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Anthropogenic risks and how to manage them

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Theme 3. Anthropogenic risks

(fishing gear, by-catch, introduction, pollution, GMOs)

1. Fishing Gear

- ✓ Non-selective fishing gear causes overfishing, bycatch and discards
- ✓ Habitat damages: Bottom fishing disturbs seabed, benthic structures, VME
- ✓ Ghost fishing: abandoned fishing gear, 10% of marine litter, continued catch of fish and other species (example: crab pot 1.25 mil blue crab each year in the Chesapeake Bay)

→ solution:

- make fishing gear more selective so that bycatch and discards are reduced
- RFMOs: NPFC – *“development and use of selective, environmentally safe, and cost-effective fishing gear and techniques”, measures to protect vulnerable marine ecosystems (NPFC CMM 2017-05 and 2017-06)*

2. Bycatch

- ✓ Global level of bycatch: A total of 28.7 million mt and 27.0 million mt of discards (37.2% from shrimp fisheries (FAO, 1994) vs 77 million mt from target catch → 9million mt of discards (FAO, 2005)
 - ✓ Various marine species including shrimps, fishes, sea birds, sea turtles, marine mammals
 - ✓ Impacts at population and ecology, economic impacts, socio-cultural impacts
- solutions:
- Fishing capacity and effort controls, spatial and temporal closures, enforceable limit on bycatch and discards, improve selectivity of fishing gear, bycatch reduction measures (TED, tori poles, grid trawl, fishing line, etc)
 - Role of RFMOs: adopt measures (CMMs) to reduce bycatch of non-target species, monitoring, data, risk assessment, control, surveillance

3. Introduction

- ✓ introduction of non-native species into an ecosystem by maritime trade (ballast waters, fouling), leisure navigation, mariculture, climate change
- ✓ threaten native biodiversity, affect human health and economies.
- ✓ fishes, crustaceans, molluscs, others
- ✓ Biological invasions are on the increase

→ how to prevent?

- Controls on ballast water and hull fouling based on risk minimisation rather than prevention. Import prohibitions relating to aquaculture stocks. Infestation monitoring and removal programs. national and international efforts needed. Surveillance and compliance programs.
- Information from Global invasive species database (www.iucngisd.org)
- Implementation of Aichi 2020 Target 9 to prevent introduction

4. Pollution

- ✓ nutrients, sediments, plastic litter, noise, hazardous and radioactive substances; discarded fishing gear, microbial pollution, and trace chemicals
 - ✓ disrupts marine ecosystems, pollutants do have the potential to influence species' habits for breeding and feeding.
 - ✓ examples: 19 billion pounds of plastic into the ocean every year
- how to prevent?
- Control focused on specific pollutants, such as plastics or highly toxic or radio-active substances. Integrated coastal and river basin planning, including objectives to limit the passage of nutrients and other pollutants to the marine environment. Surveillance and compliance programs.
 - RFMOs: NPFC Convention – *“minimizing pollution and waste originating from fishing vessels”*
 - implementation of Aichi 2020 Target 8 to limit pollution level

Relevant provisions of the NPFC Convention

3c. adopting and implementing measures in accordance with the precautionary approach and an **ecosystem approach to fisheries**

3.d. assessing the impacts of fishing activities on **species belonging to the same ecosystem or dependent upon or associated with the target stocks** and adopting, where necessary, conservation and management measures for such species

3.e. protecting biodiversity in the marine environment, including by **preventing significant adverse impacts on vulnerable marine ecosystems,**

3.k. **minimizing pollution and waste originating from fishing vessels, discards, catch by lost or abandoned gear,** and impacts on other species and marine ecosystems through measures including, to the extent practicable, the **development and use of selective, environmentally safe, and cost-effective fishing gear and techniques;** and

WHAT HAVE WE DONE SO FAR?

Second Year of Official Operations:

- **Meetings:** 2nd Scientific Committee Meeting and 2nd Small Scientific Committee meetings on VMEs, NPA, and PS as well as two workshops on Pacific Saury Stock Assessment and one workshop for Chub Mackerel; Technical and Compliance Committee Meeting and follow up WEBEX; 1st Finance And Administration; and 3rd Commission Meeting.
- **Adopted 9 Conservation and Management Measures (CMM)** to manage, conserve and protect the fisheries resources and marine ecosystems of the Convention Area: Vessel Registration, IUU fishing, Interim Transshipment, Vessels without nationality, Conservation and protection of Bottom Fisheries & VME (NW, NE), Chub Mackerel, Pacific saury, HSBI procedure
- **Adoption of the first IUU vessel list**
- **Stock assessment of priority species:** Pacific saury, Chub mackerel, Adaptive management for North Pacific Armorhead
- **Liaison with regional and global organizations:** FAO (ABNJ [deep sea/CDS - MCS], COFI); RSN; NPAFC; PICES; UNFSA Review; UN BBNJ.

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Спасибо
Thank you



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