

Diadromous Fish Committee (I)

Chair: Niall Ó Maoiléidigh (Ireland)

Rapporteur: Malcolm Beveridge (UK, Scotland)

The Committee met on Tuesday 21 September from 14:00 to 18:00 and on Wednesday 22 September from 11:30 to 13:30. 18 participants attended the meeting,

Opening

The Chair welcomed the participants, reminding Delegates of the ToRs, aims, and responsibilities of the Diadromous Fish Committee. The Diadromous Fish Committee was to act as a forum for discussion of all aspects of diadromous fishes and to consider the status of stocks and recommendations for research as reported by Expert Groups and directly by members of the Committee.

Appointment of a rapporteur

Malcolm Beveridge (UK, Scotland) was appointed rapporteur.

Adoption of agenda and arrangements for the meeting

Changes to the order of business were briefly reviewed and the agenda was duly adopted. The arrangements for the meeting, including the use of audio-visual equipment and reporting procedures were outlined.

Committee business

Reports of SGSDF, SGBYSAL, and SGSSR

The Chair of the Diadromous Fish Committee presented a summary of the draft report of the Study Group on the Status of Diadromous Fish Species (Doc. I:02), drawing attention both to the information that had been compiled to date and to the deficiencies. The Committee was asked to consider recommendations for further reports from countries, the usefulness of summarising information in tabular form, and the need to develop a plan of action as final inputs to complete the draft and formally submit this to ICES. It was noted that many blanks in the tabular summaries could be easily completed. Many species, for example, were not present in a number of countries; remaining gaps could then be readily identified and specific requests for information put together. Principal deficiencies were in North America. The Committee noted the September deadline for the SGSDF report, but agreed that the updated draft, including the recommended additions should be re-circulated for comments before formal presentation to ICES by October 2004.

The Report of the Study Group on the Bycatch of Salmon in Pelagic Fisheries (SGBYSAL – Doc. I:01), was presented by the Chair, Marianne Holm (Norway). While much progress had been made on identifying the overlap in time and space between pelagic fisheries and the likely distribution of salmon post-smolts and adults, the absence of critically important disaggregated commercial catch data from NEAFC member countries was highlighted and discussed. It was noted that both NASCO and the ICES secretariat had written to NEAFC to help expedite the data from member states. It was also suggested that NEAFC vessel monitoring system data, although only of recent origin, may also be used in the shorter term. The DFC also noted that the next SGBYSAL meeting must take place after the various pelagic working groups had met, in order that the appropriate fisheries scientists could attend, but prior to the meetings of the Atlantic salmon working groups in April 2005. It was noted that

the report and its recommendations were of importance to the NASCO SALSEA research project and that efforts must be made to ensure that the findings were fed into the development of the research project. The Committee resolved to hold the Study Group again in 2005 if either the appropriate data were made available or a strong commitment to providing these data was made. Similarly, the Committee recommended that a member of the Fish Technology Committee be invited to the meeting to allow a more in-depth review of inter-calibration between commercial and research trawling methods.

No report is available as yet from the Study Group on Salmon Scale Reading (SGSSR). This meeting, to be chaired by Lars Karlsson (Sweden), will be held in Riga during November 2004. The ToRs were reviewed by the Committee and it was agreed that they should remain unchanged. It was noted that both wild and hatchery fish scales were being considered, but that the two-day meeting would be unable to cover topics such as sea trout, North American Atlantic salmon scales, or isotope analysis. Given concerns expressed by Delegates about the importance of scale reading work for other diadromous fish species, the remit of the Study Group should be reviewed at next year's DFC meeting with a view to expanding the ToRs.

Review of status of stocks and research requirements for WGNAS, WGEEL, and WGBAST

While it was acknowledged that ACFM reviewed the advice from the Working Groups on North Atlantic Salmon (WGNAS), Eels (WGEEL), and Baltic Salmon and Sea Trout (WGBAST), the Committee considered that new developments, recommendations, and future plans in these Working Group reports should also be considered by the DFC.

