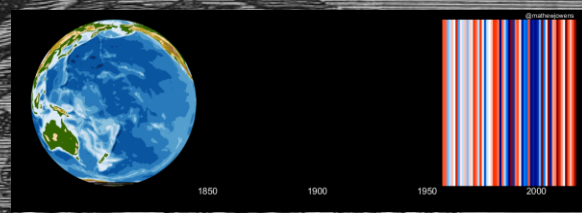




Food and Agriculture  
Organization of the  
United Nations

SUSTAINABLE  
DEVELOPMENT  
GOALS



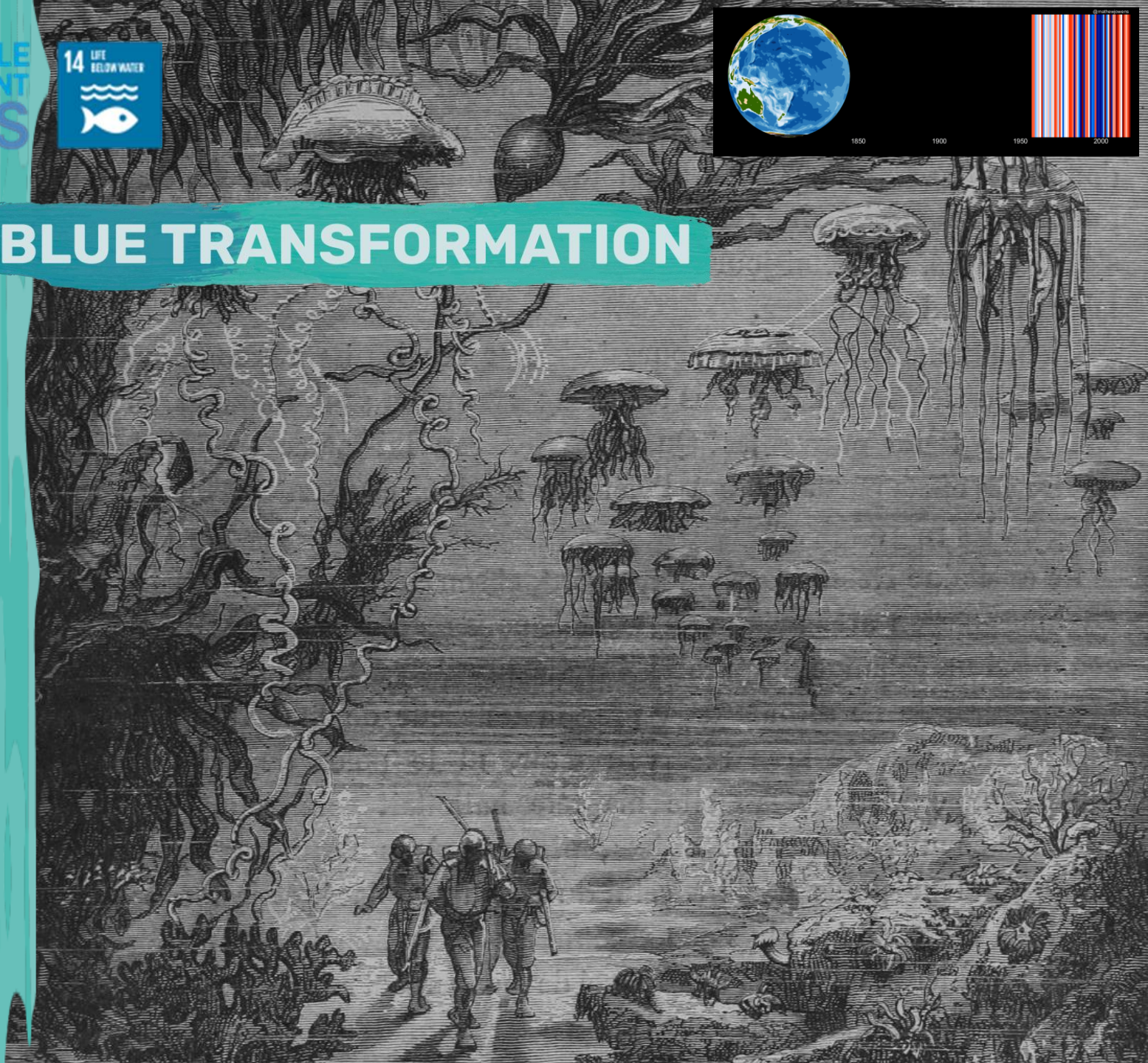
# BLUE TRANSFORMATION

## Management of Shark International IPOA Perspective

**19 February 2024**

Stakeholder Consultation on  
National Plan of Action for Conservation &  
Management of Sharks in India  
(NPOA-Sharks, India)

Kim FRIEDMAN  
FAO Fisheries and Aquaculture Division





Food and Agriculture  
Organization of the  
United Nations

SUSTAINABLE  
DEVELOPMENT  
GOALS



# Management of Sharks: A Global Perspective



1

How Change is Enabled & Measured

2

FAO & others role in enabling delivery of IPOA Shark

3

Opportunities & Needs for IPOA Shark

1

# How Change is Enabled & Measured



**THE GLOBAL GOALS**  
For Sustainable Development

## STATE OF HIGH SEAS RESOURCES

S.M. Garcia  
and  
J. Majkowski\*  
FAO Fisheries Department  
Rome, Italy

Total reported catches of identified sharks in FAO statistics have increased from 280,000 tons in 1970-1974 to 358,000 tons. Forty-eight to 58 percent of the production is from the Atlantic, especially in the North; 23-33 percent is from the Pacific North, Central and South; 12-21 percent is from the Indian Ocean, especially from the West. During the same period, the landings of unidentified *elasmobranches* has increased from 250,000 tons to 360,000 tons, part of which are certainly sharks. On the U.S. Atlantic coast and Gulf of Mexico, estimated landings increased from 13,000 tons in 1965 to 27,000 tons in 1980. This is largely due to increased recreational fisheries, up from 2 to 59 percent during that period (NMFS, 1985).

Most of the reported catches of sharks are taken on the continental shelf (or at its edge) and around islands, but some species are truly oceanic-pelagic and of more direct concern for this paper. Oceanic

