



REPORT OF THE STANDING COMMITTEE ON RESEARCH AND STATISTICS (SCRS)

(Madrid, Spain, October 3 to 7, 2011)



2011 Report of the SCRS

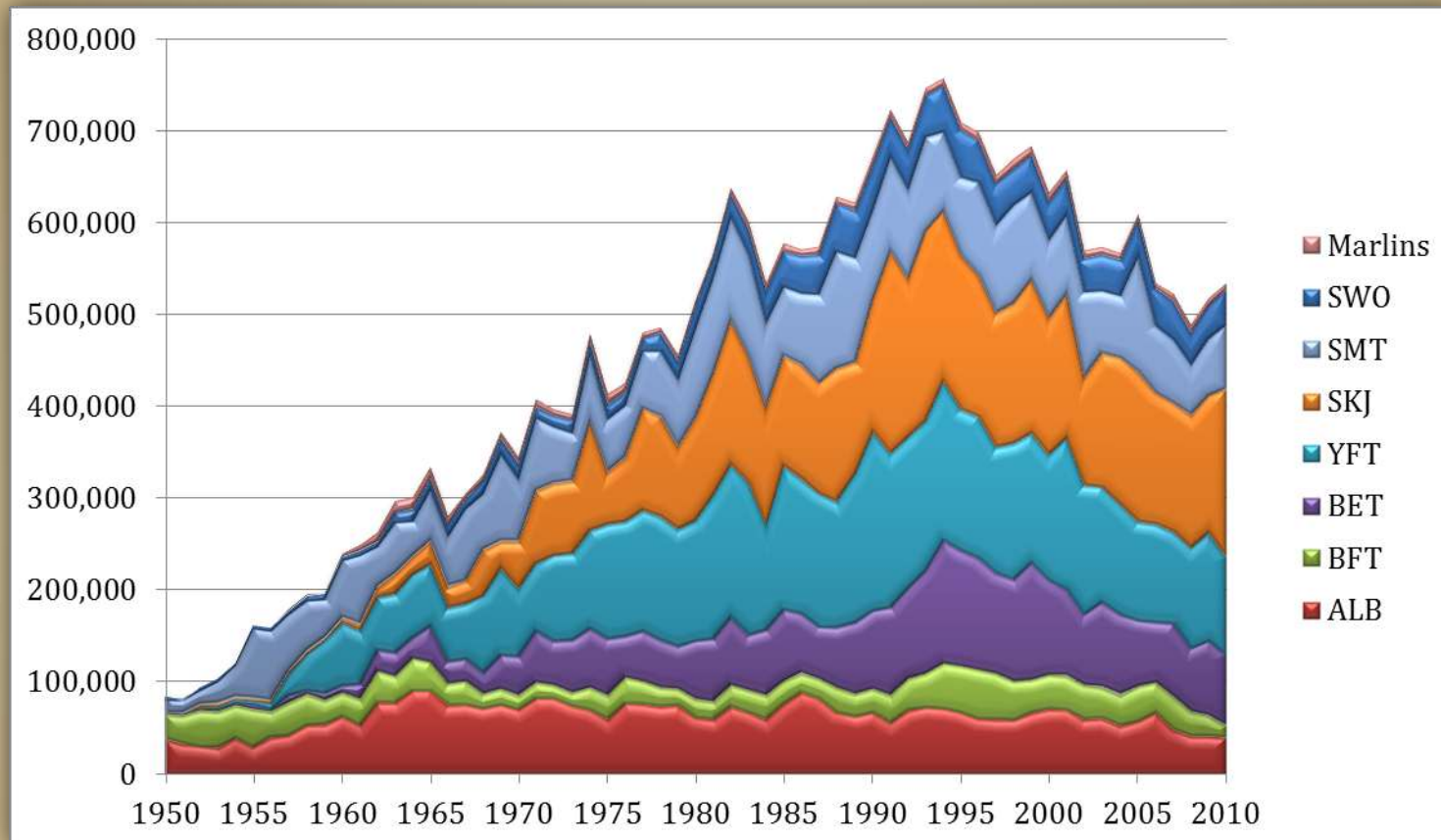
- Background
- Summary of the main activities
(including references to inter-seasonal meetings)
- General Recommendations⁽¹⁾
- Responses to COM Requests

⁽¹⁾Species-specific Recommendations & Responses will be presented during the appropriate Panel Meeting

SCRS participants

Abid, Noureddine Addis, Pierantonio Anderson, Orea Ara, Takahiro Ariz Tellería, Javier Arocha, Freddy Arrizabalaga, Haritz Baena Jiménez, Eva Bannerman, Paul Beléndez Moreno, Luis Francisco J. Belmonte Ríos, Antonio Brown, Craig A. Campoy, Rebecca Carroceda Carballal, Arancha Cass-Calay, Shannon Ceyhan, Tevfik Chang, Feng-Chen Chavance, Pierre Cooke, Justin G. Cort, José Luis Cortés, Enric Cosgrove, Ronan De Andrés, Marisa De Bruyn, Paul De la Serna Ernst, José Miguel Deguara, Simeon Delgado de Molina Acevedo, Alicia Di Natale, Antonio Díaz, Guillermo Die, David Domingo, Andrés Duarte, Rafael El Ktiri, Taoufik Elices López, Juan Manuel Faillace, Linda Faraj, Abdelmalek Farrugio, Henri Fernández Costa, Jose Ramón Fiz, Jesús Fonteneau, Alain Fraile, Igratza Franicevic, Vlasta Frédou, Thierry Fromentin, Jean Marc Gaertner, Daniel Galaz Ugalde, Txema Gallego Sanz, Juan Luis García Piña, Cristóbal García Rodríguez, Felicidad García-Orad, María José Garibaldi, Fulvio Gatt, Mark Giménez, Carlos Goñi, Nicolas Goujon, Michel Hanke, Alex Hazin, Fabio H. V. Herrero, Patricia Hoolihan, John Hsu, Chien-Chung Huang, Julia Hsiang-Wen Idrissi, M'Hamed Inoue, Yukiko Itoh, Tomoyuki Jeelof-Wuhrmann, Jolyn Jiménez, Sebastian Johnston, Graham Katavic, Ivan Katselis, Georgios Keatinge, Michael Kell, Laurence Kimoto, Ai Lastra, Patricia Lee, Shu-Min Leite Mourato, Bruno Li, Yunkai Linaae, Cristina Losada Figueiras, Sebastián Macías, Ángel David Mangalo, Caroline Marques da Silva Monteiro, Vanda Martínez Cañabate, David Ángel Mèlich Bonancia, Begonya Meski, Driss Meunier, Isabelle Miller, Shana Minami, Hiroshi Miyake, Makoto P. Monteagudo, Juan Pedro Moon, Dae-Yeon Moreno, Juan Ángel Moreno, Juan Antonio Morgan, Alexia Muniategi, Anertz Murua, Hilario Nakano, Hideki Navarro Cid, Juan José Ndaw, Sidi Neilson, John D. Nesterov, Alexander Neves dos Santos, Miguel Ngom Sow, Fambaye Nottestad, Leif Okamoto, Hiroaki Ortiz de Urbina, Jose María Ortiz de Zárate Vidal, Victoria Ortiz, Mauricio Pallarés, Pilar Palma, Carlos Parmentier, Rémi Peña, Esther Pereira, Joao Gil Peristeraki, Panagiota Peyre, Christine Pianet, Renaud Pinet, Dorothee Porch, Clarence E. Prince, Eric D. Ramfos, Alexis Ramírez López, Karina Recabarren, Pablo Restrepo, Victor Rodríguez-Marín, Enrique Rodríguez-Sahagún González, Juan Pablo Saber Rodríguez, Samar Santiago Burrutxaga, Josu Satoh, Keisuke Schirripa, Michael Scott, Gerald P. Secor, David Seidita, Philomena Serra, Simone Small, Cleo Song, Liming Srouer, Abdellah Sylla, Soumaila Tangen, Oyvind Telesca, Jennifer Elisabeth Tinti, Fausto Travassos, Paul Tserpes, George Tudela Casanovas, Sergi Tzoumas, Apostolos Vladimirov, Savvas Wolfaardt, Anton Wu, Ren-Fen Yokawa, Kotaro Zhang, Xinfeng

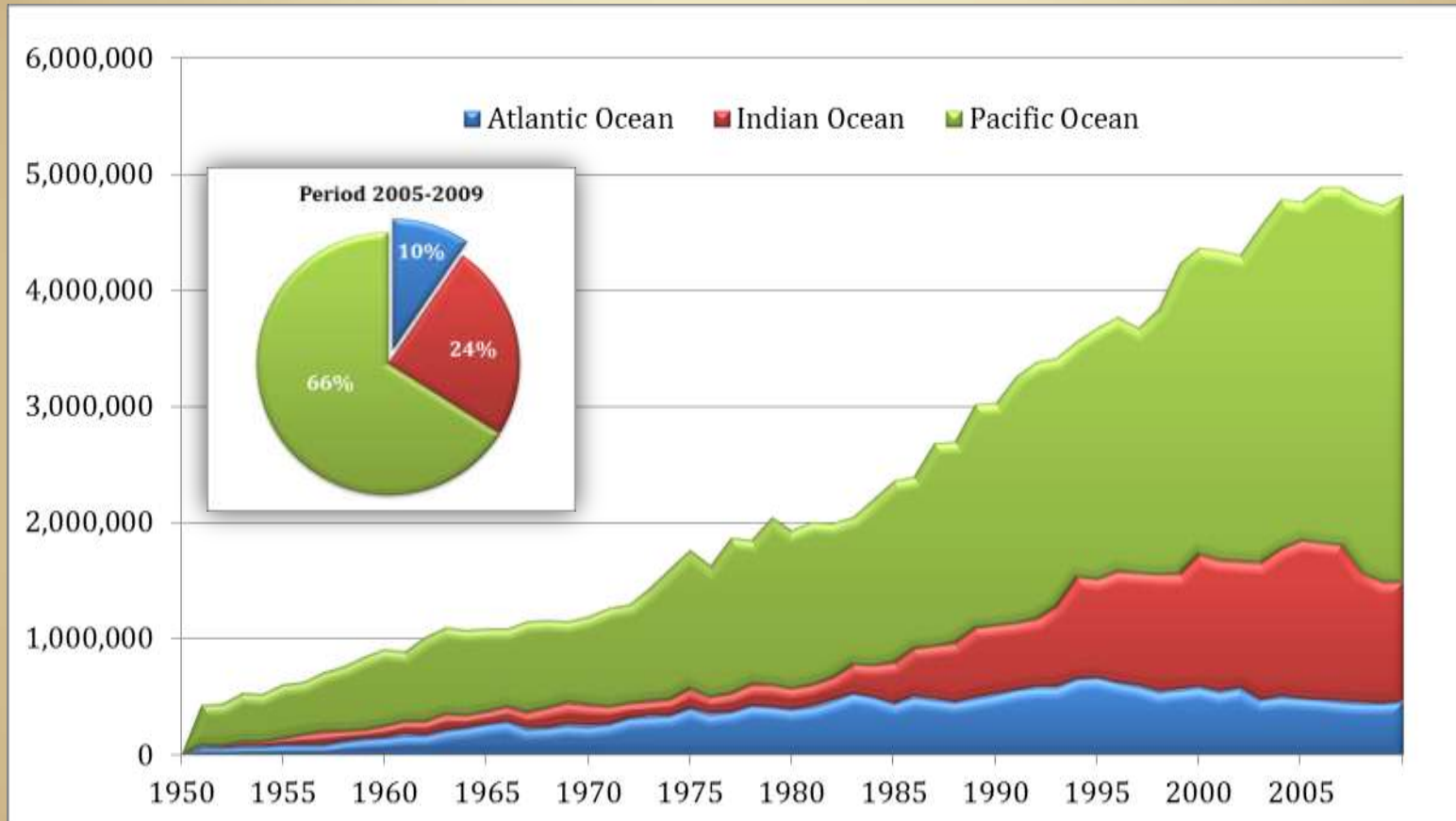
Reported catches in the ICCAT Convention Area



Overall, reported catches in the ICCAT Convention Area peaked in the 1990s and have generally been in decline over the past decade, although 2009 may have started to reverse this trend

