NGO response to DG MARE consultation on how to implement the ICES advice on eel

Dear Charlina Vitcheva & Florika Fink-Hooijer,

We would hereby like to provide our recommendations to you and the Commission on what we believe needs to be done to implement the ICES advice on European eel. Considering the imbalance and low participation of “other interest groups” in the Advisory Councils, we feel we must send a separate paper.

As you know, a decline in the European eel population was first documented in the Baltic almost 100 years ago¹, but the species was only assessed as Critically Endangered by the International Union for Conservation of Nature (IUCN) in 2008². That year, the implementation of the Council Regulation (1100/2007) establishing measures for the recovery of the stock of European eel was just beginning. Today, almost 15 years later, European eel remains Critically Endangered. It is also on the European Red List of Freshwater Fishes³. There is a joint responsibility here to protect biodiversity and manage sustainable fisheries, making collaboration between DG MARE and DG ENV very important.

We know that the European Commission and the Member States have committed to achieving long-term sustainability for our fisheries, following the scientific advice on our fish stocks, and managing them in line with Maximum Sustainable Yield or the Precautionary Approach, depending on assessment and data availability. The EU is also committed to halting the degradation of our environment, through the Green Deal, the biodiversity strategy and restoration over the coming years. And yet, the Commission and Member States have all so far failed to apply these principles to the European eel. Fifteen years after the adoption of the eel regulation, the eel population has not recovered; if anything, it has deteriorated even further.

Despite the critical state of European eel, most EU countries continue to allow both commercial and recreational eel fishing. Only Ireland and Slovenia⁴ have closed all eel fisheries, while Belgium and the Czech Republic have closed all commercial fishing for eel, and Sweden⁵, Portugal and Greece have closed all recreational fisheries. In other countries, such as France, Spain and Italy, some regions have closed all fisheries for eel or fisheries for some life stages. There have been some significant reductions in both fishing effort and

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⁴In Slovenia, European eel has been a protected species since 2004.
⁵In fact, Sweden legally banned all eel fishing already in May 2007, and only licensed exceptions to this ban are allowed. The eel fishery on the Swedish west coast was closed in 2012.
catches\textsuperscript{6} but not in all countries; some countries have even increased their eel landings overall\textsuperscript{7}.

It is widely recognized that the recovery of the European eel population is likely to take a long time. Allowing even a limited fishery to continue may delay eel recovery by decades, due to current low recruitment levels and the species’ long life span.

Ultimately, it is our view that the ICES advice for 2022, in line with the precautionary approach and CFP objectives, should be followed to the letter. All fisheries for all eel life stages should be closed, at least until a clear and documented recovery is evident. There is also an immediate need to address other anthropogenic threats to European eel, such as loss and degradation of habitats, water pollution and migration barriers.

**NGOs call on the Commission to urgently implement further measures to aid the recovery of the European eel:**

The European Commission and the Member States bear joint responsibility for the rebuilding of the eel population to healthy levels, and further measures to aid eel recovery must be taken at all levels. We hope that the European Commission will consider the following concrete suggestions on further measures to aid the recovery of European eel:

**On commercial and recreational fisheries in marine waters**

1. Close all fishing – commercial and recreational – on all life stages of eel in coastal and marine waters, as this is clearly under EU jurisdiction. All silver eels will pass through coastal and marine waters on their way to the Sargasso Sea; some of them have lived over 20 years to prepare for this journey. In addition, a substantial part of the European eel population spends its entire continental life in coastal waters, and such a closure would also protect the coastal eel stocks, while longer term measures involving habitat restoration and removal of migration barriers get underway.

   In some Member States, the recreational fishery for eel in marine and coastal waters is fairly substantial; notably Denmark has a large recreational fishery with commercial style gears in marine waters. It is our strong view that no fishing for pleasure or recreation targeting a threatened species can be considered sustainable; this recommendation is also in line with the ICES advice for 2022.

