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EUROPEAN INLAND FISHERIES ADVISORY COMMISSION

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PROGRESS REPORT SUB-COMMISSION I – Biology and Management

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Joint EIFAC/ICES Working Party on Eels

Convener: Russell Poole

In the 1970s, EIFAC first established a WP on Eel that acted as a major focus for collation of data on biology and catches of eel. By 1993, the widespread severe decline in recruitment, along with a stock-wide reduction in landings, was leading to serious concern. As a consequence, EIFAC and ICES cooperated and the WP became a Joint EIFAC/ICES WP in 1998, providing scientific advice on stock data and eel management, recently particularly in relation to the EU Action Plan for the Recovery of Eel (EU 2007: COM(2005) 472).

At the 2006, ICES Annual Science Conference in Maastricht, the Theme Session “Is there more to Eels than Slime?” was used by the WP as a public platform to discuss new research findings and their relevance to providing a scientific basis for the conservation of eel stocks. The WP concluded that the Theme Session achieved its goal, raising the profile of a multitude of issues surrounding the sustainability of the European eel, informing those tasked with developing national management plans for stock recovery, and establishing links between scientists working in many different disciplines and over a number of continents.

In November 2006, ICES received a fast-track request for advice from OSPAR regarding the listing of threatened habitats and species, of which eel was one. This request was passed on to the WP. The WP's recommendations were included in the 2007 WP report under a new TOR (d): *Provide fast-track advice, by correspondence, to OSPAR on new species and habitats to be potentially listed on their "Threatened and Declining list"*.

Hosted by CEMAGREF, the WP met in Bordeaux, France, in September 2007. 34 participants from 15 countries attended the meeting. The 2007 WP Report documents a further step in an ongoing process of reviewing the status of the European eel stock and the fisheries and compiling management advice. As such, it does not present a comprehensive overview, but should be read in conjunction with previous reports of the WP. In addition to documenting the status of the stock and fisheries and compiling management advice, the WP also provided scientific advice in support of the establishment of a recovery plan for the stock of European Eel by the EU. In June 2007, the EU Regulation establishing measures for the recovery of the eel stock (EU 2007: COM (2005) 472 – final) was accepted by the EU Council. The WP focussed in the 2007 session on providing and update on trends

data for recruitment, stocking and aquaculture and on providing scientific support for Eel Management Plans.

In 2007, the WP was requested to provide fast-track advice on the Draft EU Guidelines for Eel Management Plans (EC regulation n°1100/2007) and on whether the Black Sea and the river systems connected to it constitute natural habitat of European eel. The WP welcomed the Regulation and Stock Recovery Plan and also welcomed the guideline document provided by the EU. The WP provided comments on the draft guidelines. In relation to the Black Sea and the Danube, the WP concluded that the area around Black Sea is at the extreme limits of the natural geographic range for eel and the densities were probably low in the past before stocking practices began. In the absence of stocking, the occurrences of eel in the Black Sea were not sufficient to support fisheries.

From 3 to 9 September 2008, the WP will meet in Leuven, Belgium. The meeting will be jointly hosted by INBO and KUL.

Working Party on Fish Monitoring in Fresh Waters

Convener: Phil Hickley

The updated Terms of Reference of the Working Party were presented to the 24th Session of EIFAC and adopted (Appendix E, Report of the Twenty-fourth Session).

The suitability of the “Information Note on Electric Fishing Best Practice”, produced by Mr Peirson (UK) and Mr Beaumont (UK), continued to be assessed during field trials by members of the WP but feedback is still awaited.

<ftp://ftp.fao.org/FI/DOCUMENT/eifac/wpfmfw/WPFMFVbestpracticeguidev2.pdf>

The short “Manual on recommended sampling methods for the monitoring of fish populations in fresh waters” remains in draft form with text for some sections still being required.

<ftp://ftp.fao.org/FI/DOCUMENT/eifac/wpfmfw/DraftGuidelinesMonitoringFishFreshwaters.pdf>

The Convener of the WP continued to provide a regularly updated list of fisheries related conferences.

