North Pacific Fisheries Commission

NPFC-2025-COM09-OP02 Rev.1

Observer paper submitted by The Pew Charitable Trusts & The Ocean Foundation
Invitation to Lunchtime COM09 Side Event on Management Procedures & Independent Monitoring Programs

The Pew Charitable Trusts and The Ocean Foundation are pleased to invite COM09 participants to a lunchtime side event to be held on Tuesday, March 25, 2025 in Hall 6. Registered participants will be provided with lunch and will learn from experts how NPFC can lead the next decade through the development and adoption of management procedures (also known as harvest strategies), as well as the benefits of improved independent monitoring efforts. An agenda and slides from the side event are provided below.

To register, please complete this form by March 18: https://cvent.me/LE1Prz

For questions, please email Ms. Raiana McKinney (rmckinney@pewtrusts.org).

Rev.1: Added the presentation

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4-5-7 Konan, Minato-ku, Tokyo
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Web www.npfc.int

NPFC: 10 YEARS OF PROGRESS, HOW TO LEAD THE NEXT 10

25 March 2025 in Hall 6 | Lunchtime Side Event by The Pew Charitable Trusts & The Ocean Foundation

Note to Invitees

Thank you for your interest. A provisional agenda is provided below that outlines the side event themes. Please note that this event will occur at the lunch break (time to be confirmed) on March 25 and will be approximately 60 minutes. A finalized agenda will be provided to participants closer to the event.

Please register by March 18: https://cvent.me/LE1Prz
For questions, please email Ms. Raiana McKinney: rmckinney@pewtrusts.org

Provisional Agenda

Opening Remarks & Overview of Schedule

Session 1: Modernizing Fisheries with Management Procedures

- What are management procedures?
- Examples of management procedures around the world
- NPFC's development to date
- Resources Available + Intro: FAO Common Oceans Deep-Seas Fisheries Project

Session 2: Advancing Oversight with At-Sea Monitoring Programs

- Why monitor the high seas?
- How at-sea monitoring programs work + examples at other RFMOs
- How NPFC could implement an at-sea monitoring with human observer programs + electronic monitoring

Session 3: Questions & Answers

NPFC: 10 YEARS OF PROGRESS, HOW TO LEAD THE NEXT 10

LUNCHTIME SIDE EVENT BY THE PEW CHARITABLE TRUSTS & THE OCEAN FOUNDATION

Pew

The Ocean Foundation

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Session 3: Questions & Answers

Management Procedures:

What are they and what has been the progress at NPFC

Dr. Grantly Galland

Pew

What are management procedures?

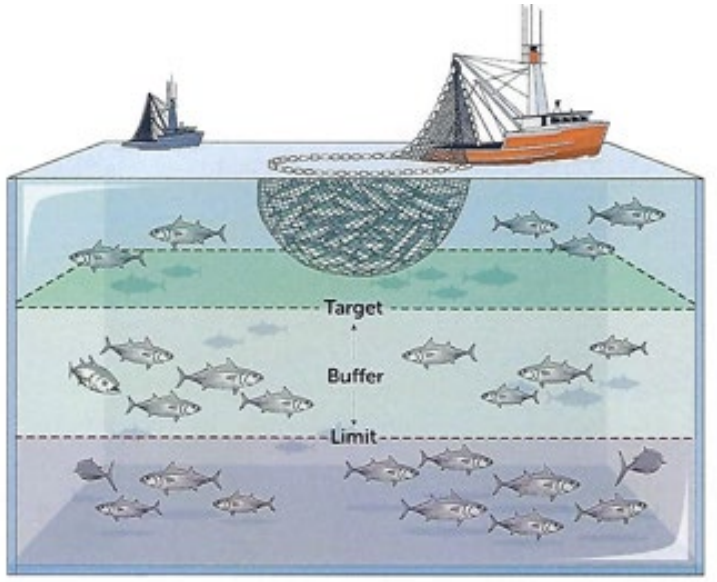
- Management procedures are also called “harvest strategies” or often just “MPs”
- They are pre-agreed frameworks (or rules) for making management decisions (usually for setting fishing opportunities – catch limits, effort limits, size limits, closed seasons, etc.)
- NPFC already has some experiences with MPs, including with the adoption last year of an interim harvest control rule for Pacific saury (more on that later)
- An MP framework includes several important pieces, each of which typically requires input from both managers and scientists:
  - **Management objectives** (including reference points)
  - **Monitoring**
  - **Assessment**
  - **Harvest Control Rule**
- Candidate MPs are evaluated using management strategy evaluation (MSE) with managers choosing the option that best meets their needs

Management Objectives

- The managers wants/needs for a fishery – these can be just about anything, but usually include objectives to maintain the stock in a healthy state, avoid the "danger zone," and maximize sustainable catch. Other potential objectives can include:
  - Stability in catch – avoiding big swings in catch from one year to the next
  - Maintaining a specific catch per unit effort – ensuring that it does not become harder to catch the same amount
  - Stability in market price – maintaining a minimum price (given other market conditions)
  - Maintaining a minimum (or preferred) level of employment
  - Protecting bycatch – ensuring that fishing operations do not take so much bycatch to risk another species
  - Preserving food webs – leaving some fish in the water for predators, both commercially important (like large tunas) and not (like marine mammals and seabirds)

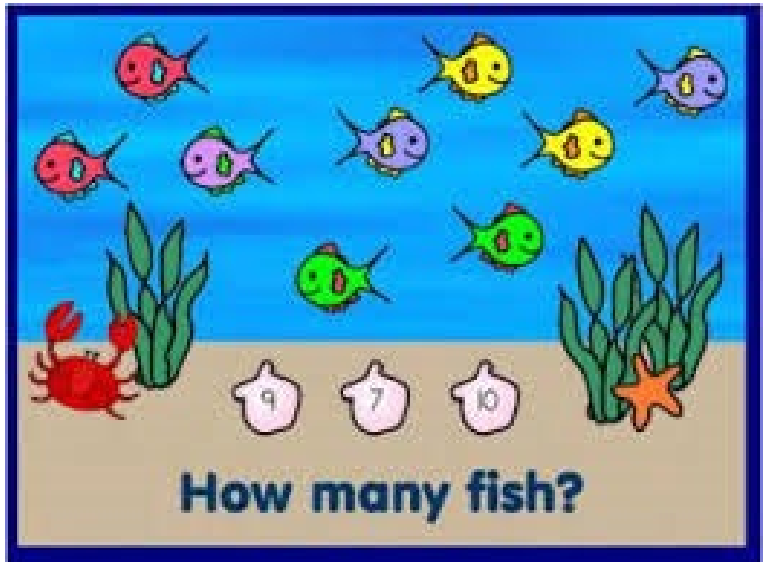
Monitoring

- Collecting information needed to run the MP or to test whether or not the MP is meeting the managers' expectations