   Supporting the argument for protecting eels in coastal and marine waters is the ICES conclusion that eels from marine coastal habitats are expected to have better spawning and migratory capacities, because the widespread and debilitating parasite *A. crassus* mainly occurs in freshwater systems.

\textsuperscript{6} Regulation (EC) 1100/2007 Article 8 on Measures concerning Community waters, states that where a Member State operates a fishery in Community waters that catches eel, the Member State shall either reduce fishing effort by at least 50% relative to the average effort deployed from 2004 to 2006 or reduce fishing effort to ensure a reduction of eel catches by at least 50% relative to the average catch from 2004 to 2006. This reduction is to be achieved gradually, initially by steps of 15% per year in the first two years over a 5-year period, from 1 July 2009.

\textsuperscript{7} ICES (2021). Advice on fishing opportunities, catch, and effort. Ecoregions in the Northeast Atlantic. European eel (Anguilla anguilla) throughout its natural range. https://doi.org/10.17895/ices.advice.7752
2. Until all eel fishing is closed, the Commission should use the Technical Measures regulation (EU 2019/1241) to protect spawning migration aggregations from any targeted fishing by creating permanently closed areas in narrow passages along the migration route that mature silver eels have to swim through, such as the Belts and Sound from the Baltic and the Gibraltar Strait from the Mediterranean.

3. Minimum Landing Size for eel is one of the most common management measures applied in the Member States despite the limited effect it can be expected to have. In fact, it may be detrimental to catch only the large, predominantly female silver eels. The Commission should ask STECF or ICES to evaluate the use of potentially ineffective or counter-productive management measures, such as Minimum Landing Size/Minimum Conservation Reference Size for eel.

Commercial and recreational fisheries in inland waters

Article 10 in the basic regulation on the CFP (EC 2013/1380) about multiannual plans specifically states that such plans may include “where appropriate, specific objectives for the freshwater part of the life cycle of anadromous and catadromous species”. We would argue that the eel regulation should be considered a multiannual plan, considering its long-term objective and set of measures. Also, measures to aid the recovery of European eel in inland waters must address both commercial and recreational fishing.

1. The Commission has noted that while the national eel management plans were intended to be adaptive, very few of them have been amended since they were first adopted in 2008/2009. In light of the ICES advice for 2022, all Member States should be asked to update their national eel management plans. While eel landings have been reduced in many countries, commercial and recreational fishing is still a main source of eel mortality, often targeting the mature individuals needed to ensure greater recruitment.

2. There is currently a serious lack of transparency around EU eel management, with national Eel Management Plans (EMPs) only available in national language and, in some cases, not publicly available at all. Considering that the EMPs are part of a recovery plan for one single, critically endangered population, it would make a significant difference if it was possible to review management plans across the EU. We therefore call on the Commission to publish the agreed, and amended (see point above) EMPs on the Commission website.

3. Many Member States [financially] support a continued fishery for eel in inland waters through restocking – particularly in the Baltic region. Restocking is even carried out above migration barriers. Such efforts do not help eel recovery, but rather mask the poor state of the population. This practice needs to stop, and as ICES highlights, the benefits of restocking to the population are very questionable.

4. A broad agreement is urgently needed to close all targeted recreational fishing for eel – this should not warrant further discussion, considering the state of the stock. A vast majority of angling organizations in the EU support this measure. Several EU Member States have already completely or partially closed their recreational fisheries for eel, but in others the

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recreational catches surpass or match the commercial landings, such as Germany and Denmark. Belgium, Poland and Italy also report substantial recreational landings. In inland waters under national jurisdiction, a ban of recreational eel fishing would correspond to targets in the eel regulation for reduction of fisheries in all sectors and upstream measures; linked to demands under the WFD, as well as targets and goals for halting biodiversity loss under the biodiversity strategy.

Other measures in inland waters

The habitats that European eel depends on have been destroyed and degraded, undoubtedly contributing to the population decline and making recovery more difficult. Measures addressing the loss of habitats and the many obstacles preventing natural eel migration into freshwater habitats are still few and far between, with many Member States choosing to focus on more short-term efforts such as trap-and-transport and glass eel relocation.