Papers presented at the

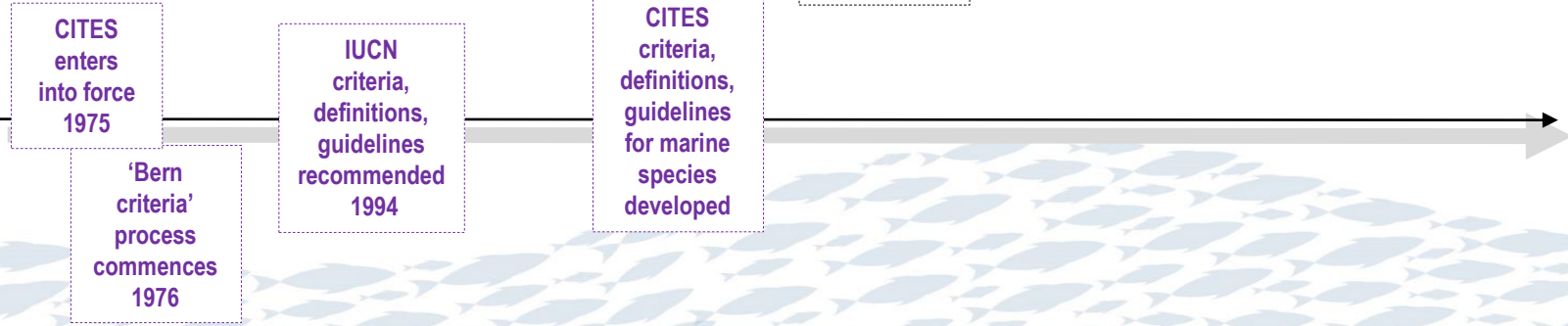
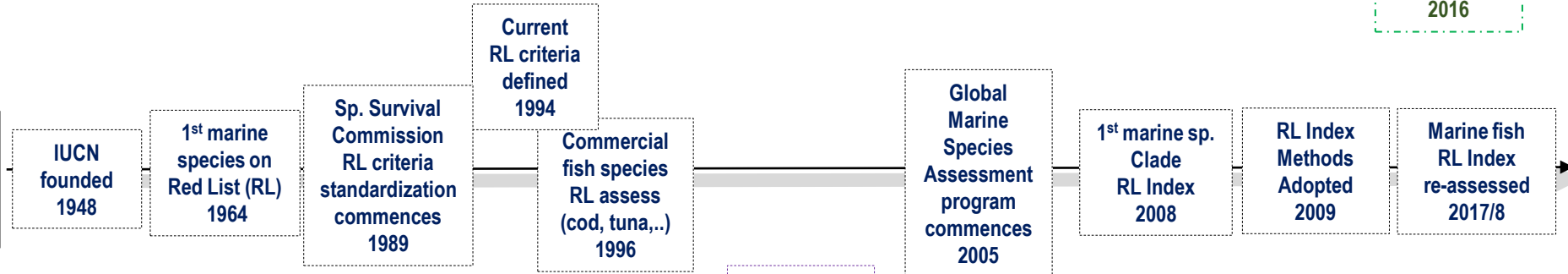
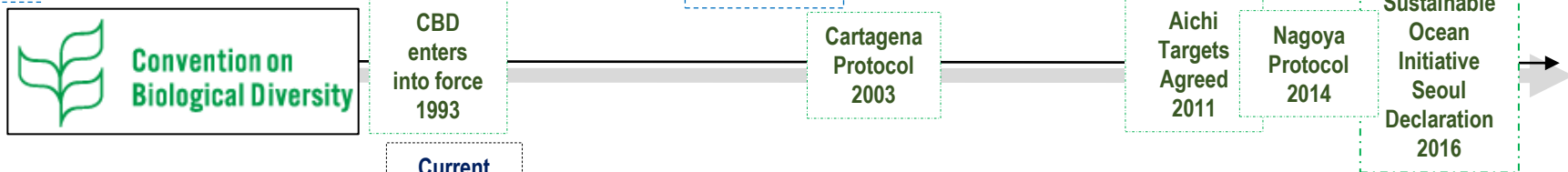
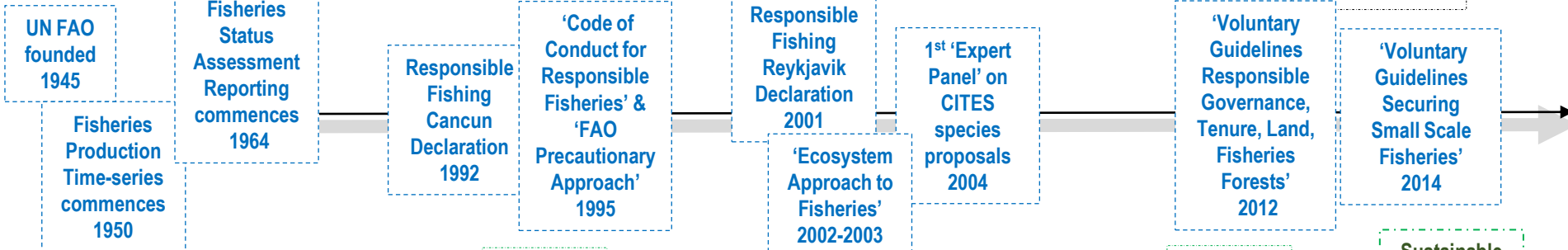
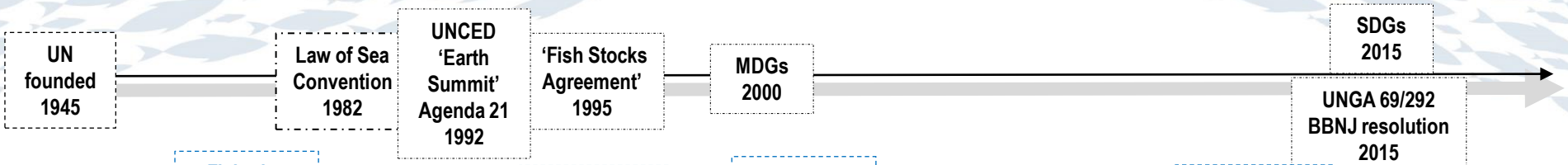
---

TECHNICAL CONSULTATION ON HIGH SEAS FISHING

### FAO Fisheries Report No. 484 Supplement

21. The present issues concerning high seas fisheries are directed at the bycatch of marine mammals, turtles and seabirds and other species. Few coastal States today maintain statistics on bycatches, including the species mentioned above. In the same way, discards of unwanted fish species are not recorded except for those countries using onboard observer programmes on their fishing vessels. It should be noted, however, that I-ATTC requests data on **sharks** caught in tuna fishing operations, and ICCAT, concerned that the catch of pelagic **sharks** is reaching considerable proportions, is making estimates of the **shark** bycatch. There is presently no identifiable solution to the recording of bycatch/discard information, since cross-checking of such data would not be possible with no commercial trade involvement. The Consultation may therefore, wish to consider the issue of the bycatch of mammals, turtles, seabirds and other species under the agenda items covering research and management.

