



**UFRPE- Universidade Federal
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**DEPAq- Departamento de
Aqüicultura e Pesca**

The Sixth Meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

FISHERIES AND THEIR CONTRIBUTION TO SUSTAINABLE DEVELOPMENT: SMALL-SCALE AND ARTISANAL FISHERIES





ISSUES TO BE ADDRESSED:

(Format and annotated provisional agenda: Annex III.A)

- 1- What actions can be undertaken to improve (understanding of) the contribution of small-scale fisheries to food security and poverty reduction?**
- 2- How can vulnerability in small-scale fishing countries be reduced and the added value of small-scale fishing activities be increased?**

Definition of artisanal and small-scale fishing:

The term “artisanal” refers to the relative level of technology, while “small-scale” refers to the size of the fishing unity (scale)

According to FAO’s Glossary:

Artisanal, or small-scale fisheries, are traditional fisheries involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels (if any), making short fishing trips, close to shore, and mainly for local consumption.

They can be for subsistence or commercial.

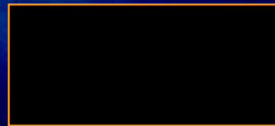


X



**SMALL SCALE/
ARTISANAL FISHING**

**LARGE SCALE/
INDUSTRIAL FISHING**



X



→ Very Easy



= ????

FAO WG Small Scale Fisheries: It is inappropriate to formulate a universally applicable definition for a sector as dynamic as diverse as small scale fisheries



How Artisanal and Small-scale fisheries contribute to food security and poverty alleviation ?



World Summit on Sustainable Development:

Poverty eradication is the greatest global challenge facing the World today and an indispensable requirement for sustainable development !

Food Security: 50% of the fish used for food

↳ **Nutritional contribution: World, National, Local, Household**

✓ **Directly: fish as food (permanent or occasional/ seasonal)**

↳ **Escape valve**

✓ **Indirectly: fish as source of income to buy food**

Poverty alleviation: 90% of the fishers

*** Poverty can be a constraint to adequate management since at the edge of survival management rules will be simply ignored.**

✓ **Economic growth at National, Local, Household and Individual**



Potential contributions of small scale fisheries to poverty alleviation:



- ✓ **Source of employment and income;**
- ✓ **Foreign exchange derived from international trade;**
- ✓ **Contribution to GDP, enhanced by multiplier effect;**
 - ↳ **Upstream (supplies input) and Downstream (harvest outputs);**
- ✓ **Tax generation;**
 - ↳ **Social development: sanitation, health, education, etc;**

1- What actions can be undertaken to improve the contribution of small-scale fisheries to food security and poverty reduction?



What are the main difficulties faced by small-scale fisheries which restrains their contribution to food security and poverty reduction?



Main difficulties faced by small-scale fisheries which restrain their contribution to food security and poverty reduction



↪ Ecosystem

- ✓ Pollution (urban/ sewage, industrial, agriculture)
- ✓ Urban development
- ✓ Destruction of estuaries, mangroves and coral reefs (climate changes: greenhouse effect, acidification, etc)
- ✓ Destructive fishing methods (trawling fishery)

↪ Fish stocks

- ✓ Overexploitation and depletion
- ✓ Excessive by-catch and discards (reduction x utilization)

↪ Fishing

- ✓ Overcapacity and IUU → unauthorized foreign fleets
- ✓ Conflict with large industrial fleets

↪ Fish

- ✓ Poor handling and conservation methods/ infrastructure
↪ high losses, low quality, low prices → greater vulnerability



Main difficulties faced by small-scale fisheries which restrain their contribution to food security and poverty reduction



↳ Fishermen

- ✓ Low living standards (sanitation, health, education, etc)
- ✓ Displacement and deprivation of land use and access (particularly to inshore coastal waters)
 - ↳ Users conflicts: artisanal/ small scale x industrial/ large scale
 - x aquaculture
 - x urban development
 - x tourism
 - x oil drilling

↳ Inputs

- ✓ Access to affordable credit
- ✓ Access to fishing equipment and material (import)

↳ Outputs

- ✓ Access to markets → vulnerability to traders/ middleman
 - ↳ Undervaluation of catches



Comparative advantages of small scale fisheries



- ✓ Fewer negative impacts on the ecosystem
 - ↳ More selective, less destructive fishing gears, less by-catch



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- ↳ Higher dependency due to much lower mobility leads to a more responsible/ respectful use → Cultural ties to land and sea (Industrial fleets may sometimes behave as grasshoppers)
- ✓ Contribution to cultural heritage and environmental knowledge
- ✓ Lower running costs and fuel consumption



Comparative advantages of small scale fisheries



✓ Labor intensive x Capital intensive

↳ Share the benefits of fish stocks with more people and the most needed, while industrial fisheries leads to capital accumulation

↳ Making to another day x Making money

✓ Decentralized and geographically spread out

* Should limit not only overall fishing capacity, but also the maximum vessel size for selected fisheries ?





