# Working Group on Tropical Tunas

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**A briefing for WCPFC WGTT by World Wildlife Fund Greenpeace and Pew Charitable Trust**

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The western and central Pacific Ocean is home to the world's largest tuna fishery, valued at $7.2 billion USD in 2012.[1] The tropical tuna fishery consists of four different species (skipjack, bigeye, yellowfin, and albacore), which are all facing increasing fishing pressure from a number of foreign fishing powers as well as from local fishing fleets. Unless this resource is managed sustainably, these tuna species could face serious declines, as seen with the Pacific bluefin tuna, which in now at just 4% of the original population size.

The bigeye tuna fishery, worth almost $1 billion USD each year, is now experiencing overfishing and is in need of urgent management action. Other species, such as yellowfin and albacore, are also showing signs of stock declines and will become unsustainable and uneconomic fisheries in time unless action is taken.[2] Scientists warn that the overfishing of bigeye tuna is being driven by high levels of purse seine FAD fishing and continued pressure from longline fisheries. The Western and Central Pacific Fisheries Commission (WCPFC) Scientific Committee met just two weeks ago and warned again that current management measures are insufficient to stop bigeye overfishing as FAD fishing continues at near-record high levels.

In recent years, WCPFC members have attempted to end overfishing of bigeye tuna by adopting measures with temporary FAD closures, requirements to reduce longline mortality, and unspecified calls to reduce bigeye mortality in purse seine fisheries. But none of these efforts has been entirely successful. Past failures are partly due to combination of factors, including the fact the measures were too weak in the first place, they were unevenly enforced, and there were too many exemptions built into the measures.

Instead of allowing the situation to worsen, a new approach based on precaution and the best available science is needed for the Commission to ensure healthy oceans and healthy fisheries for generations to come. As made clear by previous WCPFC Scientific Committee reports,[3] reductions in bigeye fishing are needed from all major fisheries sectors in the region to end overfishing. This includes reductions from the tropical longline fishery, the purse seine FAD fishery, and other fisheries that catch bigeye, including ringnets and handlines.

This year WCPFC members have the opportunity to finally end years of overfishing of bigeye tuna by adopting a conservation and management measure that puts the fishery on sustainable footing. Doing so will require managers to make some difficult decisions and live up to the commitments made under the Convention. Without strong action to halt overfishing and to deal with the overcapacity in the bigeye fishery, fishermen stand to suffer losses as the stocks continue to decline. By acting now, WCPFC can ensure tuna for the future and economically robust fisheries for years to come. While it will not be easy, a successful negotiation is imperative to the future of bigeye and critical to show that WCPFC is an effective management body.

**Table 1: WCPFC Scientific Advice on Bigeye Tuna**

| SC | Bigeye Stock Status | Management Advice |
|---|---|---|
| SC1<br>2005 | The western-central Pacific Ocean, the bigeye tuna stock is not yet overfished, but with a high probability that overfishing is occurring. | The Scientific Committee recommends that fishing mortality for bigeye tuna is reduced from Fcurrent. |
| SC2<br>2006 | There is a high probability that overfishing of bigeye has been occurring in the western and central Pacific Ocean (WCPO) (Fcurrent/FMSY ≥ 1, with >99% probability) since 1997. | 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. |
| SC3<br>2007 | The stock status description and management recommendations from SC2 are still current. | The stock status description and management recommendations from SC2 are still current. |
| SC4<br>2008 | The estimate of Fcurrent F~MSY indicates that overfishing of bigeye tuna is occurring in the WCPO with a very high probability. While the stock is not yet in an overfished state with respect to total biomass (Bcurrent B~MSY > 1), the situation is less optimistic for adult biomass. | 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. |
| SC5<br>2009 | Fcurrent/FMSY is considerably greater than 1, ranging from 1.51–2.01 for a variety of assumptions with similar steepness (~0.98). | 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. |
| SC6<br>20010 | For the base model, is estimated at 1.41, indicating that overfishing is occurring for the WCPO bigeye tuna stock. | In order to reduce fishing mortality to $F_{MSY}$, 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. |
| SC7<br>2011 | Fcurrent/$F_{MSY}$ is estimated at 1.46 (base case; range 1.16–2.10), indicating that overfishing is occurring for the WCPO bigeye tuna stock | 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. |
| SC8<br>2012 | The stock status and trends, and management advice and implications from SC7 are still current. | 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:<br>• 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;<br>• reducing the total number of FAD sets to levels no greater than those in the fishery in 2010;<br>• clarifying the definition of limits on purse-seine effort that are applicable in different areas;<br>• reducing fishing mortality on bigeye tuna from the longline fishery; and<br>• adopting management measures that apply fishery all sectors. |

**Table 2:** Projection conditions that remove 100% of BET overfishing by 2018, relative to status quo 2011 conditions (F/FMSY = 1.421) and the contribution to this reduction made by purse seine associated effort and longline catch reductions. Effort and catch in other fisheries assumed constant[4]

| Reduction in longline catch (relative to 2011 levels) | Reduction in FAD sets (relative to 2011 levels) | Longline contribution to ending overfishing | Purse seine Contribution to ending overfishing |
|---|---|---|---|
| -19% | 53% | -9% | 109% |
| -14% | 51% | -5% | 105% |
| -9% | 49% | -1% | 101% |
| -4% | 47% | 3% | 97% |
| 1% | 45% | 6% | 94% |
| 4% | 44% | 9% | 91% |
| 9% | 42% | 13% | 88% |
| 14% | 40% | 16% | 84% |
| 19% | 38% | 20% | 80% |
| 24% | 36% | 24% | 76% |
| 32% | 33% | 30% | 70% |
| 37% | 31% | 34% | 66% |
| 42% | 29% | 38% | 62% |
| 47% | 27% | 42% | 58% |
| 52% | 25% | 46% | 54% |
| 60% | 22% | 52% | 48% |
| 65% | 20% | 55% | 45% |
| 70% | 18% | 59% | 41% |
| 75% | 16% | 63% | 37% |
| 80% | 14% | 67% | 33% |

[1] Peter Williams and Peter Terawasi. *Overview of Tuna Fisheries in the Western and Central Pacific Ocean, Including Economic Conditions—2012.* Western and Central Pacific Fisheries Commission, 2013. http://www.wcpfc.int/node/7199.

[2] Ibid.

[3] See Stock Status and Management Advice for bigeye tuna of WCPFC Scientific Committee Reports, 2005 through 2012: SC1, SC2, SC3, SC4, SC5, SC6, SC7, SC8. Accessed, July 10, 2013, http://www.wcpfc.int/meeting-folders/scientific-committee.

[4] Pilling et al 2013. Analysis of the implementation and effectiveness of key management measures for tropical tunas. Western and Central Pacific Fisheries Commission Scientific Committee 9th Regular Session. Pg 13.