

REGIONAL SEMINAR ON
MECHANISMS FOR MANAGEMENT OF SHARED STOCKS OF SMALL
PELAGICS IN NORTHWEST AFRICA

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DAKAR, SENEGAL

Governance in Sierra Leone
Small Pelagic Fisheries

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Mandate

- The Ministry of Fisheries and Marine Resources has the statutory responsibility for the management of fisheries in Sierra Leone territorial waters
- The 1994 Fisheries Management and Development ACT provides the legal mandate complimented by the 1995 fisheries regulations
- The 2003 National Fisheries Policy also provides support to the legal provision

Co-Management

The Ministry collaborates with other institutions in the management of fish resources. There are two aspects in the management of fisheries resources in Sierra Leone:

i. Artisanal fisheries

Local councils

The Ministry has the overall responsibility for the management of this fisheries but the function of licensing of artisanal fishing crafts have been devolved to the Local Councils by the 2004 Local Government ACT.

Fisherfolk's organizations

There are two recognized fishers unions that represent the interest of the artisanal fishers:

- a. Sierra Leone Artisanal Fishers Union – SLAFU
- b. Sierra Leone Amalgamated - SLAAFU

The two unions have collaborates with the Local Councils in the licensing of artisanal fishing crafts and also are utilized by the Ministry in the promotion of responsible fisheries in the artisanal fishereies.

Through the assistance donor funded projects, e.g. EU 'Institutional Support for Fisheries Management' (ISFM) project, the Ministry is conducting studies with a viewing of reviewing the 1994 Fisheries ACT for institutionalizing the role of fisherfolks in the co-management of the fisheries.

Research

The Ministry has a Memorandum of Understanding, 2008, with the Institute of Marine Biology and Oceanography (IMBO) of the University of Sierra Leone to conduct fisheries research on all fisheries, including the small pelagics. Through support from donor projects, e.g. GCLME (Guinea Current Large Marine Ecosystem), EU ISFM,

research is conducted primary to determine the biomass of fish stocks, including small pelagics.

Surveillance

The Ministry has a Memorandum of Understanding with the Sierra Leone Navy to conduct joint surveillance/patrol in Sierra Leone waters.

ii. Industrial fisheries

The Ministry has the overall responsibility for the Management of the industrial fisheries but this is being shared with other stake-holders in the co-management of the resources.

The licensing of industrial fishing vessels, including mid-water trawling for semi-pelagics, is carried out by the Ministry but the other Government institutions are involved:

Vessel registration and tonnage determination

The Sierra Leone Maritime Administration, SLMA, in collaboration with Sierra Leone Ports Authority, has the legal mandate for the registration of industrial fishing vessels, the 2003 SLMA ACT.

There is an association for industrial fishing companies that seek the interest of fishing companies e.g. licensing fees negotiations, other taxes etc

Fish health certification

The 2007 Fish Health Product Regulations give the Mandate for fish health certification to the Ministry of Health as the competent authority.

Fisheries advisory bodies

The 1994 Fisheries Management and Development ACT established the Scientific and Technical Committee (STC) to advise the Director of Fisheries on fisheries management matters. This body comprises of representatives of key stake-holders such as fishermen's unions, private sector, etc

There is a proposal to establish an another advisory body, named Fisheries Advisory Committee, that would be at a higher level than the STC and composition would include broad range of stake-holders.

Current pelagic biomass* by species is presented as below:

Pelagic species	Surveys	
	May 2008 by ITAF DEME – metric tonnes	November 2008 by ITAF DEME – metric tonnes
<i>Sardinella aurita</i>	71,400	41,600
<i>Sardinella maderensis</i>	77,000	114,600
Horse mackerel	38,000	11,000
Others: carangids, scombrids, baracuda and hairtail	60,000	59,000

- Funded by EU ‘ISFM’ Project

There is an on-going research programme under the ISFM project and will continue until the end of 2010. The research will assess the status of these resources twice every year (21 days per cruise) utilizing the Senegalese research vessel, ITAF DEME.

Also through the assistance of ISFM and ADB funded projects, IMBO is conducting research on commercial fisheries, including the small pelagic fisheries segments. This may be assess the populations of *Ethmalosa fimbriata* as this species is not captured during the survey (in view of its inshore distribution).

