

# Request to ICES for Scientific Advice for 2007

## 1 Background

### 1.1 Requirements in the amended Convention

Reference is made to the Memorandum of Understanding of 2007 between NEAFC and ICES.

According to the 2006 amendment of the NEAFC Convention, the objective of the Convention is to ensure the long-term conservation and optimum utilisation of the fishery resources in the Convention Area, providing sustainable, environmental and social benefits.<sup>1</sup>

When making recommendations for management measures the NEAFC Commission shall:

- a) ensure that such recommendations are based on the best scientific evidence available;
- b) apply the precautionary approach;
- c) take due account of the impact of fisheries on other species and marine ecosystems, and in doing so adopt, where necessary, conservation and management measures that address the need to minimise harmful impacts on living marine resources and marine ecosystems; and
- d) take due account of the need to conserve marine biological diversity.

The Commission shall provide a forum for consultation and exchange of information on the state of the fishery resources in the Convention Area and on the management policies, including examination of the overall effects of such policies on the fishery resources and, as appropriate, other living marine resources and marine ecosystems.

The ecosystem approach has been reviewed regularly by the NEAFC Commission. There is general agreement that the way forward is incrementally adding elements that integrate environmental concerns in the fisheries measures.

### 1.2 International trends

The UNFSA *UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks* states maximum sustainable yield has developed into a limit reference point for fishing mortality in well managed fish stocks rather than a target. In the “Plan of Implementation of the World Summit on Sustainable Development”,<sup>2</sup> Johannesburg 2002, it was agreed<sup>3</sup> that to achieve sustainable fisheries stocks should be maintained or restored to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015.

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<sup>1</sup> Article 2 of the 2006 amendment to the Convention

<sup>2</sup> [http://www.un.org/esa/sustdev/documents/WSSD\\_POI\\_PD/English/WSSD\\_PlanImpl.pdf](http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf)

<sup>3</sup> 31. To achieve sustainable fisheries, the following actions are required at all levels:

(a) Maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015;

### 1.3 Scientific basis for management measures for fisheries

UNFSA is rather prescriptive with respect to determining stocks status. Annex II of the UNFSA stresses the use of precautionary reference points. Two types of precautionary reference points should be used: conservation, or limit, reference points and management, or target, reference points. Limit reference points set boundaries which are intended to constrain harvesting within safe biological limits within which the stocks can produce maximum sustainable yield. Target reference points are intended to meet management objectives. Some authors suggest that the MSY should be the limit reference point rather than the target.

Stock assessments render valuable insight into exploitation rates that have been sustained in the past. However, as stated by many authors, generally assessments are notoriously weak in estimating the present state of the stock and, therefore, represent a poor basis for predictions.<sup>4</sup>

The differences in estimated fishing mortality and spawning-stock biomass in the same year from subsequent assessments, as shown in retrospective analyses even in the best assessments, causes problems that have to be addressed by management i.a

- Do annual TACs result in a desired level of fishing mortality?
- Can the uncertainty in the advice be made explicit to allow managers to gauge the true risks involved in their decisions?
- Can the advice be presented in a way so the science is more transparent and stakeholders and managers can deal with uncertainty up front?

The ecosystem approach and, in general, the impact of fisheries on species other than target species and habitats is expected to be added incrementally and integrated into the measures already in place in the years to come. This involves area management for which NEAFC seeks specific advice.

## 2 Specification of requests

### 2.1 Standard recurring advice

NEAFC requests ICES to provide, not later than ....., advice on the status of fish stocks in the NEAFC Convention Area in accordance with the MoU between ICES and NEAFC. Reference is especially made with respect to **ANNEX 1. Ecosystems and stocks for which advice is given:**

Advice is provided regarding marine ecosystems within the geographical scope of this agreement. The particular stocks are those listed below. In the case of the stocks for which a Client Commission has specific responsibility, the primary request to ICES shall be made through that Client Commission.

