



Sustainable use of  
deep-sea living  
resources &  
biodiversity



# Ecological Risk Assessment — Deepwater chondrichthyans (sharks, rays and chimeras).

by

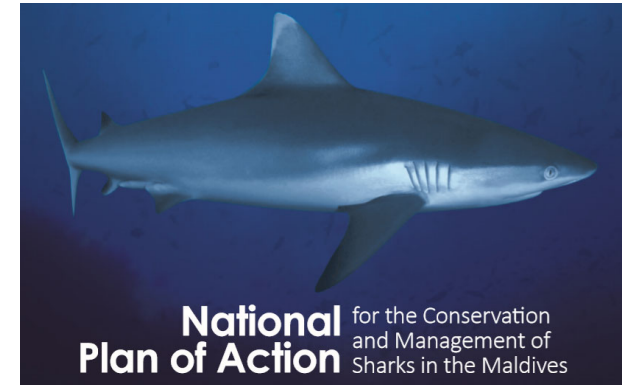
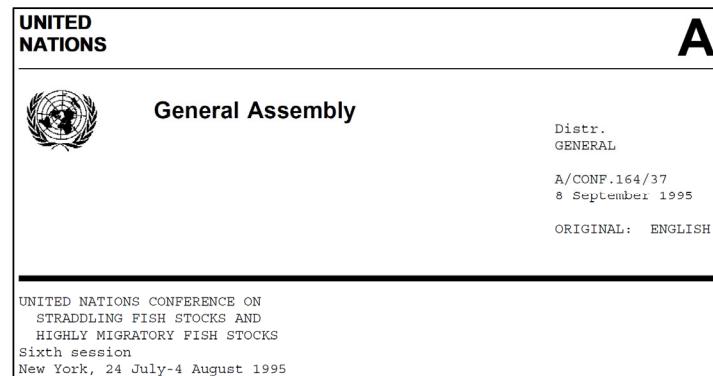
Tony Thompson, FAO Consultant, ABNJ Deep sea project

# International obligations on bycatch

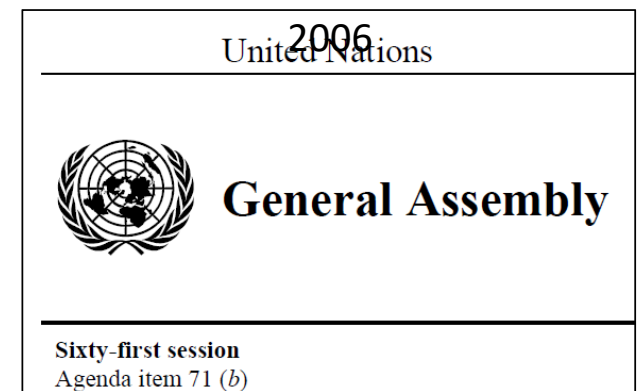
United Nations Convention on the Law of the Sea	
CONTENTS	
	Page
PREAMBLE .....	21
PART I. INTRODUCTION .....	22
Article 1. Use of terms and scope .....	22
PART II. TERRITORIAL SEA AND CONTIGUOUS ZONE .....	23
SECTION 1. GENERAL PROVISIONS .....	23
Article 2. Legal status of the territorial sea, of the air space over the territorial sea and of its bed and subsoil .....	23
SECTION 3. LIMITS OF THE TERRITORIAL SEA .....	23

