

ICCAT 101

ICCAT 101 - Course Content

- What is ICCAT?
- U.S. representation & implementation
- Major species
 - Biology
 - Stock status
 - Management measures

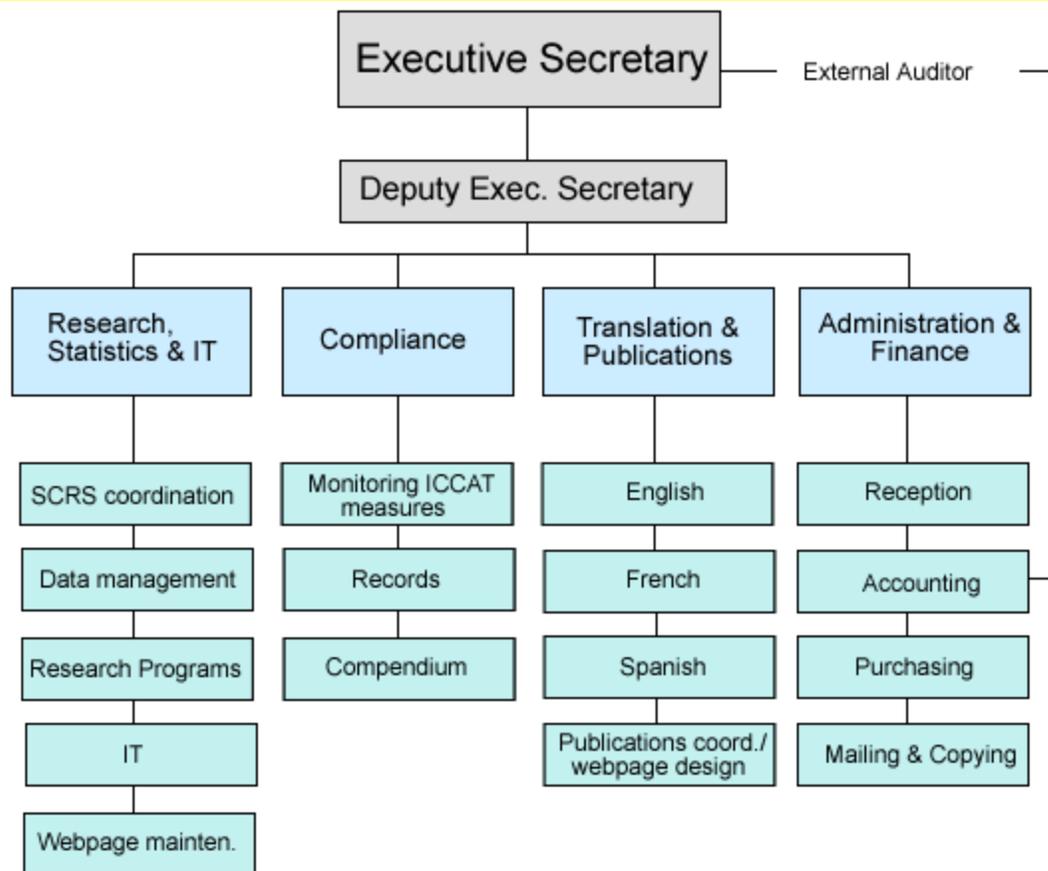
What is ICCAT?

- International Commission for the Conservation of Atlantic Tunas
- Established 1969
- Regional fisheries management organization (RFMO)
- Other tuna RFMOs: IATTC, WCPFC, IOTC, & CCSBT

ICCAT - The Convention

- *Member Nations:* 48 (includes EU)
- *Convention Area:* Atlantic Ocean and adjacent seas
- *Convention Resources:* Tunas and tuna-like species
- *Function:*
 - Collection and analysis of statistical information
 - Joint planning of research, evaluation of results
 - Joint formulation of management recommendations

ICCAT Secretariat



The Commission

- Standing Committee for Research and Statistics (SCRS)
- Standing Committee for Finance and Administration (STACFAD)
- Panels 1 - 4
- Conservation and Management Measures (Compliance Committee)
- Permanent Working Group for the Improvement of ICCAT Statistics and Conservation Measures (PWG)

The Panels*

- Panel 1: tropical tunas (bigeye, yellowfin and skipjack)
- Panel 2: northern temperate tunas (W & E bluefin tuna and N. albacore)
- Panel 3: southern temperate tunas (S. bluefin [CCSBT] and S. albacore)
- Panel 4: other species (N. & S. swordfish, blue marlin, white marlin, sailfish, spearfish, sharks, small tunas, seabirds, and turtles)