Rome, 7-15 September 1992



# THE IUCN RED LIST STATUS OF SHARKS, RAYS, AND CHIMAERAS



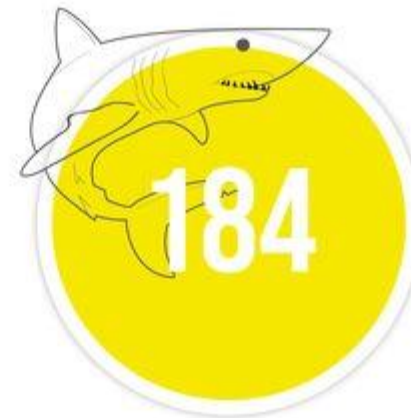
EXTINCT



CRITICALLY  
ENDANGERED



ENDANGERED



VULNERABLE



NEAR  
THREATENED



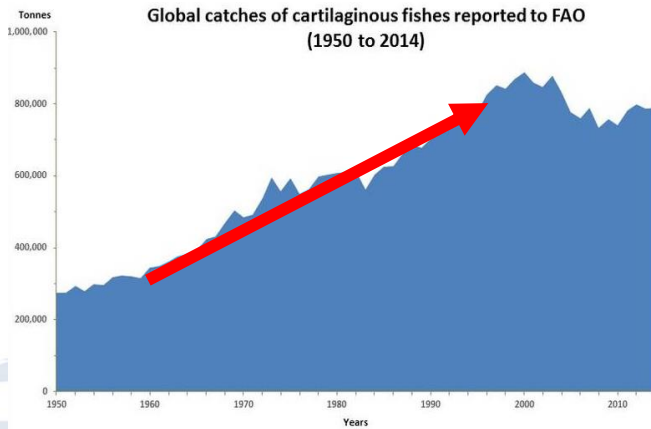
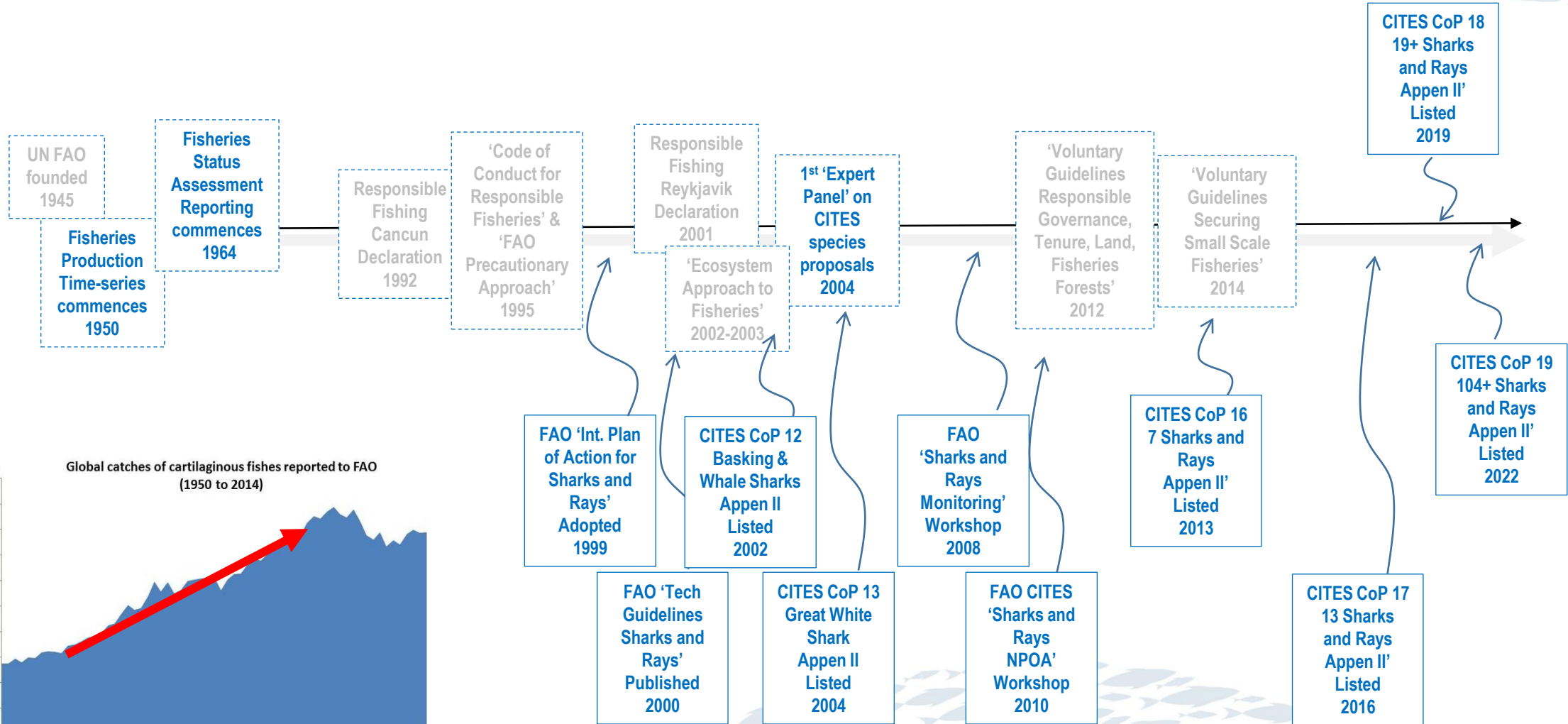
LEAST  
CONCERN



DATA  
DEFICIENT

Data extracted  
January 2024

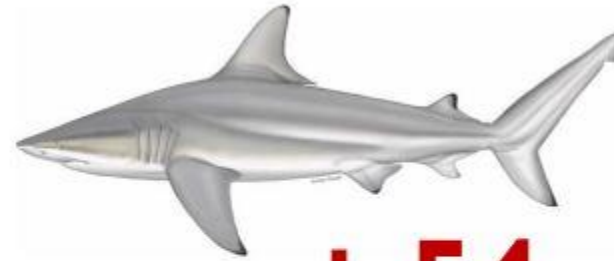
# Fisheries Evolution: Progress across global processes



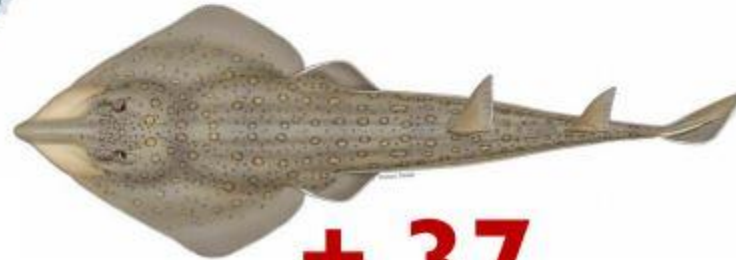




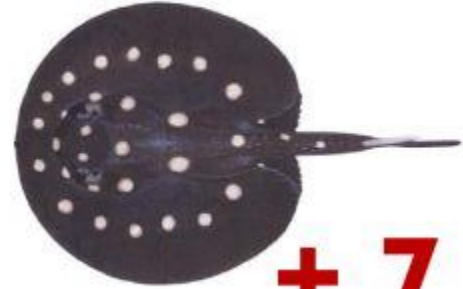
COP 19 PANAMA  
Conferencia Mundial  
sobre la Vida Silvestre  
2022



**+ 54**



**+ 37**



**+ 7**



**+ 6**



2

FAO & others role  
in enabling  
delivery of  
IPOA Shark



**Food and Agriculture Organization of the United Nations**


About FAO | In Action | Countries | Themes | Media | Publications | Statistics | Partnerships

العربية 中文 English Français Русский Español

## International Plan of Action for Conservation and Management of Sharks

Background National and Regional Plans of Action Regional sharks measures Database of measures Tools

Expanding catches of sharks and potential negative impacts on shark populations prompted a proposal at the Twenty-second Session of the FAO Committee on Fisheries (COFI) in March 1997 that FAO organize an expert consultation to develop Guidelines leading to a Plan of Action to be submitted at the next Session of the Committee aimed at improved conservation and management of sharks.



The International Plan of Action for Conservation and Management of Sharks (IPOA-SHARKS) was developed through the meeting of a Technical Working Group on the Conservation and Management of Sharks in Tokyo from 23 to 27 April 1998 and the Consultation on Management of Fishing Capacity, Shark Fisheries and Incidental Catch of Seabirds in Longline Fisheries held in Rome from 26 to 30 October 1998 and its preparatory meeting held in Rome from 22 to 24 July 1998.[...]

**Publications**

**NPOA - National Plan of Action for the Conservation and Management of Sharks in the Maldives**  
Year: 2015  
View online

**National Plan of Action for the Conservation and Management of Sharks 2012 (IPOA-Sharks)**  
Year: 2014  
View online

**Database of measures**

Database of measures on conservation and management of Sharks

The database provides a collection of instruments for the conservation and management of sharks. These instruments include binding and non-binding Conservation and Management Measures, Plans of Action, and national legislation. The term "shark" is used in the broad sense of the FAO International Plan of Action for the Conservation and Management of Sharks and includes all species of sharks, skates, rays, and chimaeras (Class Chondrichthyes).