The status of stocks and recommendations for further research by WGNAS were presented by the Chair of DFC. Most of the major stock complexes assessed by ICES are outside safe biological limits, and much of the recent decline has been attributed to problems in the marine habitat. It was noted that recommendations from WGNAS were included in the developing NASCO SALSEA Project (see below), intended to comprehensively investigate the biology and ecology of Atlantic salmon at sea. It was also noted that there were continuing developments on Atlantic salmon genetics, through EU and other initiatives that had broad implications for stock identification. The Committee noted that the pilot scale tagging study, recommended by the WGNAS and planned for April 2004, in which 500–1000 externally tagged large salmon would be released at sites in major salmon farming countries (Norway, Scotland, Ireland, Russia, Faroe, Iceland), was postponed for a year for a variety of reasons. The salmon farming industries in some countries were reluctant to support the work and there were health concerns from veterinarians. In stressing the significance of farm escapees for the management of wild Atlantic salmon stocks, the attention of the Committee was drawn to the most recent data from the Faroes, which indicated that 25–30% of salmon caught in the commercial fishery were of farmed origin.

The WGEEL report (ICES CM 2004/ACFM:09) was presented by the Chair (Willem Dekker, Netherlands). The information clearly showed that both eel recruitment and landings had declined significantly in recent years and were currently at all time historic lows. Moreover, further significant declines were inevitable. Work on the development of management targets and post-evaluation was presented and a summary of the status of Management Plans in European member states was given, showing that few countries had yet elaborated such plans and that none had as yet been implemented. Parallels between the status of eel and sea trout stocks were drawn. Clarification was provided on the interactions between the European Commission and ICES with regard to the provision of scientific advice. While there is a Memorandum of Understanding between the two bodies regarding the provision of advice, there had been no specific request to ICES for advice on eels. The DFC was reminded, however, that it was within the ICES mandate for the Committee to make a resolution for an eel working group through a science committee. General concern was expressed by the

Committee that there was inadequate response to the current eel situation both at scientific (ICES and EIFAC) and management (EU) level.

It was reported that the EU was currently considering emergency action, in which exploitation of all life stages of the eel might be closed for several months each year until scientifically-based Biological Reference Points (BRPs) were developed and could be introduced. The responsibility for developing such BRPs for eels was not clearly assigned. The development of appropriate BRPs for Atlantic salmon in the North East Atlantic had been facilitated by a specific EU-funded concerted action (SALMODEL) and these were applied by ICES in the provision of advice. There was general consensus that a similar approach would progress these issues for eel. The Committee agreed to update the current ToRs for the WGEEL with the intention that there be a working group meeting held in either November or December in 2004.

The Committee considered a presentation of the WGBST (Doc. ACFM:23) providing information on status of stocks and research recommendations. Specific attention was paid to growing concerns about the poor survival of hatchery-produced smolts (possibly due to the increasing size of hatchery fish as a result of artificial high nutrition feeds) and the perilous state of sea trout populations in the northern part of the Baltic due to bycatch in coregonid fisheries and the impact of hydro-schemes. Overlap with WGNAS recommendations for Atlantic salmon was noted and ideas for future theme sessions were discussed (see below).

Inclusion of a wider range of diadromous fish stocks and topics

Conclusions and recommendations of the 1st International Sea Trout Conference, held in Cardiff 6–8 July 2004, were presented (K. Whelan, Ireland). It was noted that an international forum to focus on the management and protection of stocks (similar to those for salmon and eel) was absent. Despite the fact that sea trout does not generally undertake large-scale geographic migrations and is therefore not exploited outside of national jurisdictions, the Committee felt that much could be done to improve coordination of research and monitoring efforts among participant ICES countries.

Consultative Committee and Diadromous Fish Committee business

Links with other committees and overlap

Attention was drawn to the developing links with other committees. Specifically, the Chair of SGBYSAL had requested that a nominee of the Fisheries Technology Committee should attend the next SGBYSAL to improve the input on inter-calibration between commercial fishery fishing methods and research fishing methods. Similarly, a member of the Mariculture Committee was on the steering committee of the 2005 Symposium on “Interactions between cultivated and wild diadromous fish species”.

Specific requirements to help the Diadromous Fish Committee in its work

No specific requirements were noted.

Nominee for Merit Awards Steering Group and nominee for committee for ICES/PICES Young Scientist Conference 2007

Håkan Wikström agreed to represent the DFC on the Steering Group. Details were also presented for the ICES Young Scientists Conference, to be held in 2007. Nominations for membership of the Steering Committee, which would be tasked with choosing a suitable theme and helping organise the conference, were also sought.