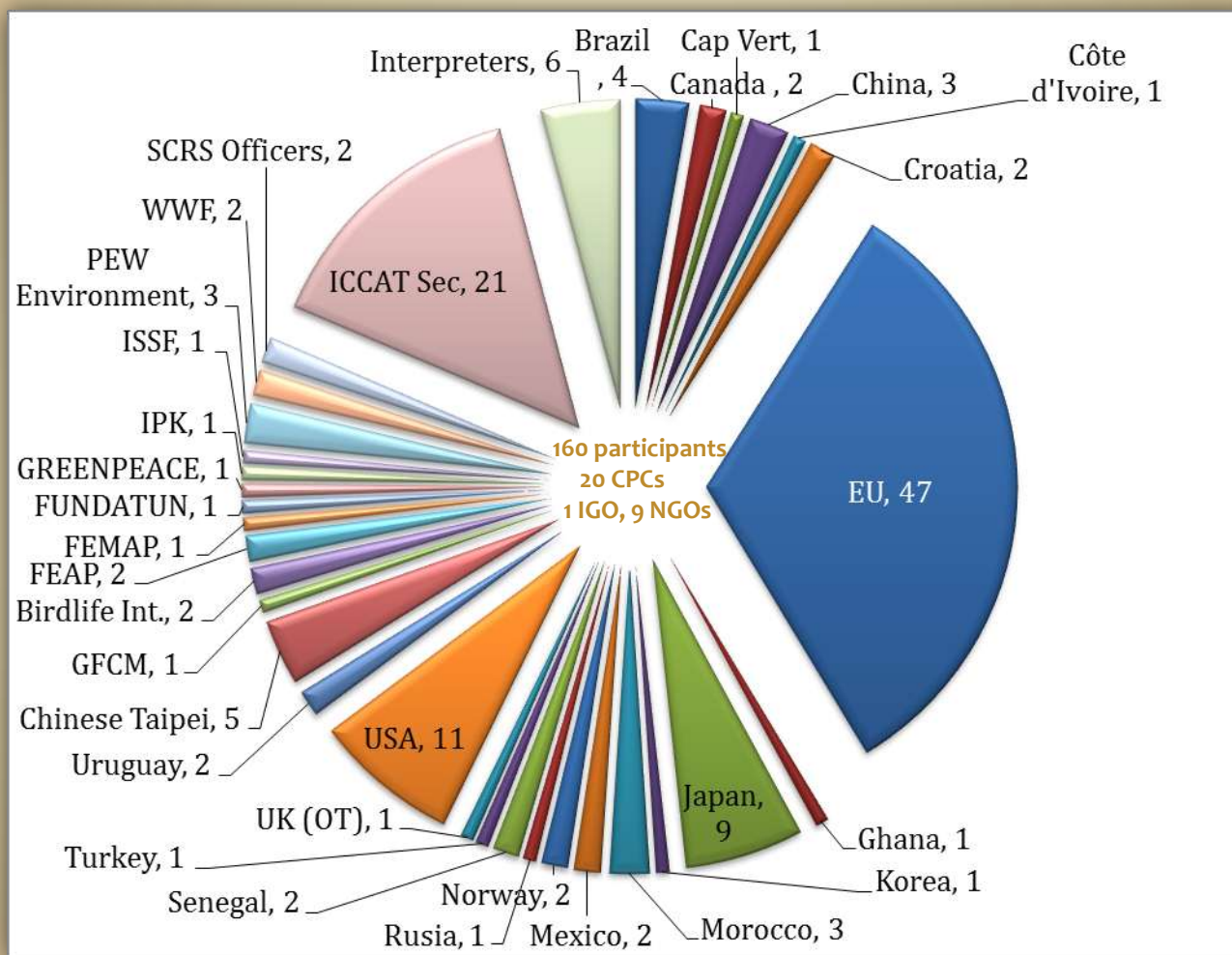
Reported catches in the different oceans

4.8 million t in 2009



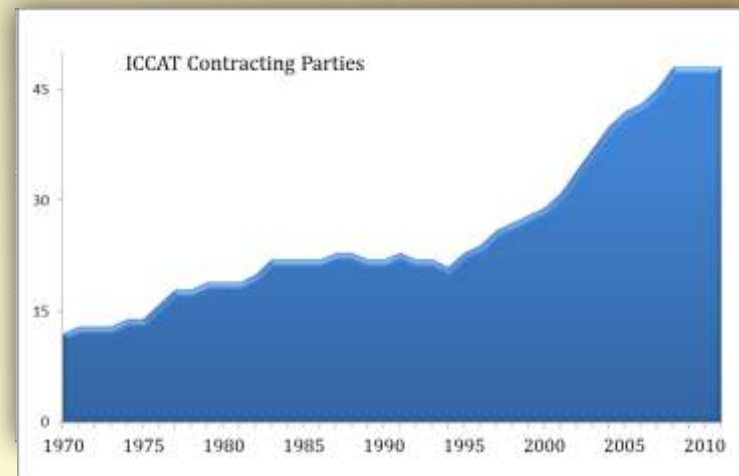
Atlantic & Mediterranean Tuna and Billfish Production had been in decline over the past 15 years; in the Indian Ocean there has been a recent decline (piracy); in the Pacific catches continue increasing.

2011 SCRS participation



2011 SCRS participation

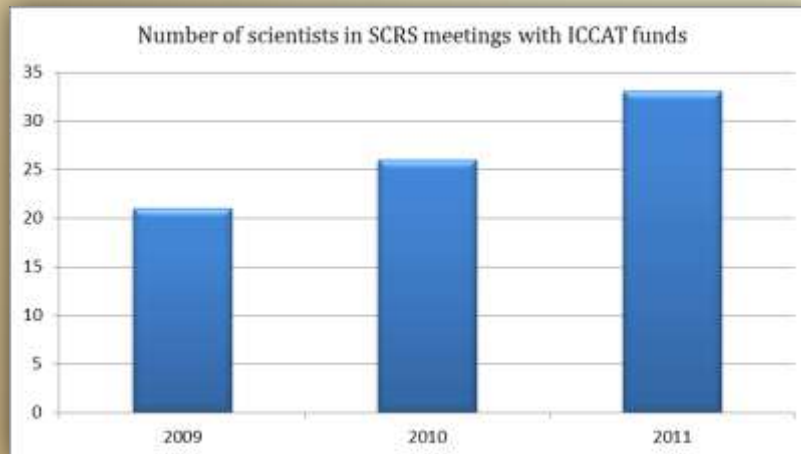
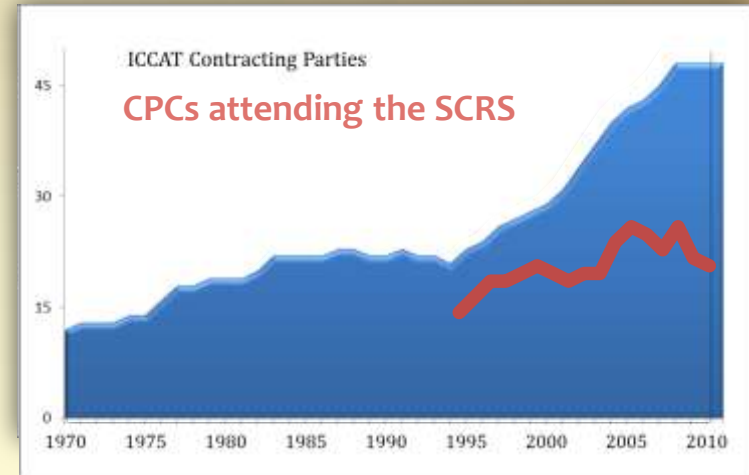
X		UNITED STATES	X		TUNISIE
X		JAPAN			PANAMA
		SOUTH AFRICA			TRINIDAD & TOBAGO
X		GHANA			NAMIBIA
X		CANADA			BARBADOS
		FRANCE (St-Pierre et Miquelon)			HONDURAS
X		BRASIL			ALGÉRIE
X		MAROC	X		MEXICO
X		KOREA, Rep. of			VANUATU
X		CÔTE D'IVOIRE			ICELAND
		ANGOLA	X		TURKEY
X		RUSSIA			PHILIPPINES
		GABON	X		NORWAY
X		CAP-VERT			NICARAGUA
X		URUGUAY			GUATEMALA
		SÃO TOMÉ E PRINCIPE	X		SENEGAL
		VENEZUELA			BELIZE
		GUINEA ECUATORIAL			SYRIA
		GUINÉE REP			St VINCENT & THE GRENADINES
X		UNITED KINGDOM (O. territories)			NIGERIA
		LIBYA			EGYPT
X		CHINA, People's Rep. of			ALBANIA
X		CROATIA			SIERRA LEONE
X		EUROPEAN UNION			MAURITANIA



Only **42% of the 48 CPs** were represented at the 2011 SCRS and Species Groups discussions where Scientific & Fishery Management Advice is developed.

2011 SCRS participation

- Participation, although lower than in recent years, would have been even lower if not for **extra-budgetary funds** contributed to assist scientists of Contracting Parties to join in the work of the Committee. Continued contributions are encouraged.
- During 2011, participation of 33 scientists, a 27% increase over 2010, was supported with ICCAT funds provided by several CPCs.



The SCRS has adopted this year a **Protocol for the use of data funds & other ICCAT Funds** (Addendum 2 to Appendix 7, SCRS report)

2011 SCRS activities

Date	SCRS – 2011 Meetings	Location	
Feb 7-11	Workshop on the use of R tools in the data preparatory work ICCAT-SCRS	Madrid, CE-Spain	PLE-105
Feb 14-18	GBYP working group on the aerial surveys analysis, conventional tagging and biological sampling	Madrid, CE-Spain	P2
Mar 2-4	Working Group on the Organization of the SCRS	Madrid, CE-Spain	
Apr 25-29	Blue marlin stock assessment session and white marlin data preparatory meeting	Madrid, CE-Spain	P4
May 9-13	Intersessional meeting of the Subcommittee on Ecosystems	Miami, USA	
May 23-25	Symposium on Trap Fishery for Bluefin Tuna	Tangier, Morocco	P2
May-30 Jun 3	Tropical tuna species group intersessional meeting on the Ghanaian statistics analysis (Phase II)	Madrid, CE-Spain	P1
Jun 20-24	Sharks data preparatory meeting to apply Ecological Risk Analysis	Madrid, CE-Spain	P4
Jun 27- Jul 1	Joint Meeting of the ICCAT WG on Stock Assessment Methods and theBFT species group to analyze assessment methods developed under the GBYP and electronic tagging	Madrid, CE-Spain	P2
Jul 25-29	South Atlantic albacore and Mediterranean albacore assessment sessions	Madrid, CE-Spain	P2
Sep 5-12	Yellowfin stock assessment session	Donostia, CE-Spain	P1
Sep 26-Oct 1	SCRS Species Groups meetings	Madrid, CE-Spain	
Oct 3-7	Meeting of the Standing Committee on Research and statistics	Madrid, CE-Spain	
Other Meetings			
May 16-20	Second Meeting of the Working Group on the Future of ICCAT	Madrid, CE-Spain	PLE-106
Jul 11-15	Third Joint Meeting of the Tuna RFMOs	La Jolla, USA	

Meeting Reports Available at: www.iccat.int

ICCAT Stock Status Report card

					2009		2010		2011	
Species	Stock	Last SA	Next SA		Most likely	Possibly	Most likely	Possibly	Most likely	Possibly
BFT	E	2010	2012							
BFT	W	2010	2012							
BUM		2006	2011							
SWO	M	2010								
SAI	E	2009								
Seabirds		2009								
POB	NE	2009								
NSMA		2008								
WHM		2006	2012							
SAI	W	2009								
POB	SW	2009								
ALB	N	2009								
POB	NW	2009								
YFT		2008	2011							
BET		2010								
SWO	N	2009	2013							
ALB	S	2007	2011							
SWO	SW	2009	2013							
BSH	N&S	2008								
SKJ	W	2008								
SKJ	E	2008								
ALB	M	-	2011							
Other sharks		2008								
POB	SE	2009								

Meeting Reports Available at: www.iccat.int



Working Group on the Organization of the SCRS

6 discussion topics

- Recommendations from SCRS/Commission to implement **PA models, MSE protocols** and incorporation of **EBFM approach**
- Review of the **Secretariat role/participation in scientific support to the SCRS** activities and current **human resources** at the Secretariat.
- Participation of **CPC scientists** at SCRS
- Review of the **data confidentiality policy** and implications for the Secretariat and SCRS
- Review and adoption of **standard formats** for SCRS reports
- Collaboration with **other tRFMOs**

Precautionary approach (SCRS advice)

