers' income.
- There is a need for information, education, and communication (IEC) on catch documentation and traceability, which is apparently new to municipal players.
- In response to the sustainability of tuna and tuna-like species, the following needs were observed:
  - IEC and enforcement of the new Fisheries Code and relevant Executive Orders, to include establishment of fish sanctuaries.
  - Localization of national laws and directives (through municipal ordinances) and their enforcement with the help of local residents, especially of women (findings in Libertad, Misamis Oriental, reveal that women are very good enforcers and men shy away from disagreeing with them).
  - Training on alternative livelihood will wean fishers away from relying on fishing, especially those who are in their 30s and below. With the boom in General Santos City and the Sarangani Province, many alternative livelihoods are possible. The move for free education can also put more young lads in school instead of forcing them to fish or sign-on in fishing boats.

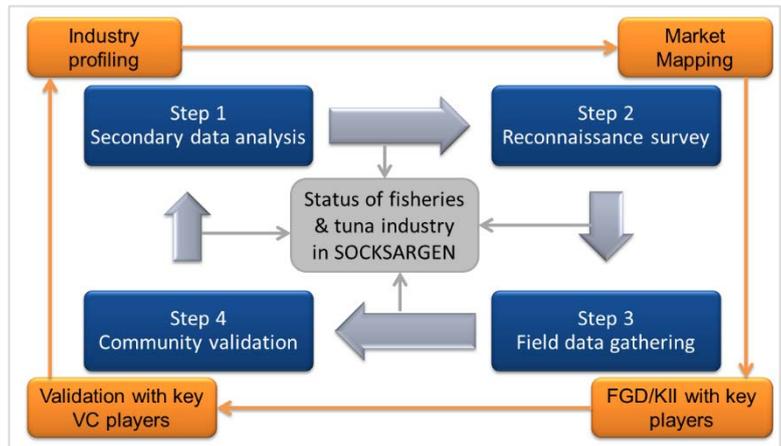
## FISHERIES GOVERNANCE

Fisheries governance is a continuing, long-term process with the goal of sustaining the fishing industry and its social and economic benefits for both industrial- and artisanal-scale capture fisheries. To improve fisheries management within the Sarangani Bay-Suluwesi Sea system, the following are recommended:

- Formulation and adoption of a seascape-wide Fisheries Management Plan, and adoption of a seascape-wide/unified fishery ordinance to implement fisheries management initiatives that will stop juvenile fishing and implement seasonal closure to allow spawning and recruitment of important fish stocks.
- Promotion of the catch documentation and traceability system (CDTS) and provide training for multiple stakeholders.
- Updating of local fisheries ordinances for adaptive management.
- Provision of monetary and non-monetary incentives (e.g. insurance) for FLETs.
- Establishment of Municipal FARMCs into an Integrated FARMC for the seascape.
- Introduction of more strategic livelihood support programs, i.e. diversification of coastal livelihoods that reduce, rather than increase, fishing pressure.
- Strengthening of FAs (of both commercial and municipal fisheries sectors) as governance partners for sustainable fisheries management (SFM) and formulate/adopt a broader IEC campaign in support of SFM.
- Intensification of capacity building in law enforcement, livelihood development, and resource conservation.

## METHODOLOGY

In the conduct of these studies, WorldFish placed the rapid appraisal of fisheries management systems (RAFMS) framework (Pido et al. 1996; 1997) within the value chain context and used this to guide participatory rapid appraisals. The method consists of four sequential but overlapping steps: (1) secondary data analyses that included a comprehensive review of existing literature on capture fisheries and tuna industry assessments; (2) reconnaissance surveys to validate some of the data collected from secondary data analyses and site visits to initiate stakeholder engagements; (3) field data gathering using focus group discussions and key informant interviews through local partners who were trained on the RAFMS approach; and (4) a community/stakeholder workshop to validate the initial analyses and implications as well as develop scenarios on the future of capture fisheries and fisheries management in the region.



*Conceptual framework for the rapid appraisal of fisheries management systems (RAFMS) within the value chain context (adopted from Pido et al., 1996; 1997)*

**The Oceans and Fisheries Partnership (USAID Oceans)**, a partnership between the U.S. Agency for International Development and the Southeast Asian Fisheries Development Center (SEAFDEC), is working to strengthen regional cooperation to combat IUU fishing, promote sustainable fisheries, and conserve marine biodiversity in the Asia-Pacific region. The backbone of the program is the development and implementation of country-specific, financially sustainable Catch Documentation and Traceability (CDT) system. This CDT system will be integrated with existing government systems, will also incorporate human welfare data elements, and will be demonstrated within an Ecosystem Approach to Fisheries Management (EAFM) framework.

**For More Information**, contact [info@oceans-partnership.org](mailto:info@oceans-partnership.org) or:

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