Executive summary

The WKEPEMP met in May 2013 at ICES HQ, Copenhagen, Denmark. Shortly before the meeting, Alan Walker (UK) was appointed as chair; there were 17 participants to the workshop, including seven eel scientists, seven observers from the eel industry and conservation organizations, one representative from DGMare of the European Commission, and two representatives of ICES ACOM. The meeting was preceded by a core scientists coordination meeting on Sunday 12th May and the full meeting was opened at 09.00 on Monday 13th May.

In 2007, the EU adopted the Eel Regulation, which led to the development of Eel Management Plans. Progress on the implementation of these plans was reported to the EU by Member States in 2012. In December 2012, EU DGMARE sent ICES a Special Request for: "*Technical evaluation of the progress reports submitted by the EU Member States to the European Commission in line with Article 9 of the Eel Regulation (1100/2007). The reports describe the progress achieved since the implementation of the Member States' eel management plans. ICES was asked to carry out an assessment of the progress achieved via the measures implemented. In view of this, the regulation may be amended and further/additional measures may be taken in order to ensure the recovery of the eel stock*". DG MARE clarified this request with the following questions: *"in order for the Commission to be able to propose enhanced/amended/additional measures (to the Eel Recovery Plan EC1100/2007), we need to know from ICES: A. which measures are delivering results; B. which measures are not; C. which need to be improved."* ICES set up an independent workshop (WKEPEMP) to carry out this assessment.

EIFAAC/ICES WGEEL, including the core scientists, constructed tables summarizing the stock indicator data (biomass and anthropogenic mortalities), assessment type, habitats and impacts assessed, and the management actions that the Member States committed to in their EMPs. Some of these tables were checked prior to the workshop by scientists from the relevant countries, but this was not possible for all because of time constraints prior to the workshop. Where necessary therefore, the workshop completed these tables to their best ability based on data and information available in the 2012 Progress Reports, the ICES Data Call, and expert judgement. However, time constraints limited the depth of investigation and so much of the data and information available to the WK was accepted in good faith.

This report addresses ToR in reporting on the status of biomass and mortality indicators assessed against relevant interim (WGEEL) and long-term (EU) targets; on whether the management actions committed to in the EMPs (in fact those declared in the Progress Reports) were implemented fully, partially or not at all; whether these management measures were contributing to the increase of silver eel escapement directly, with delay or not at all; whether management measures could be improved; and whether any novel management measures might be implemented. In addition, this report provides recommendations on how this evaluation procedure could be streamlined and made more effective in future.

ICES was not able to fully understand the basis for the stock indicators in some Progress Reports that were written in languages not understood by ICES experts at the meeting. Some Eel Management Units (EMU) did not report all required stock indicators. This made it impossible to evaluate their contribution to stock protection and recovery.

In most Eel Management Units, and depending on local conditions, progress has been made in implementing eel-specific management measures for commercial and recreational fisheries, hydropower, pumping stations and obstacles, restocking, measures on habitat and a few cases predator control.

Comparing local stock indicators provided in the 81 EMP Progress Reports examined and/or those provided in response to the ICES Data Call, to EMU targets, 17 EMU are reported as achieving their biomass targets, 42 are not and 22 did not report. Of the 42 EMU not at the target, 20 are trending towards achieving the target in the future; of the 17 at the target, eleven are trending down and will be below the target in the future. ICES did not evaluate the reliability of the methods used to derive the stock indicators and assumed they were reliable – this assumption remains to be tested.

The biomass targets correspond to total anthropogenic mortality targets: 24 EMUs have reached their targets, 19 have not and 38 have not reported all the stock indicators necessary to make this evaluation. Of the 19 not at the target, eleven are trending towards achieving target in the future; of the 24 at the target, seven have an increasing trend which means they will no longer meet targets in the future.

Most management actions were for commercial and recreational fisheries, followed by hydropower-pumping stations-obstacles, then measures on habitat, restocking, and predator control. Other actions expected to have indirect effects, such as implementing monitoring programmes and scientific studies, were almost as common as controls on fisheries. A total of 756 management actions proposed in the EMPs have been implemented fully, 259 partially and 107 declared as not implemented at all. No information was available to judge whether 18 actions had been implemented or not.

Few progress reports included data to directly demonstrate the effects of individual management measures that had been implemented so far in increasing silver eel escapement towards EMU targets. ICES expert judgement is that restrictions on commercial and recreational fisheries for silver eel have contributed most to increases in silver eel escapement in the short time since the implementation of management plans. With the exception of trap and transport, where the amount of eel transported can be quantified, the effectiveness of measures related to hydropower, pumping stations and obstacles, is difficult to demonstrate or judge because of the site-specific nature of potential impacts and lack of post-evaluation data. Measures to improve habitats may reduce density-dependent mortality rates, but their effectiveness is driven by local conditions. Restocking is not expected to have contributed to increased silver eel escapement yet because of the generational lag time. The efficacy of restocking for recovering the stock remains uncertain while proof of net benefit is lacking. Recent studies of marine migrations suggest no behavioural differences between eel of natural and stocked origins. Control of predators was proposed in 14 actions but only five were fully implemented. Several predators of eel are themselves protected by European legislations and therefore control can be difficult even where they are considered an anthropogenic-induced mortality factor.