

**FIRMS Steering Committee Meeting****Fourth Session****Rome, Italy 26 February-2 March 2007****FIRMS Descriptors of Stock Status****Author: FIRMS chairman, with inputs from SC members**

*Summary of Information Received From Partners Regarding  
Common FIRMS Descriptors of Stock Status*

**1. Background**

During FSC3, a proposal was developed for a set of stock status descriptors for abundance and exploitation rate (below). Partners agreed to present these descriptors to their respective scientific Committee with a view to using these in FIRMS. This document synthesizes the exchanges of information received between FSC3 and FSC4.

Descriptors proposed by FSC3:

1. Exploitation rate status
  - a. No or low fishing mortality
  - b. Moderate fishing mortality
  - c. High fishing mortality
  - d. Uncertain/Not assessed
  
2. Stock abundance status
  - a. Virgin or high abundance
  - b. Intermediate abundance
  - c. Low abundance
  - d. Depleted
  - e. Uncertain/Not assessed

## **2. Information Received from Partners**

### **2.1 CCAMLR**

CCAMLR has not had an opportunity to develop specific advice on the FIRMS status descriptors. However, the Secretariat has suggested the following modifications to the FSC3 proposal:

- Include a category "e. Precautionary approach" as a descriptor, especially for the exploitation rate.
- Use the term 'unexploited stock' instead of 'virgin'.

The Secretariat also noted that CCAMLR's regulatory framework classifies its fisheries using the terms 'new', 'exploratory', 'assessed' or 'lapsed/closed'. However the transition points (e.g. from exploratory to assessed) are yet to be fully explored and agreed by the Commission.

### **2.2 FAO**

FAO reiterated that the propositions agreed in FSC3 were good and useful.

Regarding the exploitation rate descriptors, FAO suggested that some confusion could be avoided by changing "moderate" to "intermediate".

FAO was also of the opinion that excessive precision on the descriptors was not advisable, not only because the uncertainties, but also because the use of different definitions and criteria to establish reference points by the different RFBs.

### **2.2 IATTC**

IATTC welcomed the idea of referring to both biomass and fishing mortality. However, it felt that the proposal from FSC3 was not sufficiently clear about how terms such as "moderate" and "intermediate" relate to targets or limits. IATTC felt that if "moderate/high" referred to F targets and "intermediate/low" referred to biomass limits, then the proposal could be modified as follows:

#### **1. Exploitation rate status**

- a. no or low fishing mortality
- b. fishing mortality below limit point
- c. fishing mortality at the target
- d. fishing mortality above the target
- e. uncertain/not assessed

#### **2. Stock abundance status**

- a. virgin or high abundance
- b. stock above limit reference point
- c. stock at target reference point
- d. stock below target reference point
- e. uncertain/ not assessed

## 2.3 ICCAT

The ICCAT scientific committee (SCRS) reviewed the FSC3 proposal and expressed some doubts about how such a proposal would be made operational while respecting the integrity of its stock status reports. One particular difficulty stems from cases in which the stock assessment results are characterized by a broad range of uncertainty (e.g.,  $F/F_{msy}$  ranges from 0.5 to 1.5). The SCRS neither accepted nor rejected the proposal and asked that it be brought back to the table at its October 2007 meeting.

## 2.4 ICES

During FSC3, ICES explained that it uses a matrix of nine possible descriptors. Each level of stock status is expressed in wording that has been agreed and adopted by ICES and which would be difficult to change.

## 2.5 NAFO

NAFO's Scientific Council (SC) provisionally agreed to a trial classification which maps reference points from the NAFO Precautionary Approach framework, to the FIRMS descriptors as follows ( $F_{buf}$ ,  $F_{lim}$ ,  $B_{lim}$  and  $B_{buf}$  are biological reference points used by NAFO's SC):

Stock abundance status			Exploitation rate status		
Code	Status	NAFO Criterion	Code	Status	NAFO Criterion
<b>A</b>	Virgin or high abundance	$B \gg B_{buf}$	<b>1</b>	No or low fishing mortality	$F < F_{buf}$
<b>B</b>	Intermediate abundance	$B > B_{buf}$	<b>2</b>	Moderate fishing mortality	$F_{buf} \leq F \leq F_{lim}$
<b>C</b>	Low abundance	$B_{lim} \leq B \leq B_{buf}$	<b>3</b>	High fishing mortality	$F > F_{lim}$
<b>D</b>	Depleted	$B < B_{lim}$	<b>0</b>	Uncertain/Not assessed	
<b>E</b>	Uncertain/Not assessed				

## 3. Other relevant information

In January, 2007, a joint meeting of the five tuna RFMOs (CCSBT, IATTC, ICCAT, IOTC and WCPFC) took place in Kobe, Japan, which was attended by some 70 member countries and cooperating parties. One purpose of the meeting was to examine matters on which improved coordination of activities between these RFMOs could lead to more efficiency. The meeting drafted an Action Plan for the next few years. The Action Plan calls for the scientific chairs of the five RFMOs to achieve a "*Standardization of presentation form of stock assessment results.*"

Thus, it is likely that the Tuna RFMOs that are Partners to FIRMS will want to ensure compatibility between descriptors used by FIRMS and the standardized descriptors that they will develop in the near future. It should be noted that many participants at the Kobe Meeting expressed a preference for "friendly" graphical representations.

It is noted that the FIRMS Secretariat worked on mock-ups of synoptic graphical summaries of status (see [http://193.43.36.238:8181/fi/figis/firms\\_test/MapSelector/mapIndex.htm](http://193.43.36.238:8181/fi/figis/firms_test/MapSelector/mapIndex.htm)). Partners are invited to review these and other forms of presentation.

#### **4. Conclusions**

Some Partners have tentatively agreed to the descriptors developed at FSC3 and it is likely that others will agree to these descriptors if some modifications are made. However, others have not made a decision yet, and it thus seems that the adoption of a common set of descriptors will need to wait for further consultations.

FSC4 should examine the proposal developed during FSC3 and decide whether it should be modified as suggested by some Partners (see Item 2, above).

In the mean time, FIRMS should maintain the flexibility for stock status descriptors that was agreed during FSC3 so that each Partner can use its own descriptors.