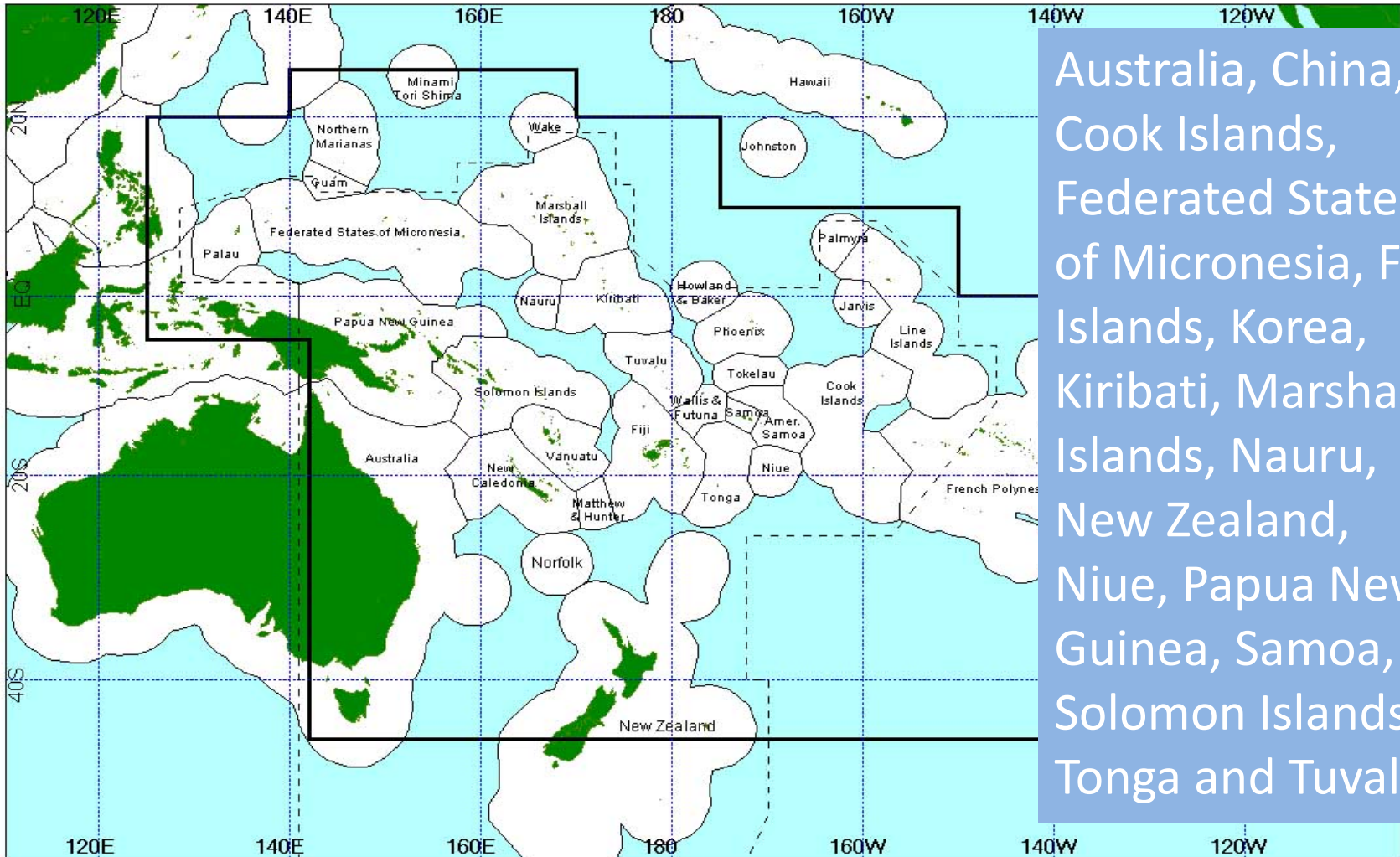


Sustaining tuna fish stocks the SW Pacific: management and policy

**NRI Diploma in Economic Policy Analysis
May 18-19, 2011**

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The University of Queensland

Western and Central Pacific Fisheries Commission Convention Area and EEZs



Australia, China, Cook Islands, Federated States of Micronesia, Fiji Islands, Korea, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga and Tuvalu.

See also Forum Fisheries Agency

The Pacific Islands Forum Fisheries Agency (FFA) strengthens national capacity and regional solidarity so its 17 members can manage, control and sustainably develop the tuna fisheries in their EEZs.

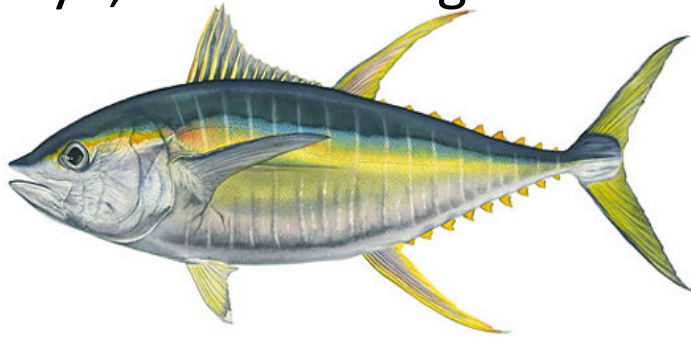
Based in Honiara, Solomon Islands, FFA's 17 Pacific Island members :

Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

Tunas of the W&CPO



Skipjack: Tropical/warm temp, pelagic, spawns 1yo, max wt 35kg



Yellowfin: Trop/sub-trop, pelagic, spawns 1-1.5yo, max wt 200kg

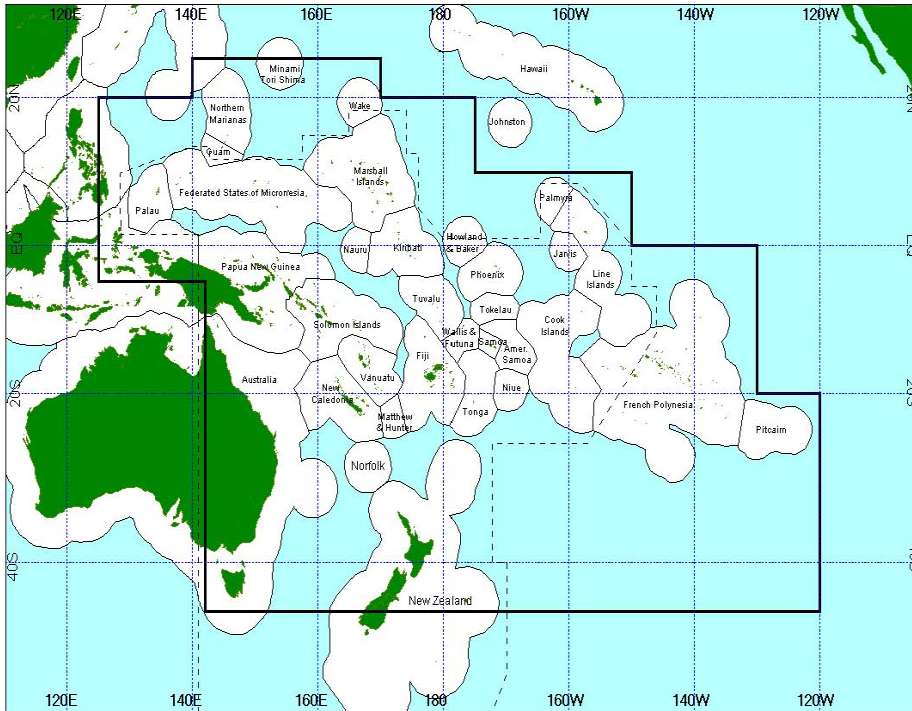


Bigeye: Sub-trop, pelagic, spawns 3-4yo, max wt 210kg



Albacore: Sub-trop/temp, pelagic, spawns 5yo, max wt 60kg

Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific



Convention Aims
To ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean. (Came into force 2004.)

Pacific island benefits, tuna resource

- Income
(License fees, fish sales)

- Employment
(fishing, processing, canning)