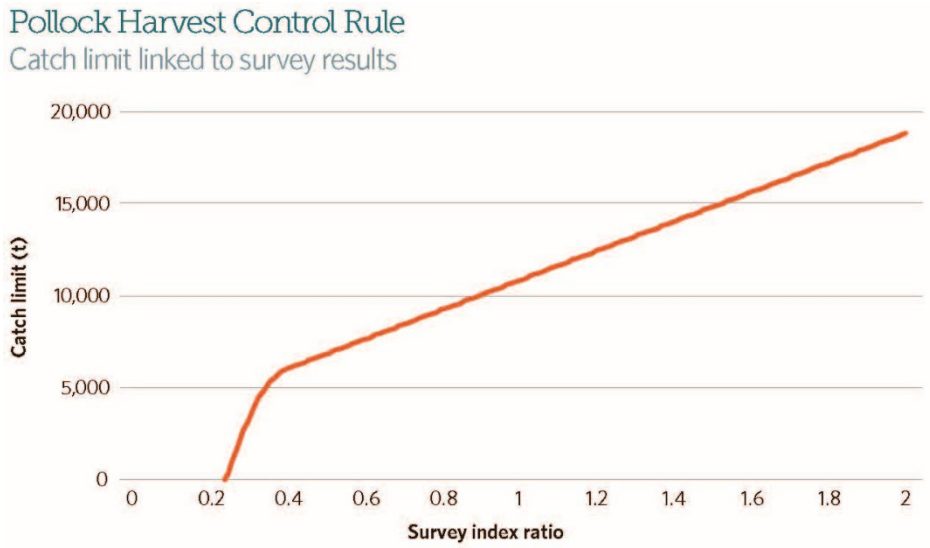
Assessment

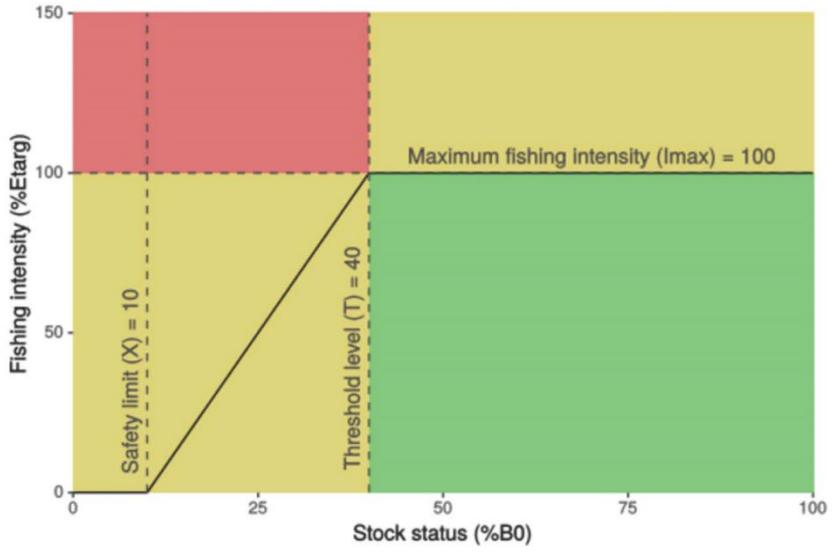
- Determining the size of the stock (for a stock assessment **model-based MP**) or the state of the fishery indicators (for an **empirical MP**).
- Outputs of the assessment become the inputs of the harvest control rule.
- Assessments for this purpose are often somewhat simplified



Harvest Control Rule (HCR)

- The equation that takes the output of the assessment method and produces the next year's (or multiple years') fishing opportunity (catch limits, effort limits, size limits, closed seasons, etc.).
- The HCR is often defined by the **reference points** which are jointly set by managers and scientists and include targets (what managers want), limits (what should be avoided), and thresholds (which may lead to management action)





What are management procedures?

A system of rules that automatically set fishing opportunities based on the managers' wants/needs for the fishery and depending on the status of the stock. MPs replace the year-to-year political negotiation of catch limits with automated decisions based on science.

They can be used to recover overfished stocks or maintain stocks and fisheries that are in good condition.

What is management strategy evaluation and why is it so important?

- MSE is a detailed scientific model that simulates the expected performance of different candidate MPs across a range of different biological and environmental characteristics or fishery activities that have been observed in the past and therefore could be observed again in the future
  - Each set of different characteristics is called an **operating model (OM)**
- Could also incorporate environmental characteristics expected from **climate change** (but not yet observed)
- Very powerful tool for testing candidate MPs' ability to meet managers' objectives, even when those objectives pull in opposite directions
- **MSE accounts for scientific uncertainty, environmental change, and competing objectives**

Where have RFMOs adopted management procedures?

Tuna RFMOs

- Southern bluefin tuna
- Eastern Atlantic and Mediterranean bluefin tuna
- Western Atlantic bluefin tuna
- North Atlantic albacore
- North Pacific albacore (x2 RFMOs)
- Pacific skipjack
- Indian Ocean skipjack
- Indian Ocean bigeye
- North Atlantic swordfish
- Indian Ocean swordfish

General RFMOs

- Pacific saury (simulation-tested HCR)
- 3NO Atlantic cod
- Greenland halibut (Atlantic)
- Adriatic sardine (simulation-tested HCR)
- Adriatic anchovy (simulation-tested HCR)

2025?

Progress on MP development at NPFC

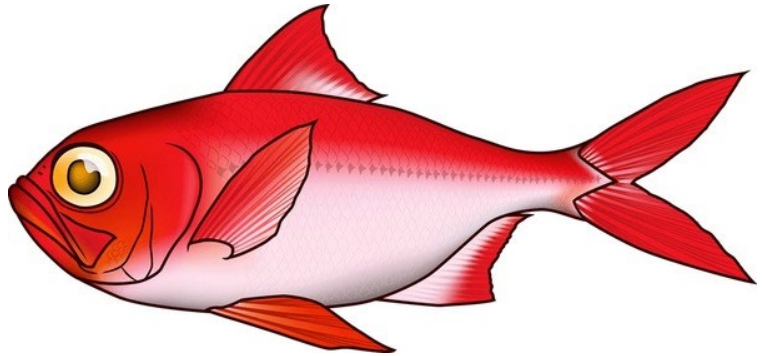
- 2024 adoption of an interim harvest control rule for Pacific saury based on analysis using an MSE-like model.
  - But note that the other specifications of a full MP need to be adopted at the next opportunity, and CMM 2024-08 calls for MSE to be completed and a full MP to be adopted in 2027.
    - **Pew recommendation**: start by agreeing to clear management objectives for the full MP, including ecological/climate-related objectives
  - Also note that full MSE should be developed. The current model does not account for a full range of uncertainties
- The saury effort started as an effort to better understand the state of the stock but now forms the basis of a new management system to support recovery and long-term sustainability

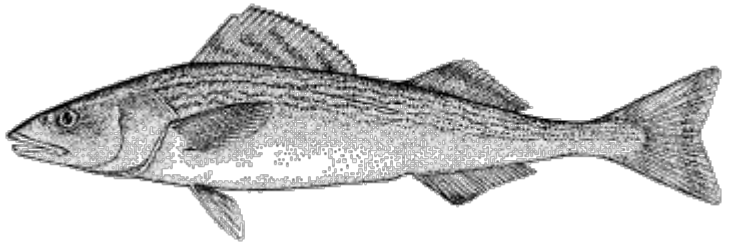
Progress on MP development at NPFC

- In 2024, Pew/TOF facilitated an MSE workshop for NPFC scientists that was well attended and received positive remarks and may have already fostered some scientific collaboration
- 2024 SC meeting endorsed several MP/MSE related recommendations!
  - Explore options for developing full MSE and completing the MP process for Pacific saury
    - **Pew recommendation**: expand the uncertainty considered in the MSE so the MP is likely to be successful under a wider range of biological/environmental characteristics
  - Explore options to develop MSE for neon flying squid, as a means to better understand the state of the stock and to explore future options for management
    - Already in 2025, there has been some scientific collaboration on this possibility
    - **Pew recommendation**: start by identifying and adopting interim management objectives so scientists are clear about managers' wants/needs for the neon flying squid fishery

Progress on MP development at NPFC

- The 2024 SC also received positive comments from members and observers on:
  - Developing MSE for chub mackerel, building on the progress made recently on the stock assessment
  - Developing MSE and adopting an MP for sablefish catch taken on the high seas, noting that Canadian domestic sablefish fisheries are already managed by an MSE-tested MP
  - Considering how MPs may be useful (along with other tools like area-based management) in recovering NPFC's priority deepwater stocks (North Pacific armourhead and splendid alfonsino)





Conclusions

- Management procedures are now a regular part of RFMO business, with 15 adopted MPs or interim HCRs (including NPFC's Pacific saury HCR)
- Specifying all the components of an MP is an important way to ensure long-term sustainability of priority stocks
- There is good momentum to continue developing and adopting MPs in the north Pacific, including by NPFC

- **Performance Review Recommendation**: "The Commission, through NPFC Members, [should] increase efforts to advance the Commission's work, in particular the development of Management Procedures (MPs) and Harvest Control Rules (HCR) for NPFC priority stocks, and the adoption and implementation of priority MCS measures."