* may change in the future

Chairpersons*

- Commission - Mr. Masa Miyahara (Japan)
- SCRS - Dr. Josu Santiago (EU)
- STACFAD - Ms. Sylvie LaPointe (Canada)
- Compliance - Dr. Chris Rogers (USA)
- PWG - Mr. Taoufik El Ktiri (Morocco)
- Panel 1 - Cote d'Ivoire
- Panel 2 - European Union
- Panel 3 - South Africa
- Panel 4 - Brazil

*Elections in odd years (at regular meetings)

The Commission (continued)

- Membership
 - Contracting parties
- Other Participants
 - Cooperating non-contracting parties
 - Non-contracting parties
 - Observers, including NGOs and IGOs
- Regular vs. special meetings
- Intersessional meetings
- Recommendations vs.
Resolutions/Other decisions

The United States and ICCAT

- Implementing legislation = Atlantic Tunas Convention Act (ATCA)
- The National Marine Fisheries Service is responsible for implementing ICCAT management measures

U.S. Representation at ICCAT (Atlantic Tunas Convention Act)

- U.S. Commissioners (Presidential appointments--3 year terms)
 - Federal: Russell Smith
 - Commercial: Randi Parks Thomas
 - Recreational: Ellen Peel
- U.S. ICCAT Advisory Committee
 - 20 members (appointed by Commissioners for 2 year terms, represent constituencies)
 - 1 member from each of the five Atlantic Fishery Management Councils
 - 20 Technical Advisors (Commissioner appointed)