More

**Related Links**

- Fisheries and Aquaculture Department
- Regional Fishery Bodies (RFB)

**External Links**

- CITES-Sharks and manta rays

**Tweets by @FAOfish**

FisheriesAquaculture Retweeted

**Francois Pythoud** @FrancoisPythoud  
acts against illegal, unreported & unregulated fishing! @FAOfish

FisheriesAquaculture Retweeted

**WorldFish** @WorldFishCenter  
#DidYouKnow By volume, fish production is four times that of poultry and 20 times that of



Guidance on National Plan of Action for SHARKS IN INDIA

Shobha Inze Kishikudar, P.J. Zacharia, Sujatha Thomas, I. Vethakanandan and Muktha Menon

Indian Council of Agricultural Research Central Marine Fisheries Research Institute CMFRI



National Plan of Action for the Conservation and Management of Sharks

March 2007



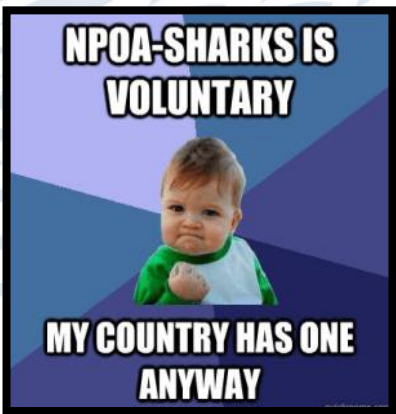
Operational Strategy: National Plan of Action for the Conservation and Management of Sharks 2012 Shark-plan 2



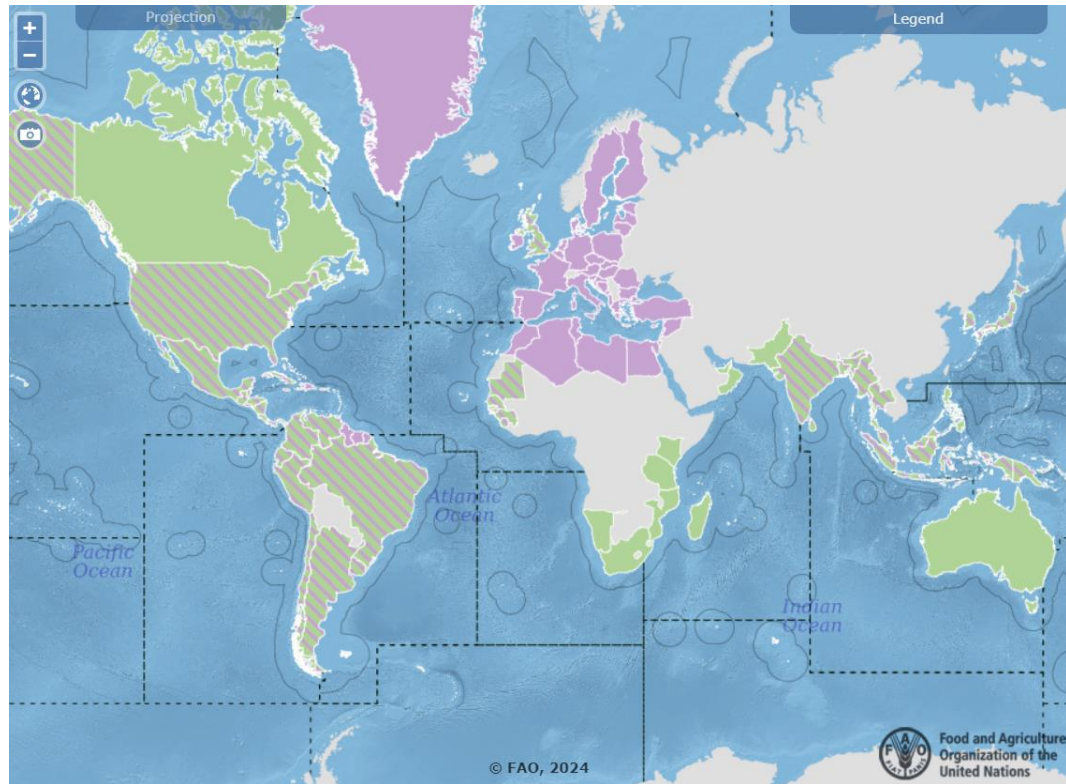
National Plan of Action for the Conservation and Management of Chondrichthyes in the Republic of Cuba



Havana, Cuba 2005

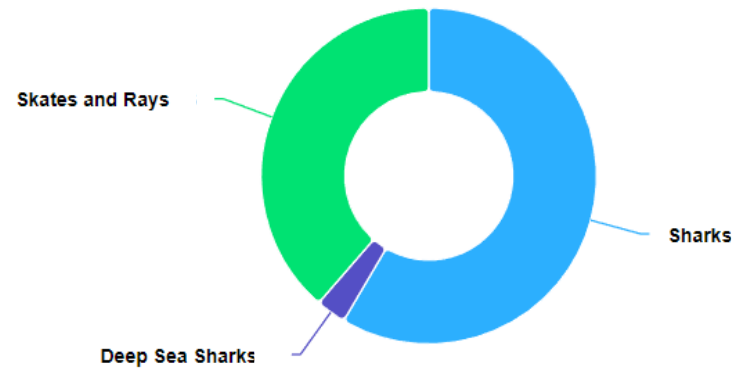




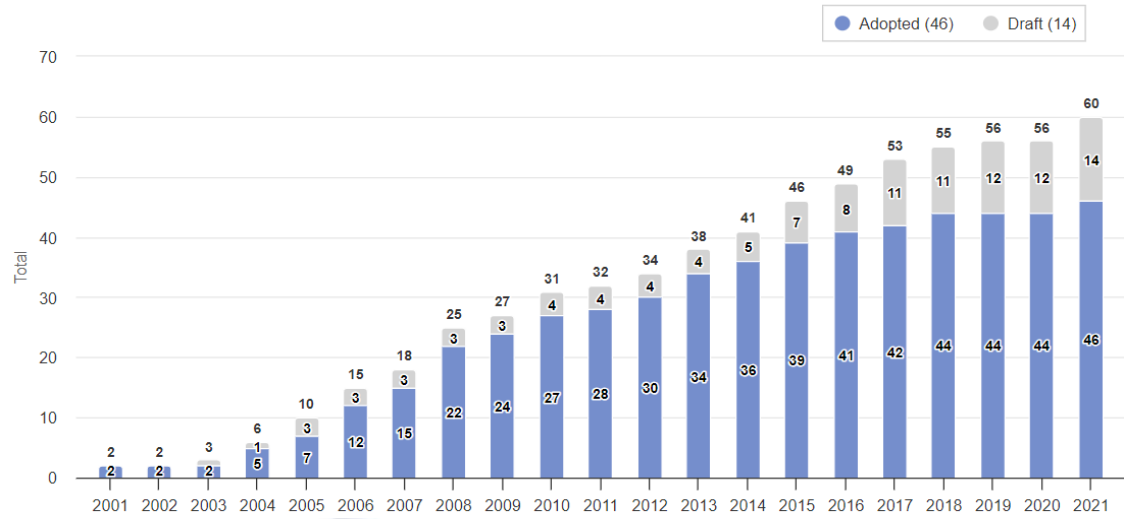
## National and Regional Plans of Action