1982

1995



2015



# Users of ERA for sharks



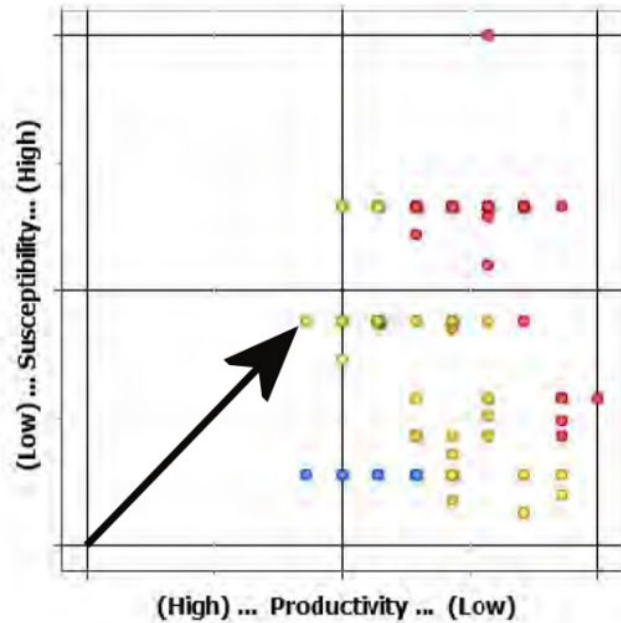
Version 2.1, 31 August 2018



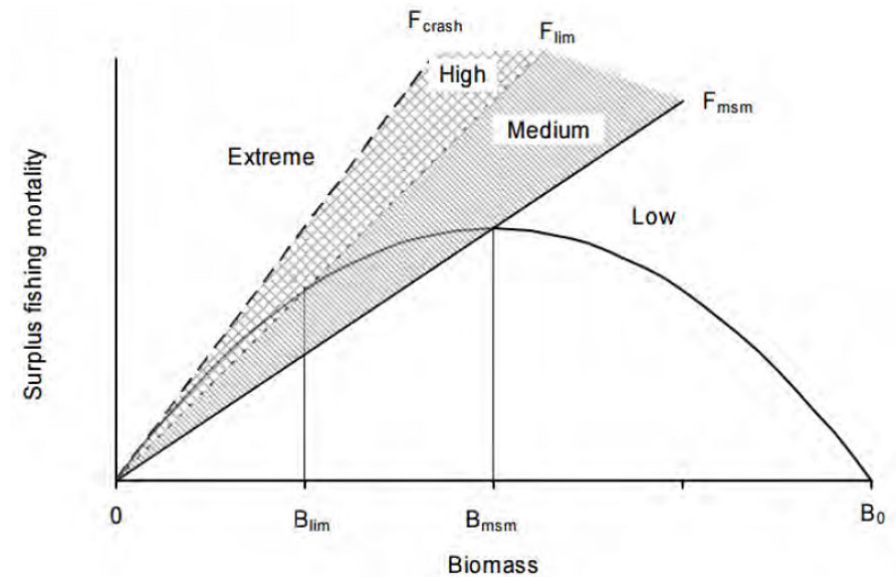
Method	Assessment	Examples and methods
CA – Consequence Analysis	Target species	MSC, 2018, p. 73-76
PSA – Productivity Susceptibility Analysis	Target and bycatch species	MSC, 2018, p. 76-83 SPRFMO, 2017, 2018a, b SIOFA, 2017 SC03 07.21(01) IOTC, 2012 IATTC, 2009 (modified PSA) WCPFC, 2006a, b ICCAT 2012 p. 1-3; 2013 p. 31-32
EASI-Fish – Ecological Assessment of Sustainable Impacts of Fisheries	Data poor bycatch species	IATTC, 2018
SAFE – Sustainability Assessment for Fishing Effects	Target and bycatch species	SPRFMO, 2018a. SC6-DW08 SIOFA, 2017 SC03 07.21(01)
Consequence Spatial Analysis – CSA	Habitat outcome	MSC, 2018, p. 84-95
Scale Intensity Consequence Analysis – SICA	Ecosystem outcome	MSC, 2018, p. 96-101



# Results



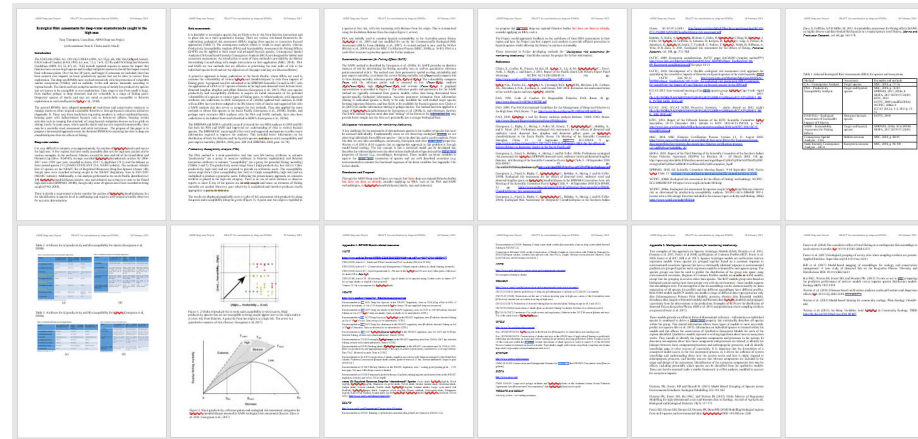
***Productivity Susceptibility Analysis (PSA)***



***Sustainability Assessment for Fishing Effects (SAFE)***

*CSIRO/FAO will hold a workshop on “Multispecies risk assessments for monitoring biodiversity”*