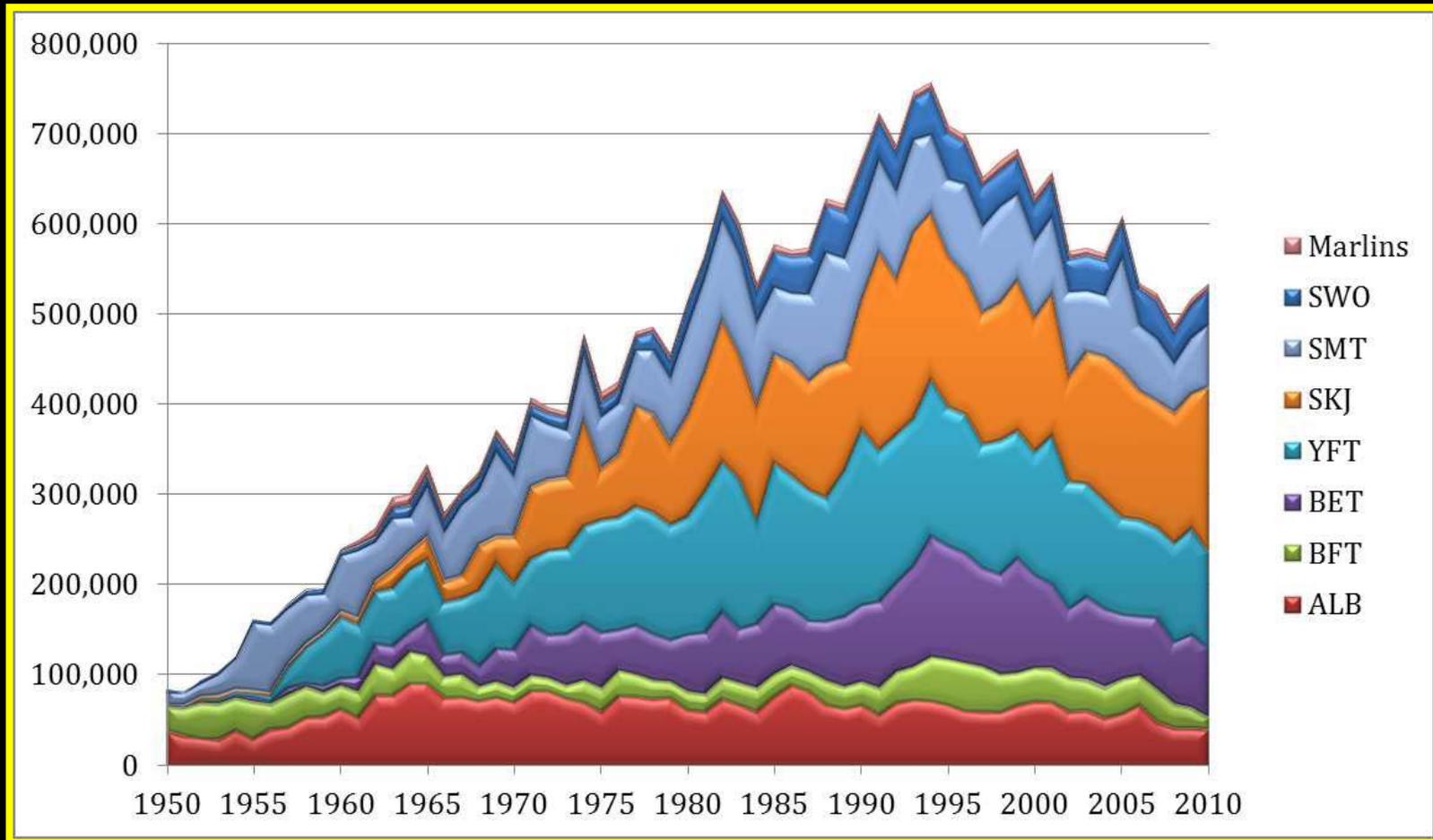
U.S. ICCAT Advisory Committee

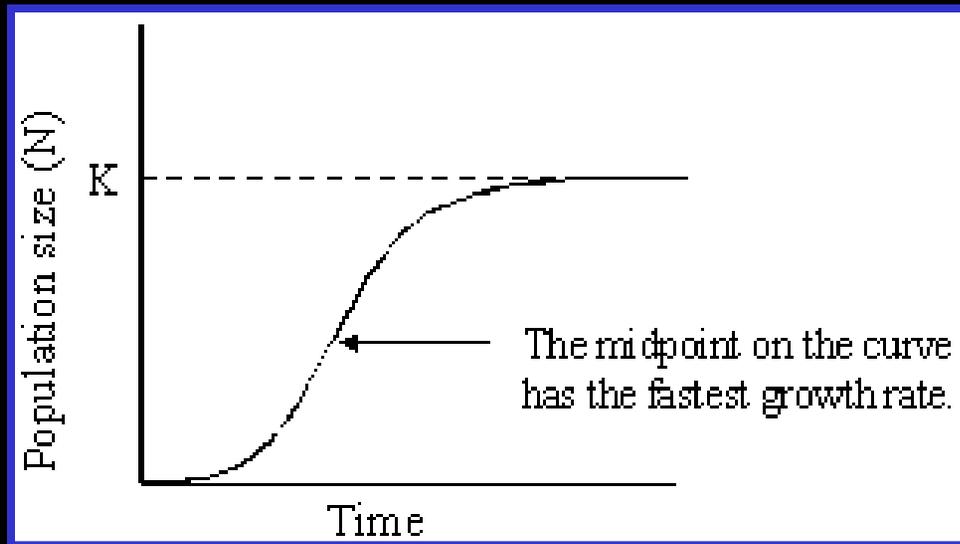
- Spring Species Working Group Meeting (w/ Technical Advisors)
- Fall Advisory Committee Meeting(s)
- Special ad hoc Workshops/Meetings
- ICCAT Commission Meeting/Intersessionals
- Relationship to NMFS Highly Migratory Species Advisory Panel

Major Species/Fisheries

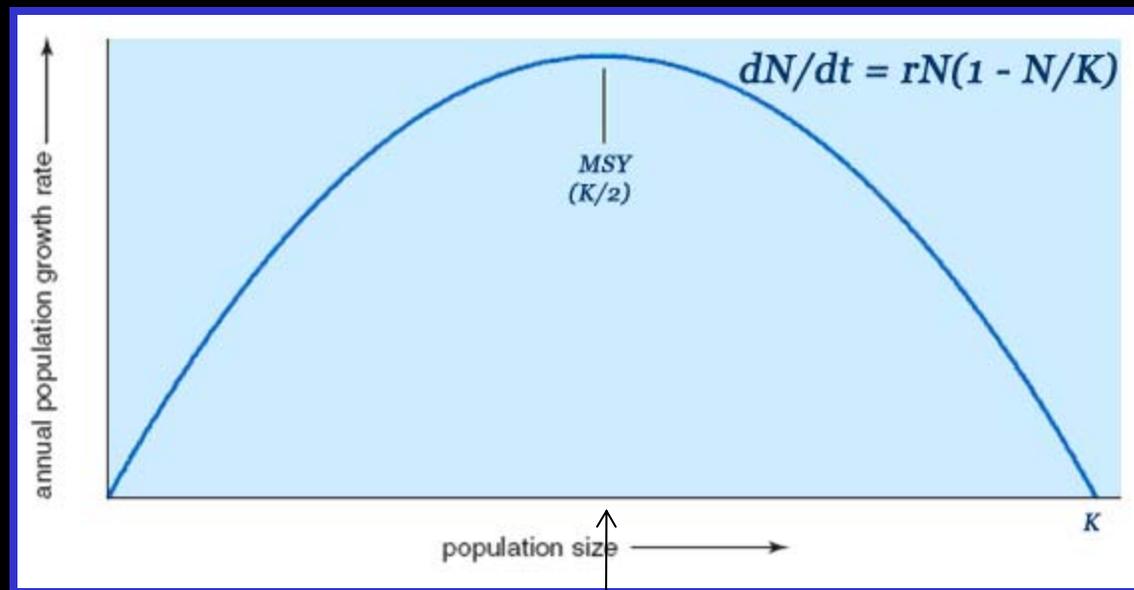


Historical Catch by Species





Maximum Sustainable Yield (MSY)