However, long-term measures need to be prioritized in order to reverse the decline and support recovery. Habitat restoration, water quality improvements and removal of migration barriers are also likely to benefit wider biodiversity targets and overlap with climate mitigation and adaptation measures, as well as efforts to provide a cleaner and healthier environment.

1. Across the EU, trap-and-transport is a measure commonly used to address hydropower mortality. According to a recent European Parliament report, “expensive” and “short-term approaches like trap-and-transport could possibly be established as interim solutions. However, they should not be used as justification for not taking measures with long-lasting effects.” Instead, Member States need to identify priority areas for long-term solutions that will open up more freshwater habitats to naturally recruited eels. This is particularly important in the “core area” in the Bay of Biscay, where glass eels still arrive in higher densities than in the North of Europe.

It would be helpful if the Commission could provide guidance on this identification process, to ensure that key principles are observed across the board. Effective mitigation measures related to hydropower plants (HPP) tend to be expensive and may incur a loss in power production and reduce profits. The need for renewable energy across the EU would also need to be considered, making prioritization and assessment of cost-effectiveness important.

2. However, there are examples of old and obsolete migration barriers and dams, as well as HPP with very low output in many countries. Removing these would not only secure more habitats for eel, but also help achieve the target in the Biodiversity Strategy of the EU: "at least 25,000 km of rivers to be restored into free-flowing rivers by 2030 through the removal of primarily obsolete barriers and the restoration of floodplains and wetlands". We urge DG

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MARE and DG ENV to work together to ensure that a coordinated approach is developed, taking the plight of European eel into consideration.

3. Habitat restoration is another area that so far has not been prioritized by most Member States, and the coupling of eel recovery measures to implementation of the Water Framework Directive is very variable. Several Member States have not taken any measures to improve habitats for eels. There are synergies here with climate mitigation measures, such as recreating wetlands, and other environmental policies focused on improving water quality.

Recent studies in Norway\textsuperscript{10} also suggest that access to freshwater habitats is very important and that eels that remain in coastal waters can be opportunistic in utilizing them, even small-scale water bodies and waterways. It is therefore crucial that Member States prioritize such efforts, particularly in areas where there is a documented natural recruitment of young eels, by identifying such restoration measures - be it dam removal or recreation of wetland areas. If win-win situations, which aid eel recovery, provide climate adaptation and benefit wider biodiversity can be identified, even better.

4. Considering the high fat content of eels and the affinity for many persistent organic pollutants, more efforts to improve water quality are also urgently needed. We call on both the Commission and the Member States to end the “silo thinking” and initiate proper co-management with environmental agencies, on EU and national level to address habitat degradation in key freshwater habitats (see point about priority areas above) that will support natural recruitment and re-colonisation of eels in EU freshwater environments, including reduction targets for persistent pollutants.

5. We also call on the Commission to ensure that the few natural rivers that remain intact in the EU which have a documented presence of eel are protected from development.

Glass eel fisheries and restocking

Natural recruitment - glass eel arrival - is now only 5.4% and 0.6% of numbers seen only 50 years ago for “elsewhere Europe” and “the North Sea” respectively\textsuperscript{11}. Current stock levels in the Baltic Sea region in particular are unlikely to support any viable eel fishery at all, but fisheries have been able to continue based on many years of widespread restocking. The Mediterranean region, on the other hand, still has natural recruitment even if it is on a much lower level than historically, and restocking of eels from other countries is also much more limited there and, it could be argued, a result of the eel regulation\textsuperscript{12}.

All restocking of eel depends on the relocation of wild glass eels, from the also incredibly reduced natural recruitment levels in the population’s “core areas” in the “elsewhere Europe” region, particularly the Bay of Biscay and the south coast of England. Since the eel regulation came into force, glass eel landings have gone down in the EU, but increased [from a low level] in the United Kingdom. The sector is completely dominated by France, responsible for over

\textsuperscript{10} Pers. comm. Caroline Durif, Institute of Marine Research, Austevoll Research Station, Norway
\textsuperscript{11} ICES (2021). Advice on fishing opportunities, catch, and effort. Ecoregions in the Northeast Atlantic. European eel (Anguilla anguilla) throughout its natural range. \url{https://doi.org/10.17895/ices.advice.7752}
\textsuperscript{12} See the results of the GFCM research programme on eel for more details.
80% of landings. Since Brexit took effect in 2021, French glass eels completely dominate the market of glass eels for restocking.