-  National Plans of Action
-  Regional Plans of Action

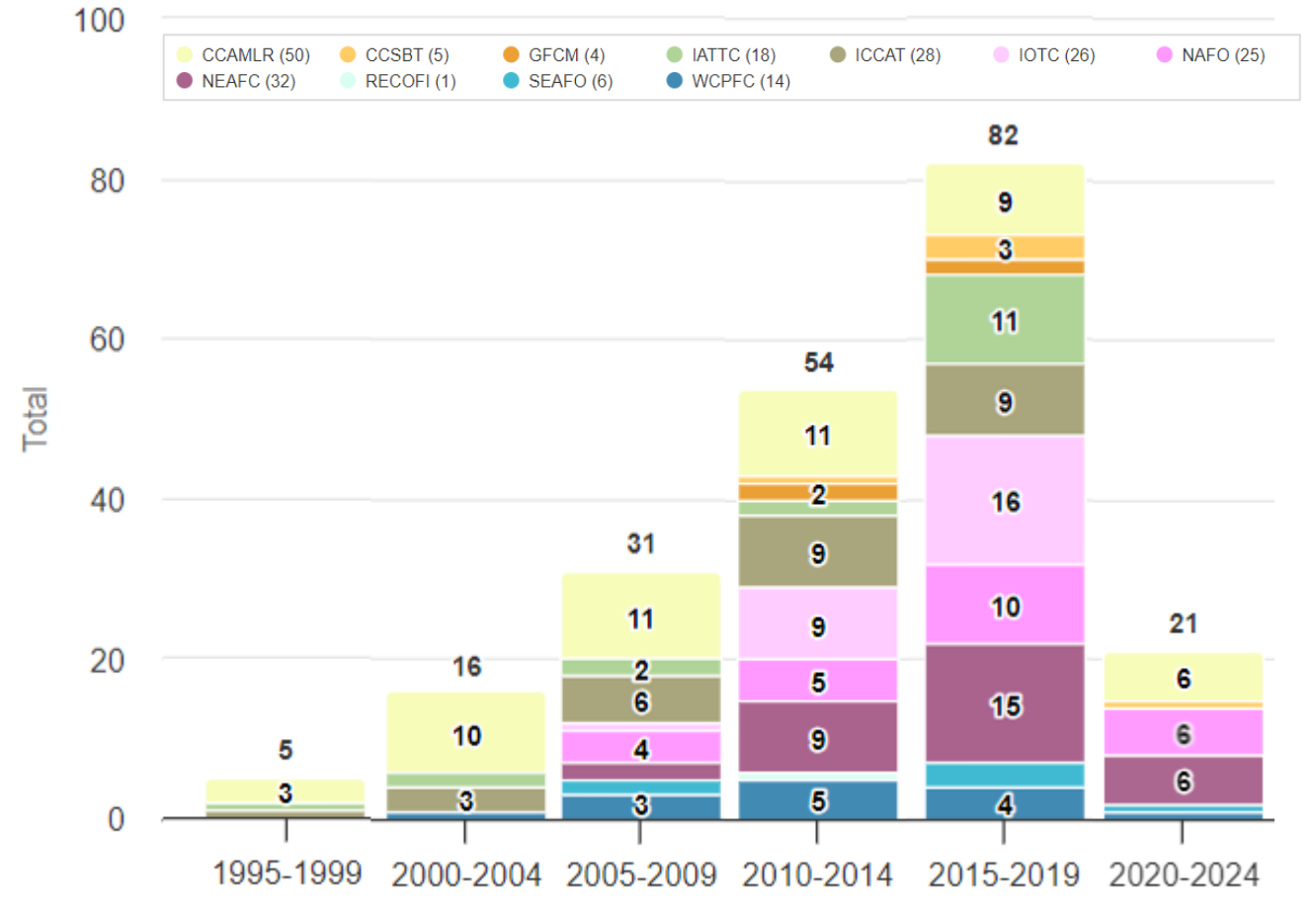


NPOA-Sharks adoption (cumulated)



### MEASURES BY RFMOS


#### Number of measures by RFMO




# Database of measures on conservation and management of sharks

Navigation and search elements:

- Home icon
- BROWSE button
- Search... input field
- SPECIES button
- INSTITUTIONS button
- COUNTRIES button
- INDICATORS button



Smooth hammerhead



## Database of measures on conservation and management of sharks



BROWSE

Search...

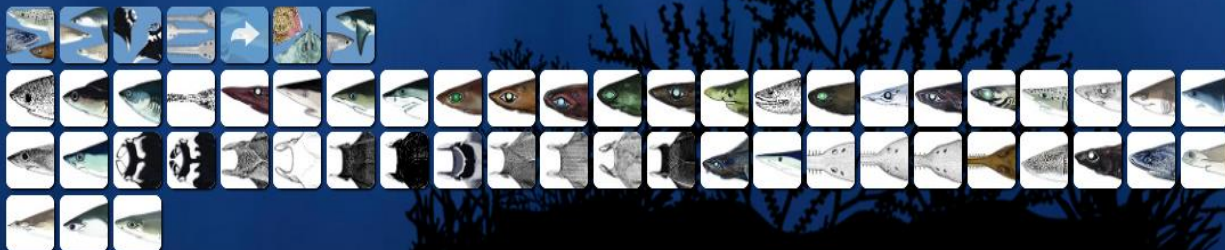
SPECIES

INSTITUTIONS

COUNTRIES



### Sharks



## Database of measures on conservation and management of sharks



BROWSE

Search...

SPECIES

INSTITUTIONS

COUNTRIES



Porbeagle  
*Lamna nasus*



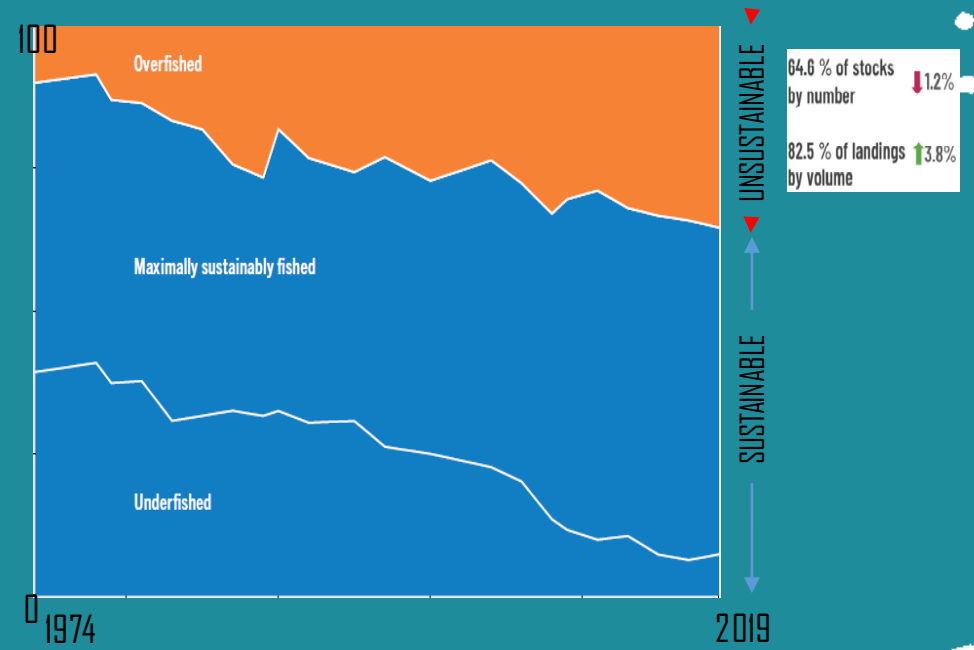
<http://www.fao.org/ipoa-sharks/database-of-measures/en/>

# 3

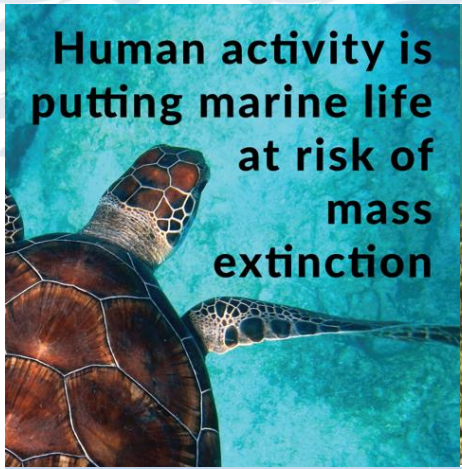
## Opportunities & Needs for IPOA Shark

GLOBAL TRENDS IN THE STATE OF THE WORLD'S MARINE FISHERY STOCKS, 1974–2019

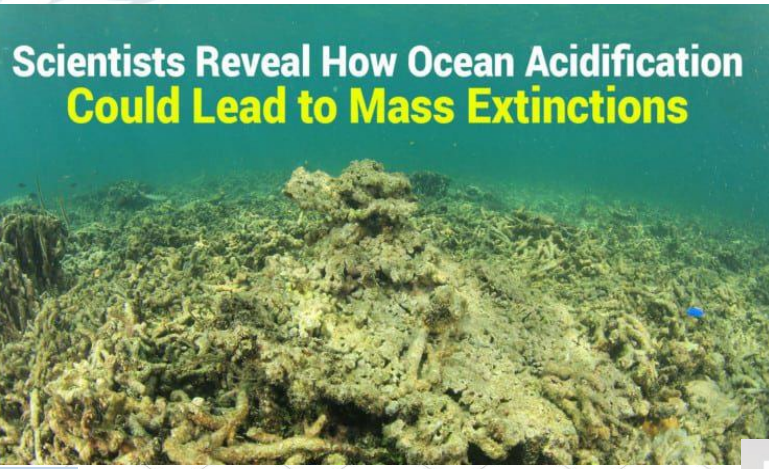
TOTAL FISHERIES AND AQUACULTURE PRODUCTION 2021 = 218.4 Mt, **A NEW RECORD**



