

**REPORT OF THE FOURTH INTERSESSIONAL MEETING  
OF PANEL 2 ON BLUEFIN TUNA MSE**  
*(Madrid, Spain, hybrid, 14 October 2022)*

**1. Opening of the meeting and meeting arrangements**

The meeting was opened by the Chair of Panel 2, Mr. Shingo Ota (Japan).

**2. Nomination of Rapporteur**

Mr. Mathieu Pellerin (Canada) was appointed as rapporteur.

**3. Adoption of agenda**

The agenda (**Appendix 1**) was adopted without changes. The List of Participants is included in **Appendix 2**.

**4. Update on BFT MSE framework and Candidate Management Procedure (CMPs) by SCRS**

**5. Candidate management procedure performance, refinement and selection**

These agenda items were discussed together.

Dr John Walters (on behalf of the SCRS) presented an update on the BFT-MSE framework, including CMPs development, performance, refinement and selection. The SCRS has made substantial progress in testing CMPs and considers the MSE to be complete, except for exceptional circumstances provisions to be drafted in 2023. With the withdrawal of two CMPs (PW and AI) since the last July meeting, there were 4 CMPs remaining (BR, FO, LW, and TC) at the time of this meeting. All of the CMPs meet the status and safety management objectives, thereby providing viable and robust options for setting total allowable catches (TACs) for Atlantic bluefin tuna in 2023 and beyond.

Each CMP is a package-deal in that one single CMP calculates separate TACs for the West and East management areas. All CMPs include a phase-in period that would limit any upward or downward TAC changes to +20%/-10% for the first two management cycles if a 2-year cycle is adopted, or only for the first management cycle if a 3-year cycle is adopted. All results assume that the operational management objectives and other CMP specifications (e.g., management cycle length) are the same for both stocks/management areas. One CPC asked if the MSE framework would allow for adopting one CMP for one area and none for the other. The SCRS noted that this would not reflect what was tested for each CMP: the management of each area takes into account the impacts that CMP-specific removals from either stock have in the other area. It was noted that the East area biomass of Western origin or the Western stock biomass in the East area are negligible fractions whilst Eastern stock origin specimens may account for a quite relevant fraction of the West area biomass.

Key performance statistics includes: the probability of being in the green quadrant of a Kobe plot after year 30 (PGK) to measure performance with respect to the stock status objective, lowest depletion (LD) to measure performance with respect to the safety objective, average catch for years 1-10 (AvC10) and 1-30 (AvC30) to measure performance with respect to the yield objective and average percentage variation in TAC (VarC) to measure performance with respect to the yield stability objective. Overall, an equal weighting scheme was used for status, yield, stability and safety objectives, as per PA2 guidance on default weighting. In answering a CPC question, the SCRS noted that PGK can be viewed differently in the context of an MSE, compared to a best assessment model, as the MSE put CMPs through more challenging and a wider range of scenarios (e.g., even under a zero catch scenario biomass declines are observed). In that sense, it was noted that a given percentage value of PGK for a management procedure is actually a more conservative objective than the same percentage reflected in a Kobe strategy matrix developed from a stock assessment. To meet the same value of PGK in an MSE compared to a best assessment model, a more conservative TAC would be needed for the latter (or the lower PGK would be required for the former). However, the extensive status space explored through the MSE includes both challenging and optimistic scenarios simulated over a much longer time period.

An additional consideration for Panel 2 is the possibility of establishing a minimum threshold for implementing a TAC change. Such an approach would minimize the administrative burden related to adopting new TAC advice if it represented only a small change from the previous TAC. If such a minimum threshold were incorporated in a management procedure (MP), no change in TAC would be implemented in those instances where application of the MP indicated a TAC level that was less than the agreed minimum threshold. Simulations for the BR CMP were conducted to test applying a minimum TAC change threshold of up to 100 t for the West and up to 1000 t for the East. Results showed that these thresholds would not cause significant difference to BR's performance, however no indication of how often the rule was invoked was given. Panel 2 requested the developers of FO to conduct analysis using the same thresholds to see the impact on the performance of that CMP.

## 6. Key decisions

Several remaining key decisions are required for adoption of a final MP at the Annual meeting, which pertain to LD, PGK, stability both in terms of management cycle duration and TAC change, choice of a CMP type, whether to implement a minimum TAC change threshold and MSE review timeframe. Panel 2 discussed these various decision points and in some cases, narrowed down the remaining available options. Agreements of Panel 2 are described below for each decision point and are also captured in the Chair's summary on the way forward in **Appendix 3**. The SCRS also noted that it could produce an updated decision guide document prior to the Annual Meeting.

### **Decision Point #1: Operational management objective for Safety (LD10% or LD15%)**

LD is the performance statistic used to track how successful a CMP is at not breaching the limit reference point ( $B_{LIM}$  or LRP). This reference point is used solely in the context of the MSE to evaluate CMP performance and does not function as a hard trigger that would require a management response, such as closing the fishery.

The SCRS noted that in order for CMPs to meet a safety requirement of LD10%, a significant reduction in yield would be required. The SCRS highlighted the significance of the decision on the PGK percentage when considering the appropriate level of precaution, noting that a higher level was more precautionary. Panel 2 agreed to remove LD10% from the options and to move forward with LD15%.

### **Decision Point #2: Operational management objective for Stock Status (PGK 60% or PGK 70%)**

PGK60% allows for heavier fishing pressure and entails a higher probability of overfishing and/or being overfished, relative to PGK 70%, which has lower fishing pressure. There was discussion of PGK65% being considered. The SCRS representative noted that the relationship between PGK and key performance statistics is essentially linear, with PGK65% nearly halfway between PGK60% and PGK70%. This will be the most significant decision in terms of the tradeoff between the objectives of maximizing yields versus maintaining the stock's status.

There was no consensus among CPCs for a preferred PGK value. Preferences were expressed for both PGK60% and PGK70%, while others showed flexibility between the two options, noting that the decision was linked to other decision points. Some CPCs supporting PGK 60 stated that PGK60 is the standard in ICCAT and there is no reason to set PGK larger than 60% considering that PGK60 in the context of MSE is more conservative compared to that of a best assessment model. Panel 2 agreed to keep these two options, noting that the decision was linked to other decision points. One CPC requested analysis of PGK65% as a potential compromise value. While PGK65% had already been tested for BR, it had not been for FO., Panel 2 agreed to request the FO CMP developers to conduct analysis with that value. The developer of FO informed Panel 2 that they would make utmost efforts to provide these results, but that they might not be able to complete this work on this timeline.

### **Decision Point #3: Management cycle length**

The 3-year management cycle CMPs were slightly slower to react to signals from the indices to change the TAC than the 2-year management cycles. As a result of this poorer performance, the changes in TAC need to be larger with a 3-year cycle as observed with the VarC statistic results. Yields are often slightly lower with a 3-year management cycle, with more pronounced reductions in near-term TACs (AvC10) compared to long-term TACs (AvC30). Panel 2 needs to consider if the administrative burden reduction of a 3-year management cycle would outweigh the reduction in yield.