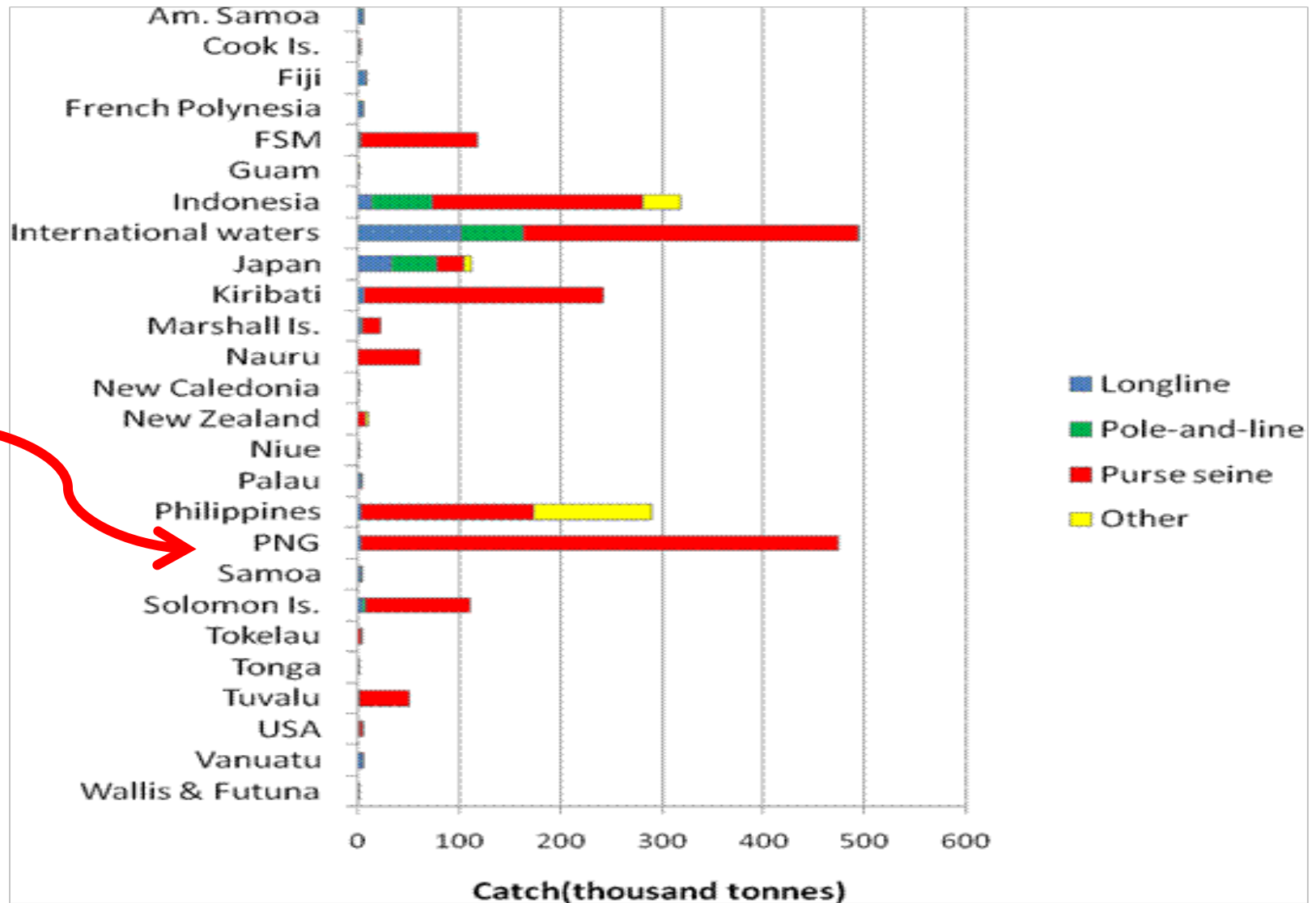




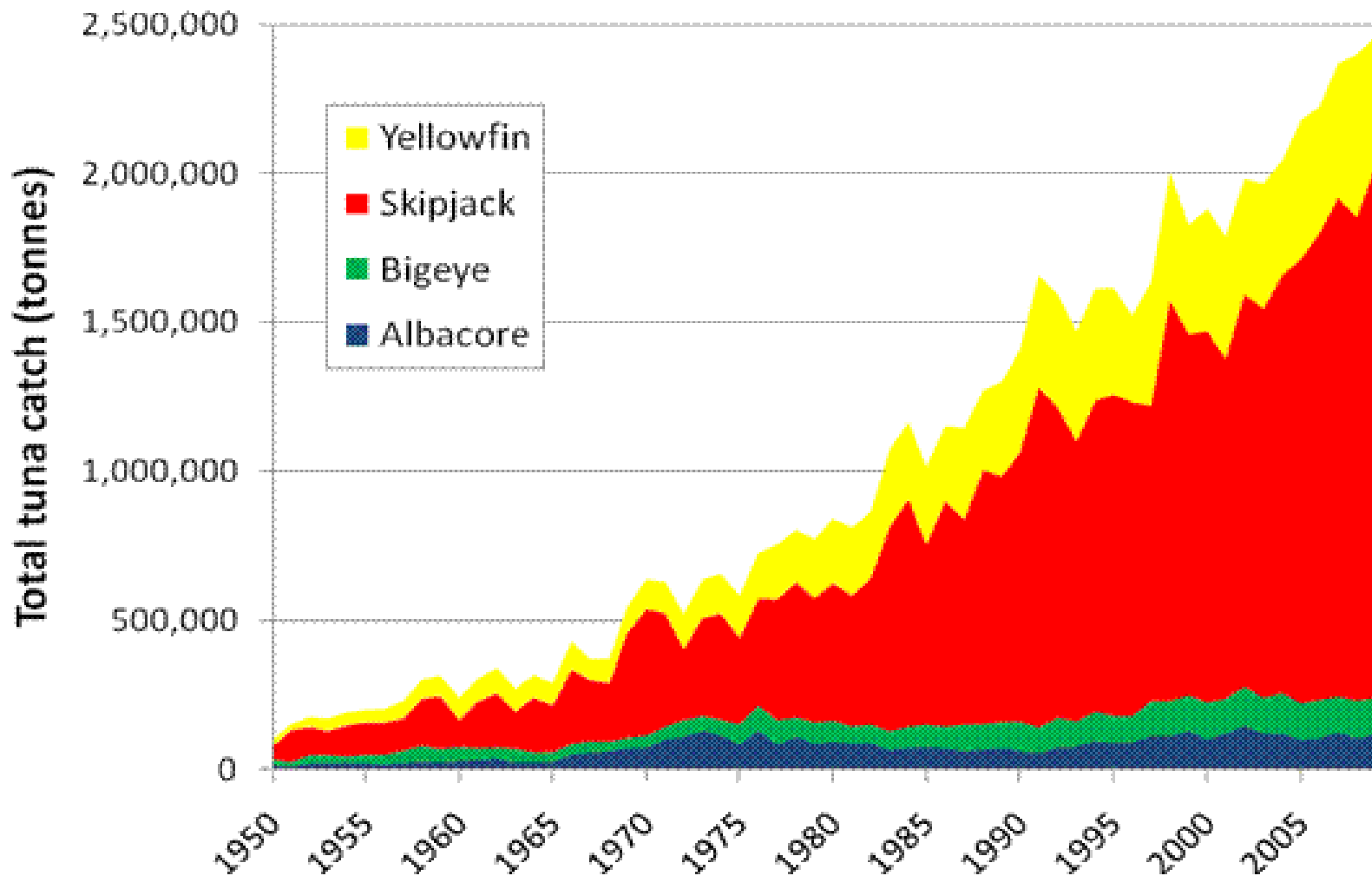
WCPO Tuna fishery

- **small-scale** artisanal fishing in the coastal waters of Pacific states;
- **large-scale**, industrial purse-seine, pole-and-line and longline operations in both the exclusive economic zones of Pacific states and on the high seas;
- artisanal and commercial fisheries exploiting the **same stocks** in Pacific Ocean waters of adjacent southeast **Asian countries**, particularly Indonesia, Philippines and Vietnam.