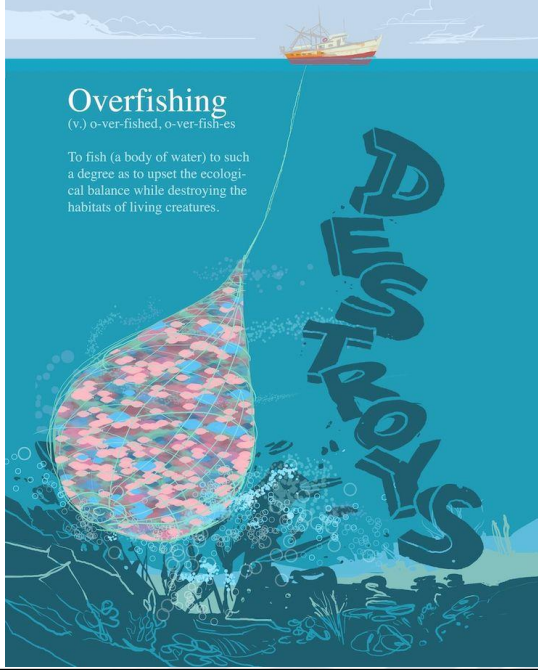
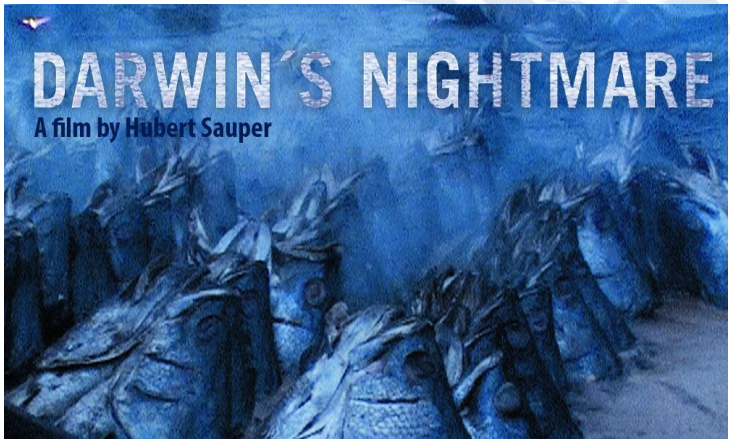




Human activity is putting marine life at risk of mass extinction



Scientists Reveal How Ocean Acidification Could Lead to Mass Extinctions



Overfishing

(v.) o-ver-fished, o-ver-fish-es

To fish (a body of water) to such a degree as to upset the ecological balance while destroying the habitats of living creatures.



SAVE the OCEAN



SAVE the SEA LIFE

Over fishing: A threat to all marine animals



SHARKS on the brink of EXTINCTION



Our marine life has been replaced by trash

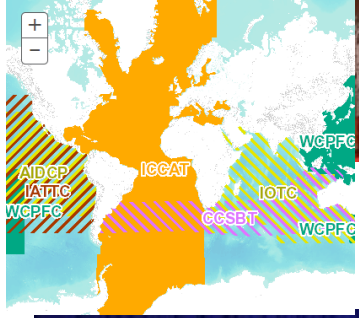
SaveMyOceans.com



THE RAREST OF THE RARE

# Positive narratives for Fisheries contributions

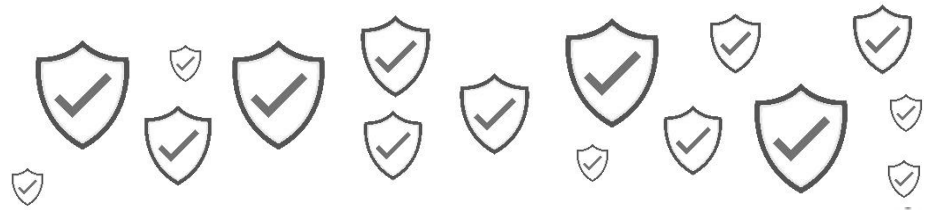






# Making & measuring orderly progress

Component & Complementary Indicator(s)

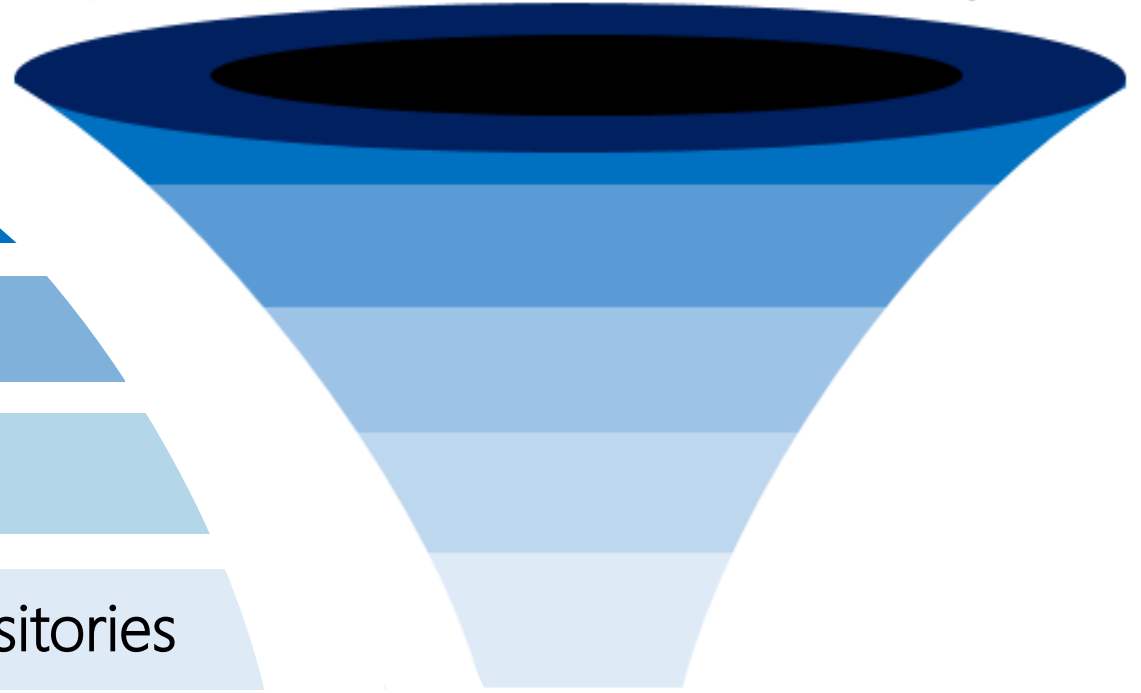


Indigenous People, Communities

National Ministries [Fish & Env]

National Stat Offices, RFBs & RFMOs

International Organizations, Data Repositories



Headline  Indicator(s)