There was no consensus among CPCs for a preferred management cycle length. Preferences were expressed for both a 2-year management cycle and a 3-year management cycle, while others showed flexibility between the two options. Panel 2 agreed to keep both options on the table.

### **Decision Point #4: Operational management objective for Stability**

This decision point is highly dependent on management cycle length and PGK. With the option of a 3-year management cycle, greater reductions in TAC may be needed. If a 3-year cycle is chosen with PGK60, no CMPs meet LD15 with the default TAC change limits of +20%/-30%. As such, stability must then be adjusted to +20%/-35% in order to meet safety requirements. All CMPs with a 2-year management cycle meet LD15% with the default stability option of +20%/-30%.

As this decision point is linked to management cycle length preferences, no decision was reached on the objective for stability. Panel 2 agrees that the default option is +20%/-30% but recognizes that allowing a greater asymmetry of +20%/-35% in some scenarios is needed to meet LD safety requirements.

### **Decision Point #5: Management procedure type**

All four CMPs remaining (BR, FO, LW, and TC) at the time of the meeting provide viable options for setting TACs for Atlantic bluefin tuna in 2023 and beyond.

While many CPCs expressed a preference for BR, others supported continuing to consider both BR and FO. Panel 2 agreed to narrow down the options for this decision point by dropping the LW and TC CMPs. At the Annual Meeting, Panel 2 will need to choose between the two remaining CMPs: BR and FO.

### **Decision Point #6: Timeframe for review of Management Procedure**

A key element of a management procedure is the timing for its review. The SCRS recommended that regular reviews of the MP be conducted to consider new data and methods, and to potentially recondition the MSE. The SCRS recommended a review every 6 years, which means the first review would be completed in 2028. This review period is compatible with both a 2-year and 3-year management cycles as well as with scientific considerations.

One CPC suggested that carrying out the first MSE review in 4 years could be preferable as it would allow more recent and important data, including on stock mixing via close-kin mark-recapture, to be taken into consideration. The SCRS noted that a review after 4 years would add to the SCRS workload and could impact its work on other issues, which is part of the reason a 6-year review period was suggested. The SCRS also noted that, in any case, a review could be triggered sooner than every 6 years under an exceptional circumstances protocol. Moreover, some CPCs noted that a 4-year review will not allow taking into account the effects of the whole implementation of the MP after the phasing-in period and will not be consistent with the claim that a MP allows for an inter-session review period longer than a traditional fish stock assessment. Panel 2 agreed to move forward with a 6-year review cycle.

One CPC asked if the 30-year projection period for bluefin tuna under the MSE would be adjusted at the first MSE review. The SCRS noted that generally this is not deemed necessary in a first review, but that it would eventually be the case that the projection period would be adjusted to recondition the MSE operating model using the most up to date data.

**7. Other matters**

No other matters were discussed.

**8. Adoption of report and closure**

The Chair mentioned that considering the short timeframe between the 4th intersessional meeting of Panel 2 and the annual meeting, the report will be short, with focus on the decision points discussed at the meeting.

It was agreed that the meeting report would be adopted by correspondence.

The Chair thanked all participants for their work and adjourned the meeting.

**Agenda [PA2\_BFT\_MSE\_OCT\_01]****Objectives**

The objective of this meeting will be for Panel 2 to recommend a single management procedure for consideration for adoption by the Commission at the ICCAT annual meeting. Key information on the BFT MSE process to provide the basis for making such a selection is available on the following pages:

Splash page: <https://iccat.github.io/nsw-mse/>

CMP plotting: <https://apps.bluematterscience.com/ABTMSE/>

Quilt plot: [https://apps.bluematterscience.com/ABTMSE\\_Performance2/](https://apps.bluematterscience.com/ABTMSE_Performance2/)

1. Opening of the meeting and meeting arrangements
2. Nomination of Rapporteur
3. Adoption of Agenda
4. Update on BFT MSE framework and CMPs by SCRS
  - a. SCRS responses to feedback provided at July PA2 meeting
    - i. Evaluation of 2 and 3 year TAC setting for selected CMPs
    - ii. "Phase-in" +20%/-30% for 2-year cycle *and* +20%/-30% and +20%/-35% for 3-year cycles
    - iii. Additional stability or trajectory provisions implemented by several CMPs
    - iv. Revised quilt plots and summary table for CMPs
  - b. Finalized operational management objective options
5. Candidate management procedure performance, refinement and selection
  - a. Finalized performance tuning
  - b. PA2 will see complete set of remaining CMPs (note that several presented earlier are no longer supported by their developers, so will not be presented)
6. Key decisions
  - a. 2 year vs 3 year management cycle
  - b. Basis for performance tuning selection including consideration of LD\*(for which values in the range of 10-15% have been suggested) and PGK (for which the values in the 60-70% range have been suggested)
  - c. Selection of recommended MP
7. Other matters
8. Adoption of report and closure

List of participants\*<sup>1</sup>**CONTRACTING PARTIES****ALBANIA****Palluqi, Arian \***

Responsible in charge of sector, Ministry of Agriculture and Rural Development, Fisheries Directorate, Fisheries and Aquaculture Unit, Blv. “Dëshmoret e Kombit”, Nr.2, kp.1001, 1010 Tiranë, Shqipëri  
Tel: + 355 695 487 657; +355 4223 2796, Fax: +355 4223 2796, E-Mail: Arian.Palluqi@bujqesia.gov.al

**ALGERIA****Bouaouina, Chahrazed**

Rue des quatre canons, 16000  
Tel: +213 553 734 193, Fax: +213 214 133 37, E-Mail: chahrapeche1@gmail.com

**Ferhani, Khadra**

Centre National de Recherche et de Développement de la Pêche et de l'Aquaculture (CNRDPA), 11 Boulevard Colonel Amirouche, BP 67, 42415 Tipaza Bou Ismail  
Tel: +213 550 735 537, Fax: +213 24 32 64 10, E-Mail: ferhani\_khadra@yahoo.fr; ferhanikhadra@gmail.com

**Ouchelli, Amar**

Sous-directeur de la Grande Pêche et de la Pêche Spécialisée, Ministère de la pêche et des productions halieutiques, Rue des quatre canons, 16000  
Tel: +213 550 306 938, Fax: +213 234 95597, E-Mail: amarouchelli.dz@gmail.com

**Tamour, Amira**

Ministère de la Pêche & des Ressources Halieutiques, 4, Route des Quatre Canons, 16100  
Tel: +213 664 367 720, E-Mail: miratamour@gmail.com

**CANADA****Waddell, Mark \***

Director General, Fisheries and Oceans Canada, 200 Kent Street, Ottawa ON K1A0E6  
Tel: +1 613 897 0162, E-Mail: mark.waddell@dfo-mpo.gc.ca

**Atkinson, Troy**

Nova Scotia Swordfisherman's Association, 155 Chain Lake Drive, Suite #9, Halifax, NS B3S 1B3  
Tel: +1 902 499 7390, E-Mail: atkinsontroy215@gmail.com; hiliner@ns.sympatico.ca