B_{MSY}

F/F_{MSY}

1.0



1.0

B/B_{MSY}

Overfished: $B/B_{MSY} < 1.0$
Overfishing: $F/F_{MSY} > 1.0$

Tropical Tunas

Yellowfin tuna, bigeye tuna, and
skipjack

Yellowfin Tuna



Yellowfin Tuna Biology

- Atlantic-wide stock
- Relatively rapid growth
- Mature 2 - 3 years
- Spawning throughout tropical Atlantic, concentrated in Gulf of Guinea
- Trans-Atlantic movements

Yellowfin Tuna Fisheries

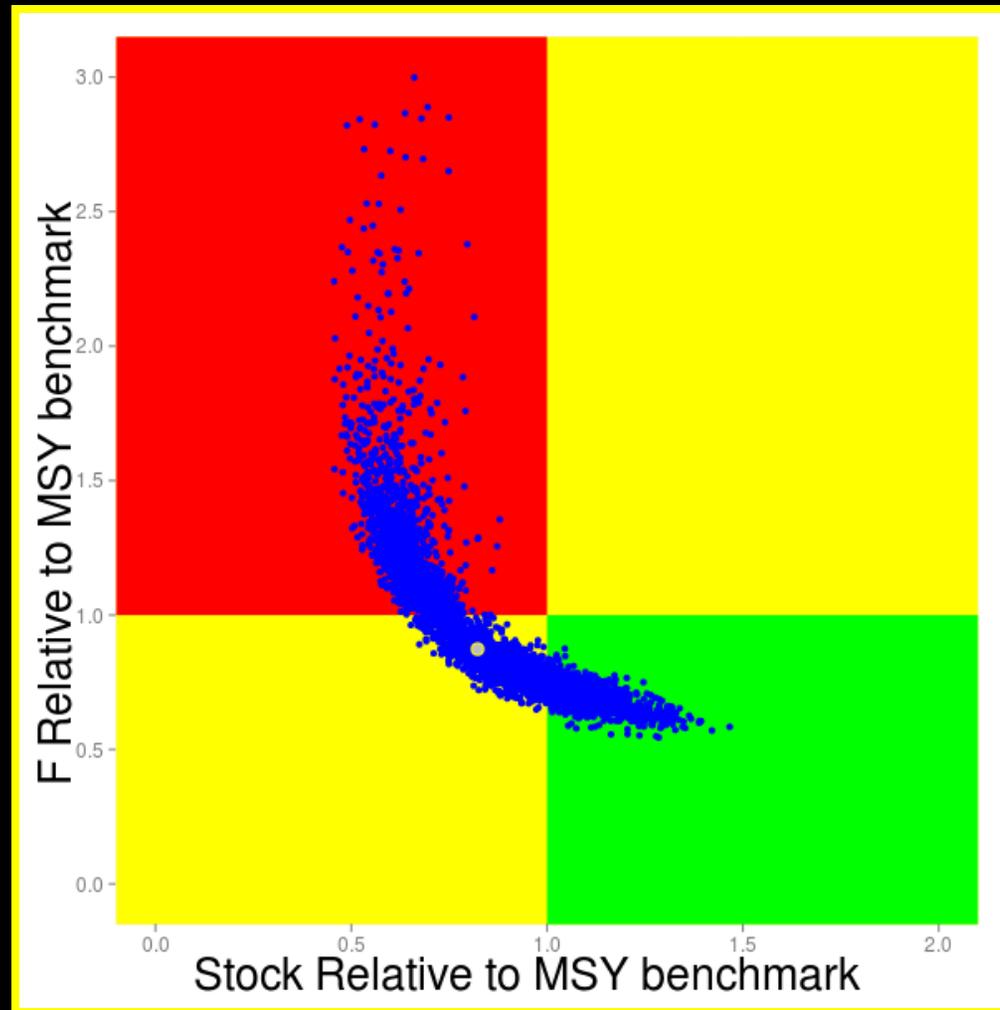
- Juveniles taken in surface fisheries
 - Purse seine
 - Bait boat
 - Association with fish aggregating devices (FADs)
- Adults taken in longline fishery

Yellowfin Tuna Stock Status (2011 Assessment)

- MSY: 144,000 mt
- Current yield:
 - 100,277 mt ('11)
- B_{2011}/B_{MSY} : 0.85



2011 Yellowfin Stock Assessment



Yellowfin Tuna Management Measures

- Yellowfin TAC set at 110K mt/year; if exceeded, Commission will review
- Under Rec. 11-01, many BET measures also apply to YFT (mixed fishery).
- Time/area closure on FAD fishing in the Gulf of Guinea