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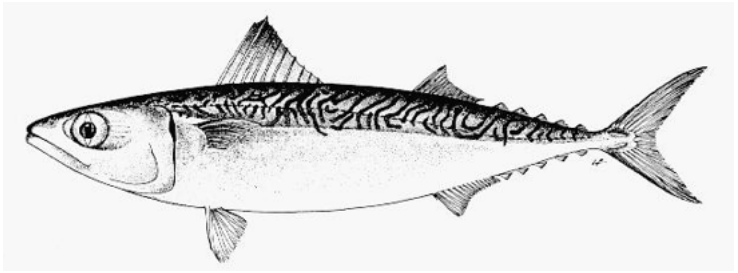
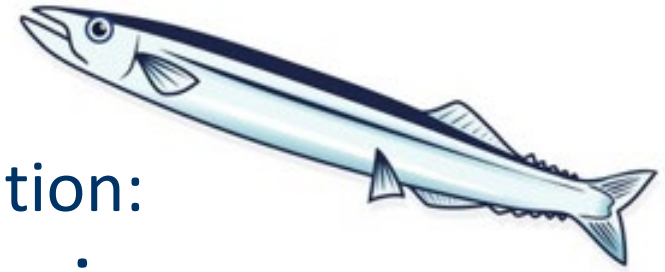




For more information:

www.harveststrategies.org

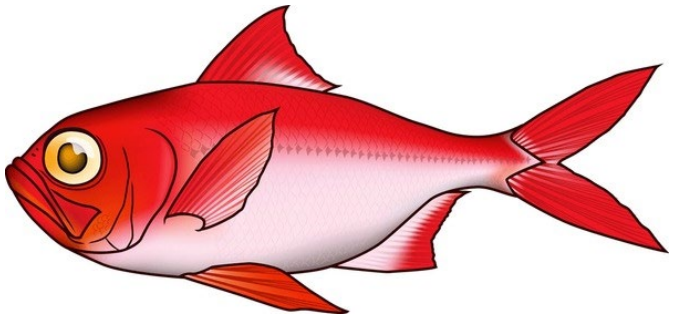
www.pewtrusts.org/harveststrategies

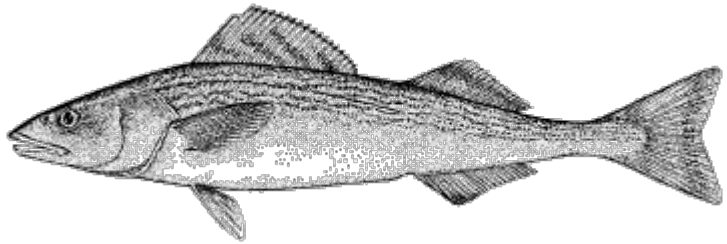
안정적이고 생산적인 태평양 꽁치 어장의 복원을 위해

수확 통제 규칙의 채택과 관리 절차를 통해 관리를 현대화하면 자원이 다시 풍부해집니다.

꽁치는 작고 수명이 짧은 어류로, 북태평양에서 큰 역할을 합니다. 꽁치는 이 지방의 일부 지역에서 문화적으로 중요한 가을 식용 어류이자 상업적으로 중요한 어업의 대상이 되지만, 더 큰 포식자, 특히 일부 참치, 연어, 상어, 바다 포유류 및 바닷새에게는 중요한 먹이가 되기 때문에 북태평양 생태계에서는 필수적인 역할을 합니다.

북태평양어업국제위원회(NPFC) 회원들은 지난 10년 동안 남획을 경험했고 현재도 남획이 심하지만, 더 이상 남획이 발생하지 않도록 태평양 꽁치의 상황을 개선하는 데 중점을 두고 있습니다. 임시 수확 통제 규칙(HCR)에 이어서 현재 관리 절차(MP)를 통해 사전 예방적인 과학 기반 관리를 채택한다면 태평양 꽁치의 상황을 회복하고 장기적 지속 가능성을 확보할 수 있는 최고의 기회를 제공하게 됩니다.