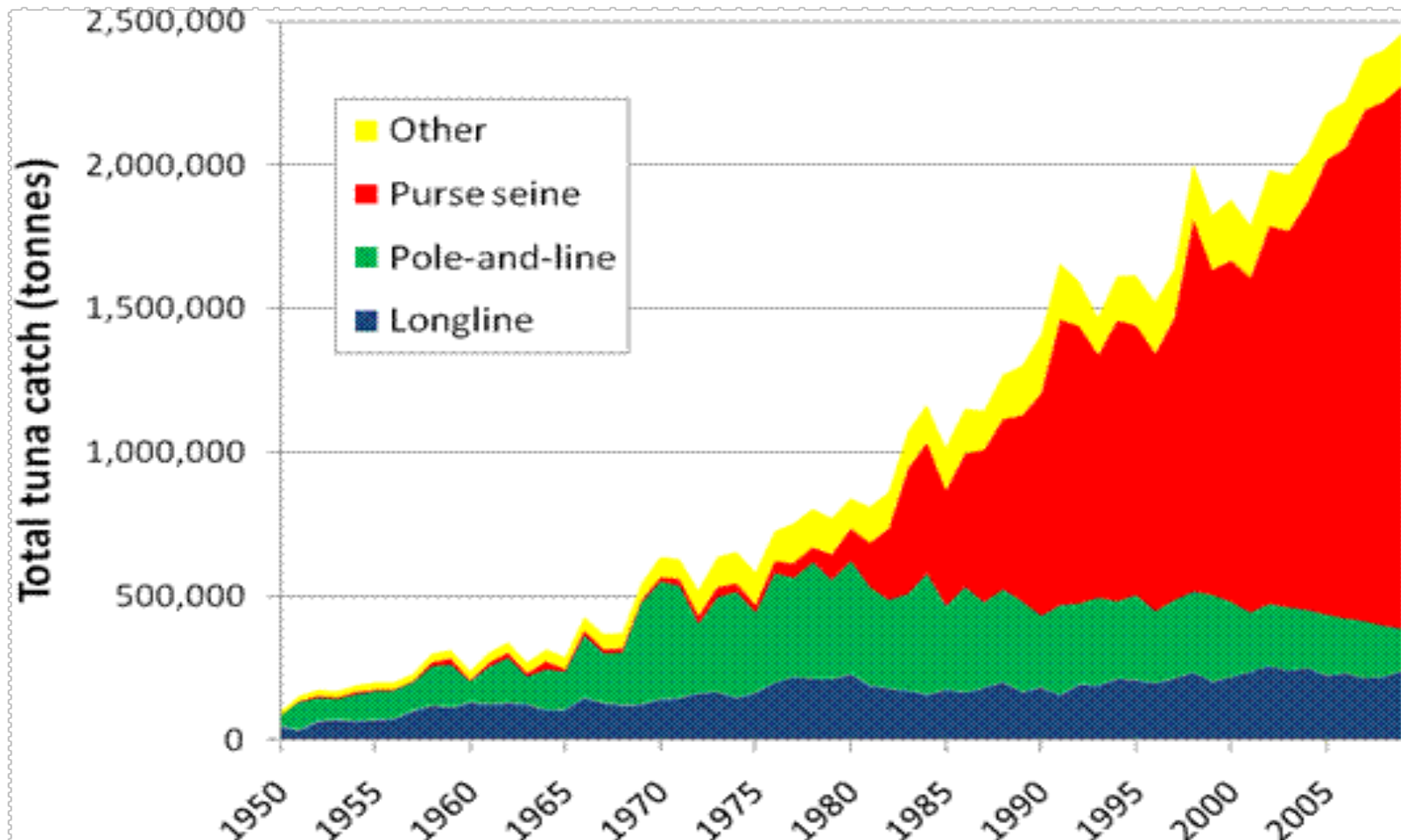
Annual catch tunas, 2007-2009, EEZs



Tuna catch by species WCPO-CA



Tuna catch by gear WCPO-CA



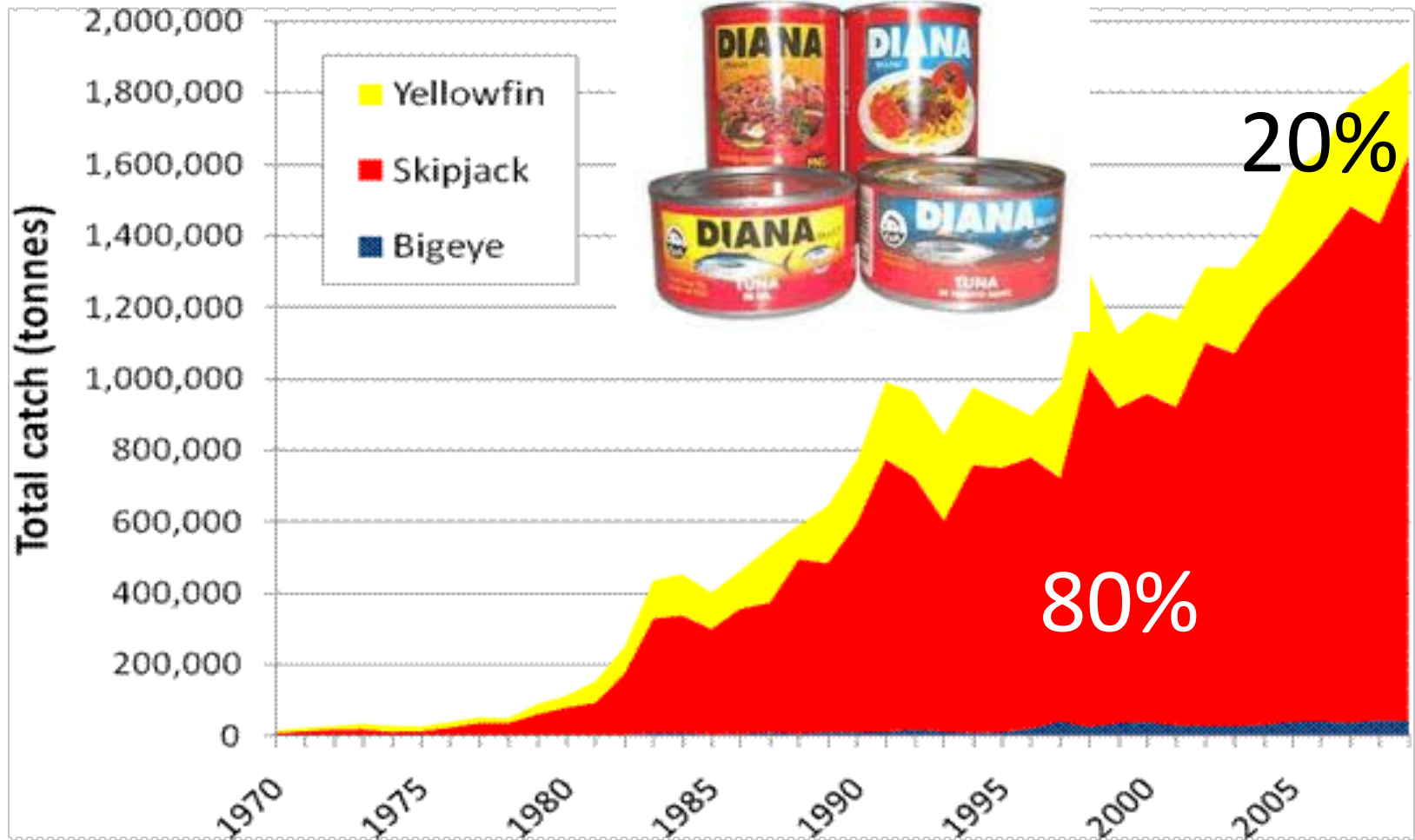
Superseiner Bismark Sea



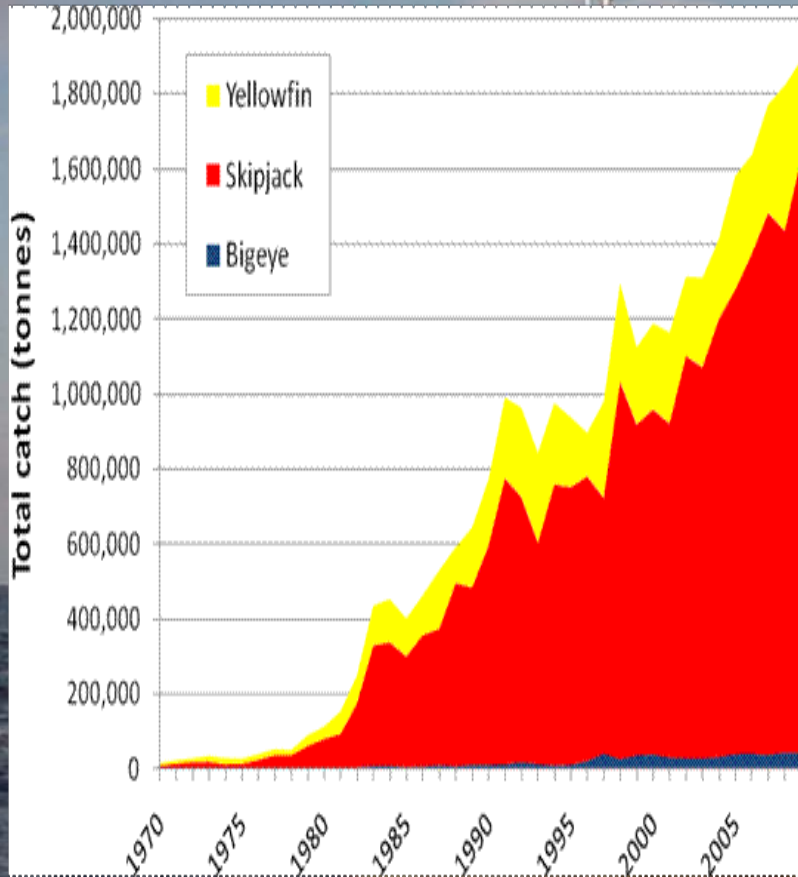
R&D Madang tuna cannery