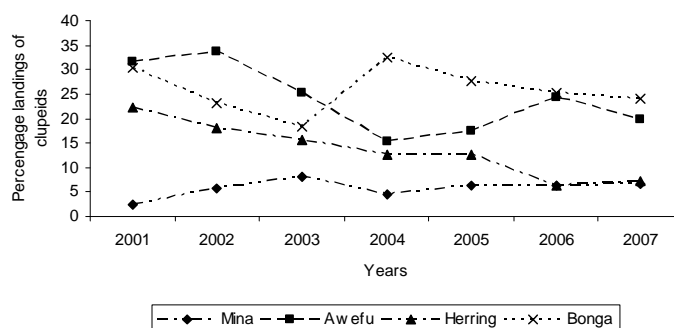
Commercial fisheries

Total landings of clupeids vs total artisanal fisheries landings in Sierra Leone (metric tonnes)

Year	<i>Sardinella</i> spp	<i>Ethmalosa fimbriata</i>	Total Artisanal fisheries production (all species)
2001	9849	24790	39950
2002	13251	31491	55659
2003	15447	28516	65458
2004	18211	51046	106216
2005	22061	52677	116614
2006	15173	60109	120490
2007	16574	52715	111939

One of the main fisheries management challenges in Sierra Leone artisanal is the high incidence of juvenile mortality of the clupeids. The juvenile *Sardinella spp* (Mina) constitutes over 5 % of total landings whilst the juvenile *Ethmalosa fimbriata* (Awefu) constitutes an average of about 24 % of total artisanal fish landings. There is attributed to the increasing number of illegal mesh sizes in the surface drift nets (estimated about 75 % being uses illegal mesh sizes i.e. less than 43 mm).

Percentage composition of juvenile Bonga (Awefu), adult Bonga, juvenile Herring (Mina) and Adult Herring



The other small pelagic fish species exploited in the artisanal fisheries are the anchovy, *Engraulis encrasicolus* and the carangid, *Chloroscombrus chrysurus*.

The other carangidae, *Decapterus spp* and *Trachurus trecae*, are not exploited in the artisanal fisheries but taken as incidental catches in demersal finfish fishery. In recent times, the introduction of pair trawl fisheries has contributed to increased landings of these species since these vessels are capable of switching effort to mid-water trawling fishery.

Total production (metric tonnes) of small pelagics, Horse Mackerel and Mackerel, in industrial trawl finfish fishery, 2000-2007

Year	Decapterus spp (punctatus and rhoncus)	Mackerel: Scomberomeros tritor and Scomber japonicus
2000	236.26	126.76
2001	433.03	333.57
2002	111.81	167.26
2003	195.92	154.41
2004	356.51	64.45
2005	731.32	120.33
2006	294.42	38.39
2007	951.40	119.74

FAO Working Group Assessment of small-pelagic fisheries

RESULTS OF FAO/CECAF SMALL PELAGICS WORKING GROUPS (2006)

Species	Region	Assessment	Reference
<i>Sardinella maderensis</i>	Sierra Leone and Guinea Conakry	Over-exploited	FAO WG (2006)
<i>Decapterus spp</i>	Sierra Leone and Guinea Conakry	Fully exploited	FAO WG (2006)
<i>Trachurus trecae</i>	Sierra Leone and Guinea Conakry	Fully exploited	FAO WG (2006)

In the case of one of the most important commercial pelagic species, *Ethmalosa fimbriata*, in view of the fact that there was problem with the data, as a precautionary measure it is recommended not to increase catches above the average of last 5 years (42 000 tonnes) for Guinea and Sierra Leone (FAO, 2006). Similarly, for the round herring, *Sardinella aurita*, as a precautionary measure, catch level should not exceed the average of the last 5 years (4000 tonnes) in the two countries.

Fisheries Management Measures of Small-pelagic fisheries

Artisanal fisheries

Current:

Permissible mesh size: 43 mm

Proposed measures, through consultations:

- a. Mesh size: 45 mm
- b. MPA in Yawri Bay, Sierra Leone River Estuary, Sherbro River, Scarcies River
- c. Co-Management involving fisher's organizations, local councils, village headmen, MFMR extension staff, Sierra Leone Navy, Maritime police
- d. Re-classification and upgrading of selected artisanal fishing crafts to semi-industrial
- e. banning of beach seines
- d. Set-up participatory MCS involving fisher's organizations, local councils, village headmen, MFMR extension staff, Sierra Leone Navy, Maritime police

Industrial fisheries

Cod end mesh sizes

- a. small pelagic purse seiners = 32 mm
- b. mid-water trawl = 60 mm
- c. demersal fish trawlers = 60 mm

Proposed:

Banning

- a. Banning pair trawling for both demersal and mid-water pelagic species