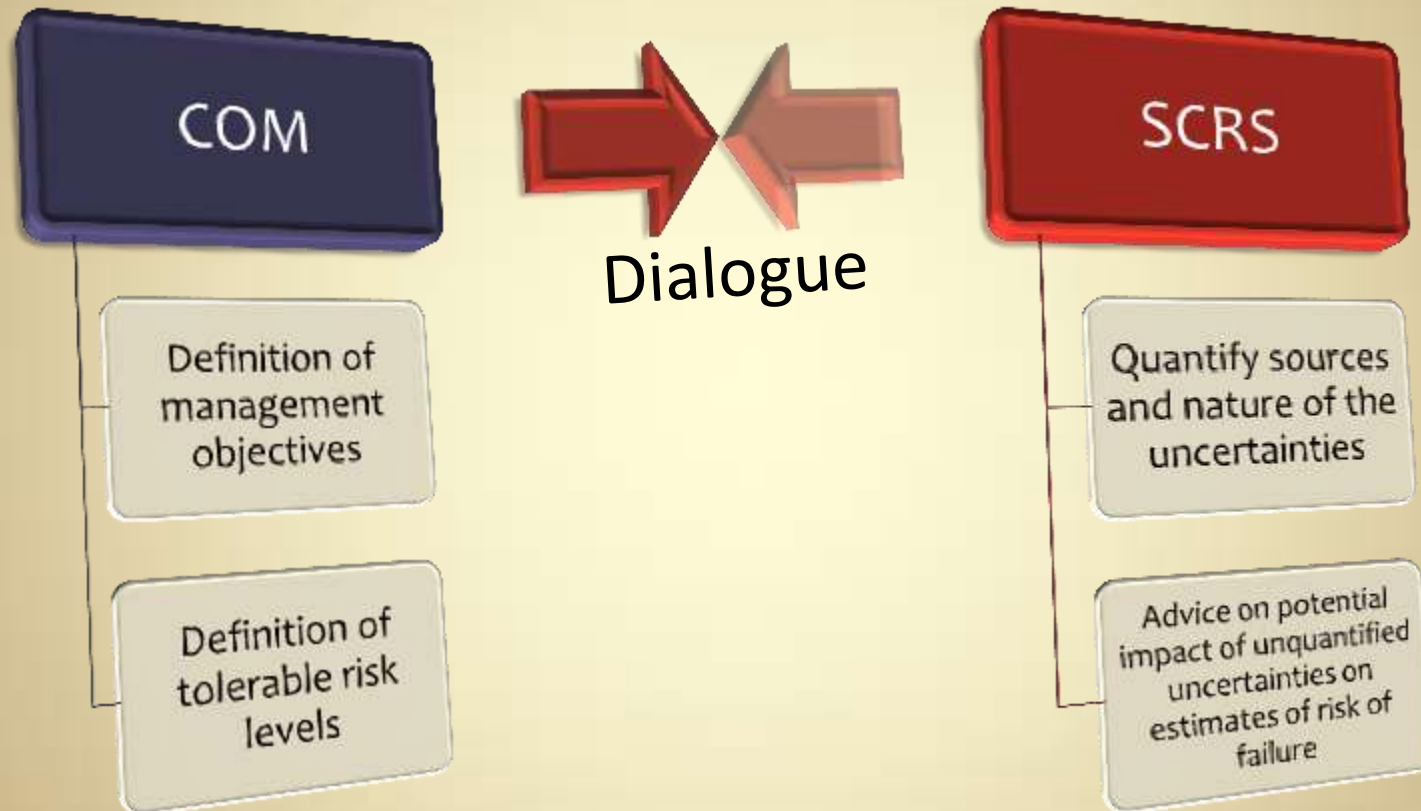
- The Commission has asked for stock assessment advice to be provided in a manner which provides a framework for informing on **risks of failure** to achieve its objectives under different management alternatives.

Kobe II strategy matrix

	2011	2012	2013	2014	2015	2016	2017	2018	2019
1000 mt	7.0%	12.9%	38.7%	60.0%	44.3%	50.6%	58.0%	81.1%	95.3%
1100 mt	1.8%	30.7%	32.3%	32.7%	43.6%	48.5%	56.9%	78.8%	93.7%
1200 mt	1.8%	28.1%	33.8%	33.8%	40.4%	46.9%	54.8%	74.6%	90.8%
1300 mt	1.7%	26.3%	30.9%	33.1%	38.9%	44.5%	51.7%	70.9%	88.9%
1400 mt	1.7%	25.4%	30.9%	33.1%	38.9%	44.5%	51.7%	70.9%	88.9%
1500 mt	1.7%	25.4%	30.9%	33.1%	38.9%	44.5%	51.7%	70.9%	88.9%
1600 mt	1.6%	22.1%	28.5%	29.7%	34.9%	39.6%	46.8%	67.4%	85.9%
1700 mt	1.6%	22.1%	28.5%	29.7%	34.9%	39.6%	46.8%	67.4%	85.9%
1800 mt	1.6%	22.1%	28.5%	29.7%	34.9%	39.6%	46.8%	67.4%	85.9%
1900 mt	1.4%	20.2%	26.1%	27.7%	31.1%	35.0%	42.8%	62.5%	81.2%
2000 mt	1.4%	18.1%	23.8%	25.3%	28.6%	32.0%	39.6%	55.9%	74.7%
2100 mt	0.8%	7.7%	17.3%	17.6%	24.9%	29.6%	35.9%	48.8%	64.0%
2200 mt	0.2%	2.6%	7.7%	8.7%	17.4%	24.3%	30.9%	42.8%	55.4%
2300 mt	0.0%	0.3%	2.0%	3.0%	9.1%	19.2%	25.8%	35.9%	44.0%
2400 mt	0.0%	0.3%	0.0%	0.0%	2.6%	9.4%	21.8%	28.0%	38.2%
2500 mt	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	10.3%	28.0%	38.2%
2600 mt	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	8.7%	17.0%	26.2%
2700 mt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	12.1%	18.2%
2800 mt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	5.7%	9.7%
2900 mt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

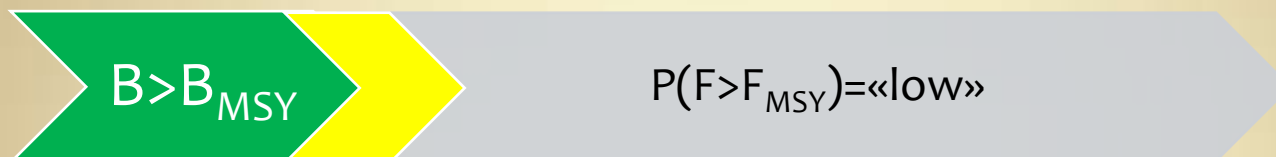
Taking risk of failure into account in setting management measures can lead to **evolving a PA to management** since a critical component of the PA is to adopt measures that account for uncertainties in stock status evaluations and forecasts.

Precautionary approach (SCRS advice)

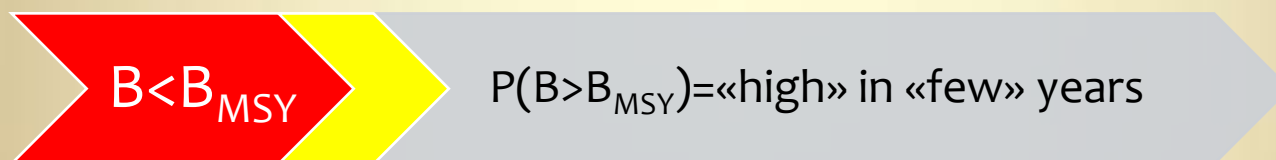


Precautionary approach (SCRS advice)

- stocks for which status is **consistent** with the Convention objective

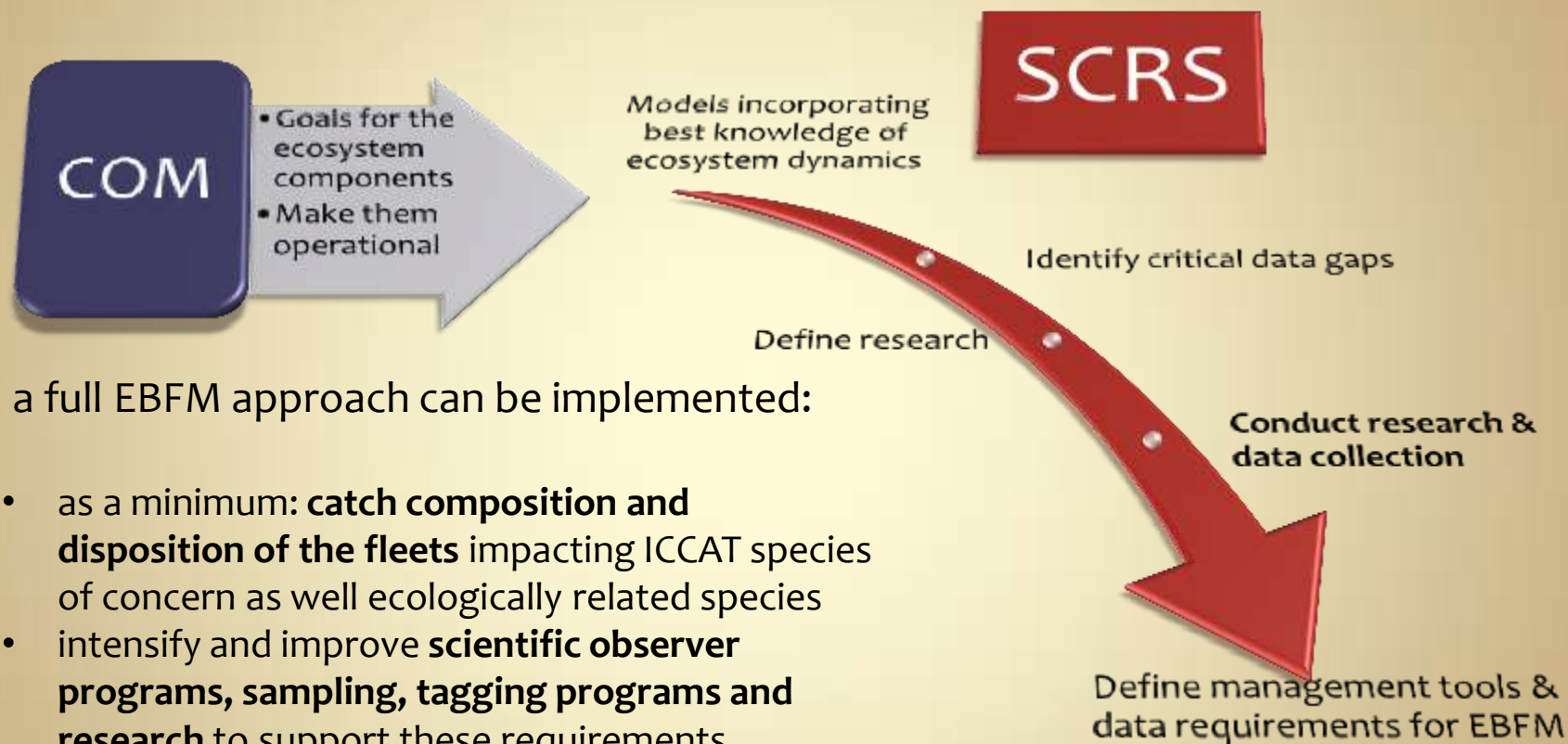


- stocks for which status is **not consistent** with the Convention objective



- Application of **MSE** for evaluating the efficacy of management options
- MSE be in line with following the FAO Technical Consultation on the Precautionary Approach to Capture Fisheries (FAO 1996):
 - the use of decision (or harvest control) rules as one of the elements of the PA to fishery management

EBFM including Bycatch data (SCRS advice)



Until a full EBFM approach can be implemented:

- as a minimum: **catch composition and disposition of the fleets** impacting ICCAT species of concern as well ecologically related species
- intensify and improve **scientific observer programs, sampling, tagging programs and research** to support these requirements.
- implementing **precautionary management** as a Best Practice to address, to the degree possible, unaccounted ecosystem concerns

EBFM including Bycatch data (recent SCRS activities)

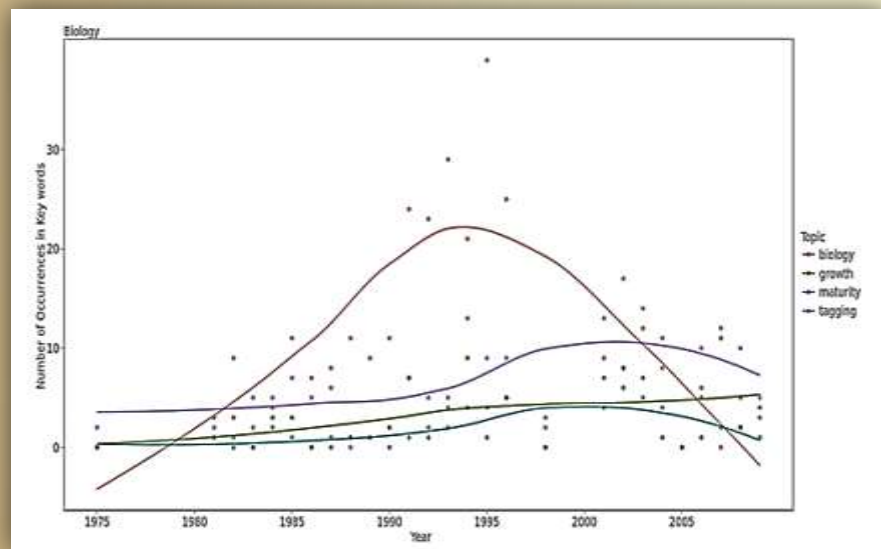
- **Sub-Committee on Ecosystems** has coordinated the SCRS work on these activities (2005: merging the subcommittees on bycatch and environment).
- Major priority: fisheries **impacts on bycatch** species and methods to **mitigate** those impacts.
- Recently, preliminary work on applications of **ecosystem models** to support identification of data gaps and development of scientific advice on EBFM.
- Organizational structuring within the SCRS