**Byrne, Vanessa**

Government of Newfoundland and Labrador, 30 Strawberry Marsh Road, St. John's NL A1B 2V6  
Tel: +1 709 729 3735, E-Mail: VanessaByrne@gov.nl.ca

**Couture, John**

Oceans North, 74 Bristol Drive, Sydney NS B1P 6P3  
Tel: +1 902 578 0903, E-Mail: jcouture@oceansnorth.ca

**Dunne, Erin**

Resource Manager, Fisheries and Oceans Canada, Northwest Atlantic Fisheries Center, 80 E White Hills Rd, St. John's, NL, A1A 5J7  
Tel: +1 709 772 3600; +1 613 993 3117, E-Mail: erin.dunne@dfo-mpo.gc.ca

**Duprey, Nicholas**

Senior Science Advisor, Fisheries and Oceans Canada, 200-401 Burrard Street, Vancouver, BC V6C 3R2  
Tel: +1 604 499 0469, E-Mail: nicholas.duprey@dfo-mpo.gc.ca

**Elsworth, Samuel G.**

South West Nova Tuna Association, 228 Empire Street, Bridgewater, NS B4V 2M5  
Tel: +1 902 543 6457, E-Mail: sam.fish@ns.sympatico.ca

---

\* Head Delegate.

<sup>1</sup> Some delegate contact details have not been included following their request for data protection.

**Fillion, Diana**

Resource Manager, Fisheries and Oceans Canada, 343 University Ave Moncton NB, E1C 9B6  
Tel: +1 506 394 8574, E-Mail: Diana.Fillion@dfo-mpo.gc.ca

**Hanke, Alex**

Research Scientist, Fisheries and Oceans Canada, 531 Brandy Cove Road, St. Andrews, NB E5B 2L9  
Tel: +1 506 529 5912, E-Mail: alex.hanke@dfo-mpo.gc.ca

**Hwang, Steve**

Policy Analyst, Fisheries and Oceans Canada, 200 Kent St, Ottawa, ON K1A 0E6  
Tel: +1 343 571 1550, E-Mail: steve.hwang@dfo-mpo.gc.ca

**Kay, Lise**

Senior Policy Advisor, Fisheries and Oceans Canada, 200 Kent Street, Ottawa, ON K1A 0E6  
Tel: +1 343 542 1301, E-Mail: Lise.Kay@dfo-mpo.gc.ca

**MacDonald, Carl**

Senior Advisor, Fisheries and Oceans Canada, 1 Challenger Drive, PO Box 1006, Bedford Institute of Oceanography, Dartmouth, NS B2Y 4A2  
Tel: +1 902 293 8257, E-Mail: carl.macdonald@dfo-mpo.gc.ca

**MacMillan, Robert**

Government of Prince Edward Island, Department of Fisheries and Communities, 548 Main Street, Montague, P.E.I C0A 1RD  
Tel: +1 902 838 0699, E-Mail: rjmacmillan@gov.pe.ca

**Mahoney, Derek**

Assistant Director, Fisheries and Oceans Canada, Resource Management Operations, 200 Kent Street, Ottawa, ON K1A 0E6  
Tel: +1 613 794 8007, E-Mail: derek.mahoney@dfo-mpo.gc.ca

**Marsden, Dale**

Deputy Director, Fisheries and Oceans Canada, 200 Kent Street, Ottawa, ON K1A 0E6  
Tel: +1 613 791 9473, E-Mail: Dale.Marsden@dfo-mpo.gc.ca

**Pellerin, Mathieu**

Resource Manager, Fisheries and Oceans Canada, 104 Rue Dalhousie, QC G1K 7Y7  
Tel: +1 418 572 9957, E-Mail: mathieu.pellerin@dfo-mpo.gc.ca

**Schleit, Kathryn**

Oceans North, 1459 Hollis Street, Unit 101, Halifax, NS B3L1Y1  
Tel: +1 902 488 4078, E-Mail: kschleit@oceansnorth.ca

**CHINA, (P.R.)**

**Feng, Ji**

Shanghai Ocean University, 999 Hucheng Huan Rd, 201306 Shanghai  
Tel: +86 159 215 36810, E-Mail: fengji\_shou@163.com; 276828719@qq.com; f52e@qq.com

**Zhang, Fan**

Shanghai Ocean University, 999 Hucheng Huan Rd, 201306 Shanghai  
Tel: +86 131 220 70231, E-Mail: f-zhang@shou.edu.cn

**EGYPT**

**Atteya, Mai**

Production Research Specialist, 210, area B - CITY, 5TH DISTRICT ROAD 90, 11311 New Cairo  
Tel: +201 003 878 312, Fax: +202 281 117 007, E-Mail: janahesham08@gmail.com

**Badr, Fatma Elzahraa**

Fish Production Specialist, Agreements Administration, Lakes and Fish Resources Protection and Development Agency, 210, area B - CITY, 5TH DISTRICT ROAD 90, 11311 New Cairo  
Tel: +201 092 348 338, Fax: +202 281 117 007, E-Mail: fatima.elzahraa.medo@gmail.com

**Elsawy, Walid Mohamed**

Associate Professor, 210, area B - CITY, 5TH District Road 90, 11311 New Cairo  
Tel: +201 004 401 399, Fax: +202 281 117 007, E-Mail: walid.soton@gmail.com

**Shawky, Doaa Hafez**

International Agreements Specialist, Foreign Affairs Specialist, 210, area B - CITY, 5TH District ROAD 90, 11311 New Cairo  
Tel: +201 017 774 198, Fax: +202 281 117 007, E-Mail: doahafezshawky@yahoo.com; gafrd\_eg@hotmail.com

**EUROPEAN UNION**

**Jessen, Anders \***

Deputy Director, Head of Unit - European Commission, DG Mare B 2, B-1049 Brussels, Belgium

**Biagi, Franco**

Senior Expert Marine & Fishery Sciences, Directorate General for Maritime Affairs and Fisheries (DG-Mare) - European Commission, Unit C3: Scientific Advice and data collection, Rue Joseph II, 99, 1049 Brussels, Belgium  
Tel: +322 299 4104, E-Mail: franco.biagi@ec.europa.eu

**Costica, Florina**

DG MARE, Rue Joseph II, 99, 1040 Brussels, Belgium  
Tel: +32 493 540 902, E-Mail: florina.costica@ec.europa.eu

**Malczewska, Agata**

European Commission DG MARE, JII-99 4/073, 1000 Belgium, Belgium  
Tel: +32 229 6761; +32 485 853 835, E-Mail: agata.malczewska@ec.europa.eu

**Ribeiro, Cristina**

DG MARE, Rue Joseph II, 99 03/57, 1049 Brussels, Belgium  
Tel: +32 470 529 103, E-Mail: cristina-ribeiro@ec.europa.eu

**Alba Mateu, Bernardino**

CC-Sud/Federación Gallega de Pesca Marítima Responsable – MEDAC/EAA (Alianza de Pesca Española Recreativa Sostenible (APERS), Spain  
E-Mail: bernadi.alba@gmail.com; presidente@apers.es