Adequacy of arrangements for meeting

The Committee noted that as far as possible, future DFC meetings should be scheduled to avoid clashing with those of the Mariculture Committee. It was also felt that a meeting room which facilitated round table discussion rather than an auditorium style room was preferable.

Forthcoming symposia and theme session topics

An overview of theme sessions for 2005 was presented, drawing specific attention to those that were likely to be of most interest to DFC Committee members and asking them to bring them to the attention of colleagues.

Feedback on Theme Session 'Non-high seas habitats and the way that the different diadromous fish use these' (2004)

Fourteen submissions were to be presented as papers (two cancelled) and six as posters. Two papers were on shad, six on eels, and four were on salmon. Three of the presentations were from North America.

Theme session in 2005 on 'rebuilding diadromous fish stocks'

The SGSDf report had highlighted that many species were vulnerable or endangered. The theme session would focus on stock rebuilding programmes, in which status of stocks, a review of threats and problems, stakeholder involvement, action plans and their implementation and monitoring should all be included. While papers on entire programmes, both implemented and planned, would be sought, aspects of programmes would also be acceptable. Examples of stock rebuilding programmes include the development of the NASCO guidelines and specific examples from the Baltic and Bay of Fundy for Atlantic salmon, the EU Action Plan for European eels, Irish and Scottish sea trout recovery programmes, recovery programmes for Norwegian Atlantic salmon stocks impacted by *Gyrodactylus salaris*, striped bass in the United States, sturgeon in Europe, and lampreys in Portugal. The current title was changed to '*Rebuilding programmes for diadromous fish populations*', and it was suggested that two further Conveners in addition to Ted Potter, representing non-salmonid and North American interests, should be sought.

Update on ICES/NASCO symposium in 2005 – 'Interactions between cultivated and wild diadromous fish species'

An update was presented to the Delegates by the symposium conveners. The date and venue were given. The reason for the symposium, target groups, the structure of the symposium, presentation formats, and publication plans were summarised. The availability of symposium details on the ICES and NASCO websites and in the first announcement flyer was also given. It was noted that the conveners aimed to create an environment which would foster constructive dialogue among all parties. NASCO accorded the symposium the highest priority and felt that it would be similarly regarded by both the salmon farming industry, which was committed to sustainable production methods and sustainable markets, and by all those concerned with the management of the seas.

The Committee noted particular concern about the funding of the symposium. It was estimated that to run such a symposium, in which the best speakers could be invited, would cost around £ 100 000. Symposium fees would cover approximately 50%, the rest coming from public and private sponsors. The NASCO Board had committed £ 10 000, with significant amounts also being pledged by the Norwegian salmon farming industry, government bodies, and research councils. It was noted that ICES would contribute DKK 10 000 (~£ 1 000) directly, to support the publication of flyers and provide secretariat support. ICES would also support publication of the proceedings in the *ICES Journal of Marine Science*. It was noted that there were no

further funds in the ICES budget for the meeting, but that ICES would cooperate with NASCO in seeking sponsorship.

The Committee expressed its satisfaction with the progress being made and there was a consensus that the theme was sufficiently wide to include non-salmonid species interests. It was noted that ICES felt that the European Aquaculture Society, with its broad representation of the European Aquaculture industry, should be invited to join the meeting steering committee. The conveners agreed to approach the organisation to seek their involvement in the steering committee. The importance of choosing an editor who was both technically skilled and able to devote sufficient time to the task to get the proceedings to publication within a reasonable time period (15 months) was also highlighted. Peter Hutchinson, NASCO, had been nominated to do this as he had been responsible for bringing the previous ICES/NASCO joint Symposium in Bath (1998) to publication in a very satisfactory manner.

The Committee was informed that a complementary meeting emerging from a NASCO initiative (Sal-Coop) to bring together scientists and the aquaculture industry, will also take place in 2005 at AQUANOR, entitled '*Tackling it together*'. It was anticipated that a series of recommendations would be produced that could be fed into the ICES/NASCO symposium.