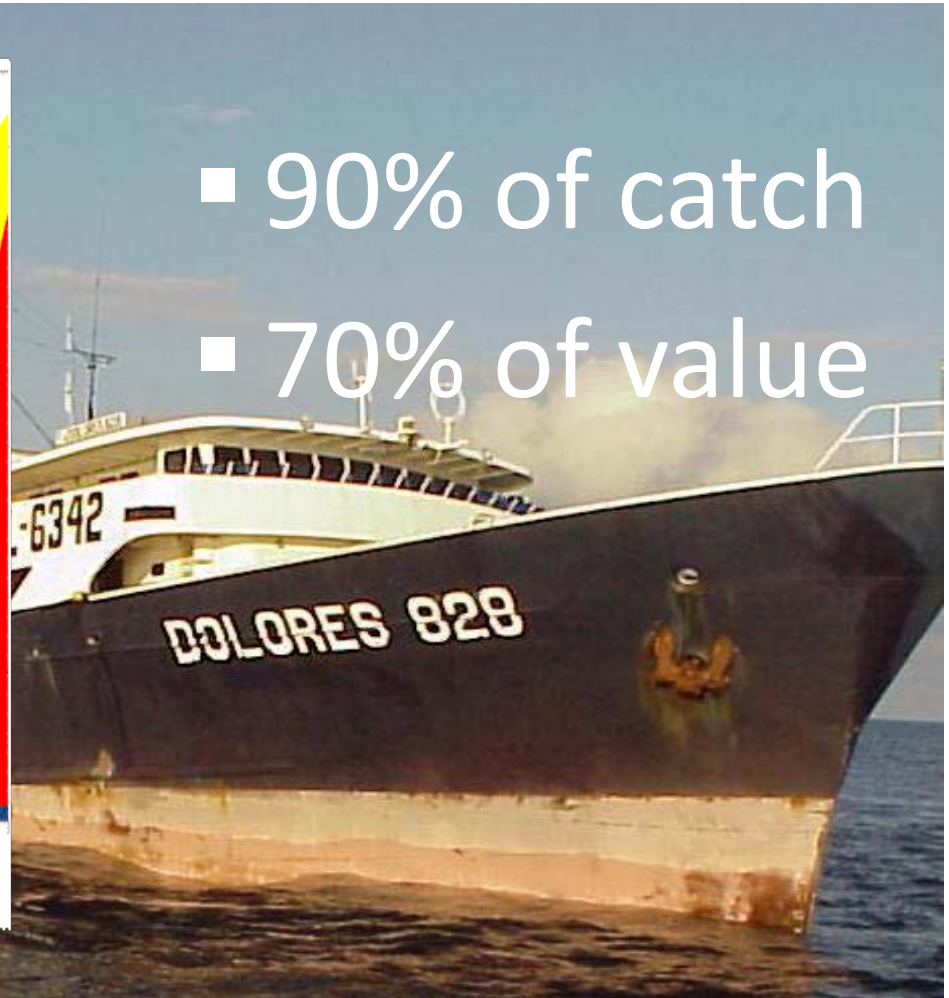
Purse seine catch by species



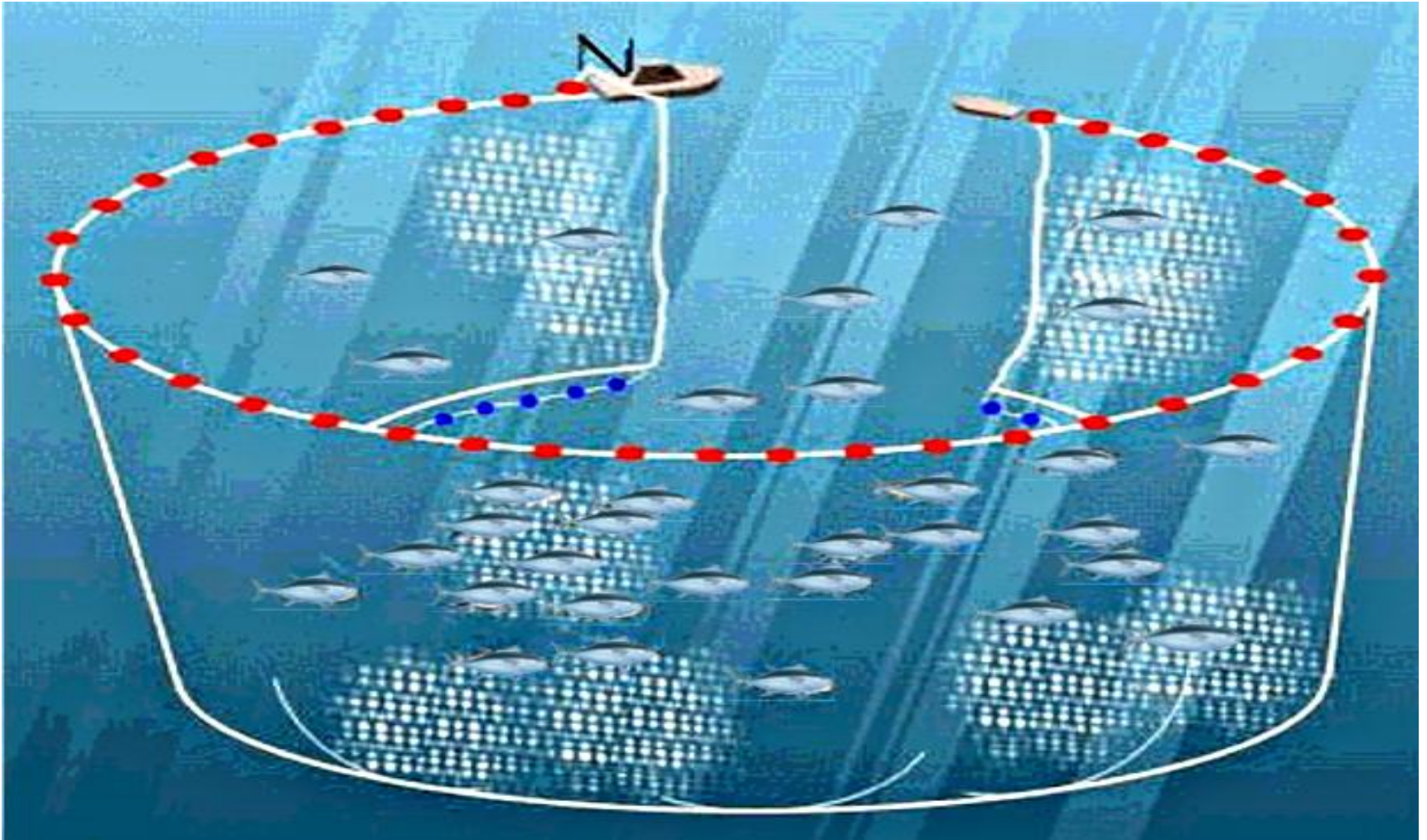
Purse seine



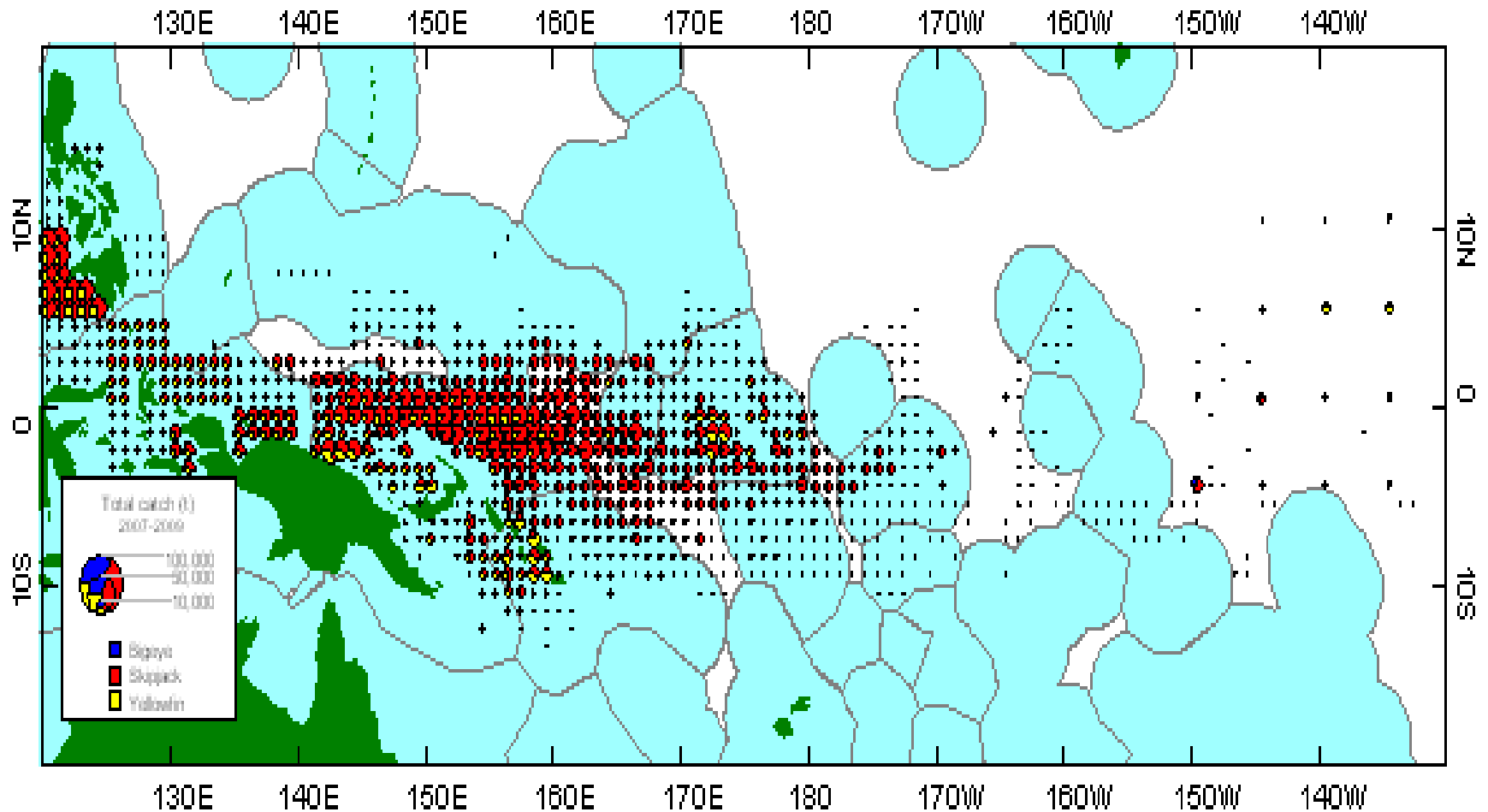
- 90% of catch
- 70% of value



Purse seine fishing



Purse seine catch by species and location 2007-2009



