



European
Commission

Workshop Report

Rebuilding the European eel stock and sustainability of sectors: silver eel capture and release

Intersessional technical workshop of the Joint Special Group under the EU Marine Action Plan and the Eel Regulation - 24 April 2024 – 10:00 – 17:00 – ONLINE

The goal of this second workshop under the Marine Action Plan was to encourage and incentivise actions to help rebuild the European eel stock and ensure a sustainable fishery and farming with a particular focus on capture and release/trap and transport (T&T) of migrating silver eels. The workshop consisted of six presentations from public and private institutes and industry during the morning session, followed by an open discussion (Tour de Table) in the afternoon. It was attended by more than 100 participants from Member States and relevant stakeholders, including fisheries, environmental and research communities.

Presentations (Morning Session):

The first presentation set the scene for the workshop, giving a recap of current state of the eel stock and ICES recommendations on zero catches, including for eel fishing, farming and restocking, followed by an overview of possible advantages and disadvantages of T&T and restocking efforts and an advocacy of understanding perspectives of different stakeholders. The second presentation gave an overview of measures under the Irish Eel Management plan, explained by examples of the two largest rivers in Ireland with T&T schemes. The third presentation on the SUDOANG project gave an example of how unified effort and cooperation fostered by trust is key for the engagement and progress. The fourth presentation showed how a T&T scheme in cooperation between different stakeholders, including the hydroelectric power companies, can look in practice and what factors are crucial in the process. The fifth presentation provided an overview of how the JRC assists Member States in meeting their objectives under the Water Framework Directive and Biodiversity Strategy for 2030 to restore freshwater ecosystems, with focus on river restoration to free flowing. The last presentation showed that most EMFF funds spent on eel conservation were used for restocking efforts, and some for wider environmental management benefiting eels. Based on the analysis of six case studies, the presentation gave recommendations for future spending efforts on eel stock recovery.

Tour de Table (Afternoon Session):

During the tour de table the participants discussed effective measures for restoring eel stock including the focus topic of capture and release (Trap and Transport) of silver eels, examples of good practices and innovative solutions. There was broad consensus among Member States taking part in the discussion that T&T is not a long-term solution. Some Member States see **Trap and Transport** as a transitional measure in eel management that can be implemented while better solutions are sought.

The majority of Member States explain that measures should focus on improving river continuity and restoration of river and marine (eel) habitats. Reasons for this included benefits for all migratory fish species like trout and salmon, benefit for the entire ecosystem instead of just one species, high costs of T&T and T&T being not a self-sustaining solution. In countries with low hydropower potential, restoration efforts can be achieved at lower opportunity costs. These views were supported by many national experts and representatives of environmental organisations.

Restocking (above dams) is not seen as a good solution for eel migration by many participants and the ICES recommendations on eel management should be enacted, or restocking should at least be scrutinized. Member State additionally reported problems with the spread of pathogens in restocking efforts. Here, experts recommended harmonized rules for quarantine. If restocking is part of a management plan it should only take place in rivers with free connection to the sea. Aquaculture industry could help in restocking through ongrowing glass eels. Practices of restocking reported also included using confiscated glass eels for restocking efforts.

When planning or reassessing a **T&T Scheme** **good practices reported** included an assessment of hydropower dams which represent major barriers in silver eel migration to better allocate T&T effort. Additional good practises of T&T included the importance of good cooperation between stakeholders especially with local small-scale fishermen which can help foster their engagement and help them in seasons with low sales. Therefore, economic feasibility for fishermen and seasonality of T&T/eel sales have to be kept in mind. Good practises proposed include a Memorandum of Understanding with hydropower companies over a T&T scheme and additionally several scientific studies in eel monitoring, including bio tagging monitoring studies/marketing restocked juveniles also while following the ICES advice on eel by currently banning fisheries and restocking like in Ireland and mandatory annual reporting and enforcement by local authorities. When hydropower companies refuse (financial) cooperation, there was a demand for a stronger political will or at best a strong legal obligation on a European level. Applicability of T&T is context and region dependent and not a one-size-fits-all approach. In larger rivers or rivers with a sequence of hydropower facilities fish rakes are costly, especially as turbines must be turned off during the installation. Some experts therefore report T&T as a potential measure in these circumstances. However other experts reported that T&T comes with enormous efforts in larger rivers, because it requires the effort to empty and clean the traps every day. In conditions with series of hydropower dams it's best to focus T&T effort on the highest entrapped part of the river. T&T schemes should consider taking place during times of lower water temperature, reduce transport time, which is already legally mandatory in a Member State and use less harmful fishing gear to reduce mortality and morbidity. Experts report however that storage time in storage nets did not increase stress in captured eels.

Other innovative measures reported to assist eel migration are fish protection rakes, fish friendly turbines, fish guidance systems using electricity, light, sound and air bubbles and Turbine Management. In one Member State for instance, turbines are turned off during the night in September until January. In Turbine Management eDNA as a method could help improving this management practices. Rakes in front of hydropower plants which support downstream migration or lead them into traps are not ideal however as mortality was observed. Effectiveness of measures should always be assessed and ensured. Member States also reported good practises with the management through a water licence system. Recommendations also include implementation of an ecosystem-based management and the need of a cross-cutting management by DG MARE and DG ENV. As demonstrated within the efforts of the SUDOANG project, harmonizing data collation and availability is of importance to improve (research) efforts. While not undermining the efforts of useful river restoration, stakeholders around the Baltic Sea highlighted that this seabasin and its estuaries itself are a suitable habitat for silver eels and most effective measure would be to focus on improving conditions there directly. Restoration efforts should also focus more on estuaries habitats and lateral connectivity which

is compromised for instance by harbours. Additionally, Member States reported problems in eel stock restoration when main barrier for eels from the largest freshwater habitat is built on Russian territory.

Besides the assisting eel migration inland and regulation of fisheries, stakeholders pointed out that **other measures** are important to restore eel stock such as fight against IUU fisheries, especially international waters and third countries, the influence of toxic pollution on the stock and contamination which decrease water quality significantly as well as negative influence of predatory birds on eel larvae and pathogens.

The workshop was successful in achieving its aim of providing an overview of effective measures for helping rebuilding eel stock through a capture and release (Trap and Transport) of silver eels, examples of good practices and innovative solutions which can support and inspire Member States in taking measures on eel restoration as addressed in the Marine Action Plan.

All the presentations can be found in the following link in CIRCABC:

<https://circabc.europa.eu/ui/group/8ba8dc69-4226-4d6d-92d7-9ba25b40fc50/library/5d652dde-afe2-483a-83d5-a252d5c16adb?p=1>