

## **Report of the Diadromous Fish Committee (DFC)**

Chair: Niall Ó Maoiléidigh (Ireland)

Rapporteur: Julian MacLean (UK, Scotland)

The Committee met on 20 and 22 September 2006. Between 16 and 30 people attended with 11 of the 26 committee members present over the 2 days.

### **Opening**

The meeting was opened by the Chair who welcomed the participants. The agenda was adopted following the addition of items under AOB. The Committee appointed Julian MacLean (UK, Scotland) as rapporteur.

### **Committee business:**

## **Matters arising from the Consultative Committee and the Advisory Committees**

### **Discussion on restructuring process**

An overview of the proposed restructuring of the ICES advisory structure, to be operational by 1 January 2008, was presented by the Chair. The new structure was still in development but one of the main objectives of the exercise was to develop an ecosystem approach, integrating fisheries and the environment into the advice process. The restructuring was to be cost neutral. DFC had four main issues which it wished to be clarified:

- How will the Advisory Group handle the development of an ecosystem approach given that the group is dominated by fishery experts?
- On a similar topic, as the process is changing to an ecosystem approach, what kind of final product is envisaged?
- What is the time scale for the output of expert groups to go through the review group?
- What are the arrangements for the Quality Assurance process?

### **Integrated ecosystem advice – continued request from the Consultative Committee for new ToRs to promote integration of fisheries and ecosystem advice**

The DFC considered that the expert groups associated with DFC directly or indirectly (e.g. salmon and eels) had integrated changes in oceanic environmental factors (mainly SST) in the catch advice procedure or generally exerted their influence when assessing the status of stocks in assessments. Further integration is being explored which might enhance assessments.

### **Links with other committees and overlap**

In general, DFC is content with the level of current linkage and overlap (e.g. with Mariculture, Living Resources, and ACFM) when proposing theme sessions, etc., and will continue to develop and strengthen cross-committee theme sessions.

### **Adequacy of arrangements for meeting**

DFC reiterated that they were satisfied with the meeting arrangements and were pleased to note that their request for a conference style layout had been adopted for the DFC committee meetings.

## Reports of expert groups

### **Overview of the Report of the Study Group on the Status of Diadromous Fish Species (SGSDS) and next steps**

The document was to be used primarily to provide guidance on the status of specific diadromous fish species using national/international criteria. Two emergent issues relating to the status of these species were identified, namely;

- Water quality barriers in estuaries
- Human alterations to estuaries

DFC then considered possible ways in which to secure greater involvement from experts working on diadromous species other than salmon and eels. No firm conclusions were reached, but DFC was aware that ICES might ask for specific advice on particular species and that DFC would be required to respond.

### **Overview of the Working Group on North Atlantic Salmon (WGNAS) and ACFM advice and identify recommendations and new advances in research contained in the report**

The current tenuous status of the stocks of North Atlantic salmon was noted. DFC then considered possible ways in which it could assist with some of the recommendations made in this report. Specifically, the DFC resolved to:

- Propose a Study Group on the Establishment of a Framework of Indicators for Salmon Stock Abundance to take place in November 2006.
- Propose a Workshop to collate and re-evaluate historical tag data from oceanic tag recoveries and oceanic tagging studies.

NASCO indicated that the priorities in the request to ICES in 2007 were both the development of a framework of indicators and the provision of catch advice for 2007.

### **Overview of the Working Group on Eel (WGEEL) and eel issues**

An overview of the Working Group on Eel (WGEEL) was presented by the Chair of the Working Group, Willem Dekker (Netherlands). Recruitment values in 2005 remained low and prospects for recovery are being hampered by the slow development of EU management plans. In drafting the ToRs for the 2007 meeting it was recognized that the report would continue to focus on providing the traditional form of advice but that a separate research programme was required to enhance understanding of basic eel biology. It was stressed that until the biology was better understood, developing rational management practices was difficult.

A presentation on the forthcoming eel investigation under the Galathea 3 programme was given by Henrik Sparholt (ICES secretariat), who is involved in this project. This will take place in March and April 2007 in the Sargasso Sea. The aims are to investigate the spawning biology and genetic structuring of European and American eels. The specific tasks are to: describe the distribution of eel eggs and larvae, compare the distributions of European and American eels, compare these results with earlier studies, analyse the plankton ecosystem, assess the genetic diversity across the area of larval distribution, observe spawning eels, and capture mature eels. Any assistance by DFC members or associates with this project would be welcomed by the project group.

