



# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Terms of Reference for Fishing Capacity  
Assessment Workshop Methods for Measuring  
and Managing Fishing Effort



2016



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**Cover photo:** Elmina harbor (Photo by Najih Lazar)

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Spatial Solutions:	<a href="http://www.spatialsolutions.co/id1.html">http://www.spatialsolutions.co/id1.html</a>

## ACRONYMS

CCM	Centre for Coastal Management
CEWEFIA	Central and Western Region Fishmongers Improvement Association
CRC	Coastal Resource Center
CSLP	Coastal Sustainable Landscape Project
DAA	Development Action Association
DFAS	Department of Fisheries and Aquatic Science
DMFS	Department of Marine Fisheries Sciences
DQF	Daasgift Quality Foundation
FtF	Feed the Future
GIFA	Ghana Inshore Fishermen's Association
GIS	Geographic Information System
GNCFC	Ghana National Canoe Fishermen's Council
HM	Hen Mpoano
ICFG	Integrated Coastal and Fisheries Governance
MESTI	Ministry of Environment Science and Technology
MOFAD	Ministry of Fisheries and Aquaculture Development
NDPC	National Development Planning Commission
NGOs	Non-Governmental Organizations
SFMP	Sustainable Fisheries Management Project
SMEs	Small and Medium Enterprises
SNV	Netherlands Development Organization
SSG	SSG Advisors
STWG	Scientific and Technical Working Group
UCC	University of Cape Coast
URI	University of Rhode Island
USAID	United States Agency for International Development
WARFP	West Africa Regional Fisheries Development Program

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# **FISHERIES CAPACITY ASSESSMENT WORKSHOP: METHODS FOR MEASURING AND MANAGING FISHING EFFORT**

## **CONTEXT**

Fisheries contribute significantly to the economy of Ghana, driven largely by the artisanal fisheries which contribute over 80% of the total fisheries production. It is a significant source of employment including artisanal post-harvest sector. However, the economic and social importance of this sector and the opportunities it offers for millions of people in coastal communities are increasingly diminishing due to excessive fishing and over-capacity.

Over-capacity contributes substantially to over-exploitation. A great majority of assessed fish stocks in Ghana are overfished and more than 50 percent are near collapse. The FAO has underlined that over-capacity is a significant – if not the primary – reason for overfishing and related socio-economic crises worldwide. Fisheries sector has long suffered from a vicious circle of poor economic profitability and overexploitation of stocks due to a significant over-capacity and excessive fishing effort remains an issue for many segments of the fishing sector.

Managing fishing capacity has been raised for some time in reference to growing concern about open access in the artisanal fisheries and the overcapitalization of industrial fisheries. However, the measurement of fishing capacity is in itself quite complex and its assessment must link between fishing capacity and fishing opportunities. Some countries have already tried to address the over-capacity problem but with little success due to lack of information and inefficient policies to implement proven effective measures for effort control and reduction.

The Fisheries Commission embarked on an ambitious program to reform the country's fisheries activities by the adoption of the first national fisheries management plan for the marine sector (2015-2019). The plan calls for ending open access in the artisanal fisheries and a 50% reduction of fishing capacity for the industrial and semi-industrial fisheries. The plan also calls for additional measures to reduce fishing capacity to the MSY levels for each fishing sector. The impact of such measures on the biological and socio-economics of the fishing sectors have yet to be identified. This is fundamental for an effective effort reduction program. It is based on the ability to match and control the inputs (fishing effort) with the sustainable output (catch). It is important to notice that neither the management of fishing effort or of catch are likely to be effective unless they apply to all fishermen engaged in the fishery. Partial controls leave space for the uncontrolled part of the fishery to expand into any gap left by controls placed upon other parts of the fishery. In the past a number of countries only controlled the effort of the larger fishing units on the basis that they created the most fishing pressure. Small artisanal sectors were left uncontrolled since they were thought to take only a small slice of the catch. This turned to be a significant strategic error made by fisheries managers. Today, the artisanal sector is the most efficient of all sectors taking the large share of the catch.

Fishing capacity assessment requires scientific information and analysis in order to make an informed decision about its management. It is meant to define the unit of fishing effort in number of boats, engine power in KW, gear size or Gross Tonnage or a combination of several indicators. Reduction of the fishing effort means limiting effort which is able to remove an adequate proportion of fish stocks by means of access to the resource. It also requires a reasonable knowledge of what level of removal are likely to prove sustainable (MSY) matched to the effort required to realize the right catch ( $F_{msy}$ ). This information is

quite difficult to obtain since they require accurate and full enumeration of the activities of boats and the amount of fish they catch for each unit of effort that often cannot be directly counted as a result of lack of resources and Illegal, Unreported and Unregulated (IUU) fishing.

