



Aquaculture Advisory Council Advice on the Recovery of the European Eel Stock - June 2018



On June 5th, 2018, the European Commission asked the AAC to provide advice on measures to be taken to best undertake the recovery of European eels (*Anguilla anguilla*) due to the critical situation of its stock.

This document details the views of the AAC on this matter. With this advice, the AAC expects the European Commission to take effective management measures to improve the situation of the eel stock for the sake of the natural environment, of stakeholders and of society in general.

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1 Advice on how to best undertake the recovery of the European eel stock both for commercial and recreational activities in 2019, notably in the context of the Council Regulation on 2019 Fishing Opportunities.

1.1 Background

The life history of the European eel is complex and atypical among aquatic species. The individuals of the species belong to a single population and spend most of their life cycle in freshwater. In addition to professional and recreational fishing, the eel stock is impacted by many human related mortality factors (e.g. damming, pumping, power plants, pollution, predation, parasites, diseases, reduction of wetlands, impact of invasive species, poaching, etc.). This context requires collaboration between countries, whether within or outside the European Union, and between the various socio-economic actors.

1.2 Advice

1. End the illegal fishing of eels. An illegal, unreported and unregulated fishery for eels still exists today in the EU and other countries on all life stages. Ending this activity must be a clear priority. This can be achieved through:
 - (i) more effective and better coordinated controls,
 - (ii) using public cooperation,
 - (iii) establishing full traceability,
 - (iv) better enforcement of Article 12 of the Eel Regulation (Council Regulation (EC) 1100/2007).
2. End the illegal export of glass eels. Linked to the previous point, it is essential to effectively control and block the illegal export of glass eels, mainly to China, and stricter control on enforcement of the reporting obligation (Art. 12). The extremely high demand for glass eels in China is today probably the main driver for their illegal fishing and sale. The smuggling of glass eels from Europe to China is an extremely lucrative activity.
3. Clear the migration routes for eels. Dams and hydropower turbines hinder the migration of young eels upstream and kill, on their posterior migration downstream, significant numbers of those that managed such upriver migration. To protect these movements, there are different and effective measures that can be taken:
 - (i) install grids at power stations,

- (ii) construction of diverted/alternative fish passages at dams, such as eel ladders,
- (iii) stop the turbines of power stations from rotating during the nights when eels are migrating,
- (iv) catch the eels and release them downstream from the power plants, so called trap and transport,
- (v) removal of migration barriers that have become redundant or of minor importance for flood management.

Under the EU Water Framework Directive (Directive 2000/60/EC), Member States should achieve Good Environmental Status of EU waters, including river continuity to ensure free migration routes for fish species such as eels.

4. Improve the environmental quality of rivers. A good environmental status of rivers that serve as habitats and provide migration routes for eels should be reached as soon as possible. Furthermore, improving the quality of the habitats of eels will improve the health of the eels (e.g. parasite load) and their general physical condition that will increase their capacity to reach spawning grounds.

5. Restocking efforts. Restocking of eels was identified as an essential component in Regulation 1100/2007 and should continue. The capture and release of eels for this purpose should be done under strictly controlled conditions.

5. Provide adequate evaluation of management plans. Management plans put into practice must be assessed to benchmark them against the overall objective for the EU framework (at least 40 % escapement to the sea of silver eels, relative to the escapement levels that would have existed in the absence of human influences). The AAC urges the European Commission to ensure appropriate evaluation of the effectiveness of the management measures, including:

- (i) comparisons of the objectives set by each Member state under their respective management plans to reduce each mortality factor,
- (ii) effectiveness of fishery closures/restrictions for all life stages,
- (iii) estimate, for each Member state and each management measure, compliance with the commitments,
- (iv) improve reporting and data collection obligations,
- (v) beyond reaching the escape target, undertake an assessment of the measures set in place to reduce each mortality factor to reach the target.

- (vi) evaluate the use of public funds (e.g. EMFF) and whether they have aided eel recovery,
- (vii) implementation of EU commitments within the framework of the Convention on Migratory Species (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- (viii) contamination levels of wild European eels at different life stages and related health aspects linked to consumption.

7. Improve the reporting of data by Member states. The reporting of any eel catches must be improved (under article 12 of the Eel Regulation). Although it is getting better, many MS are not reporting data at all, or only partly, on every aspect of the Eel Regulation. This facilitates illegal fishing and illegal export (see also point 2).

8. Stop the import to the European Union of any eels listed as vulnerable, endangered or critically endangered. Council Regulation (EC) 1100/2007 established measures for the recovery of the stock of European eel and included broad measures on the control of imports and exports of eels. Since 2010, all trade into and outside of the EU has been banned. Efforts are being made to enforce this but are insufficient, as reported in point 2. However, very little is done to prevent adult eels from being imported illegally into the EU. The fraudulent import of adult European eels is achieved by declaring, in customs declarations, that frozen eels belong to the species *Anguilla rostrata* or *Anguilla japonica*, and not to the forbidden European specie.

These imported eels are then smoked and placed on the market safely as 'eel products'. To prevent this practice, compulsory DNA examination of all eel consignments at the time of importation into the EU should be done, whatever the species declaration, and reinforce requirements related to the traceability of eels and derived products.

9. Reinforce research efforts on eel reproduction in captivity. For many years, European research centres have been involved in projects related to the reproduction of European eels and the subsequent growth of their larvae. To date, these efforts have had little effect. Nevertheless, the extremely high value of scientific knowledge on eel reproduction and its implications for the recovery of this species recommend further research efforts in this field.

10. Take advantage of existing knowledge and experience of fishers. The existing knowledge and experience of fishers should be valued. This should be used as blue services for the benefit of the environmental actions of restocking and releasing silver eels that allow a gain compared to natural colonization and the escape of silver eels. Professionals can provide many indicators of the state of the resource, a presence on the ground to limit poaching and a watchdog role to work towards the reduction of non-fishing mortality factors.

11. Obtain better information on restocking costs. To be more efficient on the implementation of further measures, the collection of information on eel restocking for all relevant countries should cover:

- (i) money spent on juveniles for restocking,
- (ii) other costs related to the restocking, including man-hours delivered by volunteers,
- (iii) identify who pays the restocking costs (including angling organisations, licensing costs, etc.).

12. Share information on atypical management schemes. Both at national and local levels, atypical management schemes may exist that deserve to be better known in other regions.

2 Improve assessment on how the measures decided in 2017, or other measures, could affect fishers and recreational anglers engaged in the eel industry.

No reliable information on this point has been made available.

3 Information on the number of recreational anglers catching eels and the level of their catches.

There is no European-level quantification of the impact of recreational fishing on the eel stock although this was agreed to be done in the management plan of 2007. The need for this information is high but no accurate numbers or quantification are yet available.

1. The AAC recommends that action is needed to quantify the impact of recreational fishing on the eel stock.
2. The AAC recommends that any investigation on recreational catches is conducted for all relevant sub-segments of recreational fisheries and not just on anglers, including where professional fishing gear is used.
3. The AAC recommends redefining the term “Recreational fisheries” to include not only anglers but also netters, spear fishers, etc.



Aquaculture Advisory Council (AAC)

Rue de l'Industrie 11, 1000 Brussels, Belgium

Tel: +32 (0) 2 720 00 73

E-mail: secretariat@aac-europe.org

Twitter: @aac_europe

www.aac-europe.org