SCRS necessities to address PA & EBFM

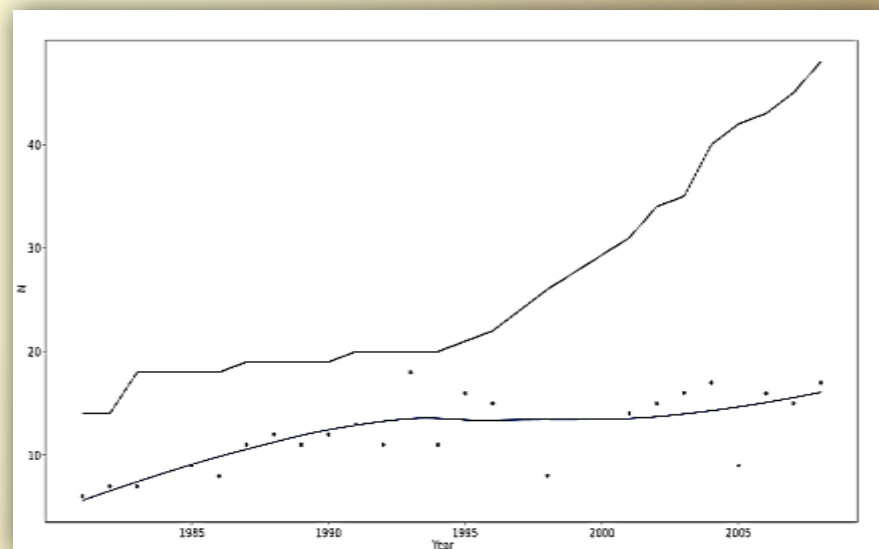
- **Increases in scientific support** for these applications are needed both at the **National Scientific level** and at the **Secretariat**.
- **Additional scientific analytical and database support** is needed by the **Secretariat** to meet the growing requirements of the SCRS in utilizing contemporary statistical modeling approaches for stock assessment and for formulating management advice.
- Fill the **By-catch Coordinator** position

SCRS necessities to address PA & EBFM

Increases in scientific support is needed at the National Scientific level



Number of SCRS papers by year on biological studies to support stock assessment



SCRS papers (dots with lowest smoother) and Contracting Parties (line) by year.

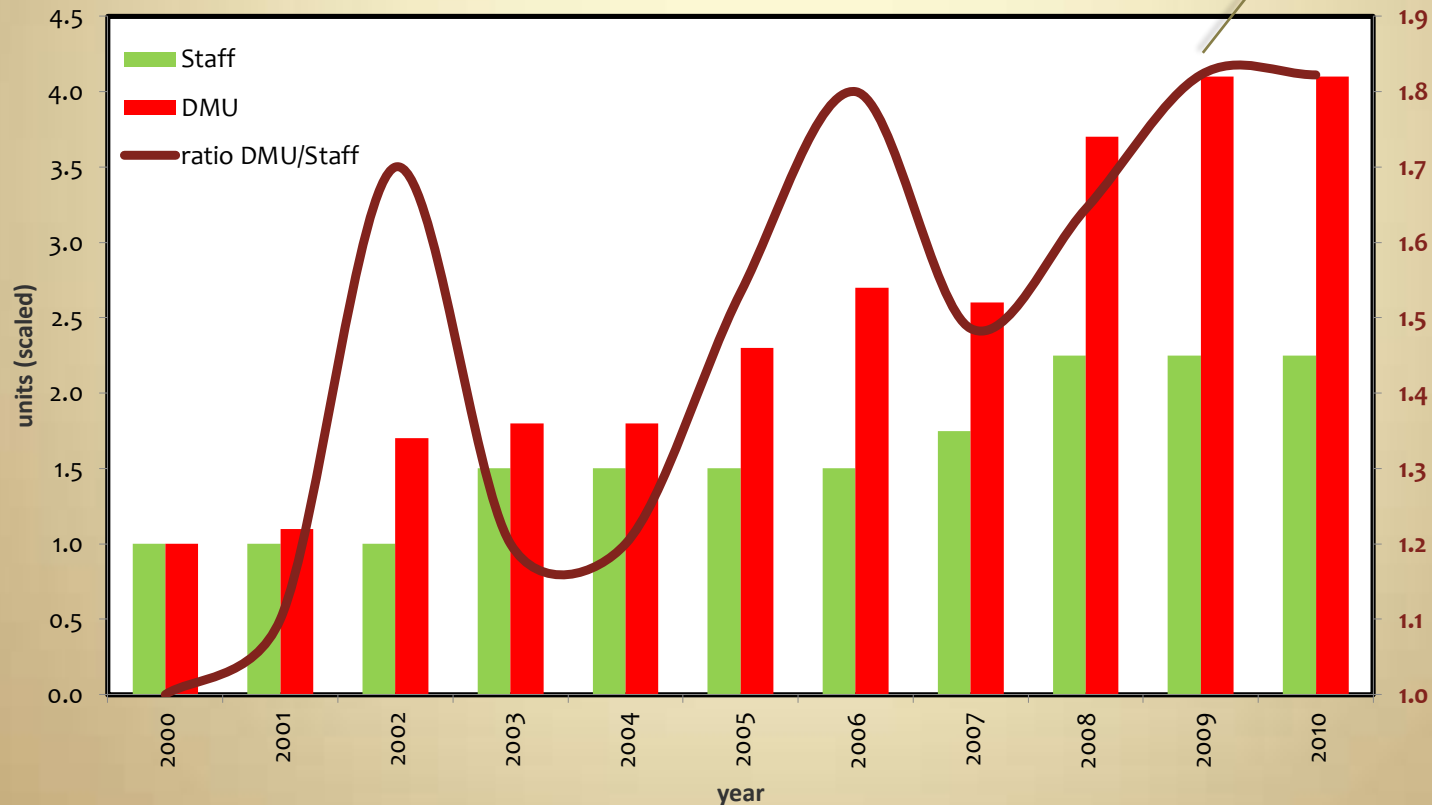
SCRS necessities to address PA & EBFM

Additional scientific analytical and database support is needed by the Secretariat

Staff vs workload

RAW view of DMU's vs Staff (CP+ST) over time

Concern that current staffing levels are not sufficient to address current and anticipated future demands



Recommendations

◊ **Secretariat support for SCRS**

- ◊ Increased scientific analytical support for the conduct of contemporary statistical stock assessment methods
- ◊ By-catch Coordinator position
- ◊ Additions to data management staff at the Secretariat
- ◊ Compliance information in electronic format.

◊ **R&D investments**

- ◊ Coordinated and well-funded research programs designed to improve knowledge of life history should be considered critical.

◊ **Participation of CPC national scientists and capacity building**

◊ **Quality assurance and transparency**

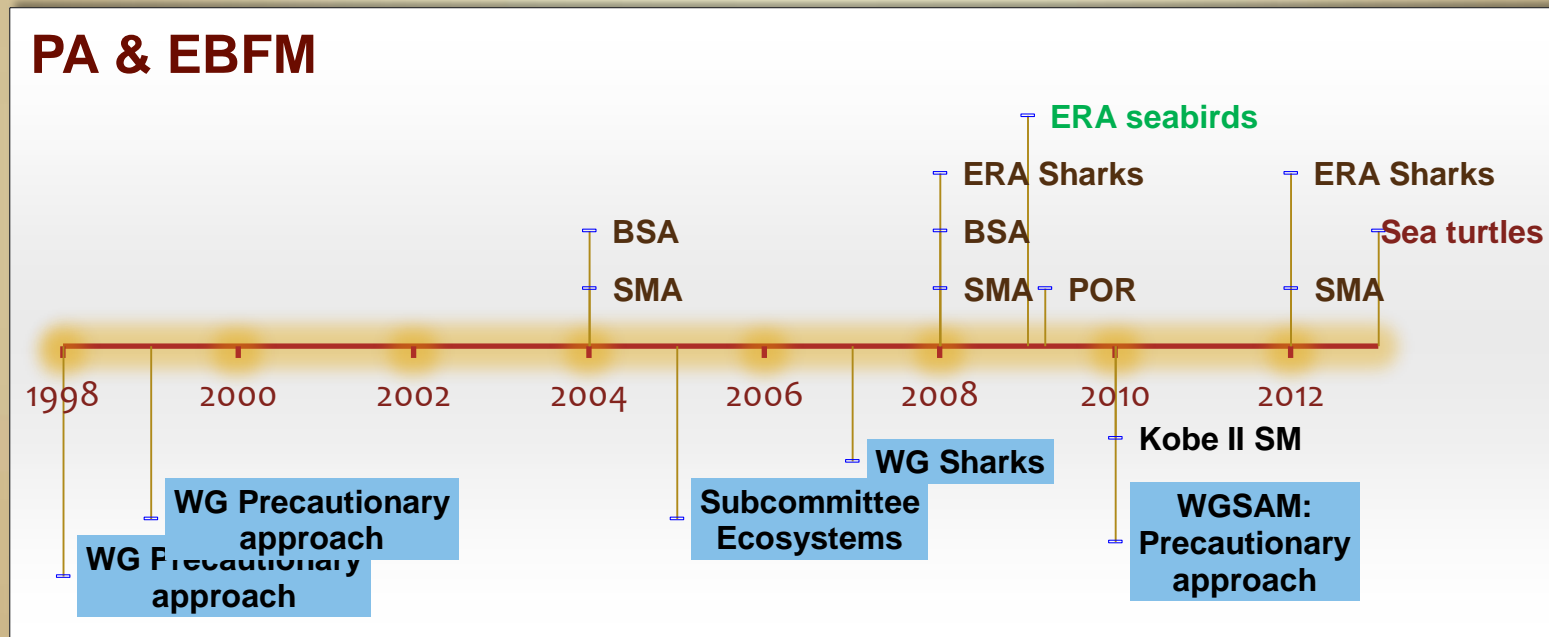
- ◊ Checklist for stock assessment documentation
- ◊ Collaboration between tRFMOs scientific committees should be further enhanced and external participatory peer review implemented as best practice.



Second Meeting of the Working Group on the Future of ICCAT

Precautionary approach (PA) and Ecosystem Based Fishery Management (EBFM)

- The Working Group agreed that both of these approaches were **fundamental to ICCAT's objectives** and noted that ICCAT had already taken a **number of steps** to implement both the precautionary approach and ecosystem approach even though these terms are not contained within the Convention.

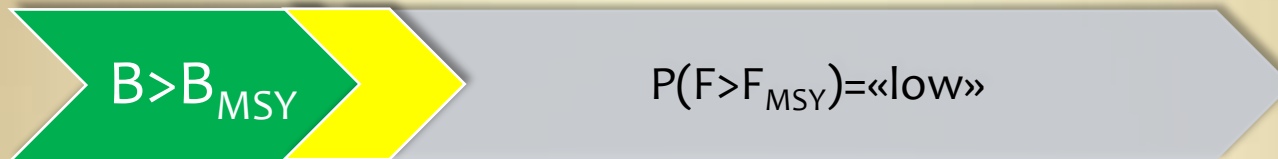


- Some CPCs raised a particular **concern** that the Convention objective itself was inconsistent with the precautionary approach.