A presentation on a proposal for a CITES listing of eel was given by Håkan Wickström (Sweden). This is a Swedish proposal and, if successful, will provide an instrument to regulate the export trade of European glass eels which are currently being overexploited. DFC was

noted that there was an OSPAR proposal to protect eels and that some progress was also being made to protect the American eel.

### **Overview of the WGBAST and ACFM advice**

The overview was presented by a member of the WGBAST, Lars Karlsson (Sweden). The assessment was performed on six groups of wild salmon, using a Bayesian approach. The status of wild salmon has increased over the last ten years, but the current smolt production is below the estimated full production capacity. On reviewing the report, ACFM found the Bayesian approach difficult to review and were concerned about the use of stock and recruitment parameters developed outside the Baltic. The WGBAST noted that the review group contained neither a salmon biologist nor a Bayesian statistician. DFC members acknowledged that the Bayesian approach was also adopted in some national assessments for North Atlantic salmon. Although somewhat more difficult to present than conventional methods, it could be an appropriate analysis in the right circumstances. The ACFM Chair confirmed that steps were being taken to review the approach and resolve the issue, stressing that ICES requires transparent models, with part of the concern being the need to communicate to stakeholders in a clear manner the way in which advice is formulated.

### **Forthcoming symposia and theme session topics**

#### **Report of the Joint NASCO/ICES Symposium on Interactions between Cultivated and Wild Diadromous Fish Stocks**

A presentation was given by a co-convener, Lars P. Hansen (Norway). The objectives of the symposium were to:

- Summarize available knowledge of the interactions between aquaculture and wild salmon stocks and other diadromous fish species;
- Identify gaps in the current understanding of these interactions and to develop recommendations for future research priorities;
- Review progress in managing interactions, the remaining challenges, and possible solutions;
- Make recommendations for additional measures to ensure that aquaculture practices are sustainable and consistent with the precautionary approach.

Participants from 17 countries contributed to a total of 35 papers and 13 posters. A number of recommendations resulted, including improving farm salmon cage technology, developing methods to recapture escapees, controlling sea lice and understanding their dispersal mechanisms, and investigation of the socio-economic effects of farmed salmon. DFC considered the resultant recommendations with a view to developing future theme sessions.

#### **Update on theme session “Is there more to EELS than slime”**

Overall, the theme session was very successful, attracting 37 submissions covering management, biology, and modeling. Of concern was the limited progress in progressing basic investigations and answering biological questions. DFC attempted to identify the features that had made the session so successful so that these could be considered in the development of future theme sessions. Among the main features identified was an early announcement of the theme session and a focused theme which was easy to relate to.

#### **Update on plans for a joint ICES/NASCO/PICES/NPAFC/Baltic Sea RAC Symposium on “Factors Affecting Mortality of Salmon at Sea” and update from NASCO on marine research initiative**

Plans for the joint symposium are underway. Some of the drivers for increased marine mortality seen in both Pacific and Atlantic salmon may be the same. The likely cost of the

symposium will be in the region of \$70k which the sponsoring organizations will need to budget for.

An update on the NASCO International Atlantic Salmon Research Board's Inventory of Research was presented by Peter Hutchinson (NASCO). The inventory is used as a tool for co-ordinating research and identifying research gaps. A total of 51 projects are listed, 10 of which were new in the 2006 update. Total funding already committed for marine salmon research was estimated at approximately £5m.

A brief overview of the component parts of the NASCO Salmon at Sea (SALSEA) initiative was presented by Malcolm Windsor (NASCO). A team of international consultants (Brakelys) has been employed to assess the possibilities. They have identified a likely ceiling of £4m being possible from the private sector who are likely to relate easily to the aims and objectives of the study; thus, funding of SALSEA will need to progress as a public/private partnership. The cost of SALSEA is approximately £8m in total but this is based on the full and comprehensive package and all components. Keeping NGOs involved was seen as imperative as many of these organizations represent international groups (e.g. WWF, AST, ASF) who have significant experience in developing public awareness. The President of NASCO, Dr Ken Whelan, had taken on the role of main contact to present the proposal to international corporations and institutions. Recent meetings with international companies had proven to be very positive and significant interest had been generated. A further 16 meetings have been arranged with international institutions. The possibility of developing a programme to apply for EU FP7 is being considered and the EU Commission have been briefed on the importance of the project in terms of understanding the oceanic phase of the salmon life-cycle.

### **Election of new Chair of DFC**

14 committee members or Delegates were available to vote. Ted Potter (UK) was the only candidate entered into the election and was elected unanimously.