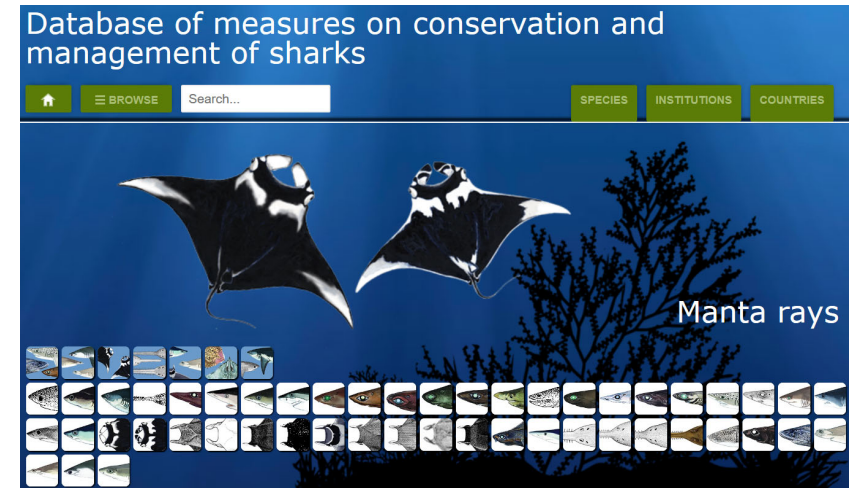
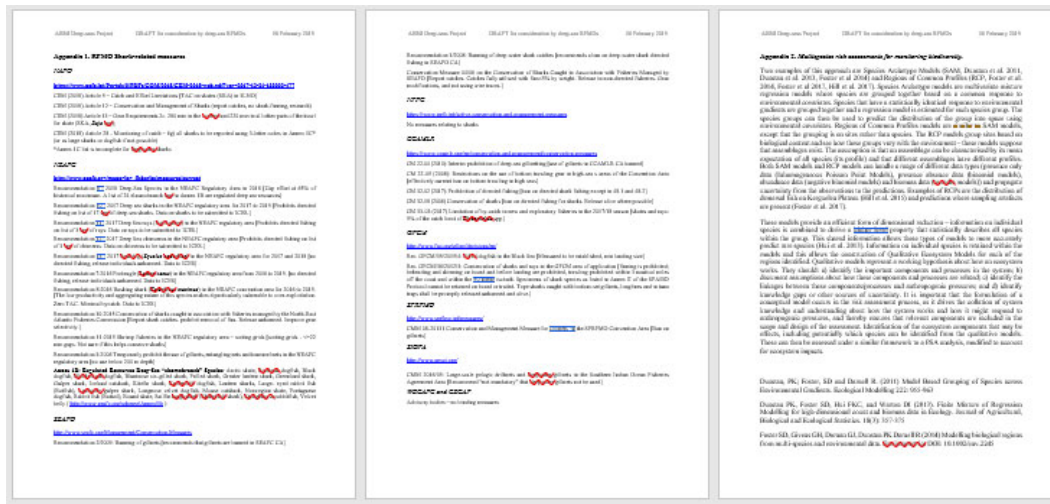
# The ABNJ deep sea project distributed a “Shark ERA Proposal” sent to all General R(F)MOs



**Objective:** To stimulate the application of risk assessments to identify groups/species likely to be at risk, and to study further and mitigate as needed.

**SIOFA and SPRFMO:** Have applied these methods and discussed at SC and MoP.

# Current measures to protect sharks in General R(F)MOs



Listed in “Proposal”

FAO

National Research Institute of Fisheries Science, Yokohama, Japan

SIOFA PAEWG1

18-19 March 2019

# Responses

- SIOFA and SPRFMO: ERA started
- NAFO: Methods presented at WG and may trial on selected species, current concerns with Greenland Shark and ongoing studies underway.
- NEAFC: In 2018 submitted request for advice to ICES
- NPFC and SEAFO: indicated they were seeking comments from members.

OSPAR and NEAFC joint advice request to generate species distribution maps for listed deep sea shark species and provide scientific support for ICES advice on bycatch management options



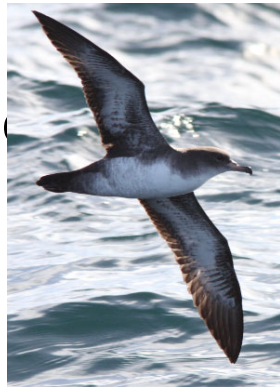
# Current constraints in ERA

Poor, lacking, improvements:

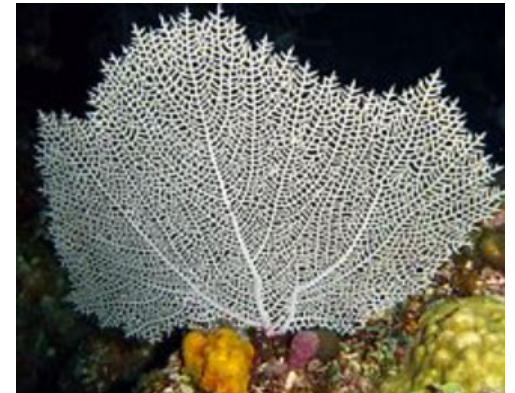
- Good distributions maps of shark species
- Identifying geographical overlap between fishing footprint and shark species
- Interactions and gear selectivity of “catches” by fishing vessels
- Identification guides and observer training
- Good practices and monitoring live “release” survival



National Research Institute of Fisheries Science, Yokohama, Japan



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