**Andonegi Odrizola, Eider**

AZTI, Txatxarramendi ugarte a z/g, 48395 Sukarrieta, Bizkaia, Spain  
Tel: +34 661 630 221, E-Mail: eandonegi@azti.es

**Bonaccorso, Ilenia**

Secretaría General de Pesca, Calle de Velázquez 144, 28006 Madrid, Spain  
Tel: +34 913 476 242, E-Mail: bec\_sgaorp03@mapa.es

**Consuegra Alcalde, Elena**

Policy officer, Ministerio de Agricultura, Alimentación y Medio Ambiente - MAGRAMA, Unit of Agreements and RFMOs, Secretary General for Fisheries, C/ Velázquez, 144, 2ª Planta, 28006 Madrid, Spain  
Tel: +34 91 347 60 66; +34 686 043 379, Fax: 91 347 60 42, E-Mail: econsuegra@mapa.es

**Cosnard, Nolwenn**

OP SATHOAN - FRANCE Méditerranée, 34200 Sète Hérault, France  
Tel: +33 646 592 386, E-Mail: nolwenn@sathoan.fr; nolwenn.sathoan@gmail.com

**Del Cerro Martín, Gloria**

Secretaría General de Pesca, C/ Velázquez, 144 2ª Planta, 28006 Madrid, Spain  
Tel: +34 91 347 5940, Fax: +34 91 347 6042, E-Mail: gcerro@mapa.es

**Eliassen, Peter Jørgen**

Senior consultant, Ministry of Food, Agriculture and Fisheries, Sustainable Fisheries, Fisheries Policy, Slotholmsgade 12, 1216 Copenhagen, Denmark  
Tel: +452 261 5937, E-Mail: pejoel@mfvm.dk

**Fernández Llana, Carmen**

Instituto Español de Oceanografía (IEO), Consejo Superior de Investigaciones Científicas, C/ Corazón de María, 8, 28002 Madrid, Spain  
Tel: +34 91 342 11 32, E-Mail: carmen.fernandez@ieo.csic.es

**Gatt, Mark**

Ministry for Agriculture, Fisheries, Food and Animal Rights Fort San Lucjan, Triq il-Qajjenza, Department of Fisheries and Aquaculture, Malta Aquaculture Research Centre, MRS 3303 Marsaxlokk, Malta

**Grubisic, Leon**

Institute of Oceanography and Fisheries in Split, Setaliste Ivana Mestrovica 63 - P.O.Box 500, 21000 Split, Croatia  
Tel: +385 914 070 955, Fax: +385 21 358 650, E-Mail: leon@izor.hr

**Guerin, Benoît**

1407 Chemin des Maures, 83400 St Raphaël, France  
Tel: +33 632 02 68 15, E-Mail: bgseaconsulting@gmail.com

**Harris, Sarah**

Malta Aquaculture Research Centre, Fort San Lucjan, BBG 1287 Marsaxlokk, Malta  
Tel: +356 229 26918, E-Mail: sarah.harris@gov.mt

**Hennache, Louise**

SA Cooperative Maritime a Capital Variable Sis "Crieux Aux Poissons Des Pays d'Agde" Quai Commandant Méric - GRAU D'AGDE, Quai Commandant Méric, 34300 Grau d'Agde, France  
Tel: +33 782 405 037, E-Mail: secretariat.opdusud@gmail.com

**Houlihan, Julie Marie**

Department of Agriculture, Food and the Marine, National Seafood Centre, Clogheen, Clonakilty, P85 TX47 Cork, Ireland  
Tel: +353 870 604 148, E-Mail: juliemarie.houlihan@agriculture.gov.ie

**Kafouris, Savvas**

Fisheries and Marine Research Officer, Department of Fisheries and Marine Research (DFMR); Ministry of Agriculture, Natural Resources and Environment, 101, Vithleem Street, Strovolos, 1416 Nicosia, Cyprus  
Tel: +357 228 07825, Fax: +357 2231 5709, E-Mail: skafouris@dfmr.moa.gov.cy; skafouris80@gmail.com

**Koutsis, Kostas**

Ministry of Rural Development and Food, General Directorate of Fisheries, 150, Syggroy Avenue - GR17671 Athens, 17671, Greece  
Tel: +302 109 287 117, E-Mail: kkoutsis@minagric.gr

**Lamothe, Julien**

Organisation de producteurs - FROM Sud-Ouest, 89 quai du ponant, 17000 La Rochelle, France  
Tel: +33 618 165 905, E-Mail: julien.lamothe@from-sudouest.fr

**Lanza, Alfredo**

Ministero delle Politiche Agricole Alimentari, Forestali e Del Turismo, Direzione Generali della Pesca Marittima e dell'acquacoltura - PEMAC VI, Via XX Settembre, 20, 00187 Rome, Italy  
Tel: +39 331 464 1576; +39 646 652 843, Fax: +39 646 652 899, E-Mail: a.lanza@politicheagricole.it

**Lintanf, Philippe**

Chef du BAEI, Ministère de la mer - Direction Générale des Affaires Maritimes, de la Pêche et de l'Aquaculture (DGAMPA), Tour Séquoia - 1 place Carpeaux, 92055 Paris-La Défense, France  
Tel: +33 1 40 81 68 05; +33 763 631 931, E-Mail: philippe.lintanf@agriculture.gouv.fr

**Magnolo, Lorenzo Giovanni**

Ministero delle Politiche Agricole Alimentari, Forestali e Del Turismo, Direzione Generale della Pesca Marittima e dell'Acquacoltura, Via XX Settembre, 20, 0187 Rome, Italy  
Tel: +39 0 646 652 819, E-Mail: lorenzo.magnolo@politicheagricole.it

**Milly, David**

Directeur de l'OP Pêcheurs D'Aquitaine, membre des Commissions thon rouge et thon blanc du CNPMM, 2 avenue Maréchal Leclerc, 64500 Ciboure, France  
Tel: +3305 5947 1939; +33 0617 29 90 56, Fax: +33 05 59478113, E-Mail: david.milly@pecheursdaquitaine.eu

**Oikonomou, Maria**

Ministry of Rural Development & Food, Directorate General for Fisheries, 150, Syngrou A. 176 71 Kallithea, 176 71 Athens, Greece  
Tel: +302 109 287 186, E-Mail: moikonom@minagric.gr

**Orozco, Lucie**

Chargée de mission affaires thonières, Direction générale de affaires maritimes, de la pêche et de l'aquaculture (DGAMPA), Bureau des Affaires Européennes et Internationales (BAEI), 1 place Carpeaux, 92055 La Defense, Île de France, France  
Tel: +33 140 819 531, E-Mail: lucie.orozco@mer.gouv.fr

**Petrina Abreu, Ivana**

Ministry of Agriculture - Directorate of Fishery, Ulica Grada Vukovara 78, 10000 Zagreb, Croatia  
Tel: +385 164 43171; +385 99 2270 967, Fax: +385 164 43200, E-Mail: ipetrina@mps.hr

