Support for devising Management Plans for the Horse Mackerel Fisheries of Angola and Namibia

Preparação do Plano de Gestão da Pescaria de Carapau

August - October 2013
Project Management

The project contract has been awarded to COFREPECHE, a French based international consultancy in fisheries, aquaculture and marine environments.

COFREPECHE have contracted in Key Experts for deployment in the region and who are responsible for working with the stakeholders and national institutions:

Key Experts:

Coordinator (COFREPECHE) – Catherine Lecouffe

- Dave Japp (Overall coordination)
- Kieran Kelleher (Angola)
- Dave Boyer (Namibia)
BROAD OBJECTIVES

- To reinforce the capacity of Fisheries Administrations in Angola and Namibia to promote the sustainable and viable development of the horse mackerel fisheries by providing them with the relevant management instruments,
- To support the Benguela Current Commission in the promotion of the joint management of transboundary resources.
PROJECT OBJECTIVES

- Develop a management plan for each country that incorporates the dynamics of the fisheries in their respective regions, including multi-species, scientific, management and socio-economics aspects;
- Coordinate the development of these plans to harmonise as far as possible the management of the fisheries in each country;
- And to provide recommendations towards a transboundary management plan for horse mackerel between the two countries.
Key Considerations of Fishery Management Plans (FMPs)

The best management plans follow the KISS principle - Keep It Short and Simple. They should:

- Set out key *principles* that should be followed in management
- Analyse the *current situation* in a fishery;
- Define *goals and objectives* for the fishery;
- Provide strategies on how they are to be *achieved*; and
- State how they are to be *monitored*
Key Fishery Characteristics Considered

1. **Biological**: Dynamics of fish stocks
2. **Ecological**: Ecosystem impacts
3. **Social**: Population affected - participants (rights holders, fishers, processors), local communities, food security
4. **Economic**: Local, national and regional
Angola Key Fishery Components
Fishery Characteristics

- Targets small pelagic species
- Sardinella dominates catches
- Carapau caught by both Industrial (>25m) and Semi-Industrial (<25 m) vessels
- T. capensis dominates catch in south
- T. trecea caught more inshore and towards the north
Carapau is caught by Artisanal Fishers but is not considered significant for this fishery.
Catches of small pelagics varies seasonally

Fonte: DP Benguela
Management measures in Angola

- Boat limitations (effort control)
- Purse seine mesh limit 25-30 mm
- Seasonal closures for spawning
- TAC (15000 t Trecea, 40000 t Capensis)
- Bycatch limits (5% demersal)
- Artisanal protected area (4 nm)
- No midwater trawl permitted
Catch – Biomass - TAC

• Biomass declining
• TAC mostly not caught—sometimes exceeds TAC
• Catch erratic
Namibia – Key Aspects of the Fishery and Stocks
Catch distribution of purse seine and mid-water
Characteristics of the fishery (Midwater)

- Annual quota ≈ 300 000 t
- Approximately 95% to midwater trawl
- Catch adult fish beyond 200 m isobath
- Main product frozen whole fish in 30 kg packs
- Exported to DRC (50%), Mozambique (13%), Angola (7%) and other African countries
- 8% sold locally. Goal to increase this
- Interest in value addition
Characteristics of the fishery (Purse Seine)

Annual quota ≈ 300,000 t

15,000 t to purse seine industry
Allocated to support industry during period of poor sardine catches
Catch juvenile fish close to shore
Main product fishmeal and fish oil
Also investigating value addition
Management measures

<table>
<thead>
<tr>
<th>No. of Rights issued</th>
<th>Vessels licenced</th>
<th>Quota fees (scaled by level of Namibianisation)</th>
<th>TAC allocated as individual quotas</th>
<th>Depth, bycatch, mesh limits</th>
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Socio-economic aspects

Shareholders – rights holders
86% Namibian

1618 employed in fishery – increasing through value addition
82% Namibian

N$ 33 million paid in quota levies
Acoustic survey abundance estimates
Size structure

The graph illustrates the size structure of populations over different time periods. Each line represents a specific year:
- Red: 03-12
- Green: 93-02
- Yellow: 83-92
- Blue: 73-82

The x-axis represents total length (cm), and the y-axis represents frequency. The peaks indicate the most common lengths for each period.
Stock Assessment

Annual acoustic abundance estimates
Trawl CPUE
Age-structured production model
Harvesting rules
Transboundary Considerations
Angola Fishery is diverse
Artisanal, semi industrial
purse seine

Transboundary Area – Affected by ABF

Namibia Fishery is industrial
Large midwater trawlers,
purse seiners
Thank You
BOM TRABALHO