### **Presentation and adoption of reports and draft resolutions**

#### **DFC resolution for a Study Group on Salmon Age Determination (SGSAD) in 2007**

DFC had previously considered a wider remit for this salmon aging group which might include North Atlantic salmon. However, it was agreed that the present group should at least have their next meeting before this was decided.

#### **DFC Resolution for a Study Group on Establishing a Framework of Indicators of Salmon Stock Abundance (SGEFISSA)**

The driver for this work is directly linked to the move to provide multi-annual advice for both the West Greenland and Faroese fisheries where it is recognised that, in a phase of continued low abundance, catch advice will not change. The establishment and use of abundance indicators will give notice of any change in abundance within the period covered by the multi-annual advice.

#### **DFC resolution for a Workshop on the Development and Use of Historical Salmon Tagging Information (from oceanic areas) (WKDUSTI)**

After some discussion, DFC agreed that this should be in February 2007 and that recoveries of tags in ocean fisheries should also be included. Further, the issue of which organization would hold and maintain the resultant database should be decided before the study group takes place. Sponsorship from the International Atlantic Salmon Research Board of NASCO to help with travel for an expert (GIS/oceanographic field) was agreed in principle. The favoured venue

was Canada as Canadian scientists who had an important contribution had expressed concerns about traveling costs for meetings outside Canada.

**DFC/Mariculture Committee Resolution for a theme session on “Stock Identification – Applications for Aquaculture and Fisheries Management” to be held in 2007**

The DFC discussed widening topics to include stock identification, using scale and otolith microchemistry to attract more varied contributions and to strengthen the application of the methods rather than the development to be more attractive for managers and stock assessment biologists. Also, a stronger link to the Mariculture Committee was considered desirable, including having a co-convenor from the Mariculture Committee.

**DFC resolution for a theme session on “Strategies for Monitoring and Assessing Diadromous Fish, Including Threatened and Endangered Species” to be held in 2008**

The DFC considered that this could be strengthened by contacting and involving other groups whose brief included protection or wildlife e.g. IUCN, WWF, Atlantic Salmon Federation, etc. DFC considered that this theme session could include non-diadromous species also in order to expand the topic and encourage papers dealing with stock assessment for marginal or low abundance species.

## **AOB**

**Moving towards an action plan for European sturgeon restoration (WWF/IUCN)**

A brief overview was given by the DFC Chair. This species, which was previously widespread throughout Europe now has only one small surviving spawning population in the Gironde, France. 13 separate action plans have been proposed with several specified sub-actions covering management, protection, review of legislation, etc. The DFC noted that the current EU Habitats Directive, while being extremely useful for many diadromous fish species does not adequately address species which are on the verge of extinction. Much more is required in terms of immediate actions than those indicated in the EU Habitats Directive.

## **Chairing of WGEEL**

The outgoing Chair of WGEEL, W. Dekker has been in the position since 1996. He informed the DFC that there were currently no nominations for a new Chair. WGEEL members are reluctant to take on the role due to the lack of development at EU and national level in applying the Eel Management Plan. Some members of the WG stated that they would not be well supported in their home countries as the role required some extra travel and attendance at meetings. EIFAC and ACFM have been warned of situation, but no solutions have been identified so far. DFC considered that it was necessary to separate the problems of lack of progress with national eel plans and the basic job of running the WGEEL meeting. The DFC also considered that the Chair should come from within the group and that the group should be encouraged to nominate someone who would then be endorsed to their national delegates by ICES.

## **Closing**

The outgoing Chair, Niall Ó Maoiléidigh thanked the committee members and others for all their feedback and support over the past four years. The incoming Chair, Ted Potter expressed his gratitude to the outgoing Chair on behalf of the committee.

**Main highlights**

- High attendance (30) on the day with no themes sessions, many off the street. Attendance was lower (18) on the second day, featuring 11 of 26 committee members.
- Feedback on the publication of ICES/NASCO Symposium on “Interactions Between Cultivated and Wild Diadromous Fish Stocks” was very good.
- More progress on updating plans for a joint ICES/NASCO/PICES/NPAFC/Baltic Sea RAC Symposium on “Factors Affecting Mortality of Salmon at Sea” and update from NASCO on marine research initiatives.
- The theme session “Is there more to EELS than slime” was very successful.
- A presentation on the forthcoming eel investigation under the Galathea 3 programme was given by Henrik Sparholt (ICES secretariat).
- Chair of WGEEL.
- New Committee Chair Ted Potter.