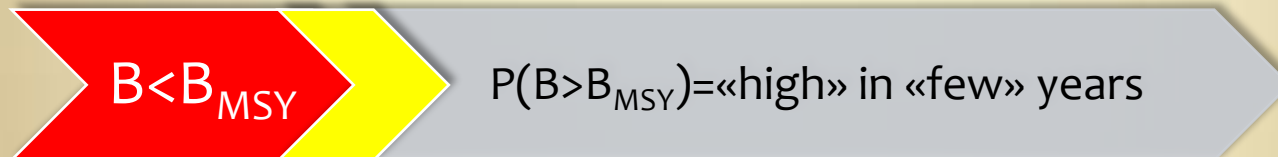
Principles of decision making for conservation and management measures and their application

SCRS advice:

- stocks for which status is consistent with the Convention objective



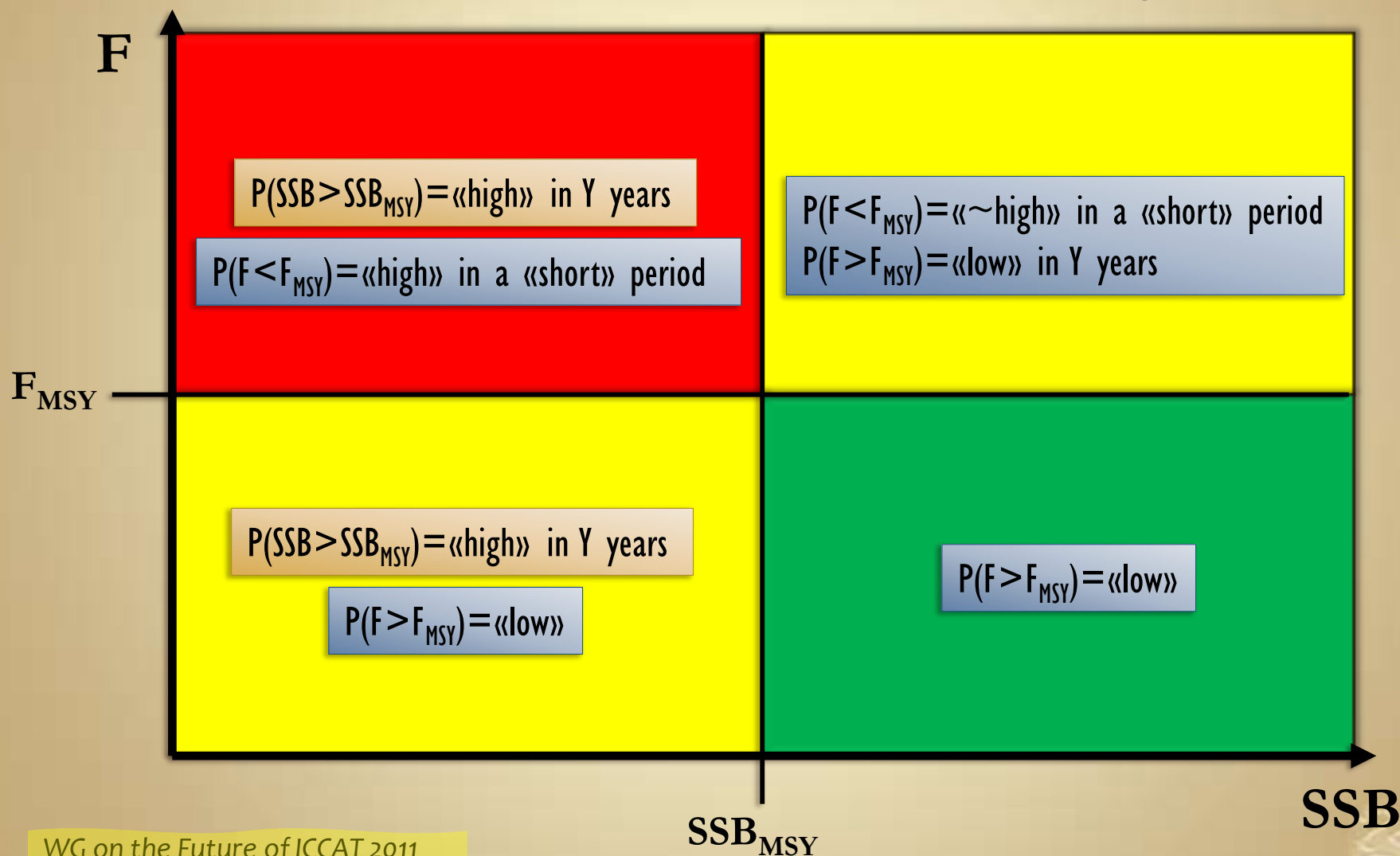
- stocks for which status is not consistent with the Convention objective



The Working Group considered a draft recommendation on the principles of decision-making for ICCAT conservation and management measures (Appendix 6).

Principles of decision making for conservation and management measures and their application

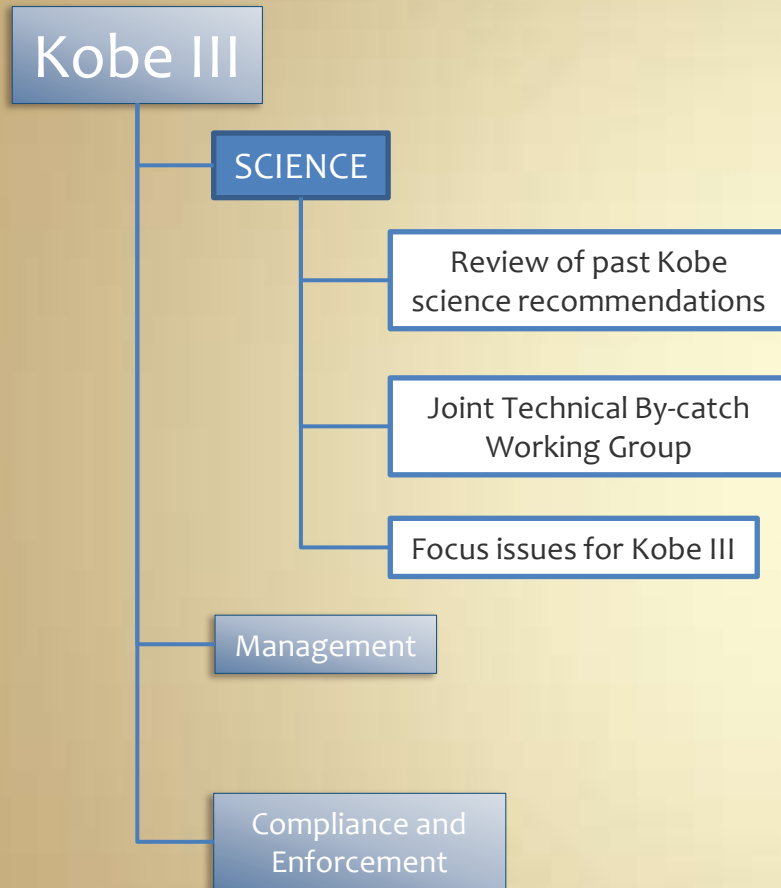
Draft Working Document



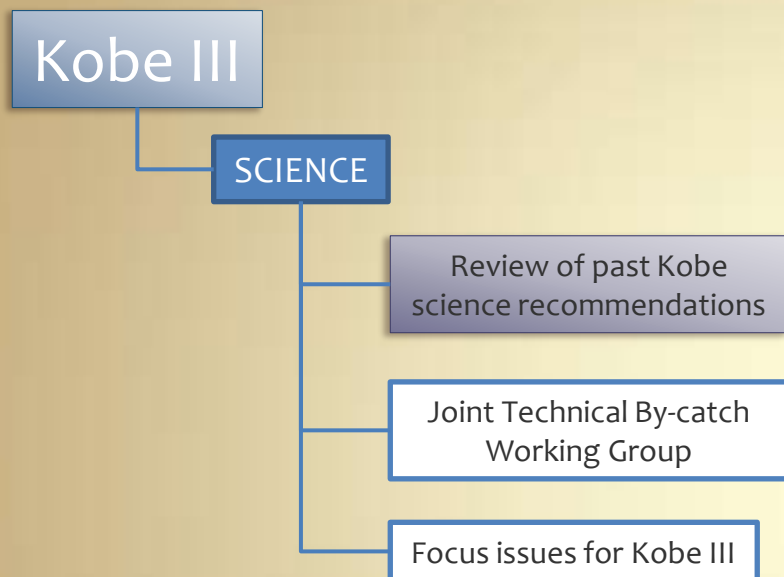


Third Joint Meeting of the Tuna RFMOs

Third Joint Meeting of the Tuna RFMOs

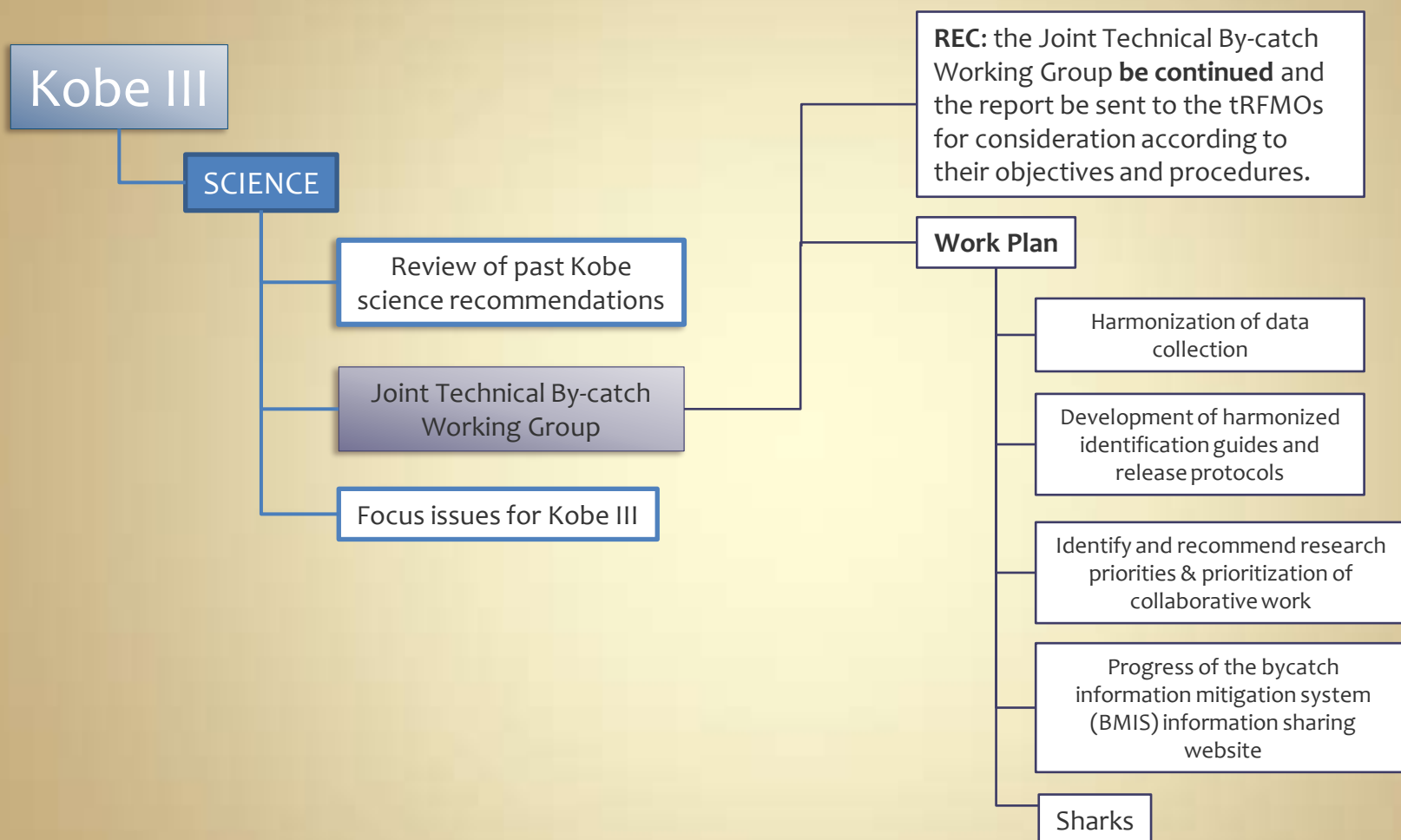


Third Joint Meeting of the Tuna RFMOs



- Science-related recommendations from the 2009 Kobe II and 2010 Kobe II workshops.
- The recommendations cover the areas of data sharing and provision of scientific advice, data reporting, and data gathering and analysis.
- Almost all these items have now been considered and adopted where appropriate by most tRFMOs.

Third Joint Meeting of the Tuna RFMOs



Third Joint Meeting of the Tuna RFMOs

The SCRS discussed the outcomes of the first meeting of the Joint Bycatch TWG.

In relation to the **recommendations on data collection and harmonization**:

- The SCRS agreed that there should be **minimum bycatch data standards**, with data fields that are collected across all RFMOs, with a view to allowing interoperability.
- However any proposal to share data between the tuna commissions, or to establish a joint database, would need to address the issue of **confidentiality**, and that further consideration would be necessary before this could occur.
- In relation to the Joint Technical WG's aim to produce a report on minimum data standards, the SCRS welcomed this and hoped that this report would be available for **review at the SC-ECO meeting in 2012**.