The workshop will address the following questions:

- What is the level of implementation of fishing capacity controls within fisheries management plans in Ghana?
- What are the interventions and/actions to improve fisheries capacity assessment and implementation in Ghana?
- What is the status of the Fisheries Information Systems to measure fishing capacity and apply its concepts in fisheries management decisions?
- How to engage research institutes and universities and strategic partners to contribute to better capacity assessment and management?

In an attempt to address these questions, the Sustainable Fisheries Management Project (SFMP) in collaboration with the Fisheries Commission, is organizing a fisheries capacity assessment workshop to better understand the practical methods for effort reduction strategies and ways to measure their socio-economic impacts.

## **WORKSHOP GOAL**

The Goal of the workshop is to create a better understanding of the management strategy evaluation of fishing effort in the context of industrial and artisanal fisheries of Ghana.

Ultimately, the objective of the workshop is to discuss and develop a strategy for effort reduction and provide recommendations on the process of implementation by the national fisheries management plan.

## **THE EVENT**

The workshop program will include group discussions on effort reduction strategies and the principles of input control measures in fisheries management. This workshop will also provide the background knowledge on fishing effort control measures described in the national fisheries management plan and associated policies.

The SFMP and FC will present on the concept of effort reduction management tools, the principals of fishing control programs through licensing schemes and the evaluation tools specific to the provisions specified in the national fisheries management plan.

## **CONTEXT**

The workshop is part of the SFMP's activities in support of the Fisheries Commission's planning and implementation of the national fisheries management plan (2015-2019). The SFMP is a fisheries food security project funded by the United States Agency for International Development (USAID)/Ghana. The goal of SFMP is to rebuild targeted marine fisheries stocks through the adoption of sustainable fishing practices and reduced exploitation to end overfishing.

## **PARTICIPANTS**

- Fisheries Commission headquarters (3)
- Fisheries Commission FSSD (3)
- Fisheries Commission MCS (1)
- University of Cape Coast (1)

- University of Ghana (1)
- Scientific and Technical Working Group (5)
- Ghana Industrial Trawlers Association (2)
- Ghana National Canoes Fishermen Council (2)
- Ghana Inshore Fishermen Association (2)
- Ghana Tuna Association (1)
- FCWC Tema (1)



# DRAFT AGENDA

## DAY 1

0900-0940	<b>Opening</b> <ul style="list-style-type: none"> <li>▪ Welcome by the Fisheries Commission</li> <li>▪ Introduction by SFMP</li> </ul>	Moderator
0940-1030	<b>Context Setting</b> <ul style="list-style-type: none"> <li>▪ Why we are here?</li> <li>▪ Fishing Capacity Assessment tools</li> <li>▪ Fishing Capacity Assessment Risks</li> <li>•</li> </ul>	Moderator Najih Lazar
1030-11:00	Break	
1100-1300	<b>Fishing Capacity</b> <ul style="list-style-type: none"> <li>▪ Licensing and vessel registration</li> <li>▪ Canoe frame surveys</li> <li>▪ Review of regulatory mechanisms to manage fishing capacity</li> <li>▪ Q&amp;A</li> <li>•</li> </ul>	Matilda Quist Paul Bannerman Kofi Agbogah  Moderator
1300-1400	Lunch	
1400-1530	<b>Small groups session</b> <p>Review of existing measures for managing fishing capacity and identification of options for such measures in the context of artisanal, semi-industrial and industrial fisheries of Ghana.</p> <p>Management of fishing capacity = management of the sustainability of the resource (labor, food security, sustainability of resources, resource recovery, regeneration of the resource rent)</p>	Moderator
1530-1630	<b>Wrap up</b> <ul style="list-style-type: none"> <li>▪ Group presentations</li> <li>▪ Discussions</li> </ul>	Moderator
1630	Close Day 1	Moderator

## Day 2

0900-0940	Opening <ul style="list-style-type: none"><li>Day 1 reflections, Day 2 agenda</li></ul>	Moderator
0940-1030	Output Controls <ul style="list-style-type: none"><li>Harvest Control Rules (HCR)</li><li>Data requirements for HCR</li></ul>	Najih Lazar
1030-11:00	Break	
1100-1300	Enforcement <ul style="list-style-type: none"><li>VMS</li><li>Effort reporting</li><li>Traceability</li></ul>	MCS
1300-1400	Lunch	
1400-1530	Group session Draft recommendations on the process of implementation by the national fisheries management plan.	Moderator
1530-1630	Wrap up <ul style="list-style-type: none"><li>Way forward</li></ul>	Moderator
1630	Closing	Moderator

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