<http://www.environment-agency.gov.uk/subjects/fish/165773/1469296/?version=1&lang=e>

Following the joint EIFAC/CEN fisheries acoustics workshop held in Dorset, UK, in March 2006, the draft standard “Water Quality – Guidance on the estimation of fish abundance with mobile hydroacoustic methods” was presented by Mr Hateley (UK) at the CEN TG4 Fish Task Group in Vienna in June 2007. In November, member states voted that the draft be accepted as a New Work Item by 11 votes to 0 with one abstention. A further revised version of the draft will be circulated for prEN vote after the next CEN meeting in Hof, Germany, on 28 May 2008.

Working Party on Introductions and Stocking

Convener: Ian Cowx

During the twenty-fourth session of EIFAC at Mondsee, Austria, the terms of reference for this working party were redefined as follows:

- review of stocking, introductions and translocations operations including economic importance of activities;
- audit the state of knowledge of the results of operations concerning stocking introductions and translocations of aquatic organisms, particularly concerning environmental and economic impacts and genetic interactions with wild populations;
- develop risk assessment protocols for future aquatic species stocking and introductions, with specific models and sub-routine assessments to consider economic issues, the potential environmental and economic impacts of diseases in wild aquatic organisms and ecosystems, genetic interactions with wild populations;
- provide guidelines for environmentally sound practices for stock enhancement operations.

Several activities have progressed this WP since the Twenty-fourth Session, the most important of which was confirmation of an EU FP6 funded project entitled “Impact of alien species in aquaculture (IMPASSE)”. The TORs of the WP were incorporated in this project which was established to underpin the EU Council regulation EC/2007/708 “Setting rules governing the use of alien species in aquaculture” which was adopted in July 2007. This regulation has important implications for stocking and introductions of fish in aquaculture in Europe. The project has been used as a vehicle for the WP. Further information on the project and reports arising from the project can be found on <http://www.hull.ac.uk/hifi/IMPASSE/index.html>. Several initiatives and events have resulted from this programme.

Members of WP and EIFAC were invited by the European Commission to attend workshops in Brussels to advise on aspects of the Council Regulation especially species that can be introduced into Europe as routine operations and do not require permits for importation and movements.

Draft guidelines for stocking of fish are being developed through funding from FAO and the Environment Agency of England and Wales. It is anticipated that these guidelines will support of implementation of the FAO Code of Conduct for Responsible Fisheries in the near future.

The Convener of the WP represented EIFAC at a workshop entitled Ecosystem-based Stock Enhancement (Bruges, 6–8 May 2007) set up to develop a road map to evaluate the potential for sea ranching, stock enhancement and restocking programmes within the European multinational context and seek funding from the EU FP7 programme¹.

Joint EIFAC/GFCM Working Party on Management of Sturgeon

Convener: Mikhail Chebanov

During the intersessional period the joint EIFAC/GFCM WP on Management of Sturgeon continued strengthening the communication and cooperation with European and worldwide aquaculture organizations such as the IUCN Sturgeon Specialist Group (SSG), the World Sturgeon Conservation Society (WSCS) and the European Aquaculture Society (EAS). Members of the WP had been also actively involved in the work of several sturgeon related international meetings and workshops.

The Convener of WP took part in a workshop devoted to *Huso huso* conservation measures in the River Po (Italy, May 2007), in the 2007 WSCS Board meeting and General Assembly (March 2007, Wuhan City, China) as well as in the Interim WSCS Board meeting and related events (New Wulmstorf, June, 2007). The next WSCS Assembly and Board of Directors will be held in Istanbul in April 2008.

Among the most urgent items within the WSCS agenda were:

- Report on the Status of the Sturgeon Action Plans
- Danube Sturgeon Action Plan and *Acipenser sturio* Action Plan. The former plan has been adopted by the Bern Convention;
- Organization and planning activities for the 6th International Symposium on Sturgeons (ISS6). Wuhan City has been chosen as the location of the ISS6.