Hauling purse seine



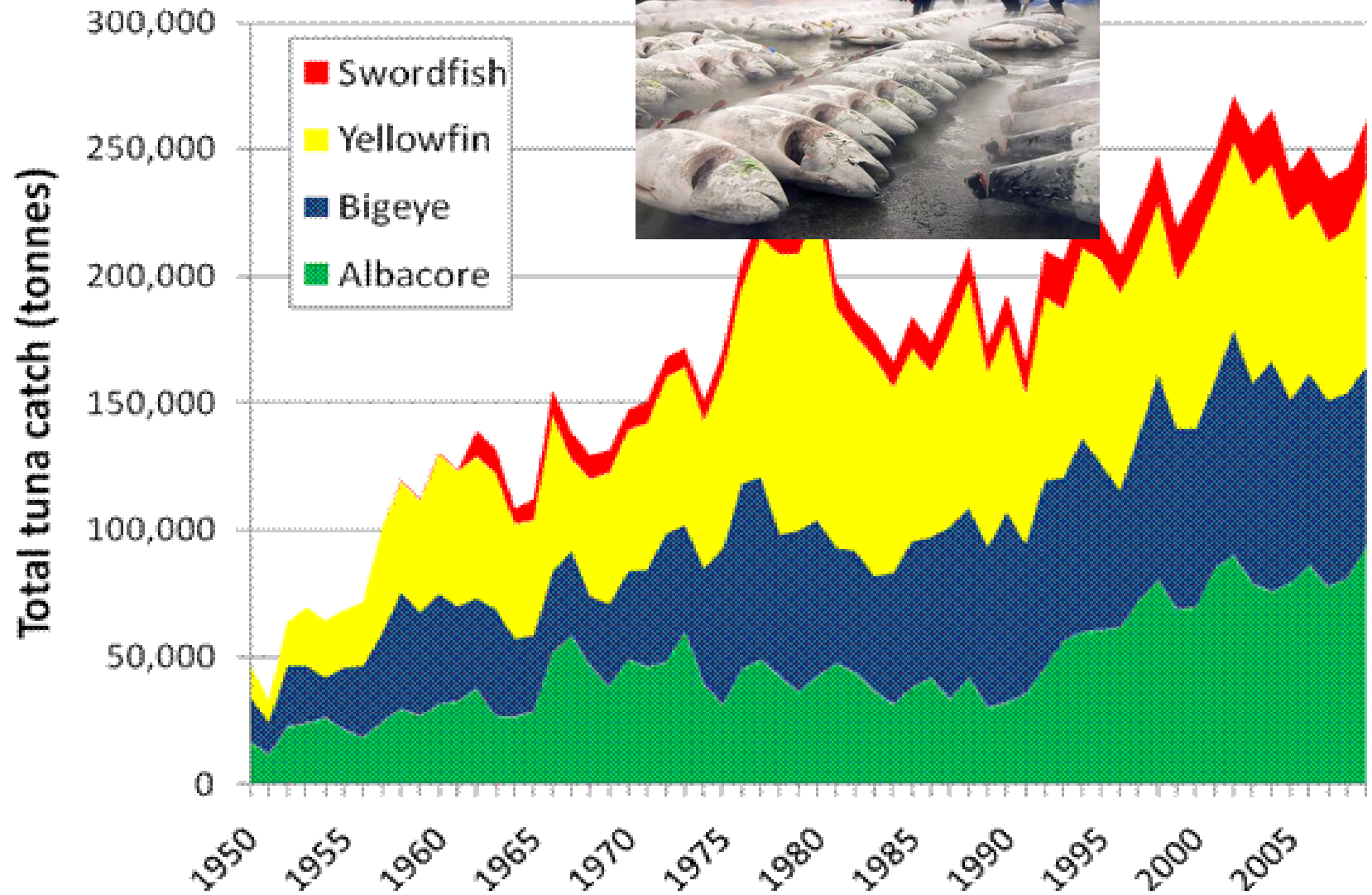
Hauling superseiner



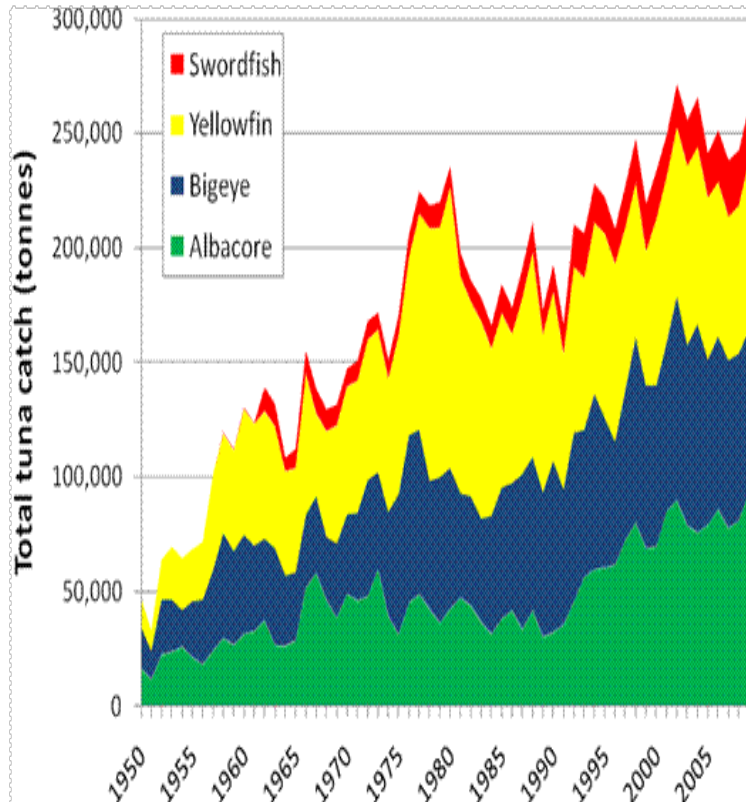
Longline fishing



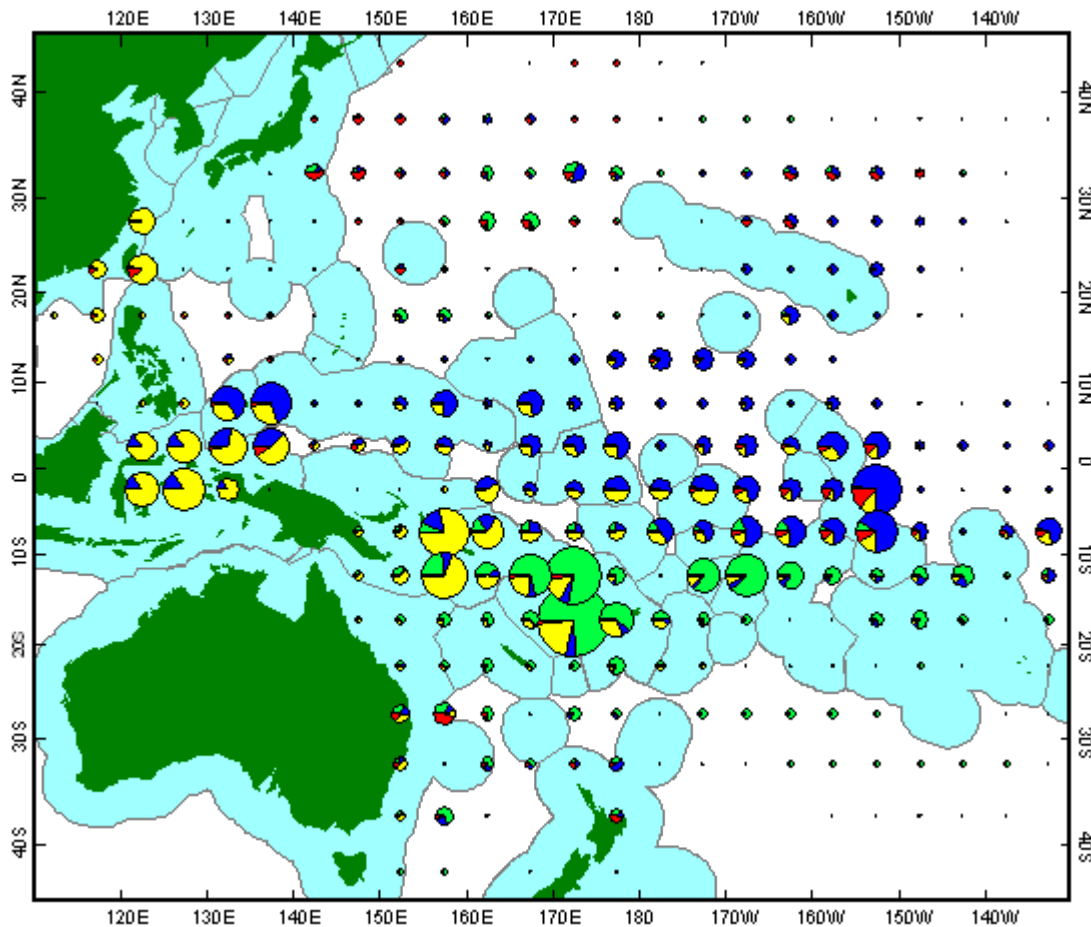
Longline catches WCPO -CA



Longline catches in WCPO-CA



Longline catch



Longline catch,
2007-2009.