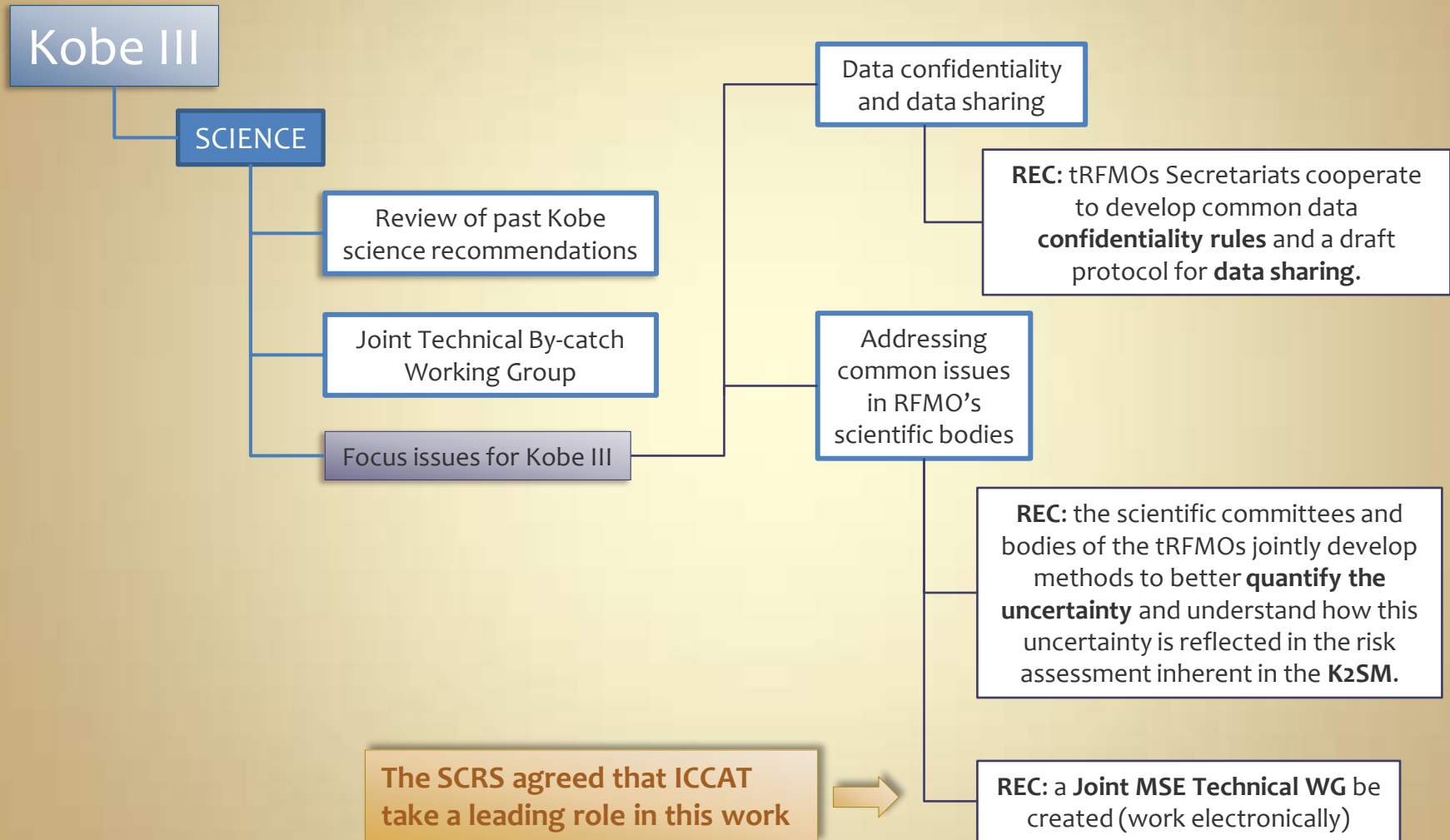
Third Joint Meeting of the Tuna RFMOs

The SCRS discussed the outcomes of the first meeting of the Joint Bycatch TWG.

In relation to the **research priorities identified by the JBTWG:**

- The SCRS emphasized the need for a program of **capacity building** with CPCs to implement observer programs.
- Data are collected to **review existing ICCAT observer programs**. This is an activity being undertaken by SC-STAT.
- **Research with the highest priority to SCRS:**
 - Design of sampling programs appropriately scaled to resources available.
 - Life history, population status and spatial distribution of bycatch species.
 - Methodologies for impact assessment of fisheries on bycatch species and possible reference points
 - Use of remote monitoring technologies to collect bycatch data

Third Joint Meeting of the Tuna RFMOs



Third Joint Meeting of the Tuna RFMOs

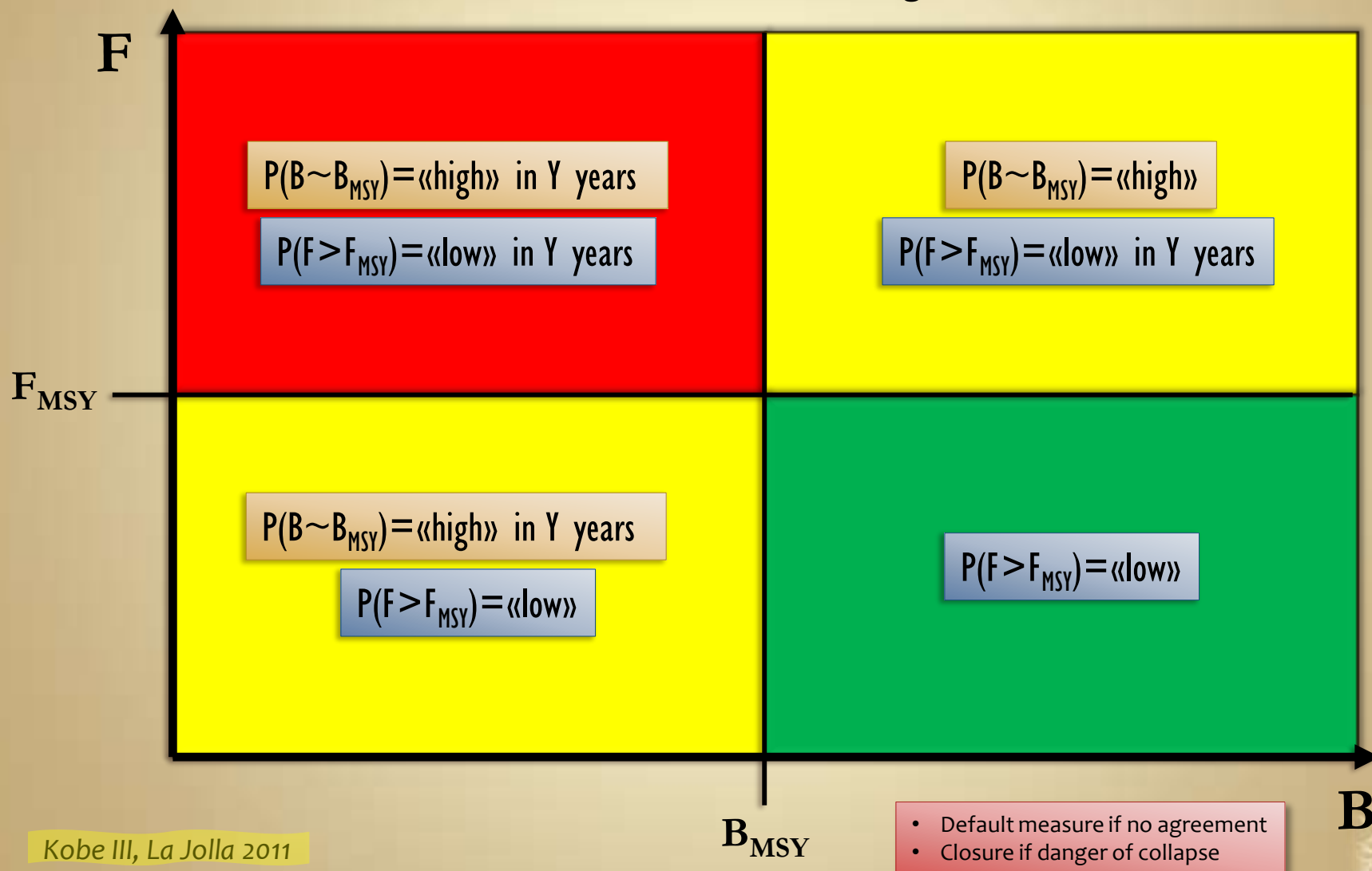
- Kobe III participants agreed that the **K2SM is a useful tool** for evaluating management strategies or options, provided that the uncertainties in assessments can be adequately quantified.
- Considerable work remains to be done both to **reduce uncertainty** in stock assessments, and to develop common standards or guidelines for **how uncertainty is reflected**.
- The definition of science-based **limit reference points** and **target reference points** linked to management objectives are important elements underpinning the K2SM.
- Decisions on these issues by tRFMOs could improve the Commissions' capacity for implementing precautionary management measures.

Addressing
common issues
in RFMO's
scientific bodies

REC: the scientific committees and bodies of the tRFMOs jointly develop methods to better **quantify the uncertainty** and understand how this uncertainty is reflected in the risk assessment inherent in the **K2SM**.

Principles of decision making for conservation and management measures and their application

Background document K3-008





WG Stock Assessment Methods 2011

2011 ICCAT Working Group on stock assessment methods and bluefin tuna species group to analyze assessment methods developed under the GBYP and electronic tagging

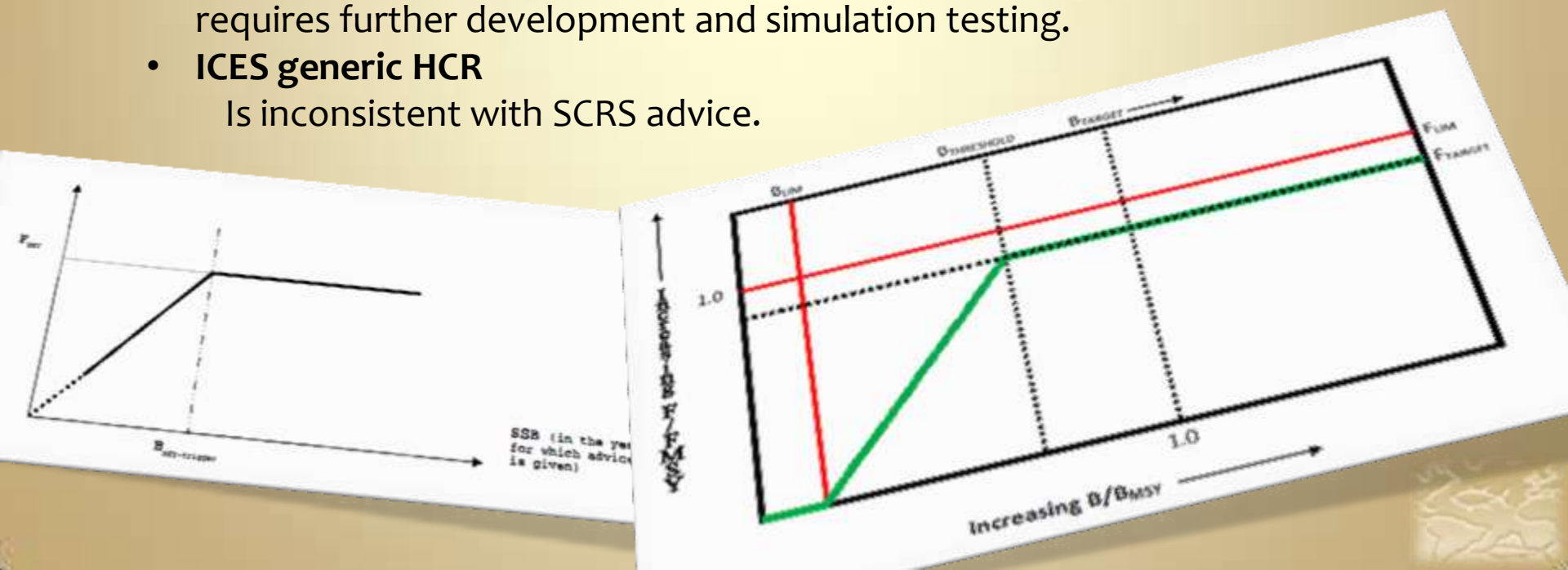
“WGSAMBFTSGAAMDGBYPET”

Objectives

- Review of current development of stock assessment methods (GBYP)
- Meta-analysis for investigation of key parameters such as steepness, virgin biomass or K , r and M
- **Limit, threshold and target reference points** as part of **HCRs** to manage risk

Harvest Control Rules

- HCR recommended **by WGSAM 2010**
- **Risk depletion HCR** – TAC that results from an X% probability of further stock decline where the probability is chosen to be extremely low – requires further development and simulation testing.
- **ICES generic HCR**
Is inconsistent with SCRS advice.