The papers presented at the Piacenza workshop (2006) by the Convener and other members of the WP will be published in the WSCS Special Publication No 2. They describe various projects attempting to provide effective methods to overcome man-made barriers in rivers that prevent sturgeons from migrating upstream to their spawning habitats.

The Workshop “Broodstock management of the critically endangered sturgeon *Acipenser sturio*” (Bordeaux, France, November 2006) was attended by the WP sturgeon experts from France, Italy, Germany, Russian Federation etc. in order to discuss current problems of sturgeon conservation and some innovative techniques.

¹ <http://www.vliz.be/NL/Infoloket/restocking>

Members of the WP participated in the Fourth Meeting of Directors of the Network of Aquaculture Centers in Central and Eastern Europe held in Galati, Romania, in September 2007. During the meeting attendees reviewed the last year's progress of NACEE and its Thematic Groups. Relevant organizational, technical and financial issues were considered, as well as prospective ways of collaboration improvements, with special focus on joint project activities, including sturgeon related.

The Working Party was also represented at the workshop related to tagging programmes in Romania in October 2007. The workshop was conducted by NMT Inc. and was held with participation of WP members from most of the Black Sea countries. Particular attention was given to Coded Wire Tagging (CWT) as this has been used on sturgeon in several countries, and proved to be suitable for large-scale international programmes.

The report entitled "Strains and Domestic Forms of Sturgeon" has been prepared by one of the Russian WP members for publication (Ministry of Agriculture RF publ.).

Working Party on Fish Passage Best Practices

Convener: Michel Larinier

For the first meeting of this newly formed WP in November 2006, the Convener invited selected WP members and members of the River Continuity Working Group of the German DWA (Deutsche Vereinigung für Wasserwirtschaft, Abwasser und Abfall) to Toulouse, France. The meeting discussed diverging views of a certain number of issues related to fish passage with the aim of harmonising *design criteria* for fish passes. Relevant regulations in France and Germany, *inter alia* the concept of target species, the biological and hydraulic criteria, the typology and the design criteria of "natural" fish passes, were reviewed. The meeting report was sent to all members of the WP for critical comments on the technical information presented. As Mr Gebler, member of the WP and top specialist in this field, could not attend the Toulouse meeting due to other commitments, the Convener of the WP met him in Strasbourg prior to the Toulouse meeting.

Upon invitation by Mr Jäger, Regional Government of Salzburg, the second meeting of the WP was held from 8 to 10 October 2007 in Salzburg, Austria. Eighteen participants from nine countries attended. The objectives were to: (a) review and discuss the concepts underlying the construction of "nature-like" fish passes in the different countries and to prepare the ground for a proposal on a common terminology list and on shared definition criteria; (b) review applied practices with regard to mitigation of downstream migration and to define R&D needs; and (c) discuss and agree upon general possibilities for cooperation between members of the WP as well as between countries.

The approach to designing "nature-like" fish passes is different in the different countries. In France, for example, "target species" (i.e. mainly diadromous species and a few potadromous species such as trout, pike, grayling) are defined for which the fish passes are designed. Rivers with migratory fishes were classified for priority rehabilitation of longitudinal connectivity but only the target migratory species have to be considered. The passes, including nature-like passes, have the sole purpose of enabling these target species to pass the obstacles. In Germany and Austria, however, the "philosophy" is different, i.e. passes should be designed in such a way that all species present in the concerned river stretch will be able to pass the obstacle. The difference in fish pass design can be tolerated as long as it is clearly stated which fish (i.e. target species or all species) should be enabled to pass. However, the *design criteria* have to be the same in all countries for the same species (or groups of species) as they have to be set as a function of the swimming capacities of the species. There was a lot of discussion on the appropriate design criteria. The use of the same criteria for maximum power energy dissipation in "natural" fish passes as for pool fish passes did not appear to be obvious to some of the experts.

Regarding mitigation of downstream migration, discussions centred on the best options for guiding fish away from turbine entrances to prevent them passing through the turbines. Behavioural barriers

are in general less efficient than the physical barriers and experience from France showed that in fact only a bar spacing of less than 2 cm generated satisfactory results. New hydropower stations should be equipped with efficient screens.

