Shared Resource, Shared Responsibility: Bigeye Tuna Management in the WCPFC

WCPFC Working Group on Tropical Tunas
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By WWF, PEW and Greenpeace

The western and central Pacific Ocean is home to the world's largest fishery for bigeye tuna, valued at about $1 billion in 2012.

Longline: $850 million USD
Purse seine: $145 million USD

Scientific Advice

Since 2005 the Scientific Committee has recommended a reduction of bigeye catch, but CCMS have consistently failed to act.

Recommendations

2005: The Scientific Committee recommends that fishing mortality for bigeye tuna is reduced from Fcurrent.

2006: The Scientific Committee recommended a 25% reduction in fishing mortality from the average levels for 2001–2004. If the Commission wishes to maintain equilibrium average biomass at levels above BMSY, further reductions would be required.

2007: The stock status description and management recommendations from SC2 are still current.

2008: The SC recommended a minimum 30% reduction in fishing mortality from the average levels for 2003–2006, with the goal of returning the fishing mortality rate to FMSY.

2009: A 34–50% reduction in fishing mortality is required from the 2004–2007 level to reduce fishing mortality to sustainable levels at a steepness of ~0.98. The results indicate a 61% reduction in fishing mortality if a lower value (0.75) of steepness is assumed.

2010: In order to reduce fishing mortality to FMSY, a 29% reduction in fishing mortality is required from the 2005–2008 level. Considering historical levels of fishing mortality, a 31% reduction in fishing mortality from 2004 levels is required, and a 20% reduction from average 2001–2004 levels.

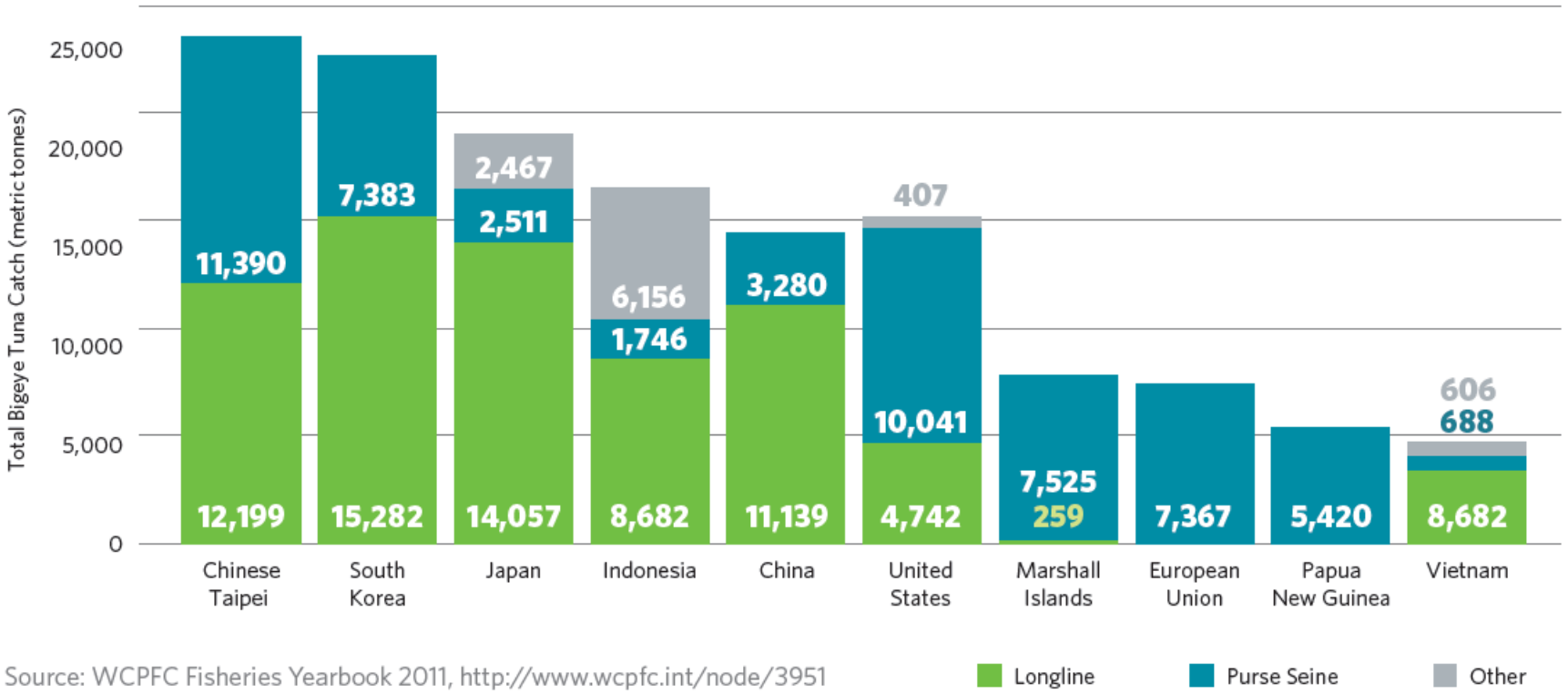
2011: A minimum of 32% reduction in fishing mortality from the average levels for 2006–2009 to return the fishing mortality rate to FMSY. This recommended level of reduction is equivalent to a minimum 39% reduction of the 2004 level in fishing mortality, and a 28% reduction of the average 2001–2004 levels.