Pew

COMMON OCEANS PROGRAM

PARTNERSHIP FOR SUSTAINABILITY AND BIODIVERSITY IN THE OCEAN AREAS BEYOND NATIONAL JURISDICTION

Deep-sea fisheries project

Implementing Agency

FAO

Executing Agency

GFCM

Partners

RFMOs

GFCM, NAFO, NEAFC, NPFC, SEAFO, SIOFA, SPRFMO

Government

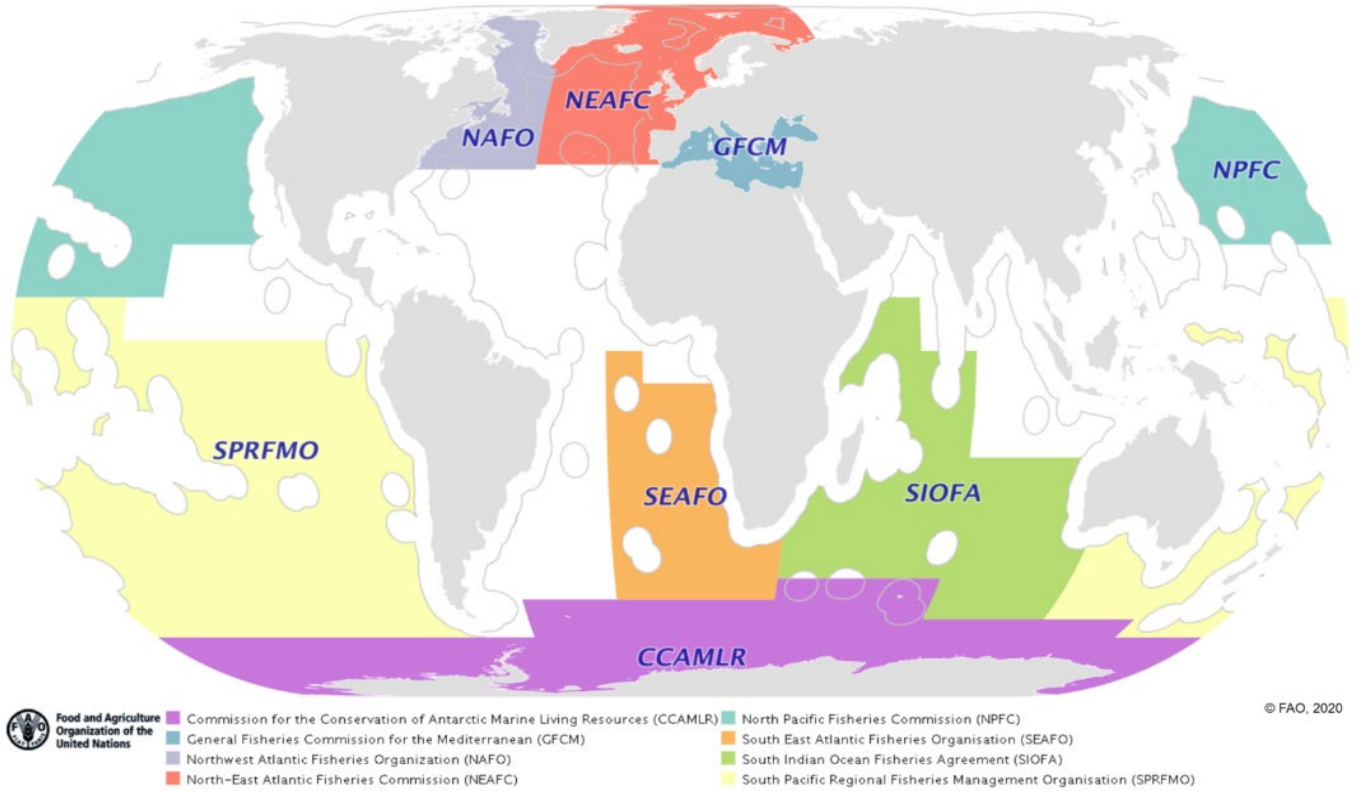
NOAA

Science advisory body

ICES

Private sector

SIODFA, ICFA



Regional Fisheries Bodies (RFBs) with the competence to manage small pelagic and deep sea fisheries

Source: FAO Fisheries Division

Timeframe

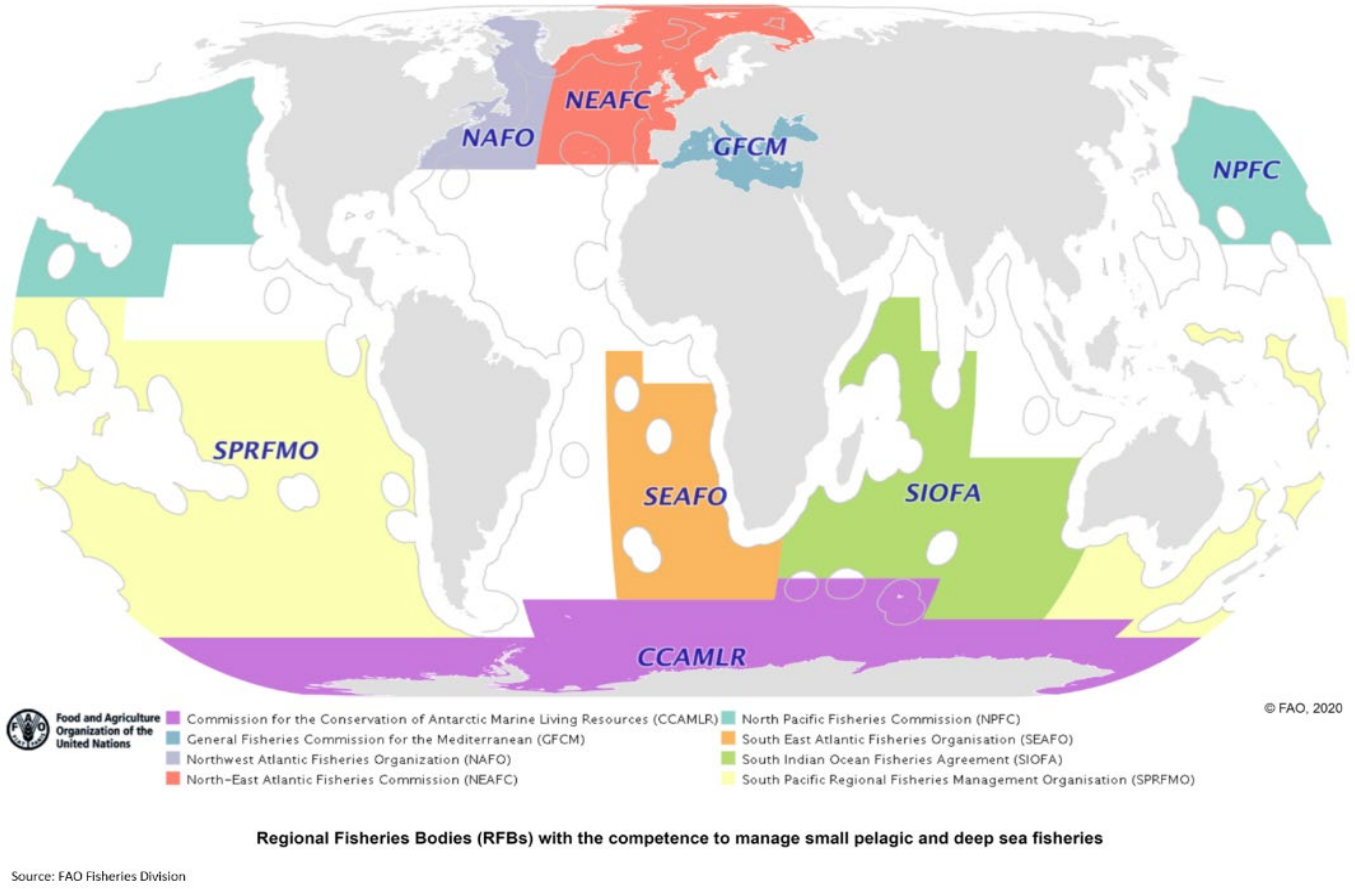
2022-2027

Project Objective

DSF in the ABNJ are managed under an ecosystem approach, with stocks at levels capable of maximizing sustainable yields and minimizing impacts on biodiversity, with a focus on data-limited stocks, deepwater sharks and VMEs

Areas of work

- Strengthen and implement regulatory frameworks
- Improve deep-sea fisheries management
- Reduce environmental impact



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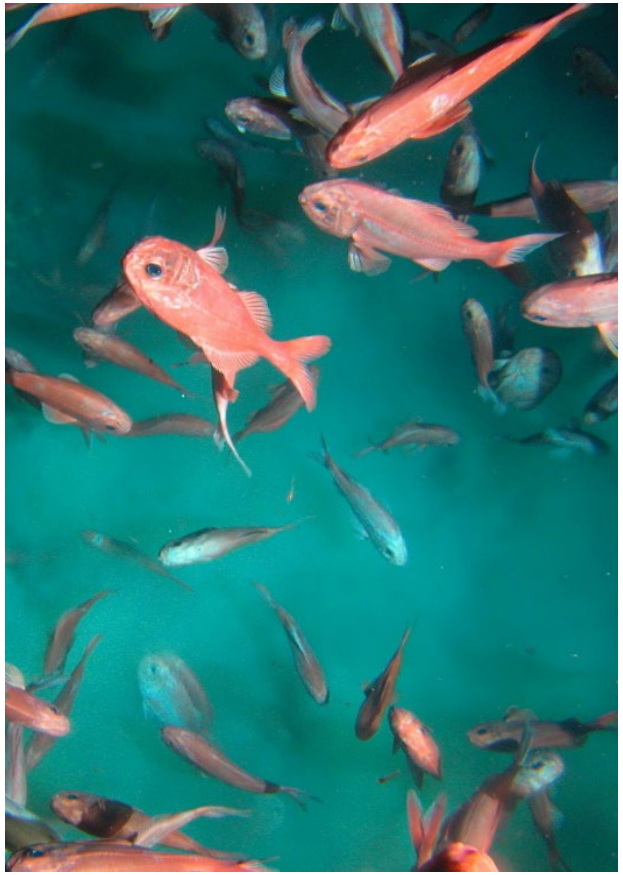
Outcome 1.1: support wider adoption and implementation of international obligations relating to sustainable fisheries;