Mr Marmulla briefed the WP about key conclusions of the EU-organized workshop “Water Framework Directive and Hydropower”, held in Berlin in June 2007, that are important for the WP: (a) the best available techniques (BAT) should be defined and utilized when constructing new hydropower plants in order to make them more fish-friendly, and (b) more research has to be carried out, especially as regards turbine damage of downstream migrating fish. Furthermore, a higher degree of standardization of mitigation measures should be reached throughout Europe.

Following the review of R&D needs, members of the WP now cooperate in assessing and improving mitigation measures for downstream migrating eel that was identified as the most critical issue in Europe. Furthermore, Messrs Larinier and Gebler are currently developing comprehensive guidelines on design criteria that would be sent to other WP members for technical comments. The draft guidelines are hoped to be finalized before the next meeting of the WP which is tentatively scheduled for the first week of June 2008 in Krakow, Poland. A sub-group of the WP will there discuss the preparation of a “checklist” to ensure that fish migration/passage will be an essential item in the new water management plans. Based on feedback from the EU, it is hoped that the list be used by the EU and the European water managers to check management plans.

Working Party on Mapping of Fish Distribution and Aquatic Habitat Quality:

Convener: Roland Fricke

Recommendation that this WP be abolished at Twenty-fifth Session

Working Party on Crayfish

Convener: Markku Pursiainen

The Tenth Session of EIFAC established the WP on Crayfish in 1978 that was active until 1996 when it reported to the Commission for the last time. Since then, the situation of the European crayfish has been subject to changes which call for European-wide attention and international collaboration. Therefore, the Twenty-fourth Session of EIFAC decided on the re-establishment of the WP on Crayfish (Report of the Twenty-fourth Session, Paragraph 86). Mr M. Pursiainen (Finland) agreed to serve as the Convener.

The European Thematic Network CRAYNET, funded by the EU, summarized many aspects of the crayfish in several conferences and publications from 2002-2006. One of the outputs by CRAYNET was the Atlas of Crayfish in Europe by Souty-Grosset *et al.* in 2006. The Atlas gives an updated description of the native and introduced crayfish species in Europe, as well as of the main pathogens. Special concern was given to the conservation of the native European crayfish species. The crayfish production as a part of inland fisheries, the management of the stocks, and the socio-economic aspects of the utilization of the crayfish resource also received some attention. Issues that were not discussed in the Atlas were the roles of the crustacean decapods, native or introduced, in the ecosystem, e.g. their direct or indirect interactions with fish.

Thus, a follow-up study of the general aspects of crayfish is needed, but more specifically, the Working Party on Crayfish should concentrate on the TORs below:

- Following the changes in the distribution of the native and introduced crayfish species
- Collecting data of the crayfish catches and aquaculture production in the member countries
- Studying the role of crayfish in the freshwater ecosystems
- Assessing the crayfish socio-economics in the inland waters
- Recommending methods for the sustainable use and management of the crayfish stocks

- Gathering information of new developments in controlling crayfish diseases
- Taking other necessary action involving the emerging issues in the crayfish field

The Terms of Reference will be updated at the first *ad hoc* meeting of the Working Party.

The Convener sent the TORs to the National Correspondents, asking them that their countries nominate experts to participate in the WP, and announced the first *ad hoc* meeting of the WP which is scheduled to be held in connection with the Twenty-fifth Session of EIFAC (most probably on Saturday 24 May). In the meeting, the TOR, participation, and future activities shall be discussed. The results will be presented to the Twenty-fifth Session for acceptance.

The WP shall organize annual meetings and workshops during 2009-2011 and address certain issues through electronic correspondence. During each meeting, the WP will focus on one or two special aspects, and attention shall be paid to the actual changes and findings in the crayfish field in the member countries. The results of the meetings, workshops, and other activities shall be reported to the sessions of the Commission in 2010 and 2012.