**Rodrigues, Raquel**

9675-162 Praia da Vitória, Ilha Terceira, Portugal  
Tel: +351 969 350 946, E-Mail: rrodrigues@federacaopescasacores.pt

**Rodríguez-Marín, Enrique**

Centro Oceanográfico de Santander (COST-IEO). Instituto Español de Oceanografía (IEO). Consejo Superior de Investigaciones Científicas (CSIC), C.O. de Santander, C/ Severiano Ballesteros 16, 39004 Santander, Cantabria, Spain  
Tel: +34 942 291 716, Fax: +34 942 27 50 72, E-Mail: enrique.rmarin@ieo.csic.es

**Rouyer, Tristan**

Ifremer - Dept Recherche Halieutique, B.P. 171 - Bd. Jean Monnet, 34200 Sète, Languedoc Rousillon, France  
Tel: +33 782 995 237, E-Mail: tristan.rouyer@ifremer.fr

**Rueda Ramírez, Lucía**

Ministerio de Ciencia, Innovación y Universidades, Instituto Español de Oceanografía Málaga, Puerto pesquero s/n, 29640 Fuengirola Málaga, Spain  
Tel: +34 952 197 124, E-Mail: lucia.rueda@ieo.csic.es

**Talijancic, Igor**

Institute of Oceanography and Fisheries Split, Setaliste Ivana Mestrovica 63, 21000 Dalmatia, Croatia  
Tel: +385 214 08047, E-Mail: talijan@izor.hr

**Teixeira, Isabel**

Chefe de Divisão de Recursos Externos da Direção-Geral de Recursos Naturais, Segurança e Serviços Marítimos, DGRM, Avenida Brasília, 1449-030 Lisboa, Portugal  
Tel: +351 919 499 229, E-Mail: iteixeira@dgrm.mm.gov.pt

**Trigo, Patricia**

DGRM, Avenida Brasília ES8, 1449-030 Lisbon, Portugal  
Tel: +351 969 455 882; +351 213 035 732, E-Mail: pandrada@dgrm.mm.gov.pt

**Wendling, Bertrand**

SaThoAn - Cap St. Louis 3B, 29 Promenade JB Marty, 34200 Sète, France  
Tel: +33 603 328 977, Fax: +33 4 6746 0513, E-Mail: bertrand@sathoan.fr

**FRANCE (ST PIERRE & MIQUELON)**

**Crespin, Rosalie**

Comité National des Pêches Maritimes et des Elevages Marins, 134 avenue Malakoff, 75116 Paris  
Tel: +33 172 711 814, E-Mail: rcrespin@comite-peches.fr

**Haziza, Juliette**

EU-France-European and International Office / Maritime Fisheries and Aquaculture Directorate, Ministère de la Mer, Tour Sequoia, 1 place Carpeaux, 92800 Puteaux  
Tel: +33 140 819 531; +33 659 542 827, E-Mail: juliette.haziza@developpement-durable.gouv.fr; juliette.haziza@agriculture.gouv.fr

**Paumier, Alexis**

Ministère de la mer - Direction Générale des Affaires Maritimes, de la Pêche et de l'Aquaculture (DGAMPA), Bureau de l'appui scientifique et des données (BASD), Tour Sequoia, 75000 Paris  
Tel: +33 687 964 560, E-Mail: alexis.paumier@agriculture.gouv.fr

**JAPAN**

**Ota, Shingo \***

Japan's Commissioner to ICCAT, Advisor to the Minister of Agriculture, Forestry and Fisheries, 1-2-1 Kasumigaseki, Chiyoda-Ku, Tokyo 100-8907  
Tel: +81 3 3502 8460, Fax: +81 3 3504 2649, E-Mail: shingo\_ota810@maff.go.jp

**Daito, Jun**

Manager, Japan Tuna Fisheries Co-operative Association, 31-1, Eitai 2-Chome, Koto-ku, Tokyo 135-0034  
Tel: +81 356 462 382, Fax: +81 356 462 652, E-Mail: daito@japantuna.or.jp

**Fukuda, Hiromu**

Head of Group, Highly Migratory Resources Division, Fisheries Stock Assessment Center, Fisheries Resources Institute, Japan Fisheries Research and Education Agency, 2-12-4 Fukuura, Kanazawa, Yokohama, 234-8648  
Tel: +81 45 788 7936, E-Mail: fukuda\_hiromu57@fra.go.jp; fukudahiroму@affrc.go.jp

**Fukui, Shingo**

Director, International Fisheries Coordination, International Affairs Division, Fisheries Agency, 1-2-1 Kasumigaseki, Chiyoda-Ku, Tokyo 100-8907  
Tel: +81 3 3502 8460, Fax: +81 3 3504 2649, E-Mail: shingo\_fukui970@maff.go.jp

**Ito, Kohei**

Assistant Director, International Affairs Division, Fisheries Agency of Japan, 1-2-1 Kasumigaseki, Tokyo Chiyoda-ku 100-8907  
Tel: +81 3 3502 8460, Fax: +81 3 3504 2649, E-Mail: kohei\_ito060@maff.go.jp

**Kumamoto, Jumpei**

Technical Official, Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries, International Affairs Division, Chiyoda-Ku, Tokyo 100-8907  
Tel: +81 3 3502 8460, Fax: +81 3 3504 2649, E-Mail: jumpei\_kumamoto270@maff.go.jp

**Miura, Nozomu**

Assistant Director, International Division, Japan Tuna Fisheries Co-operative Association, 2-31-1 Eitai Koto-ku, Tokyo 135-0034  
Tel: +81 3 5646 2382, Fax: +81 3 5646 2652, E-Mail: miura@japantuna.or.jp; gyojyo@japantuna.or.jp

**Morita, Hiroyuki**

Assistant Director, International Affairs Division, Fisheries Agency of Japan, 1-2-1 Kasumigaseki, Chiyoda-Ku, Tokyo 100-8907  
Tel: +81 3 3502 8460, Fax: +81 3 3504 2649, E-Mail: hiroyuki\_morita970@maff.go.jp

**Nakatsuka, Shuya**

Deputy Director, Highly Migratory Resources Division, Fisheries Resources Institute, Japan Fisheries Research and Education Agency, 2-12-4, Fukuura, Kanazawa Kanagawa, 236-8648  
Tel: +81 45 788 7950, E-Mail: nakatsuka\_shuya49@fra.go.jp; snakatsuka@affrc.go.jp

**Tsukahara, Yohei**

Scientist, Highly Migratory Resources Division, Fisheries Stock Assessment Center, Fisheries Resources Institute, Japan Fisheries Research and Education Agency, 2-12-4, Fukuura, Kanagawa, Yokohama, Shizuoka Shimizu-ku 236-8648  
Tel: +81 45 788 7937, Fax: +81 54 335 9642, E-Mail: tsukahara\_yohei35@fra.go.jp; tsukahara\_y@affrc.go.jp

**Uozumi, Yuji**

Advisor, Japan Tuna Fisheries Co-operation Association, Japan Fisheries Research and Education Agency, Tokyo Koutou ku Eitai 135-0034