Actions that can be undertaken to improve the contribution of small-scale fisheries to food security and poverty reduction:



- ✓ **Improve participation and transparency**
 - ↳ **Ensure greater participation of small-scale fisheries stakeholders in the processes of policy development, management decisions and legislation → share responsibility to ensure compliance**
 - ↳ **Co-management/ Community-based management**
- ✓ **Upgrade small-scale fisheries in national agendas and implement a pro-poor policy, making sure that fisheries policy development is linked to National strategies to reduce poverty and hunger**
 - ↳ **Cross-sectoral policies/ Brazil: “Zero Hunger Program” (Programa Fome Zero)**
- ✓ **Improve fisheries management strategies/ main challenge → change of paradigm**
 - ↳ **Moving from free/ open access → Nobody owns, nobody cares ! to a community-rights based management → We own, we care !**
Protect the rights of access by poor, small-scale fishers



Actions that can be undertaken to improve the contribution of small-scale fisheries to food security and poverty reduction:



FAO: Recognizing the existing rights of fishing communities is a fundamental element in building a successful fisheries management system

- ↪ **Ecosystem enhancement (Integrated Coastal management)**
 - ✓ **Reduction of land-based pollution**
 - ✓ **Marine Protected Areas and Reserves (Reserva Extrativista)**
 - # **Caution not to marginalize fishing groups #**
 - ✓ **Artificial reefs and Fish Aggregating Devices**
 - ↪ **Ecosystem protection (trawling)**
 - # **Caution not to use as simple fishing gears (increase effort) and to not negatively interfere with natural reefs #**
- ↪ **Assess and reduce excess fishing capacity and IUU (MCS Systems)**
- ↪ **Fully implement the precautionary approach**
- ↪ **Incorporate ecosystem considerations, including environmental variability, particularly its influence on recruitment, trophic chain, impact of fisheries on by-caught species and physical damage to the environment, etc**



Actions that can be undertaken to improve the contribution of small-scale fisheries to food security and poverty reduction:



✓ Develop and transfer of fishing technologies

↳ Reduction of by-catch/ utilization

↳ Access to deep-seas and high-seas resources

↳ Deep-seas resources: ✓ limited and fragile habitat

✓ low biomass and productivity

↳ Priority to small-scale fisheries

↳ Access to high-seas resources:

Advantages in relation to coastal stocks:

✓ Greater biomass and broader distribution

✓ Life cycle independent of coastal ecosystems

✓ Larger size of fish

✓ High-value fish

Code of Conduct (Art. 7.2): Management measures should provide, *inter alia*, that: c) the interest of fishers, including those engaged in subsistence, small-scale and artisanal fisheries are taken into account



Actions that can be undertaken to improve the contribution of small-scale fisheries to food security and poverty reduction:



Code of Conduct (Art. 5.2): States (...), should work for the adoption of measures to address the needs of developing countries, specially in the areas of financial and technical assistance, technology transfer, training and scientific cooperation and in enhancing their ability to develop their own fisheries as well as to participate in high seas fisheries, including access to such fisheries.

ICCAT Criteria for the Allocation of Fishing Possibilities (Art. 8): The interests of artisanal, subsistence and small-scale coastal fishers.

Transfer of monofilament longline technology to artisanal vessels off northeast Brazil (UFRPE- Universidade Federal Rural de Pernambuco)





Actions that can be undertaken to improve the contribution of small-scale fisheries to food security and poverty reduction:



✓ Capacity building

- ↪ **Focus on all different levels, including non-sector specific knowledge and skills, such as business management, socio-economics and marketing, besides fisheries specific skills**
- ↪ **Fish handling, processing and conservation**
 - ↪ **Reduce wastes and add value**
- ↪ **Strengthen small scale fisheries organizations to enhance their ability to participate in policy-development and decision-making process → capacity building of representatives**
 - ↪ **Increase legitimacy and true representativeness**

✓ Market access

↪ Import regulations

↪ **HACCP, Ecolabeling and traceability**

*** Increasingly complex technical regulations significantly reduce the access of small-scale fishermen and traders to export markets**

↪ **Concentration of benefits in fewer, better equipped, hends !**



Actions that can be undertaken to improve the contribution of small-scale fisheries to food security and poverty reduction:



✓ Financing

- ↪ Implement affordable credit, through micro-financing schemes**
- ↪ Implement accessible insurance and social security programs**

✓ Information, research and communication

- ↪ Ensure better access to relevant information, including fishworkers rights, management rules, decision-making process, oceanographic and fisheries data, weather forecasts, etc.**
- ↪ Develop research on strategic areas, besides technology development, such as (from FAO Technical Guidelines):**
 - ✓ Poverty and vulnerability in small-scale fisheries**
 - ✓ Demographic, economic, social and cultural issues**
 - ✓ The role and contribution of small-scale fisheries in rural and peri-urban economies in developing countries**
 - ✓ Effectiveness of the changing fisheries governance regime**
 - ✓ Small-scale fisheries resource and environmental conservation**
 - ✓ The use of integrated assessment in fisheries**



2- How can vulnerability in small-scale fishing countries be reduced and the added value of small-scale fishing activities be increased?



- ✓ **Improve storage and transportation facilities**
- ✓ **Diversify fishing technology → access to other fish stocks**
- ✓ **Develop weather forecast and early warning systems (tsunami)**
- ✓ **Provide affordable insurance and credit**
- ✓ **Build capacity on fish processing/ value added products**
- ✓ **Facilitate access to markets/ direct selling of fish**



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THANK YOU FOR YOUR ATTENTION !

OBRIGADO !