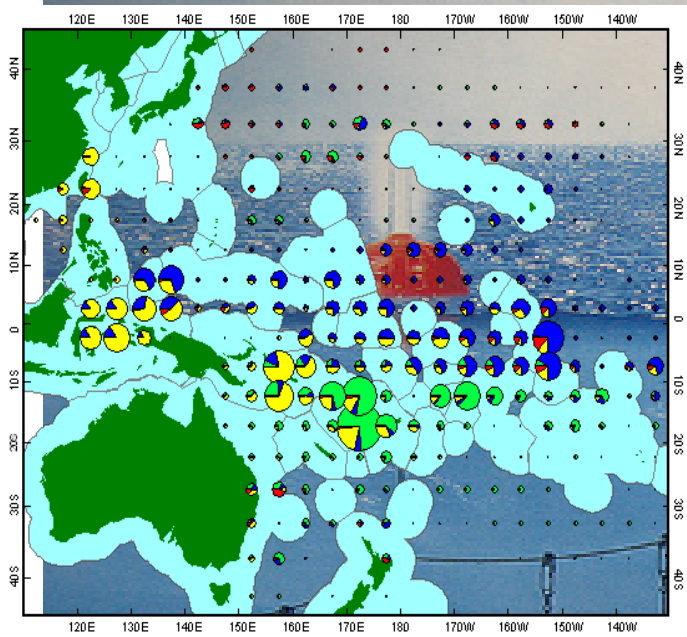
Green: Albacore

Yellow: Yellowfin

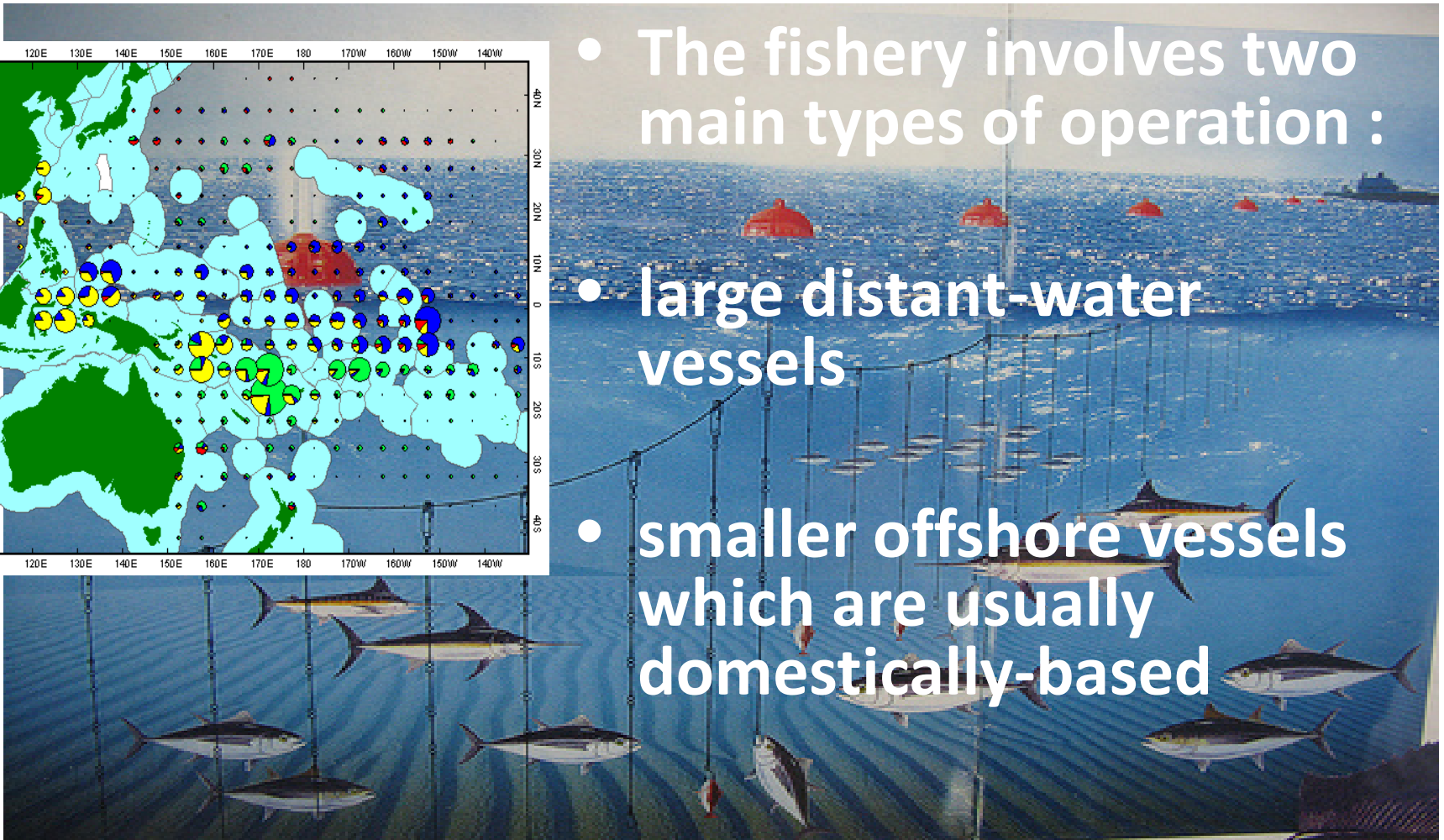
Blue: Bigeye

Red: Swordfish

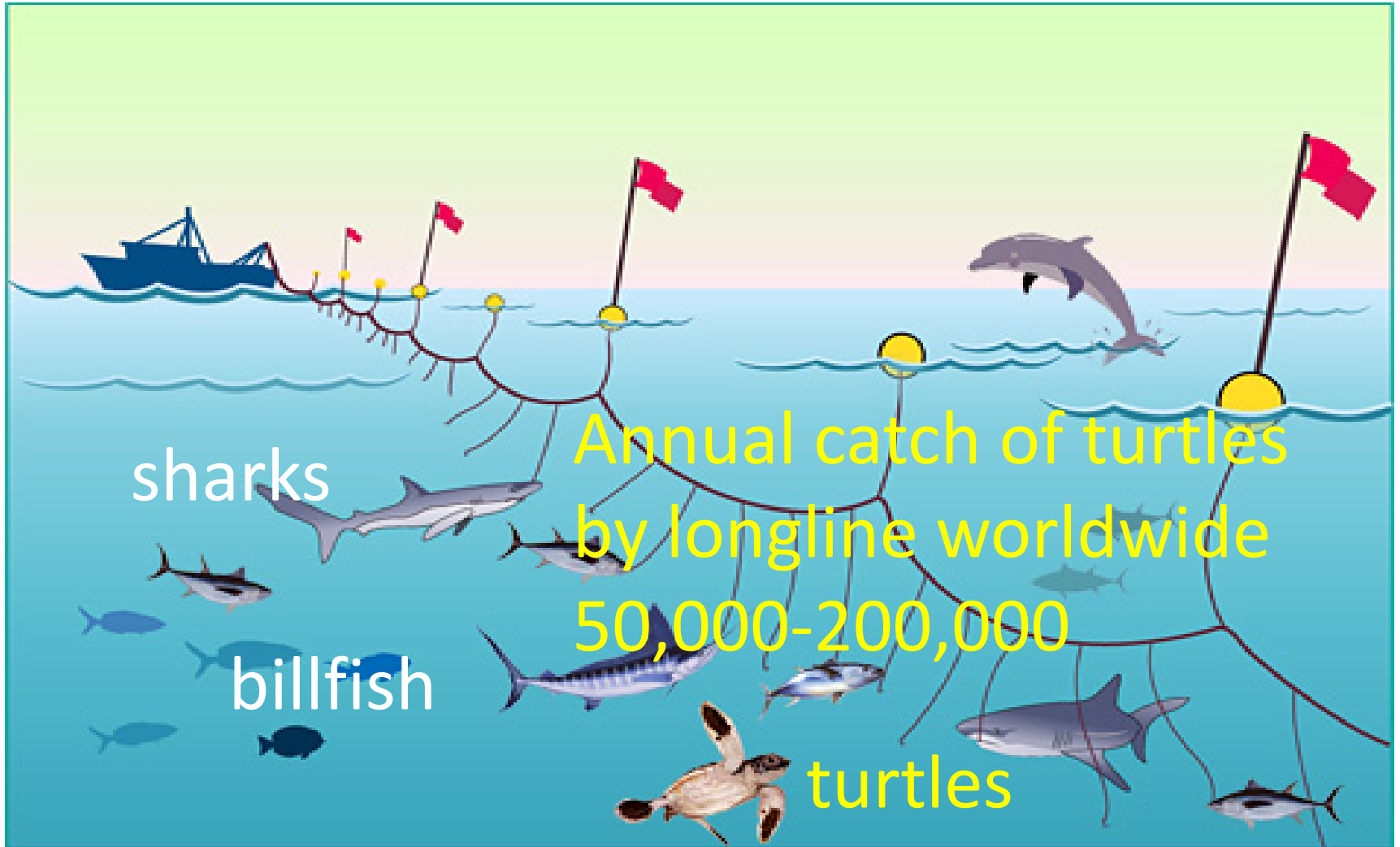
Longline fishery



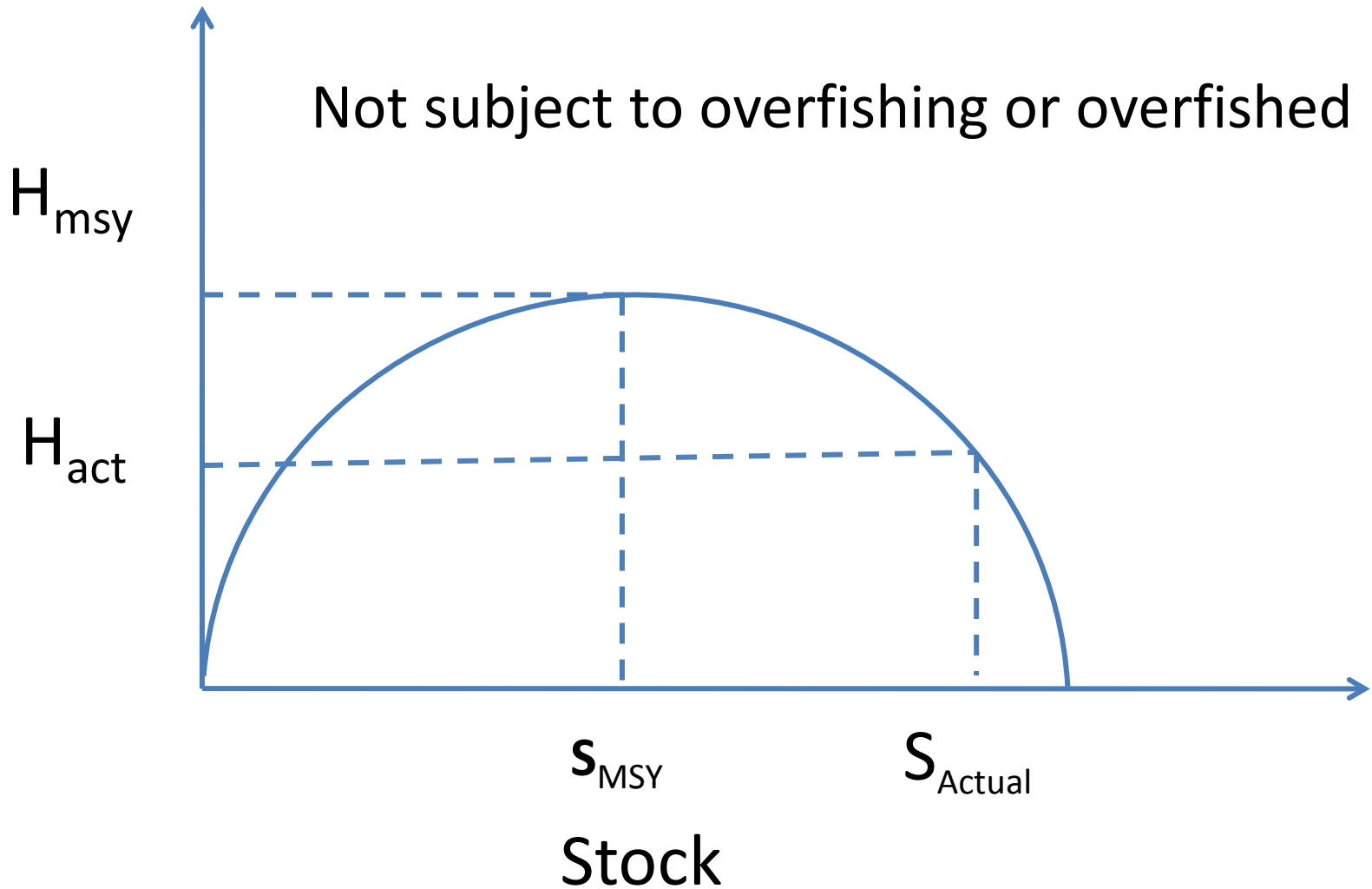
- The fishery involves two main types of operation :
- large distant-water vessels
- smaller offshore vessels which are usually domestically-based



