15-07 **GEN**

RECOMMENDATION BY ICCAT ON THE DEVELOPMENT OF HARVEST CONTROL RULES AND OF MANAGEMENT STRATEGY EVALUATION

RECALLING Recommendation by ICCAT on the Principles of Decision Making for ICCAT Conservation and Management Measures [Rec. 11-13] to support the achievement of the ICCAT Convention objective;

NOTING that the 2010 ICCAT Working Group for Stock Assessment Methods held in April 2010 in Madrid (Spain) endorsed the definitions on reference points presented during the 1999 *ad hoc* Meeting of the ICCAT Working Group on Precautionary Approach held in Dublin in May 1999;

ACKNOWLEDGING that the discussions held in the First Meeting of the ICCAT Working Group to Enhance Dialogue between Fisheries Scientists and Managers suggested that a dialogue of a general nature should continue on issues such as acceptable levels of risk, targets, limits and time horizons based on Rec. [11-13];

ALSO ACKNOWLEDGING that the Second Meeting of the ICCAT Working Group to Enhance Dialogue between Fisheries Scientists and Managers recommended to examine ways to further define the management framework building on Rec. [11-13], in particular in relation to reference points, associated probabilities and timeframes;

FURTHER ACKNOWLEDGING that one of the main goals of the SCRS Science Strategic Plan 2015-2020 is to evaluate precautionary management reference points and robust harvest control rules (HCRs) through management strategy evaluations (MSE);

THE INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS (ICCAT) RECOMMENDS THAT:

1. For the purposes of this Recommendation, the following working definitions apply:

   a) The management strategy evaluation (MSE) is an inclusive, interactive and iterative process for evaluating, *inter alia*, the performance of proposed harvest control rules and reference points in relation to management objectives, including the risk associated with not achieving those objectives;

   b) A limit is a conservation reference point based on a level of biomass (B_{LIM}) that should be avoided considering that beyond such limits, the sustainability of the stock may be in danger;

   c) A target is a management objective based on a level of biomass (B_{TARGET}) or a fishing mortality rate (F_{TARGET}) that should be achieved and maintained;

   d) A threshold is a level of biomass ($B_{THRESHOLD}$) reflecting the precautionary approach that triggers pre-agreed management actions to reduce the risk of breaching the limits. Thresholds should be set sufficiently far away from limits so that there is low probability that the limits will be exceeded; and

   e) Harvest Control Rules (HCRs) are decision rules that aim to achieve the target reference point and avoid the limit reference point by specifying pre-agreed management actions when $B_{THRESHOLD}$, F_{TARGET} or B_{LIM} are breached.

2. The above definition should be considered by the SCRS during its process of revising the ICCAT glossary. Based on SCRS input, the Commission should revise the definitions, as appropriate.

3. As first steps of MSE implementation for a specific stock, the Commission shall provide guidance to the SCRS. Therefore, beginning in 2016 and consistent with priorities to be agreed by the Commission in light of the SCRS work program, the relevant ICCAT Panels will identify the following management inputs on a stock-by-stock basis, for, *inter alia*, northern albacore, bluefin tuna, North Atlantic swordfish, and tropical tunas:

a) Management objectives, such as maximizing average catch, minimizing inter-annual fluctuations in TAC levels, returning or maintaining the stock in the green quadrant of the Kobe plot, etc., taking into account the requirements of Rec. [11-13];

b) Acceptable quantitative level(s) of probability of achieving and/or maintaining stocks in the green zone of the Kobe plot and avoiding limit reference points; and

c) Timeframes for halting overfishing on a stock and/or rebuilding an overfished stock.

4. As the next steps in MSE implementation and taking into account the inputs mentioned above, as soon as feasible for stocks subject to assessment and where possible, the SCRS shall advise the Commission on options for limit, target and threshold reference points and associated HCRs. In 2016, the SCRS will start by evaluating candidate HCRs during the assessment process planned for the northern albacore stock and will provide the Commission with a 5-year schedule for the establishment of species-specific HCRs.

5. In light of SCRS advice and in establishing the HCR for a particular stock, the Commission shall then determine pre-agreed management actions that will be triggered to halt or reduce fishing mortality if limit or threshold reference points are breached. When defining those actions, principles, included in **Annex 1**, might be taken into account by the Commission together with the requirements of Rec. [11-13].

6. The SCRS will be requested to continue developing appropriate MSE methods to test the robustness of alternative limit, target and threshold reference points, and associated HCRs in relation to the management objectives, probabilities and timeframes determined by the Commission.

Annex 1

When determining pre-agreed management actions associated to HCRs and reference points, Panels might refer to the following principles

i) In the case where the stock biomass is assessed as being above $B_{THRESHOLD}$, but the fishing mortality is assessed as exceeding F_{TARGET}, management actions shall be adopted to reduce the fishing mortality rate in as short a period as possible to F_{TARGET}.

ii) In the case where the stock biomass is assessed as being below $B_{THRESHOLD}$, management actions shall be implemented to reduce the fishing mortality rate in as short a period as possible to the F specified in the HCR.

iii) In the case where the stock biomass is assessed as being below B_{LIM}, severe management actions shall be adopted immediately to reduce the fishing mortality rate, including, *inter alia*, the suspension of the fishery and the initiation of scientific monitoring.