2012: SC8 supported the need for additional or alternative targeted measures to reduce fishing mortality on bigeye. In the development of a revised CMM for bigeye, yellowfin and skipjack tuna stocks, SC8 recommended that the Commission consider:

- building on the apparent success of some fleets in reducing their dependence on FADs to achieve greater control of FAD activity outside the closures, including control of the number of FADs set throughout a year instead of FAD time-closures;
- reducing the total number of FAD sets to levels no greater than those in the fishery in 2010;
- clarifying the definition of limits on purse-seine effort that are applicable in different areas;
- reducing fishing mortality on bigeye tuna from the longline fishery; and
- adopting management measures that apply to all sectors of the fishery.

A Look at the Bigeye Tuna Catch

Bigeye catch by CCMs and the fishing methods used, 2011



Source: WCPFC Fisheries Yearbook 2011, http://www.wcpfc.int/node/3951

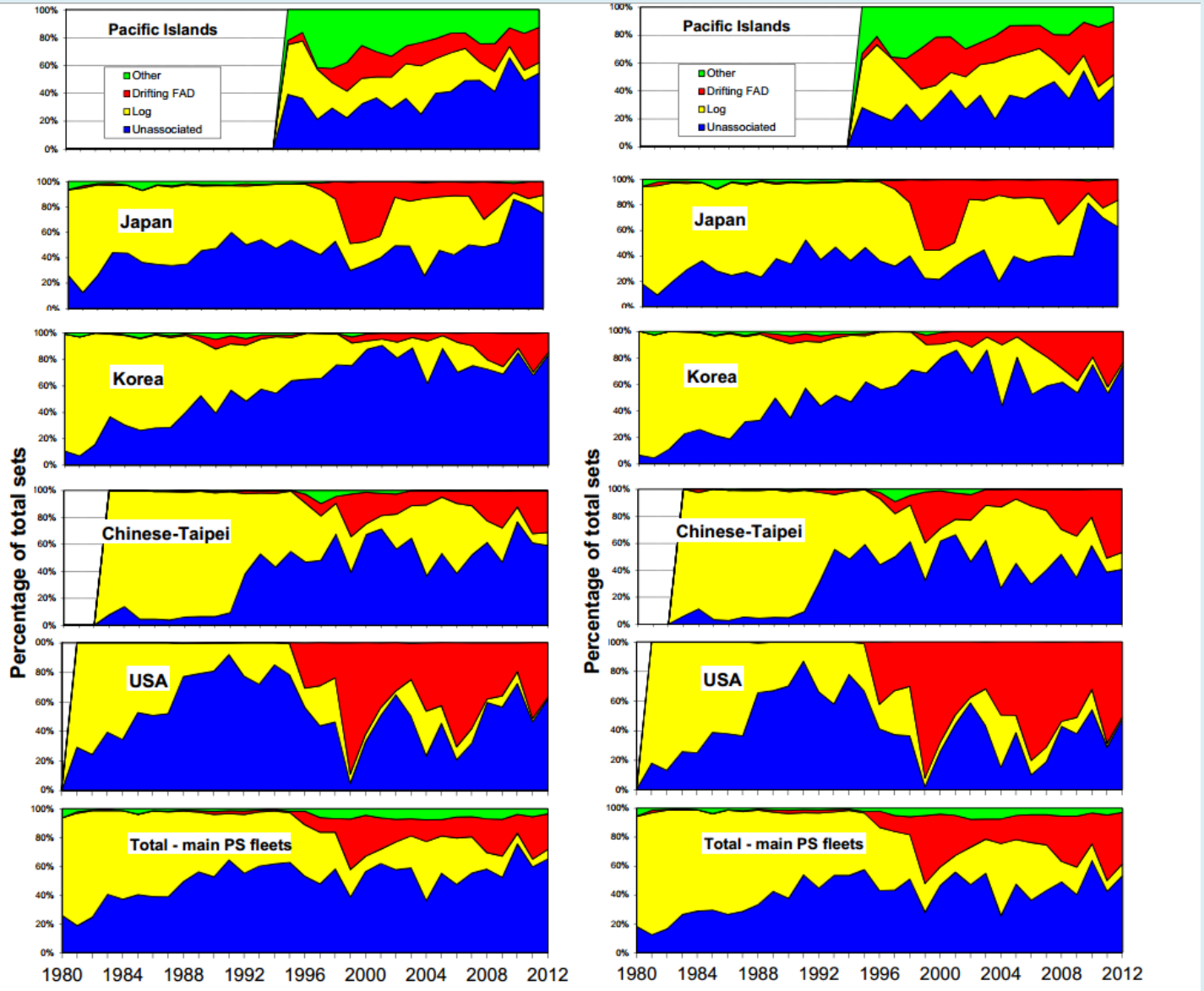
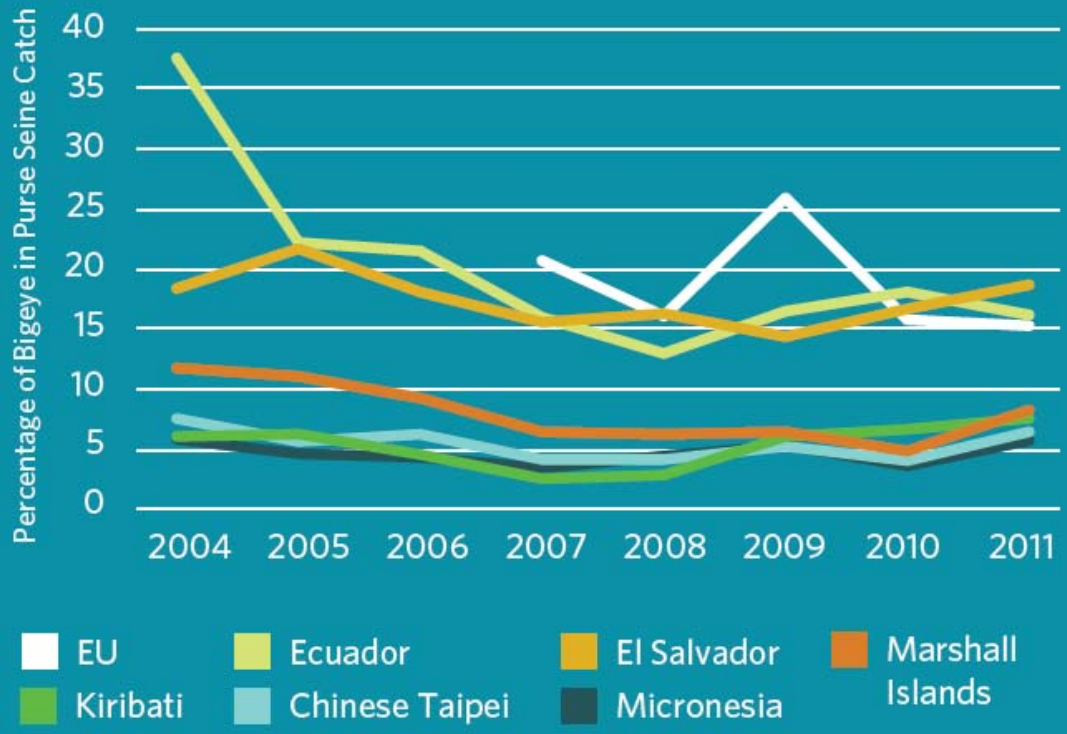