Output 1.1.1: identify gaps in regional obligations to manage fish stocks and propose corrective measures

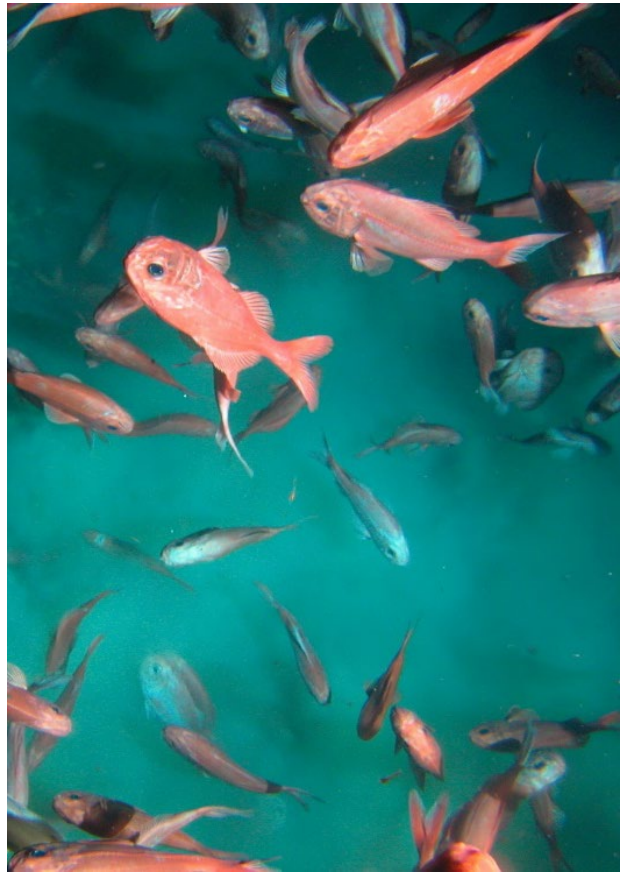
Study on implementation of international obligations

- A desktop study conducted in 2023 contrasted the CMMs of the seven dsRFMO partners against obligations outlined in international instruments
- The study considered relevant provisions of the international legal framework for ocean and fisheries governance
- The study considered two main categories of obligations:
  - The long-term conservation and sustainable use of fishery resources
  - Monitoring, control and surveillance (MCS)



Study on implementation of international obligations

- The study revealed weak implementation of the precautionary approach to the management of deep-sea stocks in the ABNJ
- Of 65 deep-sea stocks assessed, 41% had limit ref points, 21% had target ref points, and 18% had long-term management plans

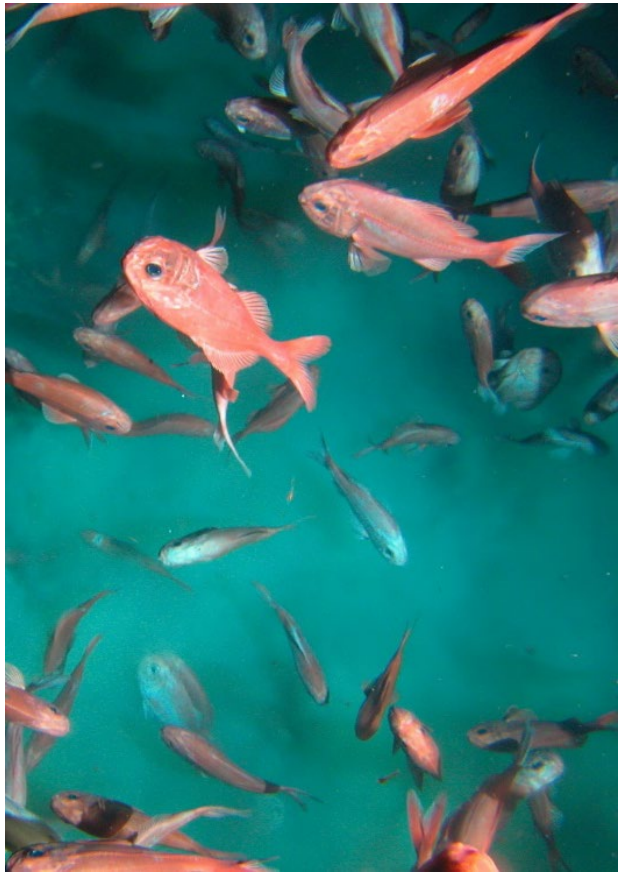


International legal framework for the PA

- The principle of reference points as crucial elements for the application of the PA to fisheries management is incorporated in the FAO CCRF and UNFSA.

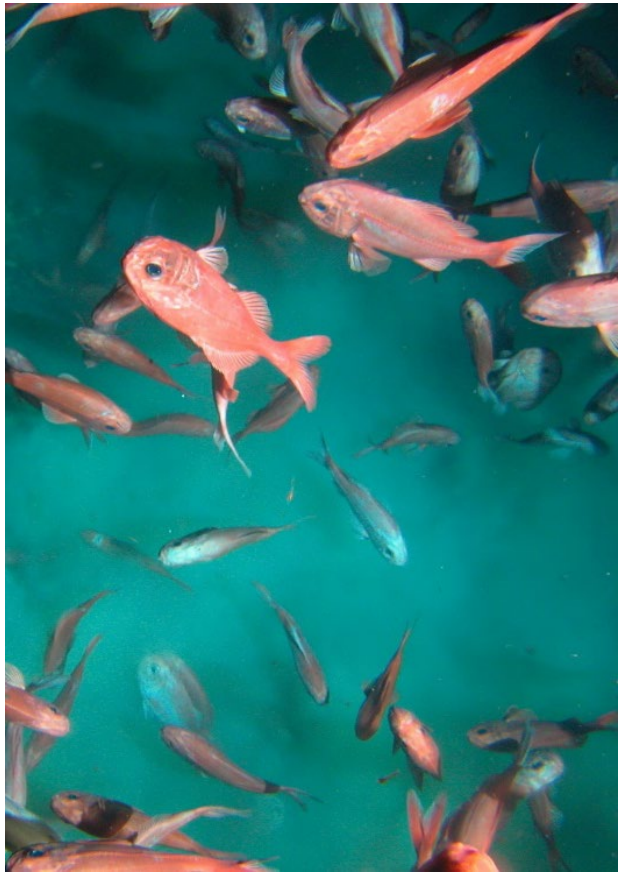
- Annex II of the UNFSA offers guidelines for the application of precautionary reference points.

- The DSF Guidelines dedicates several paragraphs to fishery management plans also highlighting they should include biological reference points set at levels that ensure that fish stocks are harvested sustainably in the long term.