**KOREA (REP.)**

**Yang, Jae-geol**

Policy Analyst, Korea Overseas Fisheries Cooperation Center, 6th FL, S Building, 253, Hannuri-daero, 30127 Sejong  
Tel: +82 44 868 7364, Fax: +82 44 868 7840, E-Mail: jg718@kofci.org

**LIBYA**

**F. Gafri, Hasan \***

Director - Libyan Commissioner to ICCAT, Ministry of Agriculture, Livestock and Fisheries, Department of Marine Wealth, Aldahra Street, P.O. Box 80876, Tajura Tripoli  
Tel: +218 916 274 377, E-Mail: gafrihasan@gmail.com; abdulalam.zbida@gmail.com

**MEXICO**

**Ramírez López, Karina**

Instituto Nacional de Pesca y Acuicultura (INAPESCA), Centro Regional de Investigación Acuícola y Pesquera - Veracruz, Av. Ejército Mexicano No.106 - Colonia Exhacienda, Ylang Ylang, C.P. 94298 Boca de Río, Veracruz  
Tel: +52 5538719500, Ext. 55756, E-Mail: karina.ramirez@inapesca.gob.mx; kramirez\_inp@yahoo.com

## **MOROCCO**

### **Abid, Nouredine**

Chercheur et ingénieur halieute au Centre Régional de recherche Halieutique de Tanger, Responsable du programme de suivi et d'étude des ressources des grands pélagiques, Centre régional de l'INRH à Tanger/M'dig, B.P. 5268, 90000 Drabed, Tanger

Tel: +212 53932 5134; +212 663 708 819, Fax: +212 53932 5139, E-Mail: nabid@inrh.ma; noureddine.abid65@gmail.com

### **Bensbai, Jilali**

Chercheur, Institut National de Recherche Halieutique à Casablanca - INRH/Laboratoires Centraux, Ain Diab près du Club équestre OULAD JMEL, Rue Sidi Abderrhman / Ain Diab, 20100 Casablanca

Tel: +212 661 59 8386, Fax: +212 522 397 388, E-Mail: bensbaijilali@gmail.com

### **Haoujar, Bouchra**

Cadre à la Division de Durabilité et d'Aménagement des Ressources Halieutiques, Département de la Pêche Maritime, Nouveau Quartier Administratif, BP 476, 10150 Haut Agdal, Rabat

Tel: +212 253 768 8121, Fax: +212 537 688 089, E-Mail: haoujar@mpm.gov.ma

### **Hassouni, Fatima Zohra**

Chef de la Division de Durabilité et d'Aménagement des Ressources Halieutiques, Département de la Pêche maritime, Nouveau Quartier Administratif, Haut Agdal, B.P.: 476 Rabat

Tel: +212 537 688 122/21, Fax: +212 537 688 089, E-Mail: hassouni@mpm.gov.ma

## **NICARAGUA**

### **Barnuty Navarro, Renaldy Antonio**

Hidrobiólogo, Director - Dirección de Investigaciones Pesqueras - Instituto Nicaragüense de la Pesca y Acuicultura (INPESCA), Km 3.5 carretera Norte, Contiguo al edificio de la Big Cola, Managua

Tel: +505 22 4424 01 Ext. 140; +505 842 04110, E-Mail: rbarnutti@inpesca.gob.ni

## **NORWAY**

### **Sørdahl, Elisabeth \***

Ministry of Trade, Industry and Fisheries, Department for Fisheries and Aquaculture, Kongensgate 8, Postboks 8090 Dep., 0032 Oslo

Tel: +47 22 44 65 45, E-Mail: elisabeth.sordahl@nfd.dep.no

### **Mjorlund, Rune**

Directorate of Fisheries, Strandgaten 229, 5004 Bergen

Tel: +47 952 59 448, E-Mail: rune.mjorlund@fiskeridir.no

### **Nottestad, Leif**

Principal Scientist, Institute of Marine Research, Research Group on Pelagic Fish, P.O. Box 1870 Nordnesgaten, 33, 5817 Bergen, Hordaland county

Tel: +47 5 99 22 70 25, Fax: +47 55 23 86 87, E-Mail: leif.nottestad@hi.no

### **Sandberg, Per**

Director, Statistics Department, Directorate of Fisheries, Postboks 185 Sentrum, 5804 Bergen

Tel: +47 90 21 96 80, Fax: +47 55 23 8090, E-Mail: per.sandberg@fiskeridir.no

### **Selbekk, Kari**

Kongens gate 8, 0153 Oslo

Tel: +47 911 95712, E-Mail: Kari.selbekk@nfd.dep.no

## **PANAMA**

### **Guerra Campos, Alcibiades**

Dirección de Cooperación Internacional, Edificio Riviera, Avenida Justo Arosemena y Calle 45 Bella Vista, 7096

Tel: +507 511 6008, E-Mail: aguerra@arap.gob.pa

### **Pino, Yesuri**

Autoridad de Los Recursos Acuáticos de Panamá (ARAP), Dirección de Investigación y Desarrollo, Edificio Riviera, Calle 45 Bella Vista con Justo Arosemena, 05850

Tel: +507 645 74963, E-Mail: yesuri.pino@arap.gob.pa

**SENEGAL**

**Sèye, Mamadou**

Ingénieur des Pêches, Chef de la Division Gestion et Aménagement des Pêcheries de la Direction des Pêches maritimes, Sphère ministérielle de Diamniadio Bâtiment D., 1, Rue Joris, Place du Tirailleur, 289 Dakar  
Tel: +221 77 841 83 94, Fax: +221 821 47 58, E-Mail: mdseye@gmail.com; mdseye1@gmail.com; mdouseye@yahoo.fr

**TUNISIA**

**Hayouni ep Habbassi, Dhekra**

Ingénieur principal, Direction de la préservation des ressources halieutiques, Direction Générale de la Pêche et de l'Aquaculture, Ministère d'Agriculture, des Ressources hydrauliques et de la Pêche  
Tel: +216 718 90784, Fax: +216 717 99401, E-Mail: hayouni.dhekra@gmail.com; hayouni.dhekra1@gmail.com

**Sohlobji, Donia**

Direction Générale de la Pêche et de l'Aquaculture, Ministère de l'Agriculture des Ressources Hydrauliques et de la Pêche, 32 Rue Alain Savary, 2036 Le Belvédère  
Tel: +216 534 31307; +216 71 890 784, Fax: +216 71 799 401, E-Mail: doniasohlobji1@gmail.com; bft@iresa.agrinet.tn

**Zarrad, Rafik**

Chercheur, Institut National des Sciences et Technologies de la Mer (INSTM), BP 138 Ezzahra, Mahdia 5199  
Tel: +216 73 688 604; +216 972 92111, Fax: +216 73 688 602, E-Mail: rafik.zarrad@gmail.com

**UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND**

**De Oliveira, José**

The Centre for Environment, Fisheries and Aquaculture Science, CEFAS, Pakefield Road, Lowestoft - Suffolk, IP19 8JX  
Tel: +44 150 252 7727, E-Mail: jose.deoliveira@cefas.co.uk