U.S. Yellowfin Tuna Fisheries

- Mainly longline fishery (Gulf of Mexico) and recreational catch (recreational catch can be 50% of total)
- 2006 catch = 7090 mt
- 2008 catch = 2407 mt
- 2011 catch = 3015 mt

Bigeye Tuna

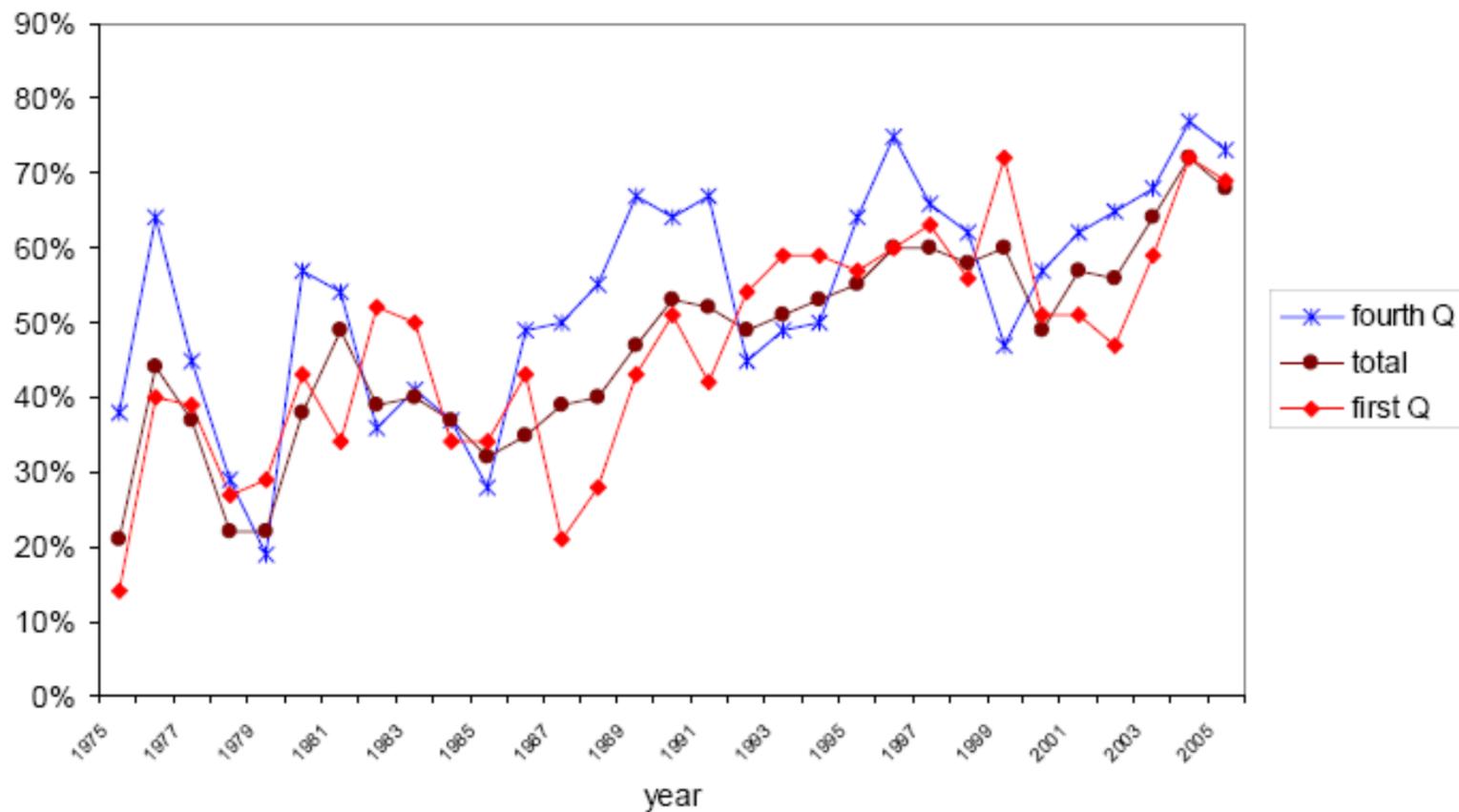
- Atlantic-wide stock
- Deeper distribution than YFT
- Relatively rapid growth (>100 cm lower jaw fork length (LJFL) by age 3, live > 7 years)
- Mature about 3.5 years
- Gulf of Guinea is a major spawning area
- Fisheries similar to YFT (deeper longline sets)

Bigeye Tuna Stock Status (2010 Assessment)

- MSY: ~92,000 mt
- Current yield
- 77,705 mt ('11)
- B_{2009}/B_{MSY} : 1.01



% of BET less 3.2 Kg.