The FAO Guidelines on the PA

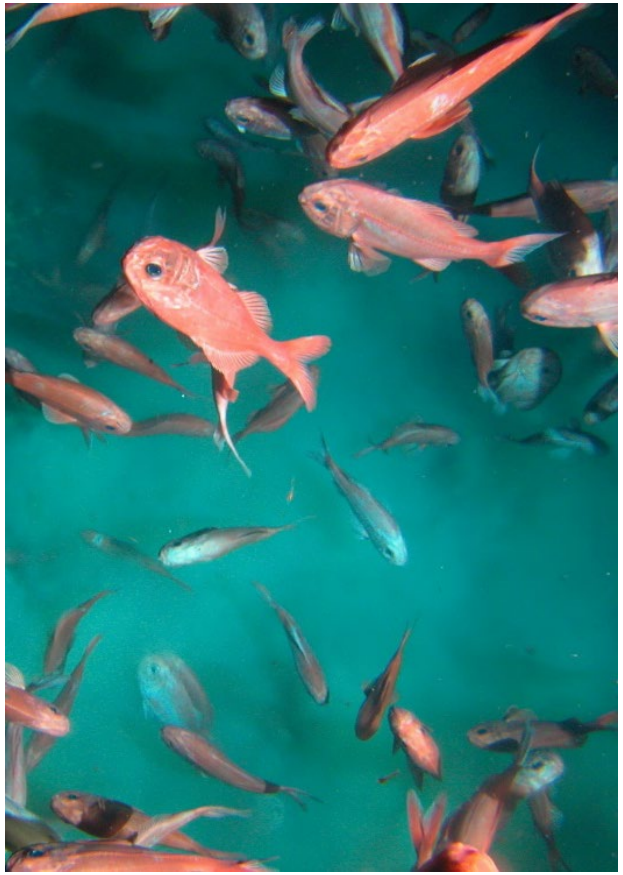
The *1995 FAO Technical Guidelines for Precautionary Approach to Capture Fisheries and Species Introductions* is the only existing guidelines on the application of the PA to capture fisheries by FAO.



The FAO Guidelines on the PA

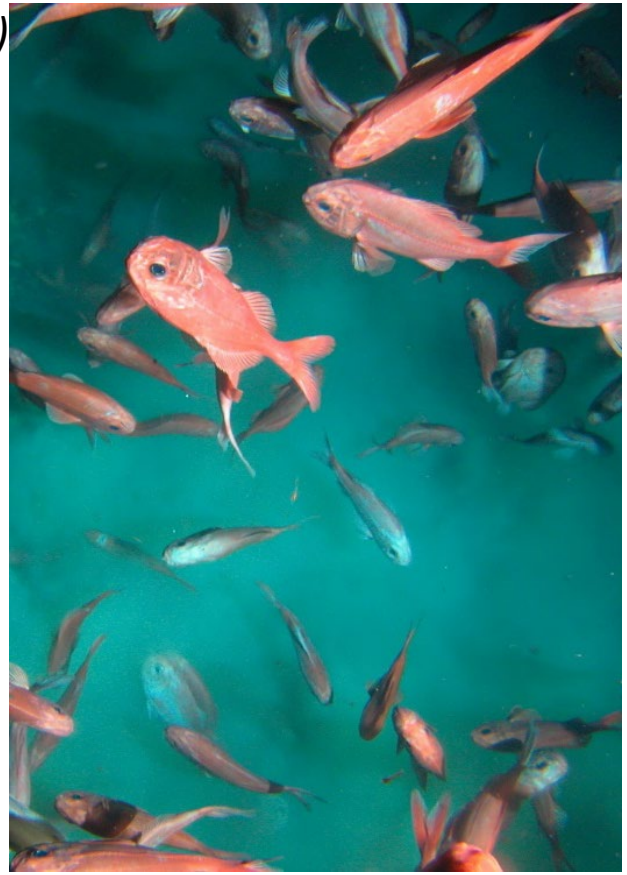
The FAO Technical Guidelines:

- ✓ deem fishery management plans necessary for all fisheries
- ✓ recommend considering time scales of at least 20-30 years
- ✓ recommend expressing operational targets and constraints in the form of target and limit reference points
- ✓ state that a precautionary approach to managing a fishery involves developing, within management strategies and plans, explicit consideration of precautionary actions that will be taken to avoid specific undesirable outcomes



2023 UNFSA Resumed Review Conference

(…) *Ensure the consistent application of the precautionary (and ecosystem) approach(es) among regional fisheries management organizations and arrangements, avoiding implementation gaps, including through enhanced* ***exchange of information*** *and the* ***identification of best practices****.*



PA Workshop, 15 October 2024

DSF Project organized a virtual workshop which aimed to:

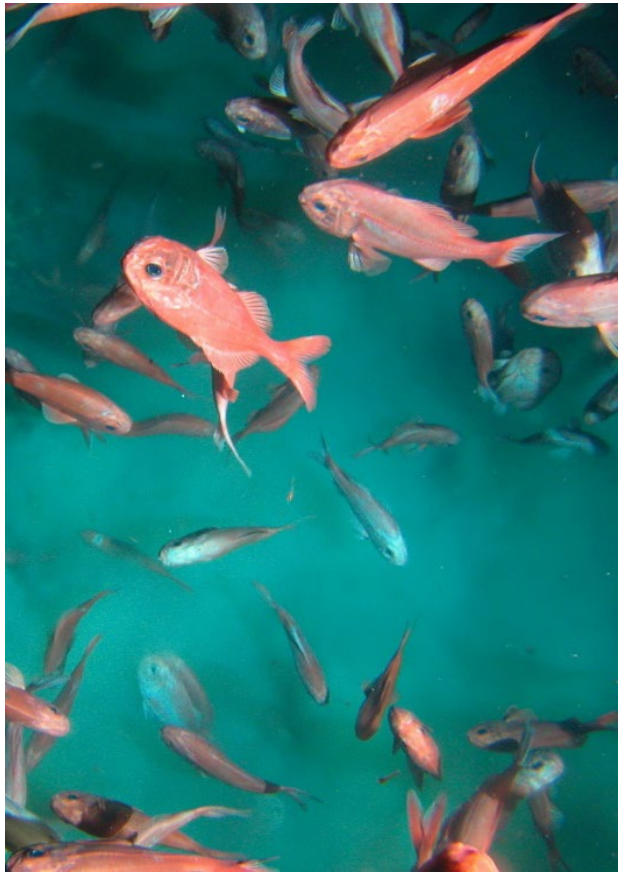
- ✓ take stock of current applications of the PA to the management of DSF stocks
- ✓ explore the steps necessary to advance on the development of long-term management plans for some DSF stocks, including through the development of harvest strategies
- ✓ identify activities to be delivered under the project

87 Participants:

- ✓ Scientists
- ✓ Government officials from 15 countries
- ✓ NGOs
- ✓ Academia
- ✓ Industry

Workshop on the application of the PA to DSF

Overview of international requirements for the application of the PA to fisheries management	**Sarah Fagnani**, Policy and Legal Expert, FAO
Scientific considerations to the application of the PA to fisheries management	**Rishi Sharma**, Senior Fishery Officer, FAO
The NAFO PA framework – an example	**Ray Walsh** and **Fernando Gonzales-Costas**, Co-Chairs of NAFO WG-RBMS
GFCM long-term management plans for shrimp – an example	**Elisabetta Morello**, Fishery Officer, GFCM
Management strategy evaluations and harvest strategies – an overview	**Shana Miller,** The Ocean Foundation



Workshop on the application of the PA to DSF

Participants proposed several actionable steps to support the application of the PA:

1. Capacity Building & Training

- Enhance training programs for scientists and managers.
- Improve communication between the scientific and policy communities.
- Expand access to resources, including www.HarvestStrategies.org, to support capacity-building efforts.

Workshop on the application of the PA to DSF

2. Guidance & Best Practices

- Develop clear, practical guidelines on PA, MSE, and harvest strategies.
- Compile successful case studies to serve as reference models.