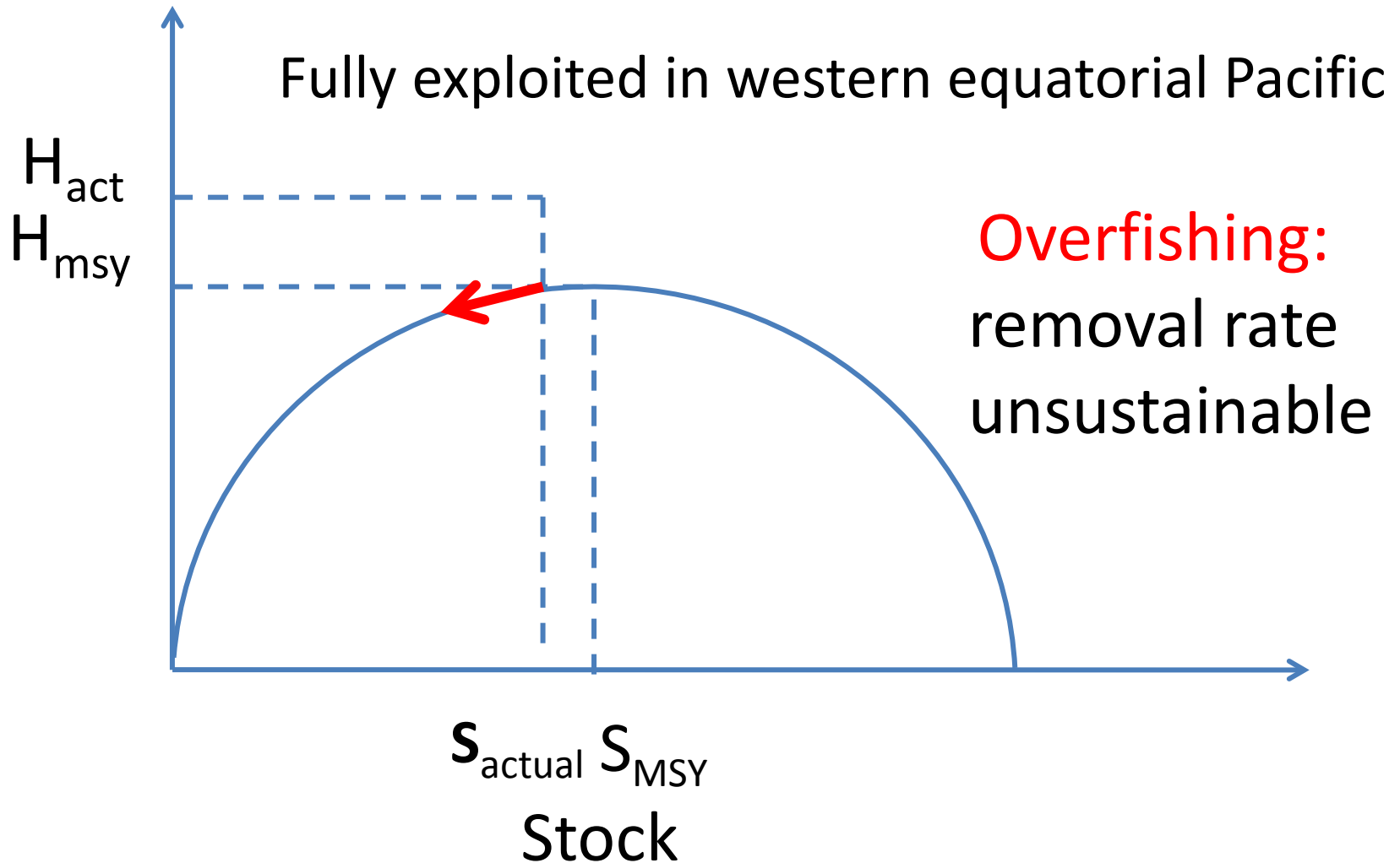
Longline fishing bycatch in the WCPO



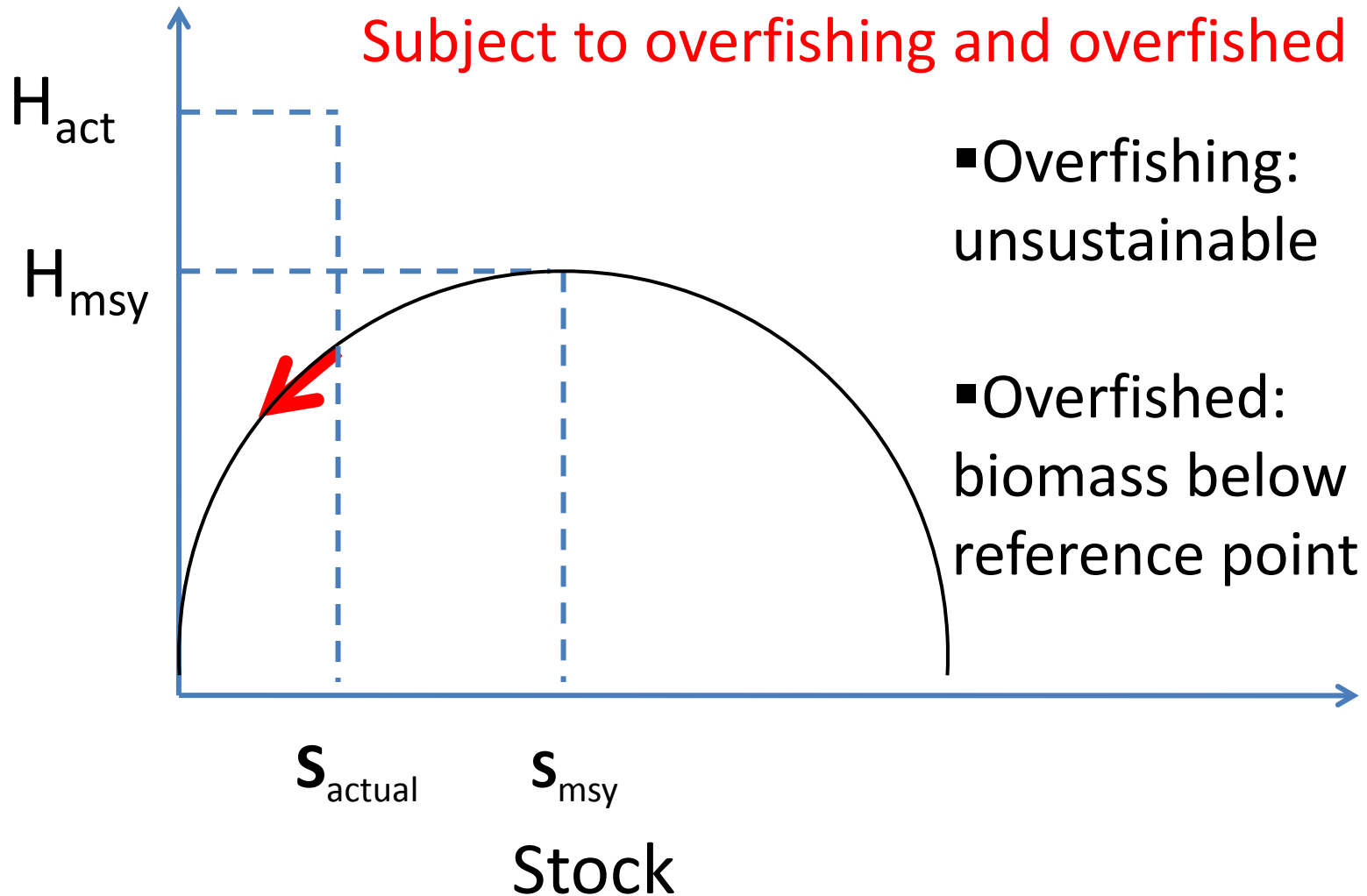
Status of stocks WCPO: Skipjack



Status of stocks WCPO: Yellowfin



Status of stocks WCPO: Bigeye



Juvenile big eye in skipjack catch

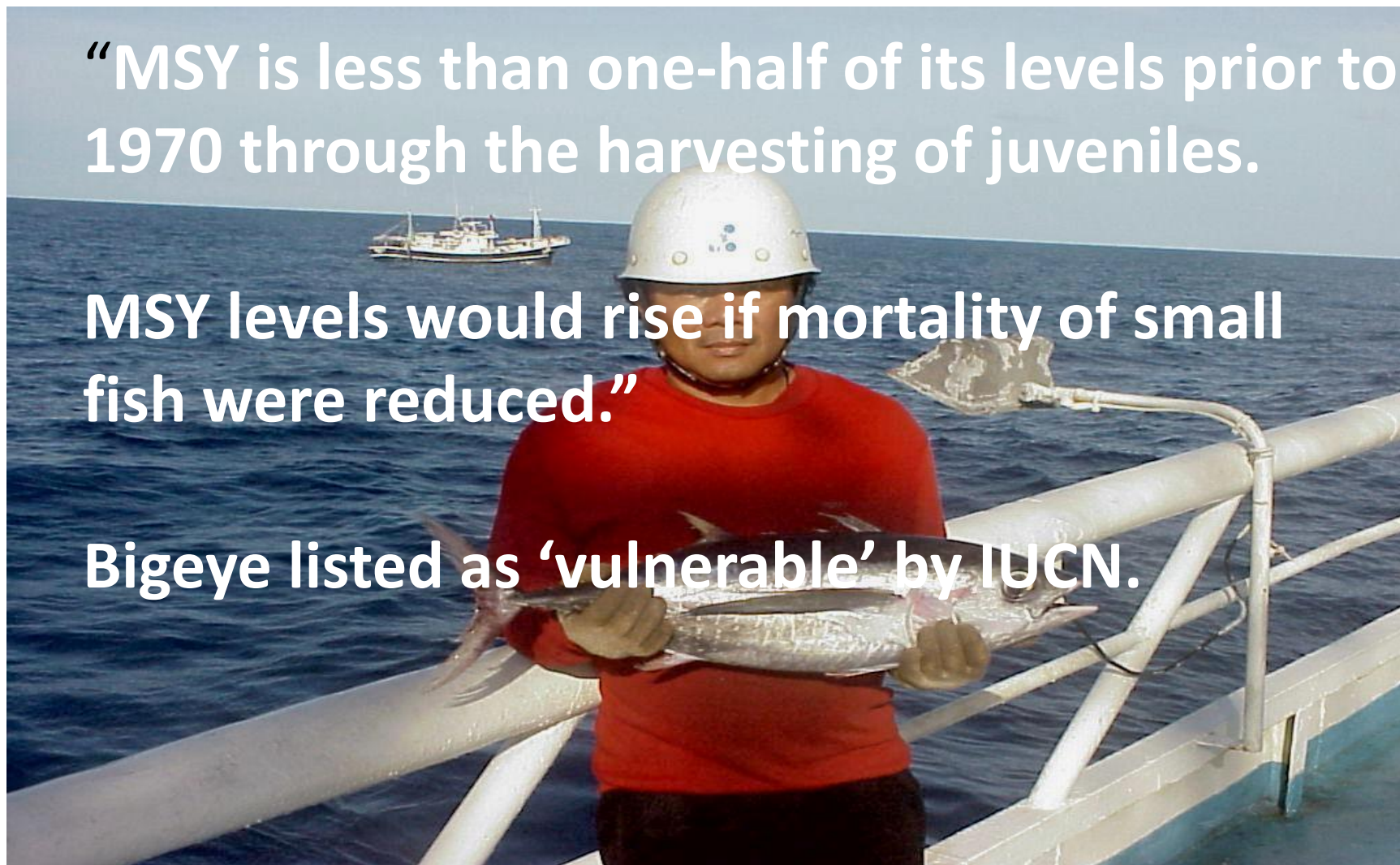


Status of bigeye stocks

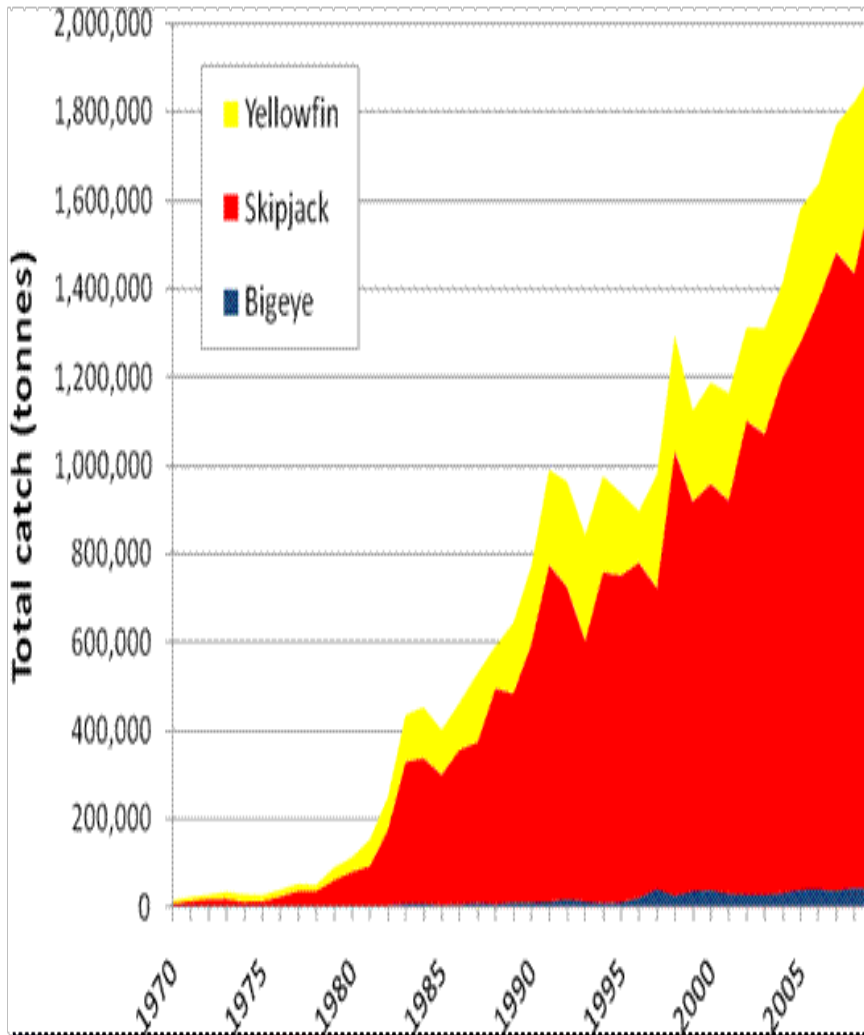
“MSY is less than one-half of its levels prior to 1970 through the harvesting of juveniles.

MSY levels would rise if mortality of small fish were reduced.”

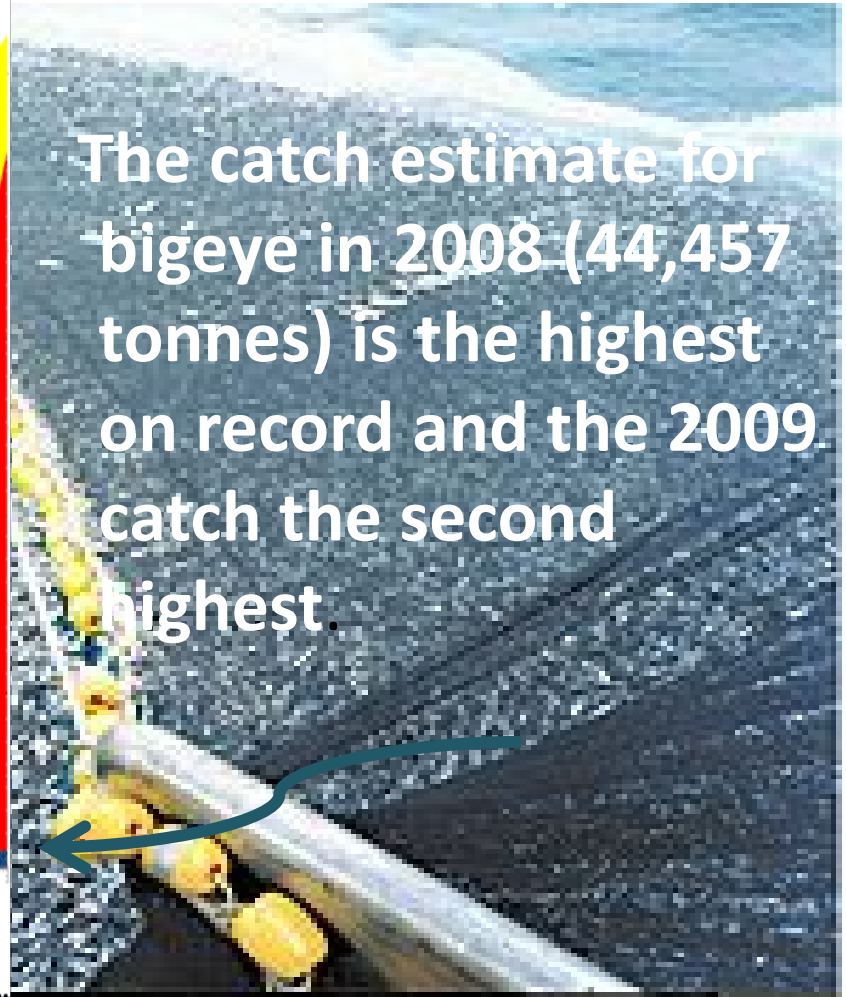
Bigeye listed as ‘vulnerable’ by IUCN.