SDGs – CITES — CBD Biodiversity Plan

# FISHERY AND AQUACULTURE STATISTICS YEARBOOK 2020

## FISHERIES AND AQUACULTURE PRODUCTION BY ISSCAAP GROUP, BY QUANTITY AND ESTIMATED VALUE (CONTINUED)

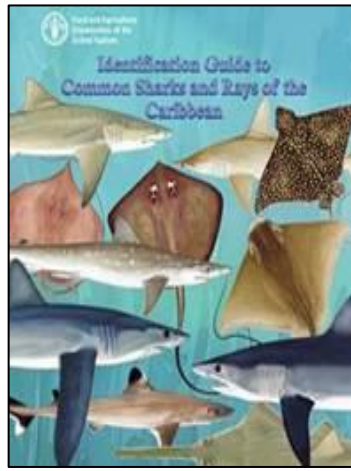
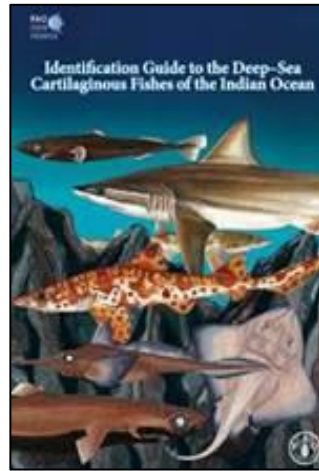
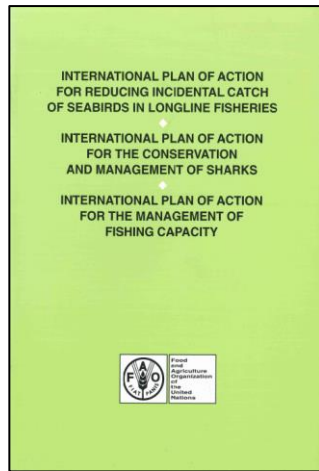
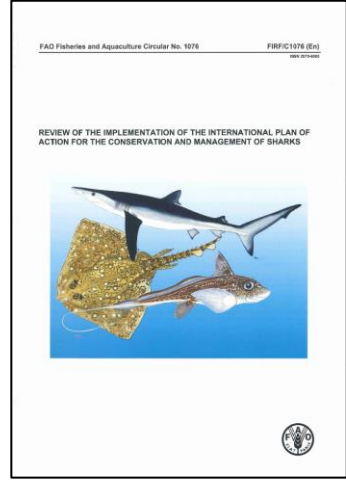
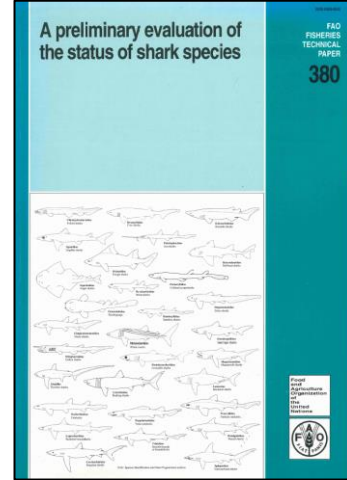
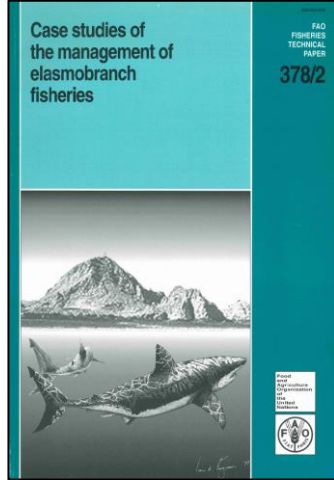
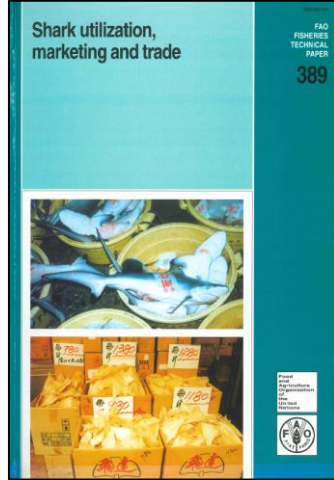
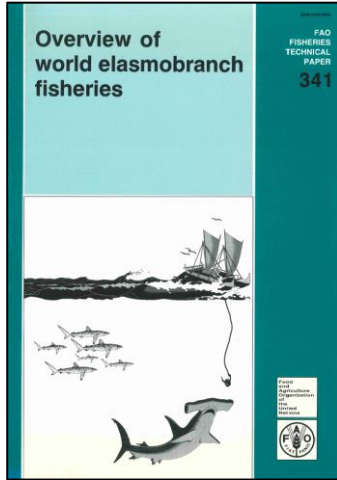
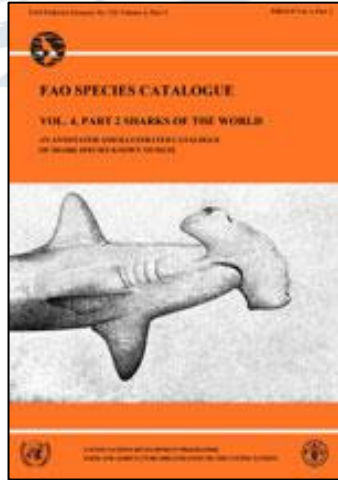
ISSCAAP group	Production source	Unit	2014	2015	2016	2017	2018	2019	2020
<b>Sharks, rays, chimaeras</b>									
	Capture production*	Thousand tonnes	7 927	7 683	6 746	7 253	7 638	6 211	6 464
		USD/tonne	700	630	690	900	850	920	910
		USD millions	5 549	4 840	4 655	6 528	6 492	5 714	5 882

## CAPTURE FISHERIES PRODUCTION OF AQUATIC ANIMALS BY ISSCAAP CLASSIFICATION

ISSCAAP Division / ISSCAAP Group	Production <sup>1</sup> (annual average)				Production <sup>1</sup>				Share <sup>2</sup> of total division production, 2020	Share <sup>2</sup> of total production, 2020
	1980s	1990s	2000s	2010s	2017	2018	2019	2020		
Miscellaneous pelagic fishes	10 987	12 668	11 164	10 580	10 849	10 965	9 847	9 689	14.8%	10.7%
Sharks, rays, chimaeras	615	769	800	736	683	694	660	666	1.0%	0.7%
Marine fishes not identified	7 924	9 778	9 280	9 343	9 837	10 517	10 563	10 742	16.4%	11.9%

## EXPORTS OF AQUATIC PRODUCTS BY ISSCAAP CLASSIFICATION

ISSCAAP Division / ISSCAAP Group	Exports <sup>1</sup> (annual average)				Exports <sup>1</sup>				Share <sup>2</sup> of total division, 2020	Share <sup>2</sup> of total exports, 2020
	1980s	1990s	2000s	2010s	2017	2018	2019	2020		
Sharks, rays, chimaeras	114	307	462	514	481	491	504	365	0.5%	0.2%
Marine fishes not identified	4 687	9 674	14 764	20 619	20 074	21 821	21 485	21 047	31.1%	13.8%





Food and Agriculture Organization of the United Nations



# ELASMOBRANCH

(shark and ray) value chains with a focus on non-fin commodities



APPENDIX 1 : INDIA VALUE CHAIN STUDY REPORT

# A STUDY OF SHARK & RAY NON-FIN COMMODITIES IN INDIA

Report

Prepared by  
ICAR- Central Marine Fisheries Research Institute Kochi, India 2020





Submitted To  
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS ROME





# Global governance guard rails for sharks: Progress towards implementing the United Nations international plan of action