Advice shall normally be provided for each calendar year. However, for stocks where measurement precision is low compared to the expected magnitude of changes in stock size advice may be provided at intervals greater than each year. For short-lived species and highly seasonal fisheries the timing of the advice shall be adapted as appropriate;

and **ANNEX 2: Recurring advice required from ICES:**

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<sup>4</sup> Background information is found in a note from the NEAFC Secretariat doc. PECM2007/02/.

“Recurring advice shall be given in the context of ecosystems and fisheries.

“The recurring advice shall include information on the state of marine ecosystems and human impacts including historical developments in main parameters and information on the present state and recent development of stocks. The recurrent advice shall provide information on state of stocks and fisheries including - when available - historical developments in spawning stock biomass, total stock biomass, fishing mortality, landings and discards.

The recurring advice regarding fisheries management will include advice on long term management strategies and short and medium term implications of these as detailed below.

Implementation issues shall be specifically addressed in the advice. Regarding fisheries management advice ICES will evaluate implementation issues and the outcomes of specific management measures. Specifically, when new regulations are introduced ICES shall provide evaluations of these when sufficient information is available.

When IUU (Illegal, Unregulated and Unreported) fishing is indicated to take place ICES will consider the effects on the stocks of such fisheries in the advice.

When providing its advice regarding fisheries ICES shall take account of all available information and the context of fisheries management including information from the fishing industry, ecosystem considerations, environment and hydrographical conditions, regulations in force that affect fisheries, factors affecting fishing operations and information about the fisheries, development of fisheries technology and relevant performance changes and other relevant factors that affect fishing or fish stocks.

Advice from ICES shall in all cases take account of the accuracy and precision of the available assessments and forecasts. Information about the accuracy and precision of assessments and forecasts shall be presented and considered in the advice.

If ICES is aware of implementation problems regarding agreed management plans the advice should highlight this and consider these issues in its advice on short term implications of these management plans.

If agreed management plans or recovery plans exist which ICES does not consider in accordance with the criteria defined in the NEAFC Convention or if no agreed management plans exist, ICES shall advice on management measures (including options for management plans) which ICES finds in accordance with the NEAFC Convention. If significantly different, the advice shall be given separately for a risk avoidance approach, based on the Precautionary Approach, and an MSY approach within the limitations of the Precautionary Approach. The short term implications of such measures shall be provided.

The short term implications will, when adequate data are available, be expressed as quantified consequences of the management measures currently implemented for that stock or fishery. For the management year (or years in the case of multi-annual management regimes), the short term consequences of relevant management measures should be given for relevant intervals of action while reflecting the uncertainties regarding expected outcomes.

In those cases where the uncertainties in the evaluation of outcomes are such that a quantitative distinction between management measures is not possible ICES shall provide quantitative or qualitative information regarding expected outcomes of relevant management measures over intervals of action which reflect the uncertainty in the evaluation. In cases where data are insufficient to provide the basis for quantitative advice ICES shall provide information on the reasons for this deficiency and advice on management measures which, given the uncertainties, are considered consistent with the NEAFC Convention.

### **Ecosystem approach**

The advice shall be based on an ecosystem approach. This will be implemented incrementally so that any information on the interactions between fisheries, the fish stocks and the marine ecosystem is considered and incorporated in the advice as it becomes available; specifically, taking ecosystem and environmental considerations into account when providing the recurring advice mentioned above, ICES will:

- a) Assess the extent to which fishing disturbs the marine ecosystems and, where reference levels have been established, compare the impact to the reference level chosen.

- b) Provide any new information regarding the impact of fisheries on other components of the ecosystem including small cetaceans and other marine mammals, sea birds and sensitive habitats.
- c). Inform NEAFC of any notable impact of other factors on and imbalances in ecosystem structure that may prejudice the stocks of commercially valuable species and its long term exploitation;
- d) Propose reference points as guidance for management purposes in an ecosystem context.