**Fischer, Simon**

Centre for Environment, Fisheries and Aquaculture Science (CEFAS), Pakefield Road, Lowestoft, Suffolk NR33 0HT  
E-Mail: simon.fischer@cefas.co.uk

**Fletcher, Fiona**

Department for Environment, Food & Rural Affairs - DEFRA, Horizon House, Deanery Rd, Bristol BS1 5AH  
Tel: +44 771 742 2562, E-Mail: Fiona.Fletcher@defra.gov.uk

**King, Thomas**

International Fisheries Policy Officer, Department for Environment, Food and Rural Affairs (Defra), Marine & Fisheries Directorate, First Floor, Seacole Wing, 2 Marsham Street, London SW1P 4DF  
Tel: +44 777 661 5108, E-Mail: Thomas.King@defra.gov.uk

**Owen, Marc**

Team Lead, International Fisheries, Department for Environment, Food and Rural Affairs, Defra, First Floor, Seacole Wing, 2 Marsham Street, London SW1P 4DF  
Tel: +44 755 732 5524, E-Mail: marc.owen@defra.gov.uk

**Sampson, Harry**

Senior International Fisheries Policy Officer, Department for Environment, Food and Rural Affairs (Defra), Marine & Fisheries Directorate, Nobel House 17 Smith Square, London SW1P 3JR  
Tel: +44 208 026 4403; +44 755 742 8543, E-Mail: harry.sampson@defra.gov.uk; trfmo@defra.gov.uk

**UNITED STATES**

**Kryc, Kelly \***

U.S. Federal Government Commissioner to ICCAT and Deputy Assistant Secretary for International Fisheries, National Oceanic and Atmospheric Administration (NOAA), Department of Commerce, 1401 Constitution Ave, Washington, DC 20230  
Tel: +1 202 961 8932; +1 202 993 3494, E-Mail: kelly.kryc@noaa.gov

**Baker, Colleen**

Sea Grant Knauss Fellow, Office of Marine Conservation (OES/OMC) Department of State, Washington DC 20520-7878  
Tel: +1 609 206 9830, E-Mail: bakerca2@fan.gov; colleen.a.baker@gmail.com

**Blankenbeker, Kimberly**

Foreign Affairs Specialist, Office of International Affairs, Trade, and Commerce (F/IATC), NOAA, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring Maryland 20910  
Tel: +1 301 427 8357, Fax: +1 301 713 1081, E-Mail: kimberly.blankenbeker@noaa.gov

**Blankinship, David Randle**

Chief, Atlantic Highly Migratory Species Management Division, NOAA - National Marine Fisheries Service, 263 13th Ave South, Saint Petersburg, Florida 33701  
Tel: +1 727 824 5313, Fax: +1 727 824 5398, E-Mail: randy.blankinship@noaa.gov

**Bogan, Raymond D.**

Alternate U.S. Recreational Commissioner, Sinn, Fitzsimmons, Cantoli, Bogan, West and Steurman, 501 Trenton Avenue, P.O. Box 1347, Point Pleasant Beach, Sea Girt New Jersey 08742  
Tel: +1 732 892 1000; +1 732 233 6442, Fax: +1 732 892 1075, E-Mail: rbogan@lawyernjshore.com

**Brown, Craig A.**

Chief, Highly Migratory Species Branch, Sustainable Fisheries Division, Southeast Fisheries Science Center, NOAA, National Marine Fisheries Service, 75 Virginia Beach Drive, Miami, Florida 33149  
Tel: +1 305 586 6589, E-Mail: craig.brown@noaa.gov

**Delaney, Glenn Roger**

Alternate U.S. Commercial Commissioner, 601 Pennsylvania Avenue NW Suite 900 South Building, Washington, D.C. 20004  
Tel: +1 202 434 8220, Fax: +1 202 639 8817, E-Mail: grdelaney@aol.com

**Golet, Walter**

School of Marine Sciences, The University of Maine/Gulf of Maine Research Institute, 350 Commercial Street, Portland, Maine 04101-4618  
Tel: +1 207 228 1671, E-Mail: walter.golet@maine.edu

**Keller, Bryan**

Foreign Affairs Specialist, Office of International Affairs, Trade and Commerce (F/IATC), NOAA, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, Maryland 20910  
Tel: +1 202 897 9208; +1 301 427 7725, E-Mail: bryan.keller@noaa.gov

**Lauretta, Matthew**

Fisheries Biologist, NOAA Fisheries Southeast Fisheries Center, 75 Virginia Beach Drive, Miami, Florida 33149  
Tel: +1 305 361 4481, E-Mail: matthew.lauretta@noaa.gov

**Leape, Gerald**

Principal Officer, Pew Charitable Trusts, 901 E Street NW, Washington DC 20004  
Tel: +1 202 431 3938, Fax: +1 202 540 2000, E-Mail: gleape@pewtrusts.org

**Loughran, Tyler**

Sea Grant Knauss Fellow, NOAA, Herbert C. Hoover Building 1401 Constitution Avenue NW, Washington 20230  
Tel: +1 206 920 4847, E-Mail: tyler.loughran@noaa.gov

**McLaughlin, Sarah**

Senior Policy Advisor, NOAA - National Marine Fisheries Service, Highly Migratory Species Management Division, 55 Great Republic Drive, Gloucester, Massachusetts 01930  
Tel: +978 281 9260, Fax: +978 281 9340, E-Mail: sarah.mclaughlin@noaa.gov

**Peterson, Cassidy**

Fisheries Biologist, NOAA Fisheries, Southeast Fisheries Science Centre, 101 Pivers Island Rd, Miami, FL 28516  
Tel: +1 910 708 2686, E-Mail: cassidy.peterson@noaa.gov

**Schalit, David**

President, American Bluefin Tuna Association, P.O. Box 854, Norwell, Massachusetts 02061  
Tel: +1 917 573 7922, E-Mail: dschalit@gmail.com

**Sissenwine, Michael P.**

Marine Policy Center, Woods Hole Oceanographic Institution, 39 Mill Pond Way, East Falmouth Massachusetts 02536  
Tel: +1 508 566 3144, E-Mail: m.sissenwine@gmail.com

**Walline, Megan J.**

Attorney-Advisor, NOAA Office of the General Counsel, Fisheries & Protected Resources Section, U.S. Department of Commerce, 1315 East-West Highway SSMC-III, Silver Spring Maryland 20910  
Tel: +301 713 9695, Fax: +1 301 713 0658, E-Mail: megan.walline@noaa.gov

**Walter, John**

Research Fishery Biologist, NOAA Fisheries, Southeast Fisheries Science Center, Sustainable Fisheries Division,  
75 Virginia Beach Drive, Miami, Florida 33149  
Tel: +305 365 4114; +1 804 815 0881, Fax: +1 305 361 4562, E-Mail: john.f.walter@noaa.gov

**Weiner, Christopher**

PO Box 1146, Wells, Maine 04090  
Tel: +1 978 886 0204, E-Mail: chrisweiner14@gmail.com