3. Strengthening RFMO Processes

- Establish dedicated science-manager dialogue groups to facilitate discussions.
- Create a roster of independent scientists to assist with MSE development.

4. Expanding Access to Tools & Resources

- Increase awareness and accessibility of PA implementation tools.

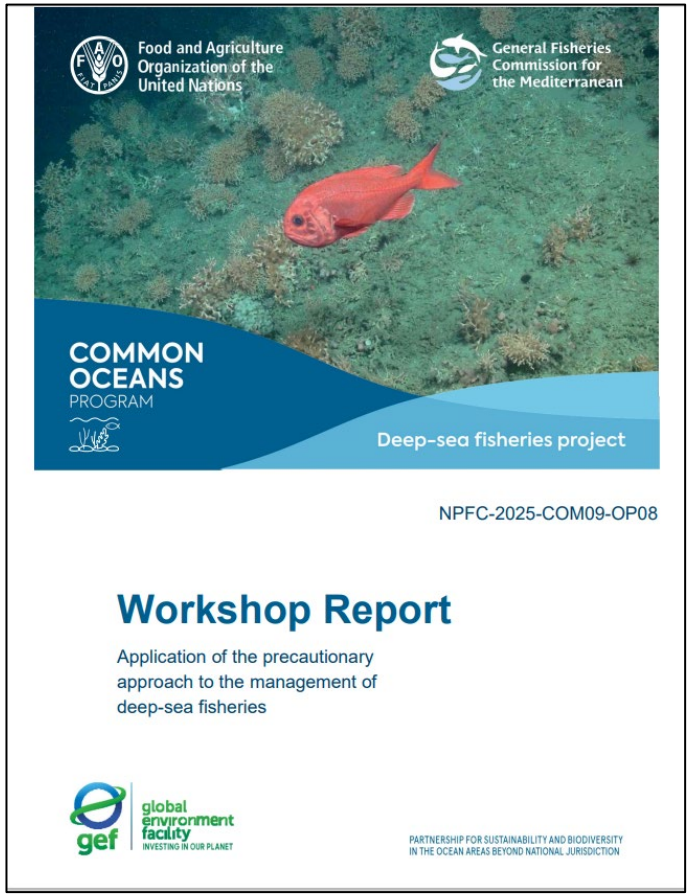
Workshop on the application of the PA to DSF

ENCOURAGING A LONG-TERM VISION FOR DEEP-SEA FISHERIES MANAGEMENT

March 17, 2025

Guest Authors

- ***Eszter Hidas***, *Project Manager of the Common Oceans Deep-Sea Fisheries Project*
- ***Sarah Fagnani,*** *International Consultant, Fisheries Policy, and Legal Expert at FAO*



COMMON OCEANS | Deep-sea fisheries project

Food and Agriculture Organization of the United Nations

General Fisheries Commission for the Mediterranean

The Common Oceans Deep-sea fisheries project brings together a global partnership dedicated to advance responsible deep-sea fisheries management and biodiversity conservation in areas beyond national jurisdiction (ABNJ). Funded by the Global Environmental Facility (GEF), led by the United Nations Food and Agriculture Organization (FAO), and executed by the General Fisheries Commission for the Mediterranean (GFCM), it works in collaboration with the seven deep-sea RFMOs, private sector, national and international organizations.

IN COLLABORATION WITH:

NAFO

NORTH-EAST ATLANTIC FISHERIES COMMISSION

NPFC

SIOFA | APSOI

SEAFO

SPRFMO

ICES OEM

International Coalition of Fisheries Associations

Southern Indian Ocean Deepsea Fishers Association

gef

PARTNERSHIP FOR SUSTAINABILITY AND BIODIVERSITY
IN THE OCEAN AREAS BEYOND NATIONAL JURISDICTION

Advancing Oversight Using At-Sea Monitoring Programs

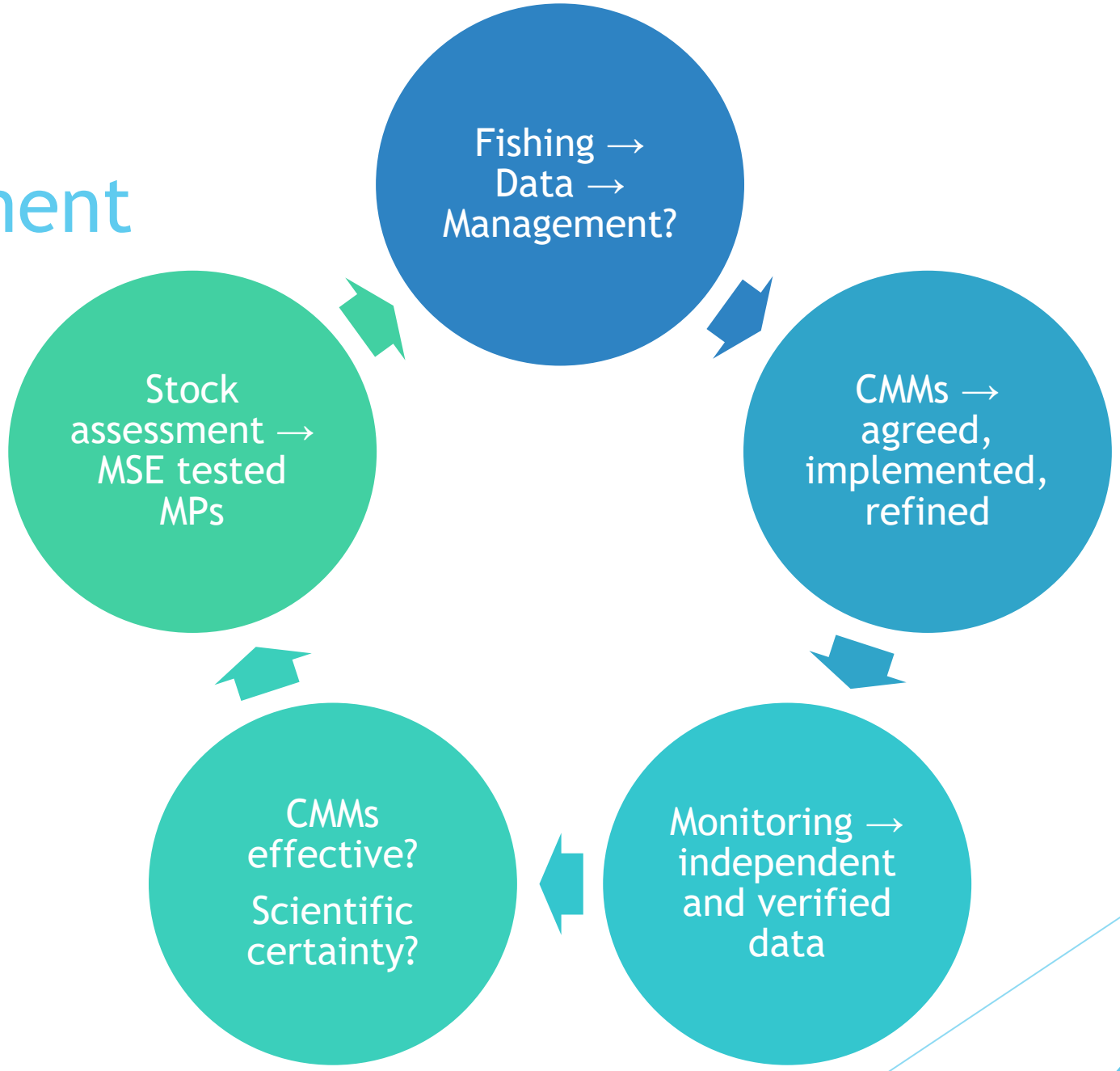
Claire van der Geest
Seven Seas Consulting for the The Ocean Foundation