ICES will in addition give warnings of any serious threats from fishing activities alone or in conjunction with any other relevant activity to local ecosystems or species as soon as ICES is aware of such threats.

#### **Provision of information**

In support of its advice ICES shall provide NEAFC with:

- a) A full methodological description of the assessment and advisory procedure for each stock, updated whenever a significant change is made;
- b) Estimates of landings, fishing mortality, recruitment and spawning stock together with information or estimates of the uncertainty with which these parameters are estimated. These data shall be provided electronically;
- c) Estimates of relevant reference points for management;
- d) On request, complete data records used for assessment purposes shall be provided. These data shall be provided electronically;

Such information should be provided whenever significant changes are made or can be detected, but not normally more frequently than implied by the schedule in Annex 3. However, NEAFC should be informed immediately of any new information indicating a previously unforeseen biological emergency.”

## **2.2 Non-recurring advice**

### **2.3 Annex I Response from ICES to request for advice**

2 March 2007

#### **Subject: Request for advice in 2007**

Dear Kjartan,

Thank you for the request for advice for 2007 as specified in the letter dated 13 December 2006, in which NEAFC requests ICES to provide advice:

#### ***1. Assessment methodology, blue whiting and Norwegian Spring Spawning (Atlanto-Scandian) herring.***

*NEAFC asks ICES to evaluate the results of the joint Russian-Norwegian project on developing new assessment tools for blue whiting and Norwegian Spring Spawning (Atlanto-Scandian) herring.*

This question has been forwarded to the Working Group on Northern Pelagic and Blue Whiting (WGNPBW) who will meet in autumn 2007. The response will be provided within October.

#### ***2. Regarding redfish stocks in the North Atlantic (ICES areas I, II V, VI, X, XII and XIV and the NAFO regulatory area).***

*a. NEAFC requests ICES to provide information on the stock structure of *Sebastes mentella* fished in pelagic and demersal fisheries on the continental shelf and slope in the entire area, i.e. relationship between the redfish in areas I, II, V, VI, X, XII and XIV and NAFO regulatory area;*

The information that has been gathered as far as ICES is aware does not warrant a re-evaluation of the stock structure. ICES has asked the relevant expert groups (the fish stock assessment groups and the Working Group on Stock Identity) to compile data and inform the advisory system when the data would allow a re-evaluation. Therefore, it is unlikely that ICES can provide new advice on this issue in 2007. (see response to 2f below)

*b. NEAFC will seek specific advice from ICES along the lines of that given recently regarding deep-sea species on the appropriateness of the introduction of potential management units for redfish in the Irminger Sea and adjacent waters.*

ICES does not consider that there is any change of the basis for the advice. Perhaps, this question needs clarification on what NEAFC intends by the reference to advice for deep-sea species by ICES. I expect your comments on this issue.

*c. In order to allow the Contracting Parties to formulate and implement a recovery and subsequent management plan for pelagic redfish in the Irminger Sea and adjacent waters, NEAFC will request ICES to recommend appropriate harvest control rules which take into account the need to avoid disproportionate exploitation of redfish in different geographical areas.*

*d. The objective of any future management plan shall be to establish such levels of catches and fishing effort which will result in the sustainable exploitation of pelagic redfish in the Irminger Sea and adjacent waters. This management plan should take due account of the management measures agreed for 2007 as set out in this recommendation.*

These requests have been passed on to the North Western Working Group (NWWG) and ICES will respond in October 2007.

*e. NEAFC requests ICES to provide a detailed description of the newly developed pelagic fishery for *Sebastes mentella* in the Norwegian Sea as well as the traditional fishery on the slopes, especially with regard to temporal and spatial distribution;*

The Working Group on Arctic Fisheries (AFWG) will consider this item at their meeting and ICES will respond in June.

