

Japanese shark research activities in response to recent change of world's opinions on the fishery stock managements



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Common positions of the ASEAN countries on fisheries management endorsed in 2002

- a. Proposals for listing in the CITES Appendices should be based on the principle of sustainable use of the resources in relation to any species
- b. Proposals should be backed by scientific-based data to be provided by competent scientific authorities
- c. Other than CITES, there are other competent authorities (e.g. FAO, ITTO) tasked to sustainably manage the species concerned should be encouraged to address any prevailing issues

Current global situation on fish stock management

➤ **Protection of Fish stock & Ecosystem**

Some major stocks managed by RFMO were collapsed .

Idea of precautionary approach has been a common understanding of stock management.

➤ **What is new, at the present ?**

Strong back up by public opinion in “some countries”

They demands conservation of fish stock in other country

They have the ways to realize their opinion, RFMO & CITES

Fisher should take responsibility for conservation

Fisher should show the fact of the fishery and prove it clean

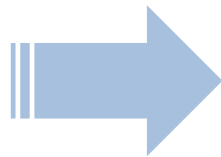
e.g. CITES and RFMO

	CITES	RFMOs
Approach of management	Regulation of international trade (except for catch in EEZ)	Flexible management of stock (e.g. TAC, size limit, time/area closure) by monitoring stock status of each species <u>through fisheries</u>
Management	<u>Uniformed internationally</u> , not applied to domestic use, and local situation is not considered	Taking into account <u>the condition of fishery</u> in each country/region
Stock assessment	Decision-making by <u>information available</u>	Start from discussion of all available data of each countries
Reliability of stock assessment	Accept fragmental information; in sharks, <u>non peer-reviewed paper</u> is even used as a source of information	Conclusion is drawn <u>after detailed discussion</u> with agreed high-integrity result

What is shark ?

➤ Having unique life history

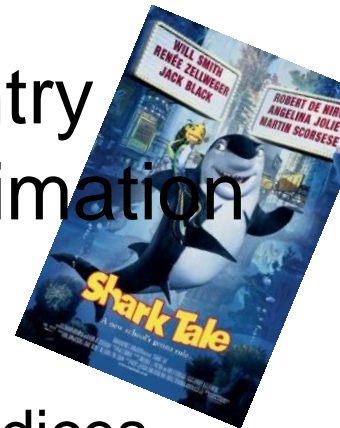
- Long life, Late maturity
- Low productivity



Should be weak for fishing pressure
Vulnerable to overfishing !!

- ◆ being species with high priority for conservation

➤ Popularity in the especially western country familiar with public through movies, animation



- ◆ Many sharks were proposed to the CITES appendices

What is on sharks ?

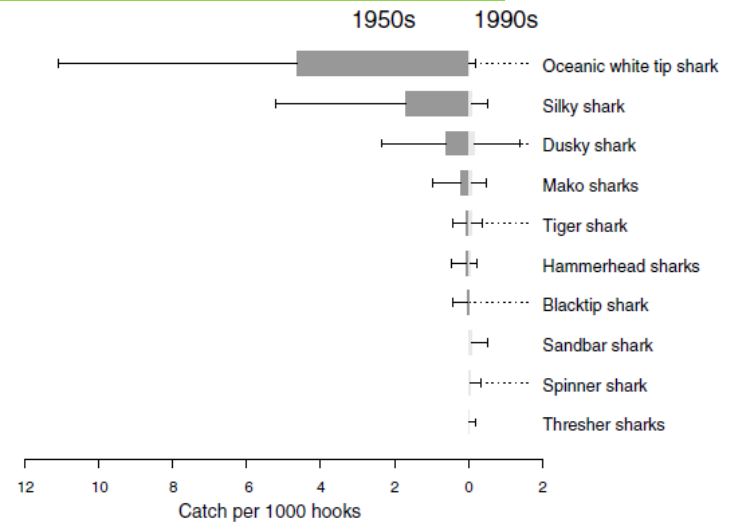
➤ Campaigns on concern about decline of many shark species

Myers and Worm (2003)

Baum et al. (2003)

Ward and Myers (2005)

etc.