Bigeye Tuna Management Measures

- TAC set at 85,000 mt
- Catch limits for major players
- Minor harvesters: developed states to maintain < 2100 mt; developing states to maintain <3500 mt
- Some parties have limits on # of vessels
- Time/area closure on FAD fishing in the Gulf of Guinea (expanded by Rec 11-01)

U.S. Bigeye Fisheries

- Mainly longline with some recreational catch
- 2006 catch = 991 mt
- 2008 catch = 516 mt
- 2011 catch = 746 mt

Skipjack



- Short-lived
- Reproduces early (and often)
- Western & eastern Atlantic mgmt units
- Surface fishery (purse seine, bait boat), often associated with FADs
- 2011 landings = 212,668 mt (2009 landings = 149,446 mt) of which 39,324 mt were from the western Atlantic
- Minor U.S. fishery - 2011 catch = 84 mt

Temperate Tunas

Bluefin tuna and albacore

Bluefin Tuna



Atlantic Bluefin Tuna Biology

- Two management units
- Occur throughout N. Atlantic, changes in distribution over time
- Can tolerate cold waters
- Spawning in Gulf of Mexico and Mediterranean Sea
- Movement of tagged fish across Atlantic
- Relatively late age of maturity (which differs depending on stock); can live more than 20 years

Bluefin Tuna Fisheries

- Surface fisheries
 - Purse seine
 - Bait boat
 - Harpoon
- Longline fishery
- Trap fishery
- Caging operations
- Recreational/Sport



Bluefin Tuna Stock Status (2012 Assessment)

- | | <u>West</u> | <u>East/Med</u> |
|------------------------|-----------------------------|--|
| • MSY: | 2,634 (low)
6,472 (high) | ~50,000 mt |
| • 2011 Yield: | 1,986 mt | 9,779 mt |
| • B_{2011}/B_{msy} : | 1.4 (low)
0.19 (high) | $SSB_{2011}/SSB_{F0.1}$: 0.89 (low)
0.63 (medium)
0.37 (high) |

Bluefin Tuna Management Measures (West)

- TAC of 1750 mt (since 2011 season)
- Country-specific catch limits
- Quota transfer for coop. research
- 30 kg minimum size (<115 cm LJFL); catches of small ("school") fish limited to <10% by weight
- Absolute min size of 67cm

U.S. BFT Fisheries

- Most constituent (along with SWO) and political interest
- Various gears: longline (mainly NE), purse seine (mid-Atlantic/NE), harpoon (NE), recreational (NC to ME)
- Bycatch in SWO and YFT longline
- Take of BFT <30 kg recreationally
- 2011 catch = 884 mt
- 2010 catch = 953 mt
- 2009 catch = 1273 mt
- U.S. baseline quota for 2013 = 923.7 mt

Bluefin Tuna Management Measures (East/Med)

- TAC = 13,400 mt
- Country-specific catch limits*
- Capacity limits and individual vessel quotas
- 30 kg min size with (many) exceptions
- 1-month purse seine season in the Med
- Many monitoring, control and surveillance measures (e.g., regional observer program; joint inspection; reporting obligations)

Albacore Biology

- Two management units in Atlantic (also a Mediterranean stock)
- Temperate tuna
- Mature ~ age 5, subtropical spawning areas (seasonally displaced across equator)
- Juveniles in surface waters, adults deeper