Recommendations

- Pursue **Robin Hood approaches** and continue pursuing meta-analyses.
- **Simulated HCRs** should be based on the advice provided by the **2010 Working Group Stock Assessment Methods** and Appendix 6 of the **2011 Future of ICCAT** meeting report unless shown otherwise.
- **Alternative harvest control rules** should be developed and evaluated, although it thought that these will supplement rather than replace more comprehensive analytical harvest control rules.



Recommendations

- **Management Strategy Evaluation:**
 - should be a **participative** approach involving all stakeholders, from scientists to managers, the industry and the fishing communities.
 - should be developed for ICCAT tuna fisheries and it is recommended that **MSE be actively pursued to develop robust management practices** which can achieve the Convention Objectives within time frames and tolerable risks that the Commission decides appropriate.
 - As part of this process, it is necessary to work toward a full **characterization of scientific uncertainty** in stock status to improve estimates of risk.





General recommendations

- Recommendations that are of a general nature and may carry substantial financial implications for CPCs and Commission

[Species-specific recommendations which also may carry substantial financial implications for CPCs and Commission will be presented during the appropriate panel discussion]

New actions supported with **capacity building funds** to involve developing economy scientists in the work of the SCRS

- **Attendance** at SCRS inter-sessional meetings is becoming an increasing **concern**.
- **Actions beyond encouraging participation** in scientific meetings of CPC scientists and providing short-term training workshops should be further encouraged and supported with capacity building funds: supporting visiting scientist opportunities at national laboratories or the Secretariat.

Increase analytical and data base management **support at the Secretariat**

- Increased **scientific analytical support** for the conduct of contemporary statistical stock assessment methods
- **By-catch Coordinator** position
- Additions to **data management** staff at the Secretariat

Quality assurance and transparency

- Use the data fund to contract help to develop stock assessment **documentation during meetings** and to **invite experts** from other trFMOs to participate in our stock assessments

**protocol for use of Data and
other ICCAT funds**

Evaluate the possibility of establishing a “**scientific TAC**” for each tuna and tuna-like species for which a TAC is already implemented and for which a large-scale research program is needed

- New **biological information & fisheries-independent** information (tagging, aerial/acoustic surveys) are crucial to get better estimates of M & F and to track trends in population size; and thereby **to provide more robust and more precise scientific advice to the COM.**
- More sophisticated (but also more **demanding**) models are increasingly used in RFMOs while the Kobe process further encourages original approaches, such as the MSE to better take into account for **uncertainties** in the scientific advice.
- The SCRS is requesting funding of **large-scale research program for several species: BFT, ALB, YFT-BET-SKJ, BIL & SMT⁽¹⁾**. These programs have in general a high cost and can hardly be supported by CPCs if they are planned at the same time.
- The development of fisheries-independent surveys and original modeling approaches imply **continuous effort over several years** to be fruitful, so that it is crucial to secure funding over the whole duration of the research program.

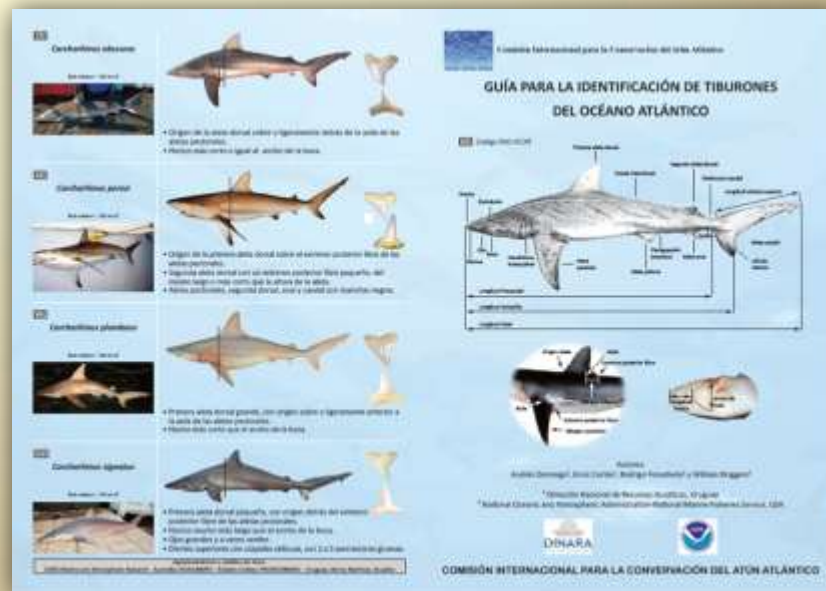
⁽¹⁾ They will be presented during the appropriate panel discussion

Recommendations related to the QUALITY of the information

- The Committee reiterated that there is a need to quantify the quality of the information reported and the **quality/representativeness of size samples** from different fisheries is a question that fits within this issue. A **10% sampling fraction** could be adopted as a **general rule** that could be revised on a fisheries basis.
- Given current ICCAT requirements of a minimum of **5% observer coverage**, and the need to collect and report data for a number of by-catch species, the SCRS recommends the development and implementation of **capacity building programmes** to improve sampling protocols, observer training and species identification (e.g. through identification guides or sending photos and samples to experts).

Recommendations related to the QUALITY of the information

- The Committee applauded the progress made on **shark identification sheets** and remained anxious to view the final product.
- OTHERS:
 - Expand the description of several **shark species** of the ICCAT Manual.
 - Develop **ID cards for Istiophorids**.
 - Develop the **LL gear chapter** of the ICCAT Manual.
 - Update the **description of white marlin and spearfishes** (RSP, *Tetrapturus georgei*, SPF, *Tetrapturus pfluegeri*)



Recommendations related to OBTAIN the information

- The Committee recommended that observers be allowed to collect **biological samples** (vertebrae, tissues, reproductive tracts, stomachs) from those species whose **retention is prohibited** by current regulations. Those dead fish could not be sold.
- To eventually consider official **derogations** to allow the sampling of fish below the minimum size limit, the use of any type of fishing gear and the possibility of fishing for scientific purposes even during the closed fishing season. Those dead fish could not be sold.
- To implement a “**research mortality allowance**” up to 20 t for incidental mortality of BFT during GBYP conventional tagging and biological sampling programs. Those dead fish could not be sold.

Recommendations related to the TRANSMISSION of the information

- The SCRS discussed the need of **forms** to submit seabird, sea turtle, other by-catch, and observer data. It is expected that this task will be taken by the by-catch coordinator. The Secretariat indicated that it only received observer data from one CPC. The Committee recommended that **CPCs report observer data** to help the Secretariat to develop electronic forms for the submission of this type of data.
- In order to improve the utility of **BCD for scientific use**, the Commission should implement **electronic reporting** forms and formats for transmission of the data to the Secretariat in order to improve the availability of complete data to the SCRS for cross-validation.
- The Committee recommended that **VMS signals** should be reported at no more than **two hour interval**. Furthermore, the Committee recommended requesting VMS data from **other ICCAT fisheries** and from position systems associated to FADs.



Responses to Commission's requests

18.1	Develop a Limit Reference Point (LRP) for the North Atlantic swordfish stock Rec. [10-02].	P4
18.2	Review of North Atlantic swordfish data requested under [Rec. 10-02]	P4
18.3	Exploring operationally viable technologies and methodologies for determining the size and biomass at the points of capture and caging [Rec. 10-04]	P2
18.4	Reporting on the scientific aspects of the national observer programs on the basis of the information provided by CPC [Rec. 10-04] [Rec. 10-10]	P2/PL
18.5	Completing the sharks identification guide [Rec. 10-06].	P4
18.6	Evaluating the information provided by CPCs on alternative scientific monitoring approach to observer program to apply in vessels less than 15 m. [Rec. 10-10]	PL
18.7	Continuation of the evaluation of data elements pursuant to [Rec. 05-09].	PL
18.8	Response to the Commission Regarding Rec. 10-09	P4

18.4.2 Reporting Information on national observer programs based on the information provided by CPCs [Rec. 10-10]

- [Rec. 10-10] requests the CPCs to provide a preliminary report to SCRS by 31 July 2011 on the **structure and design of their domestic observer programs** to be followed by an updated report on 31 July 2012.
 - a) target level of observer coverage by fishery and how measured,
 - b) data required to be collected,
 - c) data protocols in place,
 - d) information on how vessels are selected for coverage to achieve the CPC's target level of observer coverage,
 - e) observer training requirements, including any training materials, such as a training manual,
 - f) observer qualification requirements.
- Responses from **12 CPCs** so far (September 15, 2011). Only a low proportion of responses that could have been submitted have yet been received by the Secretariat. The level of detail and information provided was quite variable among CPCs.

18.4.2 Reporting Information on national observer programs based on the information provided by CPCs [Rec. 10-10]

Status	Flag	GearGrp		
		BB	LL	PS
CP	Algerie			
	Angola			
	Barbados			
	Belize			
	Brasil			
	Canada			
	Cape Verde			
	China P.R.			
	Côte D'Ivoire			
	Croatia			
	Egypt			
	EU.Bulgaria			
	EU.Cyprus			
	EU.Denmark			
	EU.España			
	EU.Estonia			
	EU.France			
	EU.Germany			
	EU.Greece			
	EU.Ireland			
	EU.Italy			
	EU.Latvia			
	EU.Lithuania			
	EU.Malta			
	EU.Netherlands			
	EU.Portugal			
	EU.Sweden			
	EU.United Kingdom			
	FR.St Pierre et Miquelon			
	Gabon			
	Ghana			
	Guatemala			
	Guinea Ecuatorial			
CP	Guinée Conakry			
	Iceland			
	Japan			
	Korea Rep.			
	Libya			
	Maroc			
	Mexico			
	Namibia			
	Norway			
	Panama			
	Philippines			
	Russian Federation			
	S. Tomé e Príncipe			
	Senegal			
	Sierra Leone			
	South Africa			
	St. Vincent and Grenadines			
	Syria Rep.			
	Trinidad and Tobago			
	Tunisie			
	Turkey			
	U.S.A.			
	UK.Bermuda			
	UK.British Virgin Islands			
	UK.Sta Helena			
	UK.Turks and Caicos			
NCC	Uruguay			
	Vanuatu			
	Venezuela			
	Chinese Taipei			
	Colombia			
	Guyana			
	Netherlands Antilles			

Green shaded cells represent metiers for which reports responsive to Rec [10-10] have been received and reviewed at the Sub-Committee on Statistics meeting in 2011. Blank cells represent metiers for which such reports might be expected based on recent (2000s) reported catches for these flag-gear combinations indicated

18.4.2 Reporting Information on national observer programs based on the information provided by CPCs [Rec. 10-10]

Since [10-10] also requires:

- **Beginning in 2012 and every three years** thereafter SCRS shall:
 - a) report to the Commission on the **coverage level achieved by each CPC by fishery**;
 - b) provide the Commission with a **summary of the data and information collected and reported** pursuant to this Recommendation and any relevant findings associated with that data and information;
 - c) **review the minimum standards established for CPC observer programs** as set out in this recommendation; and
 - d) make **recommendations** as necessary and appropriate on how to **improve the effectiveness** of observer programs in order to meet the data needs of the Commission, including possible revisions to this Recommendation and/or with respect to implementation of these minimum standards by CPCs.

18.4.2 Reporting Information on national observer programs based on the information provided by CPCs [Rec. 10-10]

- The Committee recommended the Secretariat to **elaborate a questionnaire form to distribute to all CPCs** to facilitate gathering the information requested under Rec 10-10, to better characterize and compare the different observer programs in addition to the table already developed by the Secretariat.
- This form should promote improved reporting by CPCs regarding the information requested under [10-10].

18.6 Evaluating the information provided by CPCs on alternative scientific monitoring approach to observer program to apply in vessels less than 15 m. [Rec. 10-10]

- [Rec. 10-10] enunciates that for **vessels less than 15 meters**, where an extraordinary safety concern may exist that precludes deployment of an onboard observer, a CPC may employ an **alternative scientific monitoring approach** that will collect data equivalent to that specified in this recommendation in a manner that ensures comparable coverage. In any such cases, the CPC wishing to avail itself of an alternative approach must present the details of the approach to the SCRS for evaluation. **The SCRS will advise the Commission on the suitability of the alternative approach** for carrying out the data collection obligations set forth in this Recommendation.
- As of the start of the meeting of the SCRS **only partial information from one Contracting Party** had been received on alternative methods for the collection of detailed information on vessels less than 15 m, which did not allow the Committee to carry out an assessment and prepare a response to the Commission regarding this matter.