cited from Baum and Myers (2004)

➤ Criticism against fishery

◆ Longline

◆ Purse seine

◆ Gillnet (coastal)

etc.



guardian.co.uk

Shark fishing in Japan – a messy, blood-spattered business

Kesennuma accounts for 90% of the country's shark fin trade, which some claim amounts to 'the genocide of a species'

Justin McCurry in Kesennuma

guardian.co.uk, Friday 11 February 2011 15:14 GMT

Collect reliable fishery data, can be the base to counter these publicities

Problems associated with Shark Research

➤ Difficulty in the collection of species-specific fishery data

- ✓ Confusion on Species identification

 - “look-alike” species & local name

- ✓ Low interest in the market and fishers

 - Discarding

 - Low accuracy on data (record only expensive species, misidentification)

 - Aggregated landing data (e.g. “dogfish”)

In case of Japan



- Many local names in single species
Blue shark;
Standard name; YOSHIKIRI-ZAME
Local names; AO, AOTA, AONAGI, MIZUBUKA
- In the market, only data for “species group” is available.
Sharks with lower market values treated at “group”
e.g. Thresher sharks, Hammerhead sharks
- In some markets, the shark meat and shark fin are landed separately. Causing duplicative count for catch number.

Shark research in Japan

Campaign to fishers



Poster for species identification



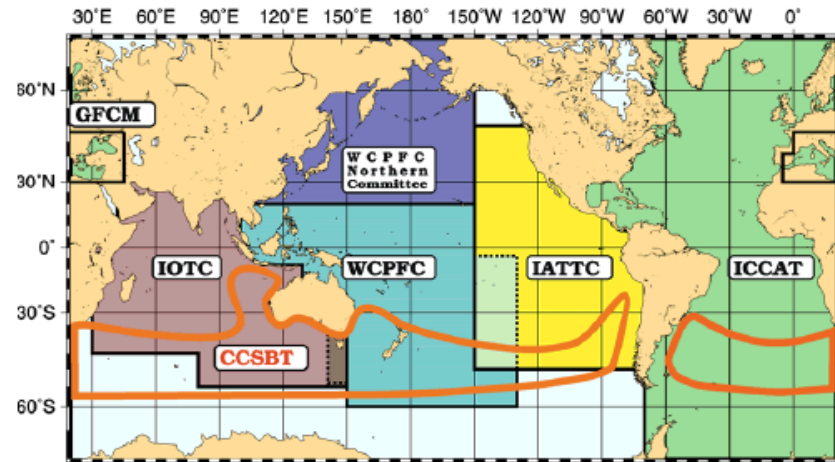
Cartoon (left: in Japanese, right: in Indonesian)

- Regular briefings for fishers are also conducted
- Created National Plan of Action for the Conservation and Management of Sharks in 2001

Shark research in Japan

Fishery data collection

- ◆ Collection of catch data in commercial longline fishery:
- ◆ Training vessels data collection
- ◆ Submission of catch and effort data and participation in the stock assessment
- ◆ Port sampling (some ports): size and sex of major species
- ◆ Observers for each RFMO management area



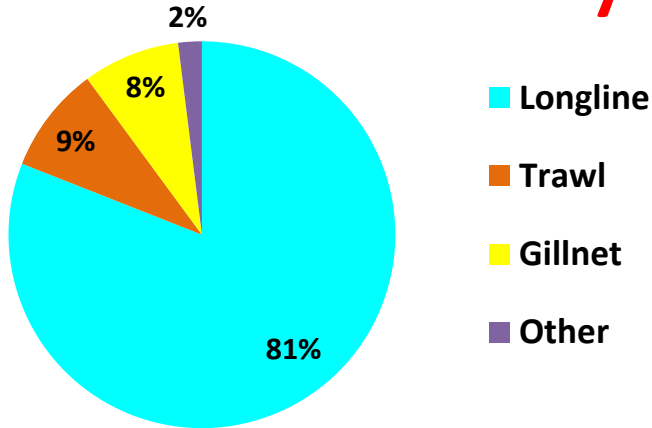
Main RFMO responsible for the management of pelagic fisheries (Source: NRIFSF)