Figure 7. Time series showing the percentage of total sets (left) and total catch (right), by school type for the major purse-seine fleets operating in the WCP–CA.

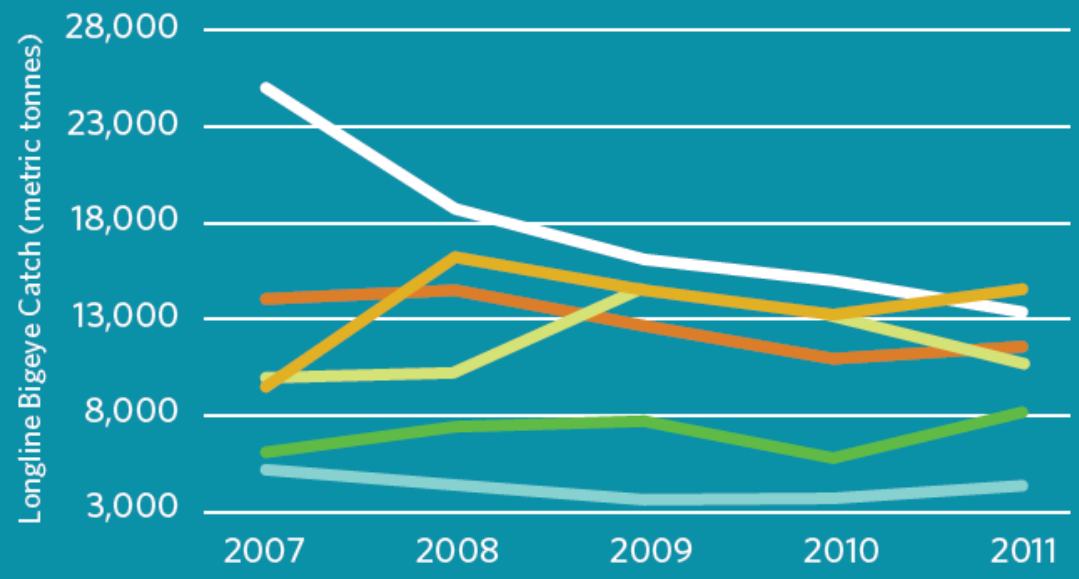
A Comparison of Purse Seine Bigeye Catch