Outline

- Importance of at sea monitoring
  - Why bother monitoring the high seas?
- At-sea monitoring programs in other RFMOs
  - Retrofitting new technology
- Possibilities for NPFC's at sea monitoring
  - Focus on data required to comprehensively support science and compliance programs
  - Integrate technology from the start
  - Build a program that supports effective fisheries management

Importance of At Sea Monitoring

Fisheries Management Cycle



At Sea Monitoring Programs in other RFMOs

Monitoring Objectives and Tools

- Distinguish legal catch from IUU catch
  - Port State Measures, Transhipment Observer Program
- Independent verification of logbook data
  - Observer program
  - Electronic monitoring
  - Electronic reporting – for all programs
- Monitoring Data:

⬆️ scientific accuracy + ⬆️ compliance with CMMs = management confidence and effective fisheries management

Retrofitted Programs

- NPFC-2024-SC09-WP02 (Rev. 4) –
  - Overview RFMO ROPs and national programs of NPFC members
  - At sea monitoring ➡️ critical part of fisheries management
  - NPFC has observer program ➡️ bottom fisheries (observers and EM)
  - Pelagic fisheries ➡️ national programs only, limited NPFC collaboration

NPFC At Sea Monitoring Program Possibility

Best Practices in Monitoring Programs

- Comprehensive understanding of the fishery
- Random
- Representative of fishery spatially and temporally
- Independent
- Verifies logbook data
- Used for scientific and compliance purposes
- Audited programs

NPFC At Sea Monitoring - same same but different

- Integrated at sea monitoring program
- Scientific and compliance data needs
- Interoperability, avoid un-necessary duplication
- Harmonised data collected, ⬆️ scalability, ⬆️ inform decisions
- Existing member programs
- Strengthening NPFC coordination
- Best practice and world leading

NPFC At Sea Monitoring – work in progress

- Scientific data requirements
- VMS program
- Bottom Fishing and VME protection observer program
- CMS
- Current Proposals before Comm 09
  - Transhipment observer program
  - Port State Measures
  - Data Standards

NPFC At Sea Monitoring – could look like…

1. Data required?
   - Data for scientific purposes
     - stock assessments, development of harvest strategies/management procedures, MSE, etc
   - Data for monitoring management
     - compliance monitoring, quota, discards, retention prohibitions, use of mitigation measures, vessel location, labour and observer safety
2. Level of monitoring required?
   - scientific power, for rare events, confidence in management

NPFC At Sea Monitoring – could look like…

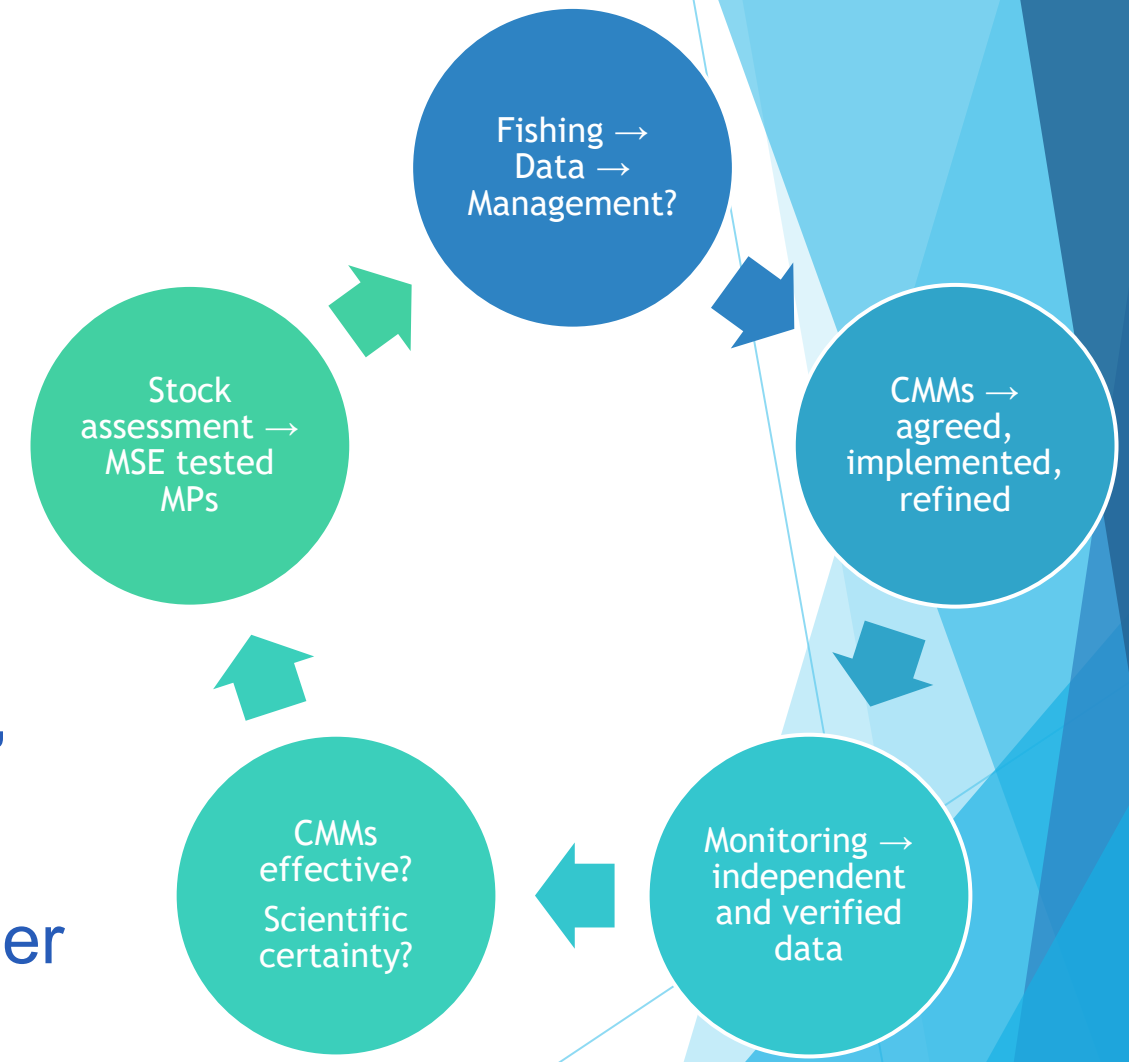
3. Match data with monitoring tools
   - Observers, electronic monitoring, port sampling, VMS, electronic reporting, HSBI, transhipment and port monitoring
   - Can the data be collected by all tools?
   - What data can be collected by multiple tools?
4. Required level of monitoring with
   - available monitoring tools
   - existing member programs

NPFC At Sea Monitoring Possible Program

1. Focus on data requirements, not tools / programs
2. Use all available tools / programs
   - If they give the required data
3. Build integrated at sea monitoring program
   - maximise use of available tools
   - provide the agreed necessary data providing
   - random spatial and temporal coverage of the entire fishery

At Sea Monitoring…

- Strengthens scientific processes
- Informs decision making
- Confirms CMM implementation
- Traceability and accreditation (e.g., MSC)
- Market access – retail and consumer expectations



NPFC: 10 YEARS OF PROGRESS, HOW TO LEAD THE NEXT 10

LUNCHTIME SIDE EVENT BY THE PEW CHARITABLE TRUSTS & THE OCEAN FOUNDATION

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