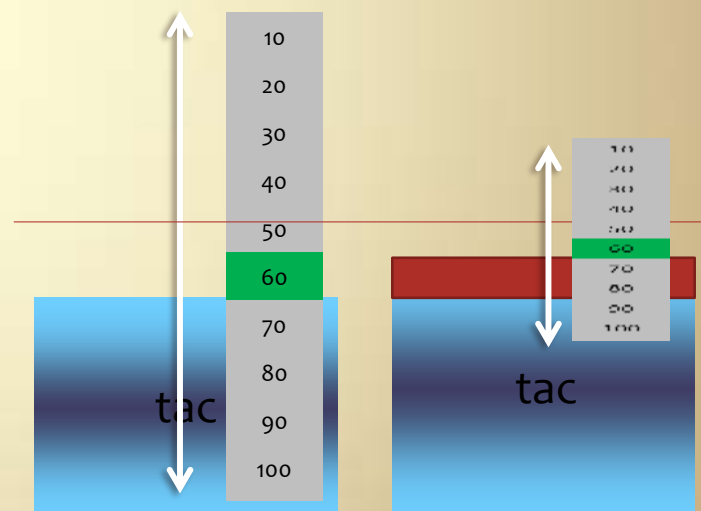
18.7 Continuation of the evaluation of data elements pursuant to [Rec. 05-09]

- [Rec. 05-09]: the Secretariat shall prepare a list of specific **data elements that are lacking for each stock** (catch, by-catch, effort, and/or size composition, by fleet, gear, and fishing area).
- In view of the report of the Secretariat, SCRS shall provide:
 - a) an evaluation of the extent to which missing data have adversely affected the most recent assessment or update,
 - b) an appraisal of the effect on new stock assessments if the data remain unavailable or incomplete, and
 - c) the consequences of the data deficiencies with respect to the formulation of management advice.
- Since 2007, a **questionnaire** has been distributed to the Rapporteurs of each Species Group that had an assessment or data preparatory meeting during the year. During 2011, several ICCAT species were assessed: **blue marlin, southern and Mediterranean albacore, and yellowfin tuna**. Document **SCRS/2011/207** includes the response to the questionnaires by the Chairs of the respective Working Groups in 2011.

18.7 Continuation of the evaluation of data elements pursuant to [Rec. 05-09]

How data deficiencies may affect management advice

- Absence of information leads **to increased** and, at times, **unquantifiable, uncertainty** in stock status evaluations.
- With increased uncertainty, **more conservative** (i.e. more constraining) **measures** need be taken to assure achieving Convention Objectives.
- To the degree possible, **SCRS aims to characterize this uncertainty** so that the Commission can weigh the relative risks and odds of achieving the objective.
- Kobe III** participants recently agreed to jointly develop methods to better quantify the uncertainty and understand how this uncertainty is reflected in the risk assessment inherent in the K2SM



18.7 Continuation of the evaluation of data elements pursuant to [Rec. 05-09]

How data deficiencies may affect management advice

Data deficiencies [Rec. 05-09]	CATCH DATA		EFFORT DATA	SIZE DATA	STANDARDIZED CPUE	BIOLOGY	ASSESSMENT Category
Stock	100	UNC					
SHK*	☹☹☹	☹☹☹	☹☹☹	☹☹☹	☹	☹☹☹	☹☹☹
ALB-MED	☹☹☹		☹☹☹	☹☹☹	☹☹☹	☹☹☹	☹☹☹
SMT	☹☹	☹☹	☹☹☹	☹☹☹	☹☹☹	☹☹	☹☹☹
BIL	☹☹	☹☹☹	☹☹	☹☹	☹☹	☹	☹☹☹
BFT-E-M	☹☹☹		☹☹	☹☹	☹	☹	☹☹☹
SWO-MED	☹	☹	☹	☹☹	☹☹	☹	☹☹☹
YFT					☹☹	☹	☹☹☹
BET	☹			☹	☹	☹	☹☹☹
SKJ					☹☹	☹	☹☹☹
ALB-ATL			☹	☹		☹	☹☹☹
BFT-W						☹	☹☹☹
SWO-ATL						☹	☹☹☹

Information deficit impedes assessing

Data poor

↑
Increasing Uncertainty

Data Rich

18.7 Continuation of the evaluation of data elements pursuant to [Rec. 05-09]

Some notable items:

- **GBYP** is generating important data which have good potential to be used for improved management advice into the future.
- Resolution of the shortcomings in **Ghanaian fishery monitoring** should be agreed to reduce uncertainties in tropical tunas data
- Given priority Commission is placing on non-target species, **estimates of by-catch** need be made and stored in the ICCAT databases.
- Confidentiality policy adopted by Commission should permit CPCs to **provide detailed catch and effort data** as is needed to improve management advice



Protocols to Follow for the Use of Data Funds & Other ICCAT Funds

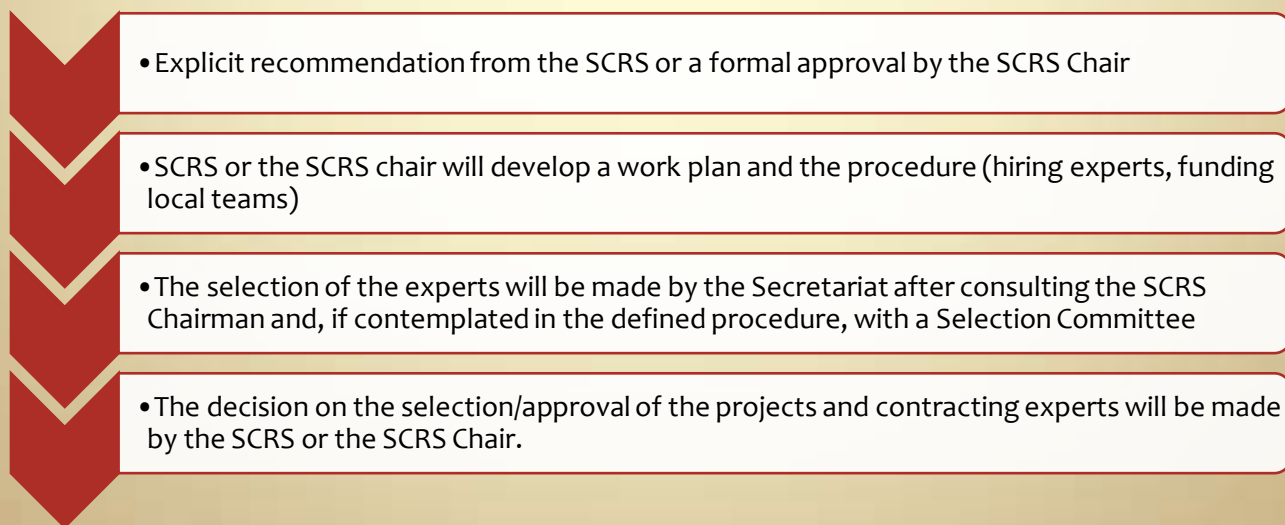
Protocols to Follow for the Use of Data Funds & Other ICCAT Funds (Addendum 2 to Appendix 7 of the SCRS report)

- **Objective:** to define the **objectives of funding** and to establish **protocols** for more fluid and productive usage.
- **Three groups** of objectives are considered:
 - a) Improvement of Statistics,
 - b) Capacity Building, and
 - c) Supporting Work of the SCRS

Protocols to Follow for the Use of Data Funds & Other ICCAT Funds (Addendum 2 to Appendix 7 of the SCRS report)

- a) **Improvement of statistics:** Recovery of historical data, Development of support material, programs for data entry and processing.

The funds can be applied to **hire experts** or to finance the **travel expenses of the Secretariat's staff** to carry out tasks to support the work teams involved. These funds would also be used to finance the **participation of scientists** from countries that do not have their own means to be able to participate in the SCRS meetings.



Protocols to Follow for the Use of Data Funds & Other ICCAT Funds (Addendum 2 to Appendix 7 of the SCRS report)

- a) **Improvement of statistics:** Recovery of historical data, Development of support material, programs for data entry and processing.

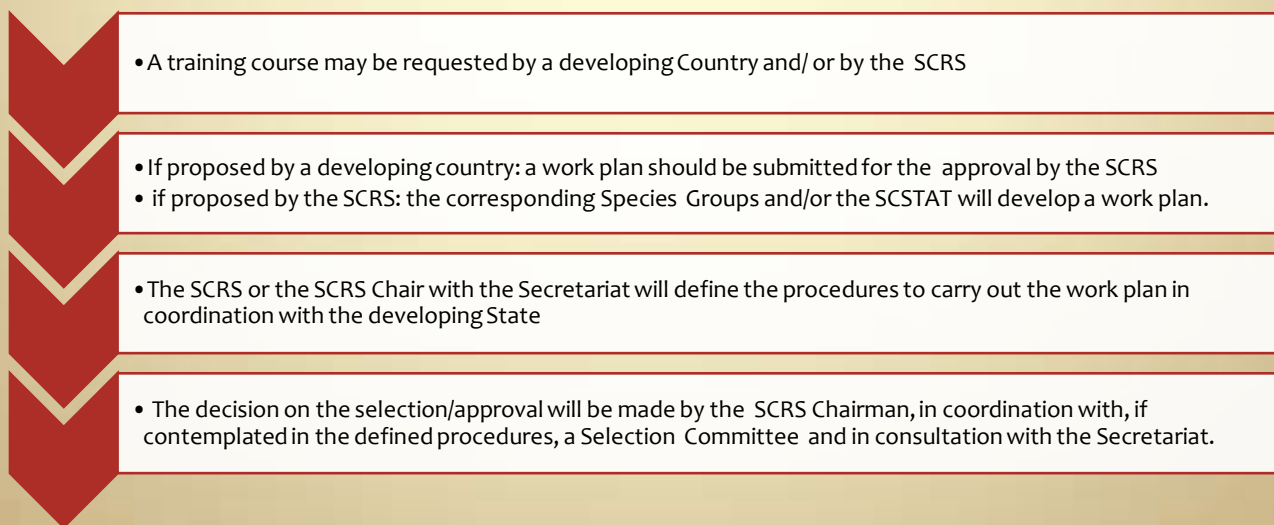
The **conditions for financing the participation of scientists at SCRS** would be the following:

1. Pertain to developing countries that do not participate by their own means.
2. Present a request, within a deadline defined in the protocol approved by the SCRS in 2010, including a detailed description of the applicant's contribution to the meeting.
3. The Secretariat will process the request and, after obtaining agreement from the rapporteurs of the Species Groups involved and/or from the SCRS Chairman, will carry out the necessary procedures in accordance with the protocol approved by the Committee.
4. The invited scientists are expected to participate actively in the meeting and likely present scientific documents.

Protocols to Follow for the Use of Data Funds & Other ICCAT Funds (Addendum 2 to Appendix 7 of the SCRS report)

- b) Capacity building:** capacity building policies which continually develops skills that will result in an overall understanding of the assessment procedures that are carried out within the SCRS.

The funds can be applied to 1) develop training programs and impart training courses, 2) develop supporting learning materials, 3) exchange of scientists between research centres, 4) finance the participation at the SCRS meetings of scientists from countries which do not have their own means to support the participation.



Protocols to Follow for the Use of Data Funds & Other ICCAT Funds (Addendum 2 to Appendix 7 of the SCRS report)

b) Capacity building: capacity building policies which continually develops skills that will result in an overall understanding of the assessment procedures that are carried out within the SCRS.

Conditions for a **stay at research centres:** The request, which must be presented at least two months before initiating the stay, should include:

1. A justification supporting the stay and a work plan describing the activities to be undertaken.
2. A letter of consent from the director of the center where the researcher works.
3. A letter from the director of the center accepting the scientist's stay.
4. In case a visa is required, the applicant should negotiate it directly with the country of the center where he/she will carry out the stay.
5. ICCAT will not provide any health and/or accident insurance during the stay).

Following the stay, a document must be presented to the SCRS including a detailed description of the work carried out during the stay and the results obtained.

Protocols to Follow for the Use of Data Funds & Other ICCAT Funds (Addendum 2 to Appendix 7 of the SCRS report)

c) Support the work of the SCRS:

The funds can be applied to 1) Contracting experts to develop models, analysis, data preparatory work, and/or participate in the assessments; 2) Financing the participation of external experts at the SCRS meetings.

In the case that the expert is associated with a tRFMO, such participation would have a double benefit of a peer review (ICCAT Performance Review rec.) and encouraging the coordination and exchange among tuna RFMOs (Kobe III rec.).