Port sampling in Kesennuma

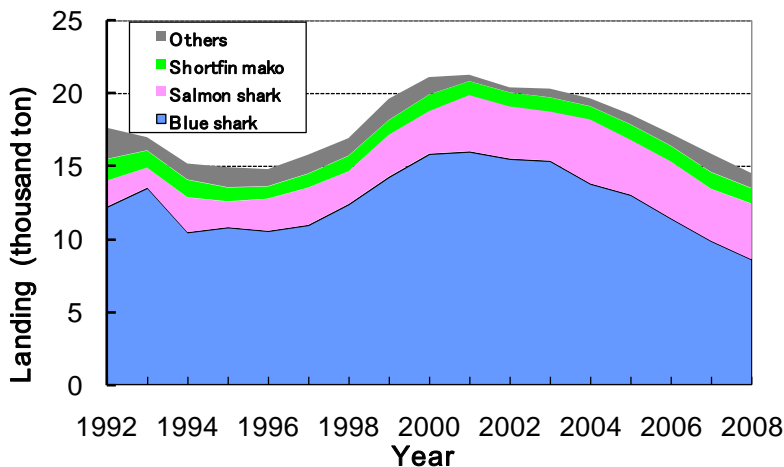
Shark research in Japan

Field survey about Fishery Activity



Ratio of shark catch by gear
(Source: Fishery Agency of Japan)

- ◆ Most of shark catch is from longline fishery
- ◆ Blue shark dominates the landing
- ◆ Sharks are mainly caught as bycatch species



Species-specific landing data collected in Major region (Source: NRIFSF)

- ◆ Pelagic longline fishery land shark meat (frozen) at foreign port
- ◆ Offshore longline fishery; land shark (stored in ice) domestically
- ◆ Processing industry composed of several categories for unwasted utilization

Shark research in Japan

Biological study

➤ Age and growth

blue shark

shortfin mako

silky shark

oceanic whitetip shark

➤ Reproduction

➤ Diet

➤ Distribution

➤ Stock structure

➤ Tagging



Centrum of shortfin mako



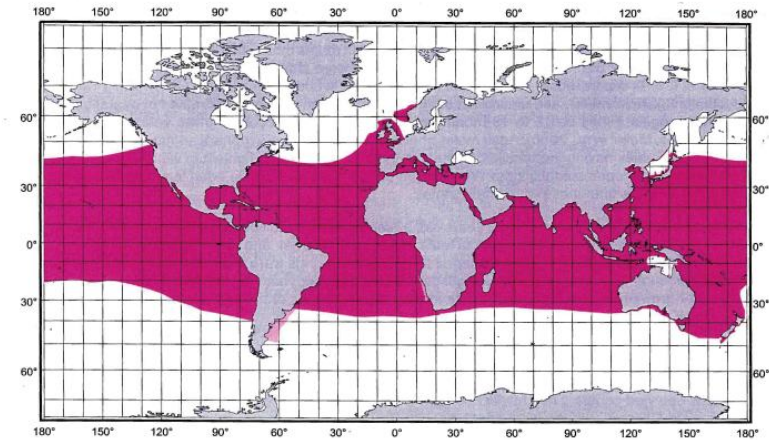
Poster for tagging program

Future directions for fishing country

1. Cooperation among countries



By Chow, S.



Compagno (2001)

- For wide-ranging species, catch data of many countries is necessary.
- The unification of data format and fish name are important

Future directions

2. Training young scientists



Seminar at NRIFSF



Discussion with fishers

- learning techniques used in stock assessment
- Close relationship with fishers to monitor the trend of fishery

Recruit new generations and continuous research activities

Future directions

3. Pride in and responsibility for



Measure of size by fishermen



IOTC meeting in 2010

- Realizing sustainable fishery (no waste, appropriate catch under regulation, not IUU)
- Encourage research and data collection
- Protect the fishery by ourselves

Summary of future directions

1. Capacity Building

for accurate species-specific data etc.

2. Training of young scientist

for understanding of reality in the field through good relationship with fishers

3. Consciousness as the fishing country

for knowledge of the fishing country is most close to the real

Thank you

