• **ISC – assessments of:**
  – Albacore
  – Pacific bluefin tuna
  – North Pacific striped marlin
  – Swordfish

• **IATTC – Science advisory committee:**
  – Yellowfin
  – Bigeye
  – Skipjack
  – Striped marlin
North Pacific Albacore (ALB)

- Last assessment in 2006
- Next assessment in 2011
- No change in conservation advice in 2010
Estimated Spawning Stock Biomass of North Pacific Albacore

Spawning Stock Biomass with Average Productivity & F=0.75 and 90% CI's for Projection Years
North Pacific Albacore (ALB)

- Last assessment in 2006
- No change in conservation advice in 2010
- Keeping $F_{2002-04} = 0.75$ will reduce SSB
- The $F_{2002-04}$ (0.75) is high relative to most F reference points
ALB - Advice

• F should not be increased from the 2002-2004 level (0.75)

• With the projection of a reduced SSB by the mid 2010s, F will likely exceed the interim BRP
Pacific Bluefin Tuna (PBF)

- ISC conducted a stock assessment in 2008-09; analyses in 2010:
PBF catch 1952-2007
Pacific Bluefin Tuna (PBF)

- ISC conducted a stock assessment in 2008-09; analyses in 2010:
- Catch – increasingly on juveniles; and majority by weight on juveniles (0-4 year olds)
PBF – relative SSB trend
Pacific Bluefin Tuna (PBF)

- ISC conducted a stock assessment in 2008-09; analyses in 2010:
  - Catch – increasingly on juveniles; and majority by weight on juveniles (0-4 year olds)
  - Spawning stock biomass has declined
  - F has increased since 2004
Pacific Bluefin Tuna (PBF)

- ISC conducted a stock assessment in 2008-09; analyses in 2010:
- Catch – increasingly on juveniles; and majority by weight on juveniles (0-3 year olds)
- Spawning stock biomass has declined
- F has increased since 2004
- F for 2004-06 exceeds commonly used BRPs
PBF – ISC conservation advice

Given the conclusions of the July 2010 PBFWG workshop, the current (2004-06) level of F relative to potential biological reference points, and the increasing trend of F, it is important that the level of F is decreased below the 2002-04 levels, particularly on juvenile age classes.
North Pacific Striped Marlin (MLS)

- ISC conducted stock assessment in 2007
- Next planned for 2011
North Pacific Striped Marlin (MLS)

- ISC conducted stock assessment in 2007
- Next planned for 2011
- 2007 results indicated that $SSB_{2005}$ at a historically low level
- $F_{2003}$ high and exceeds typically used BRPs
Fishing Mortality Rate (F) for Striped Marlin Spawners (Ages 5+)

Instantaneous $F$ (per year)

- Run 1 (with SR & $h=0.7$)
- Run 2 (no SR assumed)
MLS

• Last stock assessment in 2007
• Next planned for 2011
• 2007 results indicated that SSB_{2005} at a historically low level
• F_{2003} high and exceeds typically used BRPs
• Conservation advice from ISC7 maintained, i.e., F_{2001-03} should be reduced
Swordfish (SWO)

- ISC conducted an assessment in 2009 using both a single- and a 2-stock scenario.
Swordfish – Areas for 2-stock scenario

Proposed boundary
Adapted from Ichinokawa and Brodziak (2008; Figure 7d)
Swordfish (SWO)

- ISC conducted an assessment in 2009 using both a single- and a 2-stock scenario.
- Assessment indicated that stock was healthy and above the level required to sustain recent catches.
EPO Swordfish exploitable biomass

![Graph showing exploitable biomass over years with different lines representing projected catch biomass and projected exploitable biomass with 95% CI.]
The WCPO and EPO stocks in the North Pacific Ocean are healthy and above the level required to sustain recent catches.
Other

- Sharks
- Blue marlin
- More info and documents:
  http://isc.ac'affrc.go.jp/
Yellowfin tuna

- IATTC conducted an updated assessment in 2010.
- Assuming no stock-recruitment relationship, not overfishing and not overfished.
- Results less optimistic when stock-recruitment relationship is assumed.
Yellowfin tuna – Kobe plot
Bigeye tuna

- IATTC conducted an updated assessment in 2010.
- Assuming no stock-recruitment relationship, not overfishing and not overfished.
- Results less optimistic when stock-recruitment relationship is assumed.
Bigeye tuna – Kobe plot
Bigeye tuna – MSY over time
Skipjack tuna

IATTC looked at indicators of stock status compared to historical observations

Results:
- Exploitation rate increased over time
- No adverse consequences
- Average weight is below the reference level
- Decline in average length, and leveling off of catch and CPUE
- May suggest that F is approaching or above $F_{MSY}$
Striped Marlin (MLS)

- IATTC conducted an assessment in 2010 for a northeastern stock of striped marlin.
Striped Marlin (MLS)

- IATTC conducted an assessment in 2010 for a northeastern stock of striped marlin.
- Results – not overfished, not overfishing.
Questions?