CCM purse seine fleets with the highest rates of bigeye catch, 2004-2011



A Look at Longline Bigeye Catch Trends

Countries with the largest catch (metric tonnes), 2007-2011



Scientific advice to end overfishing of bigeye by 2018

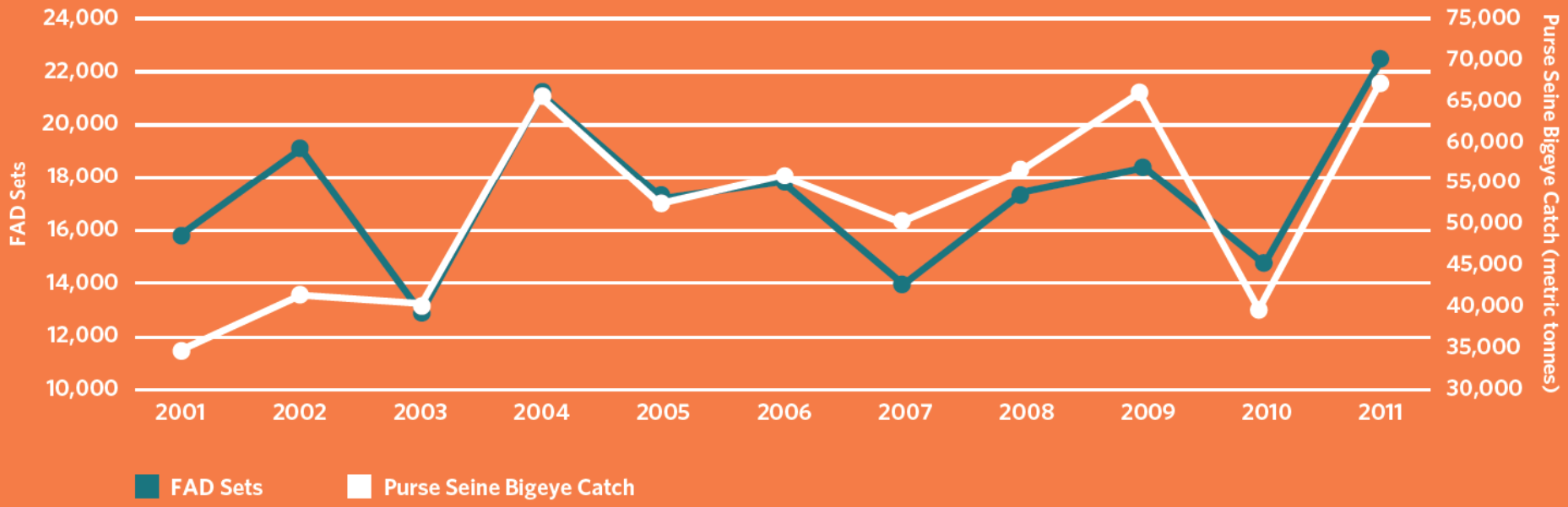
Reduction in longline catch (relative to 2011 levels)	Reduction in FAD sets (relative to 2011 levels)
-19%	53%
-14%	51%
-9%	49%
-4%	47%
1%	45%
4%	44%
9%	42%
14%	40%
19%	38%
24%	36%
32%	33%
37%	31%
42%	29%
47%	27%
52%	25%
60%	22%
65%	20%
70%	18%
75%	16%
80%	14%