Joint PICES/ICES/NASCO Symposium for 2007/08 on 'Factors affecting mortality of salmon at sea' – update from NASCO on marine research initiative

A presentation was made by the NASCO Secretariat, summarising the work of the International Atlantic Salmon Research Board (www.salmonatsea.com) and the inventory of research that it had carried out. An account was given of the range and type of projects and costs. It was explained that the inventory was essential in highlighting knowledge gaps and research opportunities. One direct output from the exercise was the SALSEA project, which had been drafted in late 2003, and which comprised a suite of three work packages that comprehensively addressed the issues of Atlantic salmon mortality at sea. A further workshop will be held in Dublin in October 2004 to review the present project draft, strengthen the North American dimension and shape the project into a number of integrated components that could be presented to potential public and private sector funders. Outputs from the SALSEA project will feed directly into the proposed PICES/ICES/NASCO symposium in 2007 or 2008. There would also be opportunities for those working on Baltic species, on other diadromous or marine species to take part in SALSEA or benefit directly from anticipated outputs in such areas as tag developments. Due to the complex nature of the SALSEA proposal which would require a high level of scientific coordination, the Committee undertook to investigate the establishment of an ICES/NASCO planning group to coordinate the marine research once funding had been acquired.

Action Plan and future topics for the Diadromous Fish Committee

Action Plan progress and audit

The DFC Chair gave a summary of how the Action Plan would be tracked by ICES, using as an illustration the work that had been done by the Study Group on the Status of Diadromous Fish Species (SGDFS) and the Study Group on Salmon Bycatch (SGBYSAL). It was noted that the audit would be in database format, with fields indicating the year initiated, Action Plan code, narrative text, terms of reference, the role of any Expert Group, links to relevant report(s) and comments. The database will be used by ICES, clients, and stakeholders to quickly provide an assessment of progress with specific elements of the Action Plan. It was also noted by the Committee that those responsible for undertaking the work were also responsible for completing the database and it was questioned whether this would provide a

wholly unbiased audit of progress. Questions were also raised about how audit results were to be used and the consequences of recording an “unsatisfactory” category.

Possible interactions with DIADFISH

A presentation was given on the DIADFISH project (a network of excellence sponsored by the EU), established in 2002 to generate funding opportunities for work on diadromous fish species in EC member states, although a number of Russian institutions had also been accorded membership. The DIADFISH website provided valuable information not only on its activities, such as the Symposium on Diadromous Fish, to be held in Bordeaux in March/April 2005, but also on expertise and research at member institutions.

Draft Resolutions

Resolutions for Working Groups/Study Groups

- A Study Group on the Bycatch of Salmon in Pelagic Trawl Fisheries [SGBYSAL]. This need arises from a request by NASCO to provide estimates of bycatch of salmon in pelagic fisheries and advise on their reliability, for its meeting in June 2005.

It was noted by the Committee that this Study Group should only take place if there is a strong prior commitment from participants to make available the requisite disaggregated data in pelagic catches.

- A Study Group on the Status of Diadromous Fish Species [SGSDFS]. Proposed as a result of the Committee’s decision to establish “baseline” status report on all diadromous fish in response to the query on the scope and diversity of species which should be handled.

This will complete specific country inputs on the status of diadromous fish and particular threats to these species, as well as developing a strategy for highlighting threatened and endangered species.

- A Study Group on Salmon Scale Reading [SGSSR]. This was proposed for 2004, but may be postponed until early 2005.
- A Working Group on Eels [WGEEL]. In the absence of a specific request for advice from the EU to ICES and considering the tenuous status of eel stocks internationally, the Committee strongly endorsed holding a meeting of this Working Group in November or December in 2004, or failing this, at an early date in 2005.

Proposals for theme sessions/symposia or other actions

- 2005 – A theme session on ‘Rebuilding programmes for diadromous fish populations’ has already been proposed for 2005 and is being developed further.
- 2006 – A theme session on ‘Strategies for monitoring and assessing diadromous fish’ is proposed for 2006. Considering the lack of information on some species and the lack of coordinated and standardised information on other species, especially threatened and endangered species, there is an obvious need to assess current and required assessment methods, including the use of data from monitored rivers and novel sampling techniques which may now be available.
- 2007 – A theme session on ‘Application of genetic identification to management of salmon stocks’ is proposed for 2007. Advances in this field have been significant in recent years and the potential for providing stock-specific catch advice (at regional, river, and tributary level) is being realised. The theme session will allow the potential for these applications to be

reported and the implications for salmon management to be discussed with the scientific community, stakeholders, and resource managers.

- An ICES/NASCO Planning Group on Salmon Research at Sea (PGSALSEA) should be considered to coordinate aspects of the new international SALSEA initiative once appropriate funding has been acquired (possibly 2006 or 2007).

Any other business

No other business was raised.