Albacore Fisheries

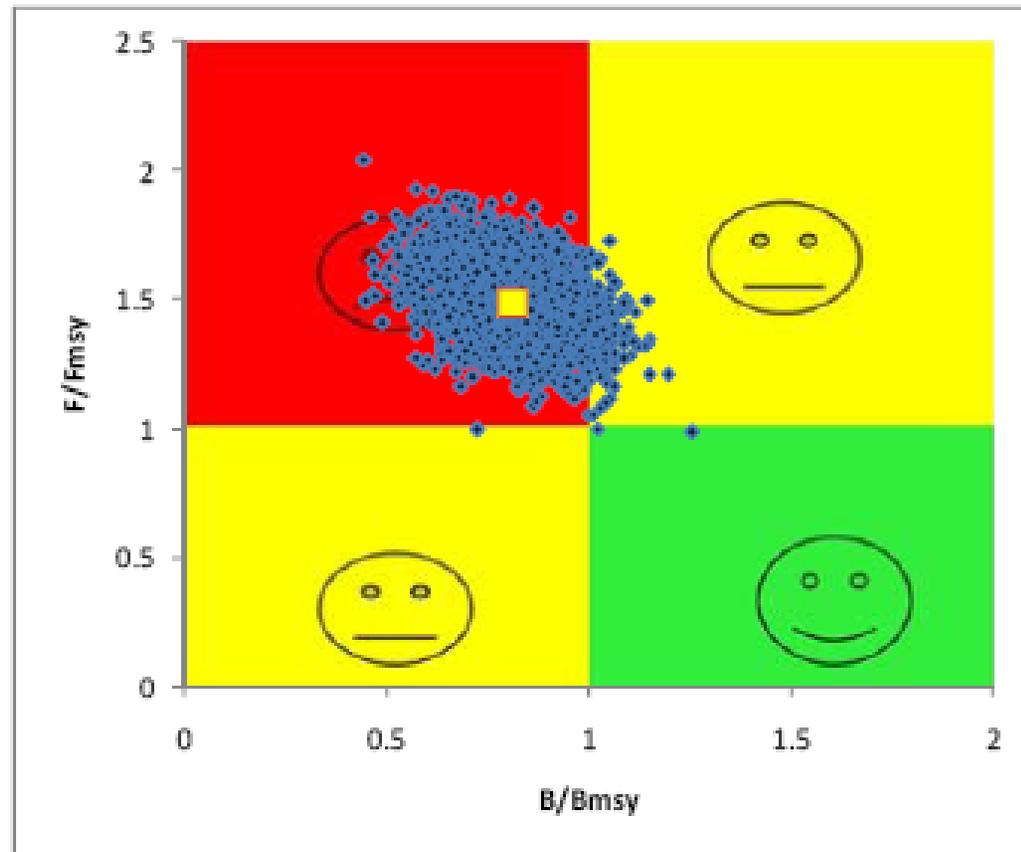


- Surface fisheries (Bay of Biscay, South Africa, Namibia)
 - Bait boat
 - Troll
 - Trawl
- Longline fishery (Chinese Taipei, Brazil)
- North stock: TAC 28,000 mt; Country-specific quotas
- South stock: Shared TAC of 24,000 mt

Albacore Stock Status

(2009 Assessment for North;
2011 Assessments for South & Med)

	<u>North</u>	<u>South</u>	<u>Med</u>
• MSY:	29,000 mt	27,964 mt	Unknown
• Yield ('11):	19,995 mt	24,078 mt	4,660 mt
• B/B_{MSY} :	0.62	0.88	Not estimated



ALB-Figure 7. The distribution of stock status determination for North Atlantic albacore en 2005 indicating the uncertainty in this evaluation.

U.S. ALB Fisheries

- Longline (minor component) and recreational catch
- U.S. Quota = 538 mt
- 2007 catch = 532 mt
- 2009 catch = 189 mt
- 2011 catch = 449 mt
- U.S. canning constituency very interested in this fishery (not just U.S. quota)

Other Species

Swordfish, blue marlin, white marlin, sailfish/spearfish, sharks, small tunas, turtles and seabirds

Swordfish



Swordfish Biology

- Three stocks (N. Atl., S. Atl. & Med.)
- Relatively rapid growth (130 cm LJFL by age 2)
- Females spawn age 5, males earlier
- Spawning throughout the year in the tropics

Swordfish Fisheries

- Directed longline fishery throughout the Atlantic
- Incidental catch in bigeye tuna fishery (primarily deepset longline fisheries)
- Dead discards reported by United States and a few others
- ~80% of undersized swordfish are dead at haulback

Swordfish Stock Status

(2009 stock assessment)

	<u>North</u>	<u>South</u>
• MSY:	13,730 mt	~15,000 mt
• Current yield ('11):	12,836 mt	12,566 mt
• B_{2009}/B_{MSY} :	1.05	1.04

Swordfish Management Measures

- North Stock: TAC=13,700 mt since 2010; Country-specific quotas
- South Stock: TAC=15,000 mt since 2010; Country-specific quotas
- Min size of 125 cm (w/tolerance) or 119 cm (w/o tolerance) LJFL; alternative CK measurement adopted in 2011

U.S. SWO Fishery

- Longline (mainly Gulf and NE) and recreational (mainly FL)
- Closures to protect sea turtles and juvenile swordfish/ "Revitalization"
- 2011 catch = 2888 mt; 2010 catch = 2412 mt; 2009 catch = 2878 mt; (U.S. baseline quota 3907 mt)
- Imports impact price for U.S. caught fish

Blue Marlin



White Marlin



Blue Marlin and White Marlin Biology

- Atlantic-wide stocks
- Spawning in tropics
- Rapid growth (blue marlin to 70+ lbs by year 1)
- Males mature 2 - 3 years, females at 3 - 4 years (aging is uncertain)

Blue Marlin and White Marlin Fisheries

- Bycatch in pelagic longline fisheries throughout the tropical and temperate Atlantic
- Directed recreational fisheries in many locations
- Large artisanal fishery in West Africa; artisanal fisheries in Latin America as well

Blue Marlin ('11) and White Marlin ('12) Assessments

- | | <u>Blue</u> | <u>White</u> |
|------------------------|-------------|---------------|
| • MSY: | ~2,837 mt | 874 - 1604 mt |
| • Current yield ('11): | 3160 mt | 344 mt |
| • B/B_{MSY} : | ~0.67 | ~0.12 |
- Magnitude of artisanal landings??