*f. NEAFC is aware of genetic research ongoing aiming at clarifying the uncertainty regarding the origin of the redfish in the high seas*

*within ICES Division II. The aim of the researchers is to finalize a draft report of their findings during the first half of 2007. Based on these results and other relevant information, ICES is requested to advise NEAFC on possible relationships of pelagic redfish in ICES Division II with *Sebastes mentella* in adjacent areas.*

NEAFC is kindly asked to provide ICES with further information on this ongoing research so that the information can be passed on to the Working Group on Stock Identity (SIMWG). This Group is tasked to compile relevant information, and especially new information, and in cooperation with redfish experts evaluate the available information and whether a re-evaluation of the stock structure is warranted. The Group works by correspondence in 2007. If the Group concludes that sufficient new data are available, ICES will re-evaluate the stock structure in 2008. ICES will keep NEAFC informed of the work of SIMWG.

### **3. Regarding vulnerable habitats and deep-water species.**

#### **a. Vulnerable deep-water habitats in the NEAFC Regulatory Area.**

*NEAFC requests ICES to continue to provide all available new information on distribution of vulnerable habitats in the NEAFC Convention Area and fisheries activities in and in the vicinity of such habitats.*

*Particularly relevant is information assisting NEAFC in evaluating appropriateness and effectiveness of the temporary closures of the Faraday, Hecate, Antialtair, Altair seamounts and the area on the Southern Reykjanes Ridge. NEAFC also requests advice on other possible actions to protect vulnerable habitats in the Regulatory area. NEAFC requests that such information should be available not later than November 2007.*

The Working Group on Deep-water Ecology (WGDEC) will consider this question, and the advice will be released to NEAFC in June after joint consideration by ACFM and ACE.

#### **b. Deep sea species.**

*NEAFC requests ICES to evaluate the use and quality of VMS data and records of catch and effort to be received from NEAFC in order to provide information on the spatial and temporal extent of current deep-water fisheries in the NE Atlantic. If data quality allows such analyses, these should be provided with particular emphasis on activity in the NEAFC Regulatory Area.*

*NEAFC reiterates its request that ICES develop suitable criteria for differentiating fisheries into possible management types (e.g. directed deep-water fisheries, by-catch fisheries etc.) and to apply these criteria to categorise individual fisheries in order to enable NEAFC to develop*

*fishery-based management initiatives. Shortcomings in data quality that impede this exercise should appear in the evaluation under pt 1.*

ICES concluded based on the analysis presented to NEAFC of the 2003-2005 VMS data that the usefulness of VMS data would be greatly improved by linking VMS information to logbook information providing gear and catches. ICES concluded that if the analysis should be taken further indeed such merging of data sets would be necessary. ICES offers that the Chairs of WGDEC and WGDEEP, Paul Marchal and Mark Tasker will visit NEAFC HQ during this spring and together with NEAFC determine what data are available and what data are required to provide a response in continuation of the advice given in 2006. ICES is aware of the confidentiality issues and will fully cooperate with NEAFC in respecting such concerns.

*ICES is also asked to compile data on documented historical or present spawning/aggregation areas of blue ling in the NEAFC Convention area.*

WGDEEP will deal with this issue during their meeting in April and the response will be provided in June 2007.

***c. Co-ordination of scientific deep sea surveys in the NEAFC Convention Area.***

*NEAFC asks ICES to consider co-ordination of existing deep-sea surveys. The evaluation may also include recommendations for the development of new surveys if it is considered to be appropriate.*

WGDEEP will discuss general requirements for deepwater surveys, looking at existing surveys and consider how these meet the requirements. Also, WGDEEP may consider changes, need and opportunity for co-ordination. Depending on the results from WGDEEP, ICES may decide to set up a Planning Group for deep-sea surveys at this year's Annual Conference. ICES will report on the developments and outcomes from WGDEEP in June.

Yours sincerely,



Hans Lassen  
Head of Advisory Programme