

Original: English

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

*(Proposal by the European Union)*

*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 the 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]

*FURTHER ACKNOWLEDGING* that the Second Meeting of the ICCAT Working Group to Enhance the 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 HCR through MSE;

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

1. For the purposes of this Recommendation, the following definitions for target, limit and threshold reference points apply in the context of ICCAT:
  - a) A target is a management objective based on a level of biomass ( $B_{tar}$ ) or a fishing mortality rate ( $F_{tar}$ ) that should be achieved and maintained.
  - b) A limit is a conservation reference point based on a level of biomass ( $B_{lim}$ ) or a fishing mortality rate ( $F_{lim}$ ) that should be avoided considering that beyond such limits stock and recruitment dynamics could induce possible collapses.
  - c) A threshold is a level of biomass ( $B_{thresh}$ ) or a fishing mortality rate ( $F_{thresh}$ ) reflecting the precautionary approach, fixed between the limit and target reference points as buffers allowing to reduce the risk of reaching or exceeding the limits.
2. As from 2016, for stocks subject to assessment, the SCRS shall provide where possible options of alternative HCRs with the associated limit, target and threshold reference points.
3. As from 2016, the relevant ICCAT Panels will identify the following management inputs on a stock-by-stock basis, in particular for albacore, bluefin tuna, swordfish, bigeye, yellowfin tuna and skipjack:

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- a) Management objectives. In doing so, Panels shall take into account the following general objectives:
- i)  $B \geq B_{tar}$  and  $F \leq F_{targ}$  with average probability;
  - ii)  $B \geq B_{thresh}$  and  $F \leq F_{thresh}$  with high probability;
  - iii)  $B \geq B_{Lim}$  and  $F \leq F_{Lim}$  with very high probability or extremely high probability.
- b) Acceptable level(s) of probability of achieving and/or maintaining target reference points, not exceeding threshold reference points and avoiding limit reference points. When qualifying the associated level(s) of probability, Panels should refer to the following qualitative scaling:
- i) Extremely high probability: probability levels more than 90 %;
  - ii) Very high probability: probability levels more than 75 % and less than 90 %;
  - iii) High probability: probability levels more than 60 % and less than 75 %;
  - iv) Average probability: probability levels more than 40 % and less than 60 %;
  - v) Low probability: probability levels more than 25 % and less than 40 %;
  - vi) Very low probability: probability levels more than 10 % and less than 25 %;
  - vii) Extremely low probability: probability levels less than 10 %.
- c) Pre-agreed management actions that are triggered if limits or threshold reference points are exceeded, including the timeframes for halting overfishing on a stock and/or to rebuild an overfished stock. When designing pre-agreed management actions, the following principles shall be taken into account:
- i) In the case where the stock biomass is assessed as being above the precautionary reference point ( $B_{thresh}$ ), but the fishing mortality is assessed as exceeding the precautionary reference point ( $F_{thresh}$ ), management actions shall be adopted to reduce the fishing mortality rate in line with the general objectives laid down in § 3a). When defining those actions, Panels shall also propose modalities, paths and timeframes resulting in an adequate reduction of the fishing mortality.
  - ii) In the case where the stock biomass is assessed as being below the precautionary reference point ( $B_{thresh}$ ), management actions shall be adopted to reduce the fishing mortality rate in line with the general objectives laid down in § 3a).
  - iii) In the case where the stock biomass is assessed as being below the biomass limit reference point ( $B_{lim}$ ) or the fishing mortality is assessed as being over the limit reference point ( $F_{lim}$ ), severe management actions shall be adopted immediately to reduce the fishing mortality rate, such as the suspension of the fishery and the initiation of scientific monitoring.
4. In addition SCRS is also requested to continue developing appropriate MSE methods to allow testing the robustness of different management procedures and options of HCR to achieve management objectives and to estimate the associated probabilities and timeframes.

5. SCRS shall complete the process of revising the ICCAT glossary in accordance with this Recommendation to include, inter alia, updated definitions of the following:
  - a) Reference points (target, threshold, and limit)
  - b) Harvest control rules (HCR)
  - c) Management strategy evaluation (MSE)