Bigeye in purse seine



The catch estimate for bigeye in 2008 (44,457 tonnes) is the highest on record and the 2009 catch the second highest.




Fish aggregating device (FAD)



Tuna aggregating on FAD




Juvenile
bigeye and
yellowfin
tuna caught
on FADs




Conservation and Management Measure 2008-11 of WCPFC

- Achieve, through the implementation of a package of measures, over a three-year period commencing in 2009, a minimum of **30% reduction in bigeye tuna fishing mortality** from the annual average during the period 2001-2004 or 2004;
- Ensure that there is **no increase in fishing mortality for yellowfin tuna** beyond the annual average during the period 2001-2004 average or 2004; and
- Adopt a package of measures that shall be reviewed annually and adjusted as necessary by the Commission.



Conservation and Management Measure 2008-11 of WCPFC

“Convention members shall ensure that the level of purse seine fishing effort in days fished (EEZs and high seas) does not exceed 2004 levels or the average of 2001-2004.”



Conservation and Management Measure 2008-11

“The purse seine fishery in EEZs in the area bounded by 20°N and 20°S shall be closed to fishing on FADs between 0000 hours on 1 August and 2400 hours on 30 September.” (Years 2009 and 2010.)”



WCPC, Scientific Committee, 2010

“...CMM-2008-01 is extremely **unlikely to achieve** its most important objective: reducing fishing mortality on the WCPO bigeye tuna stock by 30%

Furthermore, if the high seas pockets closure results in effort being transferred to high seas areas to the east, where bigeye tuna generally form a greater proportion of the purse-seine catch, the objectives of CMM-2008-01 will be **even less likely to be achieved.**”



WCPC, Scientific Committee, 2010


The seasonal restriction (two months in 2009, and three months during 2010–2011) on the **use of FADs is one of the key measures within the WCPFC conservation and management measure for bigeye and yellowfin tunas (CMM2008-01).**

There was also a query as to whether there was any information on the level of compliance within Indonesia's EEZ for the FAD closure. It was pointed out that **this closure only applied to PNA members**, and that other non-PNA members have agreed to adopt similar measures, but that this wording is open to interpretation.



WCPC, Scientific Committee, 2010


“The presenter noted that as an overall measure, the FAD closure did not have an impact over the entire year but was effective only during the small window of the actual closure. He also noted that the overall year had FAD effort sets higher than in the past five years. The convenor also commented that the estimated **bigeye purse-seine catch during 2009 was the second highest on record** and around 40% higher than the average over the period 2001–2004, while the aim of the CMM had been to reduce catches by 10% below this level.”



Secretariat of the Pacific Community: Update on tuna fisheries

Management measures have been widely disregarded by Commission members. Specific measures to restrict purse-seine fishing effort in the EEZs of SPC members have not been effective.

- (a) unwillingness of countries, including SPC members, involved in the purse-seine fishery to take action** to limit fishing mortality on juvenile bigeye and yellowfin when this might negatively impact their catches of skipjack, the main target of the fishery and a species not under threat;
- (b) unwillingness of countries involved in bigeye-targeted longline fishing to reduce their catches** when they perceive excessive catches of juvenile fish to be the main cause of the problem; and
- (c) the political difficulties faced by Philippines and Indonesia in implementing any effective regulation of their domestic tuna fisheries.**



Secretariat of the Pacific Community, 2008: Update on tuna fisheries

The WCPFC is now at a crossroad in the management of tuna fisheries in this region. Its early efforts to limit the increase in fishing effort and capacity have been ineffectual, and sustainability concerns persist for some key species. Meanwhile, there is continued pressure to expand fishing effort to meet the legitimate economic aspirations of SPC members and to provide access for new entrants to the fishery from Europe and Latin America. At the same time, the established distant-water fishing nations wish to maintain their historical share of the fishery.

The need to allocate an increasing share of the tuna catch towards ensuring food security for rapidly growing Pacific Island populations will result in further pressure on the resource. SPC members played a strong leadership role in establishing the WCPFC, motivated by the economic and social importance of tuna resources to the Pacific. The Pacific now needs to take the lead, both within and outside the WCPFC, to ensure the long-term conservation and sustainable use of this critical resource.

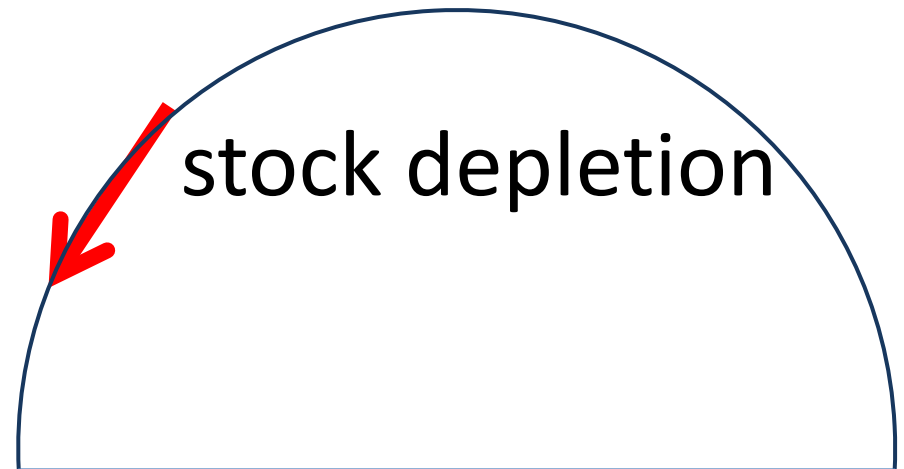
Summary of SWPO tuna fishing

Problems

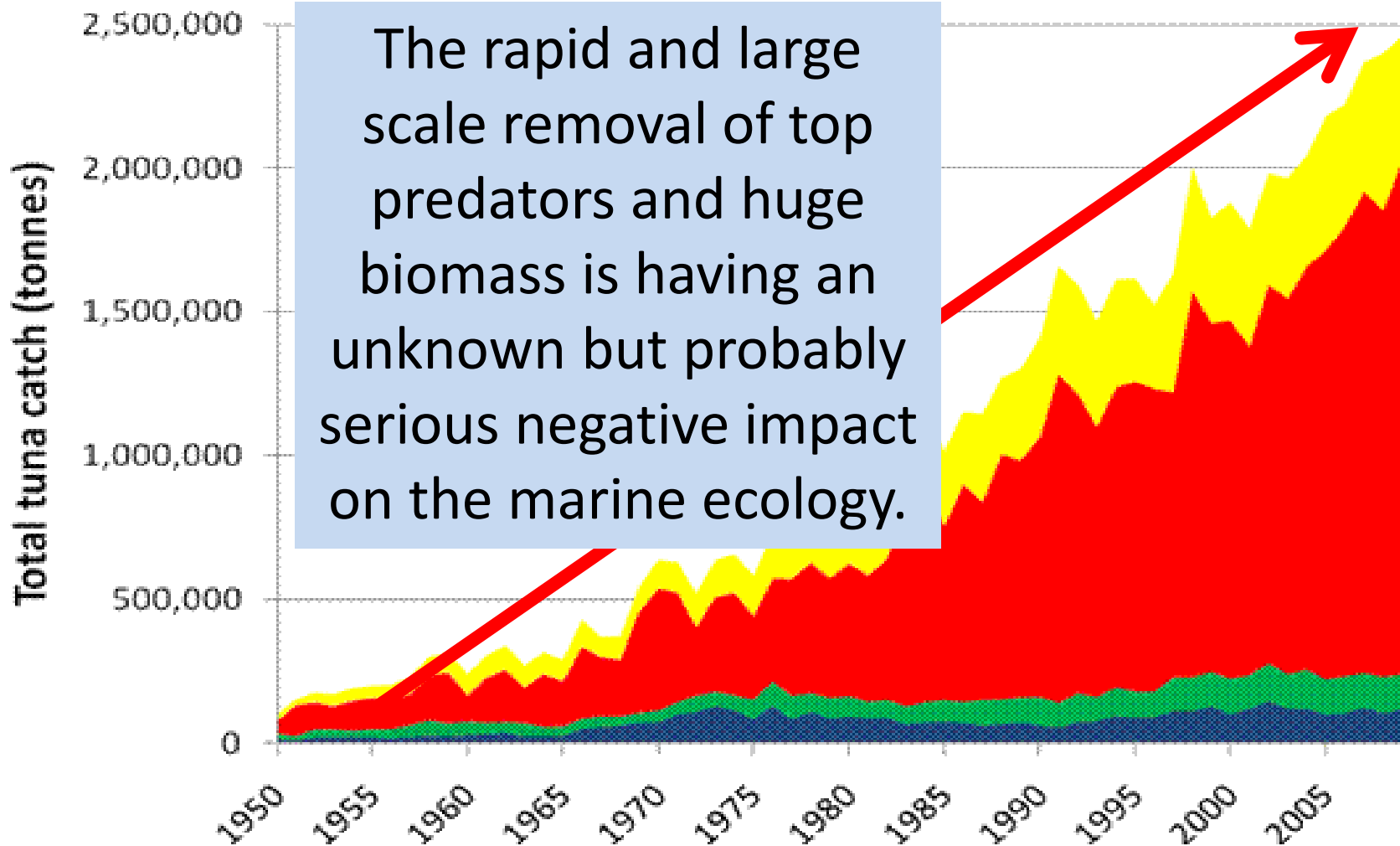
Multispecies fishery

Ineffective regional
body

Consequences



Ecosystem concerns



Question:

What role for PNG in marine resource management in the WCPO?