Blue Marlin and White Marlin Management Measures

- In 2000: purse seine and longline landings limited to 33% (WHM) or 50% (BUM) of 1996/1999 levels USA20
- In 2011: landings limits set at 30% of new reference years; 2000 mt TAC set for BUM; WHM/spearfish complex established
- In 2012: WHM TAC set at 400 mt; first country-specific quotas set for BUM and WHM (through 2015); limited carry forward of underharvest

Slide 56

USA20

There was an interim step here. In 2011 (for the 2012 fishery) we adopted a rec that set a TAC for BUM of 2000 mt (in line with SCRS advice) and lowered the landings limit of BUM and WHM to 30% based on a different set of base years (1996-2004 for all by Taiwan). This was also the first rec that established the WHM/spearfish management complex.

USA, 3/28/2013

Additional Marlin Measures

- Atlantic-wide recreational minimum sizes established (equivalent to U.S.)
- U.S. recreational fishery limited to a total of 250 fish landed annually (BUM and WHM combined)
- Discard estimation methods to be reported in 2013
- SCRS to present plan to improve data collection in artisanal fisheries

U.S. Marlins Fishery

- Taken as bycatch in commercial fisheries (retention prohibited)
- Large recreational fishery (primarily catch and release; tournaments, charter)

Pelagic Sharks

- Blue shark assessed in 2008; porbeagle in 2009; shortfin mako in 2012
- Ecological Risk Assessments (ERAs) conducted for these and many other species
- Assessment results
 - Blue shark (N & S): $B > B_{MSY}$
 - Shortfin mako: $B \sim B_{MSY}$
 - Porbeagle: NE, NW, SE stock: $B < B_{MSY}$; SW stock status unknown
- Incidental catches in pelagic longline fishery and some directed effort, esp for porbeagle and blue

Shark Measures

- Ban on finning ('04)
- No retention of bigeye thresher ('09)
- No retention of oceanic whitetip ('10)
- No retention* of hammerhead sharks except bonnethead ('10)
- No retention of silky sharks ('11)
- Reports due in 2013 by all parties on implementation of shark measures ('12); No data, no fish rules applicable

U.S. Shark Fisheries

- Targeted commercial shark fisheries for different species
- Sharks also taken as bycatch in other HMS fisheries (e.g., longline)
- Recreational fisheries, incl. tournaments

ICCAT Challenges

- Science-based management measures
- IUU, member compliance problems (incl data reporting) and non-member fishing issues
- Allocation issues
- Overcapacity
- Convention scope

Science-Based Management

- Conservation and management measures do not always follow the scientific advice or use the precautionary approach.
- The scientific advice is often intensely debated during negotiations.
- Short-term economic considerations often end up outweighing more conservative management approaches.

Compliance

- Many parties do not submit data, especially catch at size, catch by area, etc.
- Lack of timely reporting to support assessments
- Science data versus compliance
- Poor implementation of quotas and other management measures by some parties due to lack of capacity and other reasons; improvements seen recently

Allocation Decisions: A Major Issue

- Who gets what?
- Historical fisheries vs. developing nations
- Who is responsible for overfished stocks?
- Should responsible fishing (compliance with rules; implementation of ecosystem approaches) be rewarded and irresponsible fishing penalized?

IUU Fishing

- Significant levels of IUU fishing in certain fisheries; EBFT situation improving substantially
- Flags of convenience
- Closing the markets to IUU catch
- Problem with "fish laundering" during transshipment

Overcapacity

- Many ICCAT fisheries overcapitalized
- Contributes to overharvest of quotas, TACs set too high
- Some developing states seeking to expand (whether or not they can control their fleet).
- Efforts to limit capacity in some fisheries (e.g., EBFT and BET)

ICCAT Convention

- ICCAT treaty is out of step with more recent international fisheries instruments (e.g., UN Straddling Stocks Agreement)
- Scope of treaty with regard to management of some species (e.g. sharks, bycatch species) at issue; can impact negotiations
- Groundwork by Future of ICCAT WG
- Convention WG created in 2012; meeting in 2013 to develop amendments on key issues (e.g., scope, decision making, and non-party participation)