**OBSERVERS FROM NON-GOVERNMENTAL ORGANIZATIONS**

**ASOCIACION NACIONAL DE ACUICULTURA DE ATÚN ROJO - ANATUN**

**Martínez Cañabate, David Ángel**

Ricardo Fuentes e Hijos, S.A., Ctra. de la Palma, Km.7, La Palma, 30593 Cartagena, Murcia, Spain  
Tel: +34 696 440 361; +34 968 845 265, Fax: +34 968 165 324, E-Mail: david.martinez@grfeh.com;  
es.anatun@gmail.com

**ASSOCIAÇÃO DE CIENCIAS MARINHAS E COOPERAÇÃO - SCIAENA**

**Blanc, Nicolas**

Incubadora de Empresas da Universidade do Algarve, Campus de Gambelas, Pavilhão B1, 8005-226 Faro, Portugal  
Tel: +351 917 018 720, E-Mail: nblanc@sciaena.org

**Carvalho, Gonçalo**

SCIAENA, Incubadora de Empresas da Universidade do Algarve, Campus de Gambelas, Pavilhão B1, 8005-226 Faro,  
Portugal  
Tel: +351 936 257 281, E-Mail: gcarvalho@sciaena.org; sciaena@sciaena.org

**EUROPÊCHE**

**Jourdain, Jérôme**

Secrétaire général adjoint, Union des Armateurs à la Pêche de France (UAPF), Rue des Senneurs, 29900 Concarneau,  
France  
Tel: +33 298 704 508; +33 663 981 436, E-Mail: jj@uapf.org

**PEW CHARITABLE TRUSTS - PEW**

**Galland, Grantly**

Officer, Pew Charitable Trusts, 901 E Street, NW, Washington, DC 20004, United States  
Tel: +1 202 540 6953; +1 202 494 7741, Fax: +1 202 552 2299, E-Mail: ggalland@pewtrusts.org

**Samari, Mona**

Pew Charitable Trusts, 248A Marylebone Rd, Marylebone, London NW1 6JZ, United Kingdom  
Tel: +44 751 582 8939, E-Mail: monasamari@outlook.com

**Tak, Paulus**

Senior Officer, Government Relations, Pew Charitable Trusts, Square de Meeus 35, 1000 Brussels, Belgium  
Tel: +32 478 24 13 32, E-Mail: ptak@pewtrusts.org

**THE OCEAN FOUNDATION**

**Levontin, Polina**

Consultant, Renewable Resources Assessment Group Imperial College of Science, Technology & Medicine, Center of  
Environmental Science and Technology, 13 Chalcot Gardens, London NW3 4YB, United Kingdom  
Tel: +44 794 707 8739, E-Mail: levontin@hotmail.com

**Miller, Shana**

The Ocean Foundation, 1320 19th St., NW, 5th Floor, Washington, DC 20036, United States  
Tel: +1 631 671 1530, E-Mail: smiller@oceanfdn.org

**WORLDWIDE FUND FOR NATURE - WWF**

**Buzzi, Alessandro**

WWF Mediterranean, Via Po, 25/c, 00198 Rome, Italy  
Tel: +39 346 235 7481, Fax: +39 068 413 866, E-Mail: abuzzi@wwfmedpo.org

**OTHER PARTICIPANTS**

**SCRS CHAIRMAN**

**Melvin**, Gary

SCRS Chairman, St. Andrews Biological Station - Fisheries and Oceans Canada, Department of Fisheries and Oceans, 285 Water Street, St. Andrews, New Brunswick E5B 1B8, Canada  
Tel: +1 506 652 95783; +1 506 651 6020, E-Mail: gary.d.melvin@gmail.com; gary.melvin@dfo-mpo.gc.ca

**SCRS VICE-CHAIRMAN**

**Arrizabalaga**, Haritz

Principal Investigator, SCRS Vice-Chairman, AZTI Marine Research Basque Research and Technology Alliance (BRTA), Herrera Kaia Portualde z/g, 20110 Pasaia, Gipuzkoa, Spain  
Tel: +34 94 657 40 00; +34 667 174 477, Fax: +34 94 300 48 01, E-Mail: harri@azti.es

**EXTERNAL EXPERT**

**Butterworth**, Douglas S.

Emeritus Professor, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701 Cape Town, South Africa  
Tel: +27 21 650 2343, E-Mail: doug.butterworth@uct.ac.za

\*\*\*\*\*

**ICCAT Secretariat**

C/ Corazón de María 8 – 6ª planta 28002 Madrid – Spain  
Tel: +34 91 416 56 00; Fax: +34 91 415 26 12; E-mail: info@iccat.int

**Manel**, Camille Jean Pierre

**Neves dos Santos**, Miguel

**Ortiz**, Mauricio

**Kimoto**, Ai

**Taylor**, Nathan

**De Andrés**, Marisa

**Peña**, Esther

**ICCAT INTERPRETERS**

**Baena Jiménez**, Eva J.

**Faillace**, Linda

**Hof**, Michelle Renée

**Liberas**, Christine

**Linaae**, Cristina

**Pinzon**, Aurélie

**Summary of the Chair of Panel 2 on the way forward**

1. Regarding six decision points, Panel 2 agreed as follows:
  - 1) LD  
LD15% should be used.
  - 2) PGK  
There are three options: 60%, 65% or 70%.
  - 3) Management cycle  
There are two options: 2 years or 3 years.
  - 4) Stability  
The default is +20%/-30%. If a CMP with certain parameters cannot satisfy LD15%, it should be +20%/-35%.
  - 5) CMP  
There are two remaining options: BR or FO.
  - 6) Review cycle  
Tentatively agreed at 6 years.
2. In addition, Panel 2 will consider whether or not the minimum threshold of TAC change (up to 100 t for the West and up to 1,000 t for the East) should be incorporated in the management procedure (MP).
3. Panel 2 requested the SCRS to produce new quilt plots, taking into account paragraph 1 above. It was noted that the developer of FO will have to test within that CMP the effects of incorporating the minimum TAC change threshold discussed in paragraph 2 above. In addition, the developers of the BR and FO CMPs will need to test tuning to PGK65% specifically and present the output to the Panel 2. It was confirmed that this analysis should first test stability figures of +20/-30% and if the result does not satisfy LD15%, it should test figures of +20/-35%. The quilt plots from the previous and expected analyses will be as follows: 2 CMPs (BR and FO), 2- vs 3-year management cycle setting and PGK 60%, 65%, and 70% (with applicable stability figures) resulting in a quilt plot containing  $2 \times 2 \times 3 = 12$  options.
4. Panel 2 requested the SCRS to provide the results of the analysis requested in paragraph 3 above one week prior to the Annual Meeting. The developer of FO informed Panel 2 that they would make utmost efforts but could not guarantee that the work could be completed on this timeline.
5. The SCRS will also provide trajectory plots of the CMPs under 4 different assumptions about the trajectory of future indices: (1) all indices stable, (2) 10% increase per year, (3) 10% decrease per year, and (4) 20% decrease per year.