Eric Gilman<sup>1</sup>  | Milani Chaloupka<sup>2,3</sup>  | Nathan Taylor<sup>4</sup> | Lauren Nelson<sup>5</sup> |  
Kim Friedman<sup>6,7</sup> | Hilario Murua<sup>8</sup>

<sup>1</sup>Fisheries Research Group, Honolulu, Hawaii, USA

<sup>2</sup>Ecological Modelling Services Pty Ltd, Brisbane, Queensland, Australia

<sup>3</sup>Marine Spatial Ecology Lab, University of Queensland, Brisbane, Queensland, Australia

<sup>4</sup>International Commission for the Conservation of Atlantic Tunas, Madrid, Spain

<sup>5</sup>Indian Ocean Tuna Commission, Mahé, Seychelles

<sup>6</sup>Food and Agriculture Organization of the United Nations, Rome, Italy

## Abstract

There is growing concern over the conservation status of sharks and relatives exposed to fishing mortality. The Food and Agriculture Organization of the United Nations in 1999 adopted the *International Plan of Action for the Conservation and Management of Sharks* (IPOA), which provides nations with advice on adopting and implementing national plans. An assessment of global national and regional plans of action on sharks (NPOAs) found that: most are out of date; limited use of specific, measurable and timebound objectives and activities; no outcome objectives; and few performance assessments. This makes most NPOAs inadequate for planning and assessing efficacy. Over 33% of the annual retained catch of sharks and relatives was from countries

# HOW CAN WE PROVIDE BETTER PROTECTIONS FOR SHARKS & RELATIVES?

New study recommends improving the United Nations International Plan of Action for the Conservation and Management of Sharks

**33%** of sharks and rays are threatened with extinction primarily due to fisheries bycatch

**88%** of annual shark catch is from countries without current national plans

## Recommendations

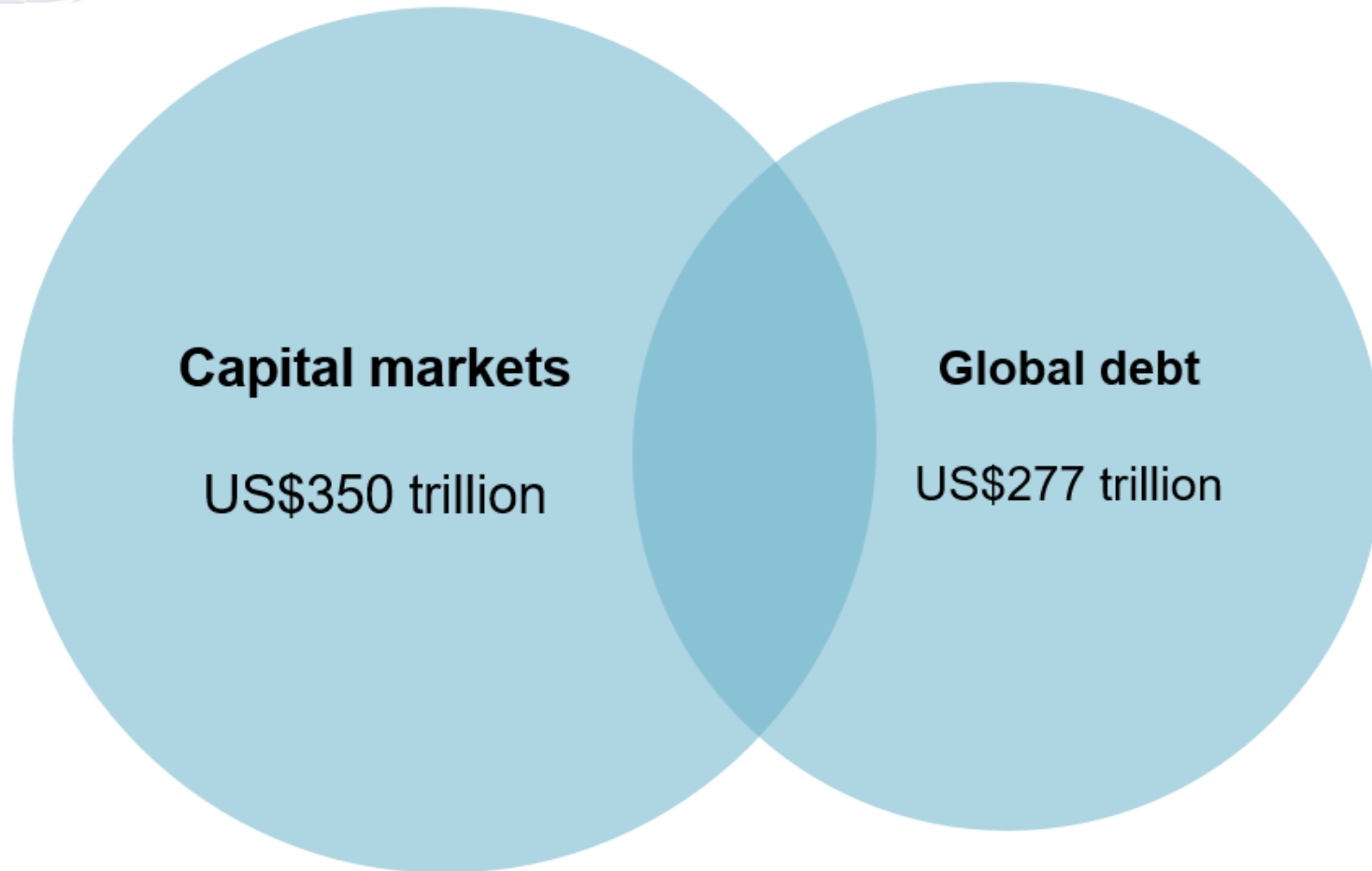
Improve the International Plan of Action to provide guidance on:

- Applying specific criteria to determine when a national shark plan is needed;
- Including specific, measurable, and timebound objectives and activities;
- Including 'outcome' objectives that specify an end result improvement in the conservation status of a shark population;
- Addressing deficits with all components of fisheries management frameworks;
- The full suite of approaches for managing bycatch;
- Accounting for costs to commercial viability, likelihood of compliance, and multispecies conflicts when evaluating alternative bycatch management strategies, and
- The complementary role of regional shark plans.

*Fish and Fisheries*

<http://tinyurl.com/sharkIPOA>

# Financing progress



*Figure adapted from Jeremey Eppel*

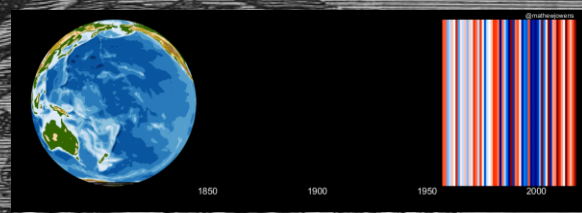


Food and Agriculture  
Organization of the  
United Nations



Food and Agriculture  
Organization of the  
United Nations

SUSTAINABLE  
DEVELOPMENT  
GOALS



## BLUE TRANSFORMATION

# Aquatic Foods in the Biodiversity Plan 2022 to 2050

Target F1 Point 1. states: *Facilitate adoption and effective implementation of new and existing international instruments, regional coordination mechanisms, plans of action and guidelines*

Target F3. Point 4 states: *Promote the implementation of fisheries management measures that support biodiversity, facilitate ecosystem restoration, strengthen climate change adaptation and build resilience to stressors*

Target V1. Point 3 states: *Facilitate compliance with instruments addressing post-harvest issues or trade at a global, regional or national level*

Target V3. Point 2 states: *Fisheries and aquaculture products access international markets more efficiently (linked to species of conservation concern and trade controls of CITES).*



Contacts:  
[Kim.Friedman@fao.org](mailto:Kim.Friedman@fao.org)

Photo: Louise Goggin