Options for controlling bigeye tuna fishing mortality

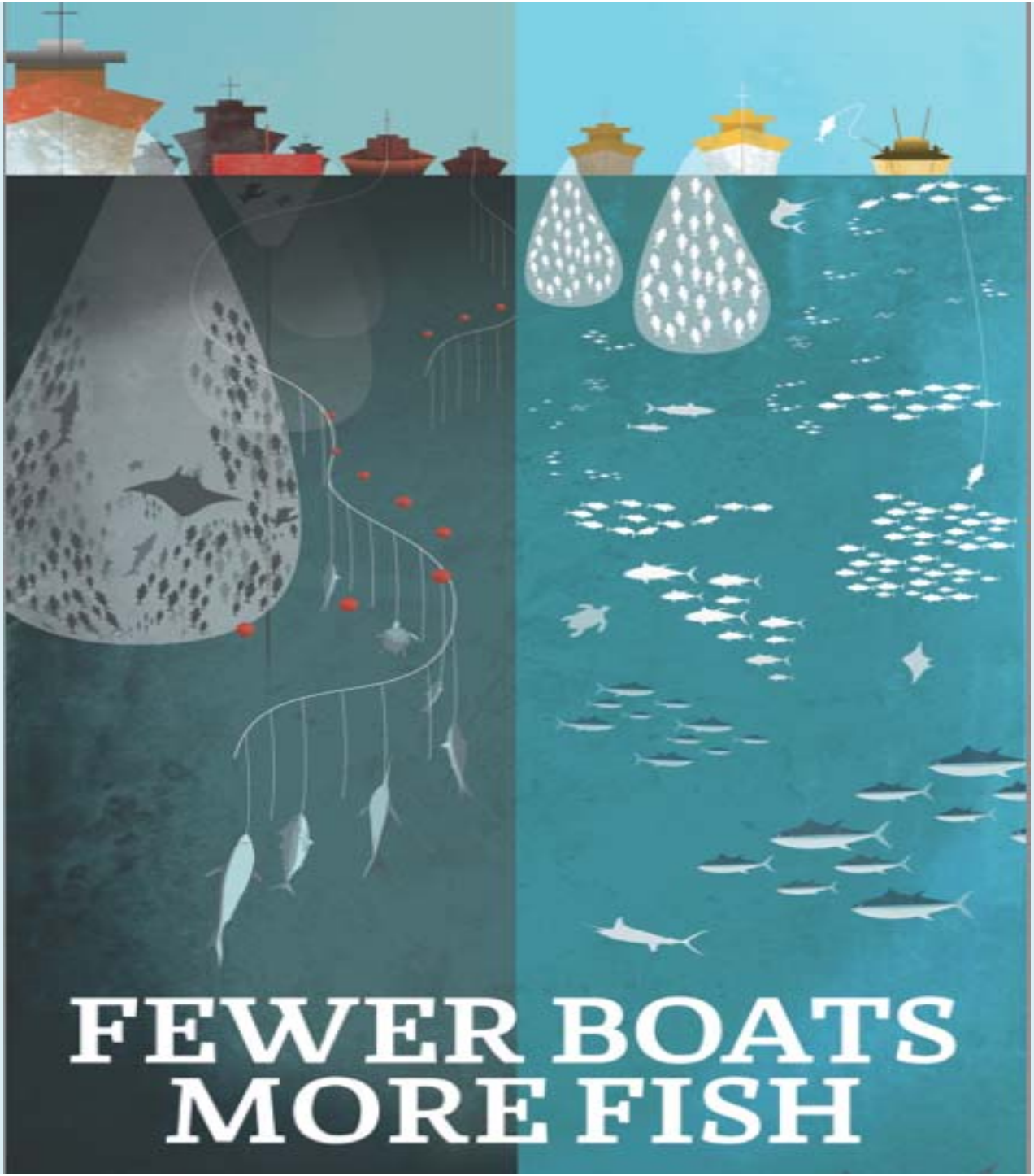
Longline catch limitation	FAD Closure	FAD set limit
Catch limits set at levels low enough to result in real reduction of fishing mortality	Time limited FAD closures have been effective in reducing juvenile bigeye mortality during the closure period, but not the overall bigeye tuna mortality.	The WCPFC Scientific Committee recommends limiting FAD sets to no higher than 2010 levels.

The Connection Between Fish Aggregating Devices and Purse Seine Bigeye Catch

A comparison of the number of FAD sets and the catch of bigeye tuna by the purse seine fleet, 2001-2011



Source: WCPFC, "Data summaries in support of discussion on the new CMM on tropical tunas," Document WCPFC9-2012-IP09 (Rev. 3), 2012, http://www.spc.int/DigitalLibrary/Doc/FAME/Meetings/WCPFC/RS9/WCPFC9-2012-IP09_Rev_3.pdf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Reference Points

- Process of agreeing on target and limit reference points continues to be a priority.

- Need Tropical Tuna CMM negotiation to recognize this process and ensure any agreements on reference points are compatible.

Advice:

- **Follow the science to end bigeye overfishing by 2017**
- **Adopt a measure that is fully enforceable and has ramifications for non-compliance**
- **Ensure fishing capacity is limited and where necessary reduced to reinforce measures aimed at purse seine and longline vessels and to ensure other stocks and ocean areas don't become over exploited as a result of this measure.**

Many CCMs have contributed to bigeye overfishing over the years.
Now everyone needs to make hard decisions to solve this.
That's what fisheries management is all about.

Thank you

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WWF

Domo Arigato