As you know, the eel regulation (EC 1100/2007) considers restocking a “conservation measure in the context of EU funding”\textsuperscript{13}. It also essentially prescribes restocking under Article 7.1, which states that Member States that permit fishing for glass eels (< 12 cm), shall reserve at least 60% for restocking each year by 31 July 2013.\textsuperscript{14} This is contradictory to the ICES advice, which states that when “following the precautionary approach, any catch for restocking should not be allowed” and that “the net benefit of restocking of eels to reproductive potential of the stock is unknown”.\textsuperscript{15}

ICES has also argued for many years that (a) there is no surplus of glass eel anywhere to be redistributed to other areas and (b) there is evidence that stocked/translocated eels experience impairment of their navigational abilities\textsuperscript{16} - and yet, the “surplus” argument of saving glass eels that would otherwise have died is commonly used in Member States involved with restocking.

In addition, national and EU funds have often been used to pay for restocking, costing the EU taxpayers millions of Euros. In some countries, restocking programmes are tendered and managed by the fishing sector, creating strings of funding and vested interests. Public money is spent on buying glass eels, paying for ongrowing/quarantine in private facilities, paying sector interests to provide the service of restocking, and ultimately supporting a continued fishery instead of a stock recovery. This cannot be considered good practice.

1. Currently, implementation of the Eel Management Plans and efforts to achieve the 40% silver eel escapement target, particularly in the Baltic Sea region, rely heavily on the catch and relocation of wild glass eels from other countries (predominantly France) to national waters. According to ICES, the remaining natural population cannot support this widespread relocation\textsuperscript{17}. Its effectiveness as a conservation measure is now also widely

\textsuperscript{13}Originally, Regulation (EC) 1198/2006 on the European Fisheries Fund (EFF), where Article 38.2 under Measures to protect and develop aquatic flora and fauna, states that “Direct restocking shall not be eligible for aid, unless explicitly foreseen as a conservation measure by a Community legal act.” The EFF was replaced in 2014 by the Regulation (EU) No 508/2014 on the European Marine and Fisheries Fund (EMFF), where Article 11 Ineligible operations lists “direct restocking, unless explicitly provided for as a conservation measure by a Union legal act or in the case of experimental restocking,” and Article 37.2 Support for the design and implementation of conservation measures and regional cooperation, states that “The EMFF may support direct restocking under paragraph 1 only when it is provided for as a conservation measure in a Union legal act.” In 2021, a new funding period began under Regulation (EU) 2021/1139 establishing the European Maritime, Fisheries and Aquaculture Fund (EMFAF). Again, direct restocking is listed as an ineligible operation (Art. 13) “except explicitly provided for as a reintroduction measure or other conservation measures in a Union legal act or in the case of experimental restocking”. There is no longer any mention of restocking under Article 25 Protection and restoration of aquatic biodiversity and ecosystems.

\textsuperscript{14}According to the Commission’s report to the Council and European Parliament in 2014 on the implementation of the EMPs: “Restocking is a measure featuring in virtually all EMPs. According to the scientific review, only a few EMUs have reached their restocking targets, most EMUs have partially reached their targets and a few EMUs failed to implement the action.” “Scientific advice on the state of the stock of European eel for 2012 expressed concerns about current eel restocking practices and pointed out that it is not clear if restocking actually contributes to ensure increased silver eel escapement, or to sustain fishing for eel in certain EMUs.” “Scientists are also questioning the contribution of restocking to the spawning stock and it has been recommended “that all stocked eel should be marked and thereby separable from wild eel in subsequent sampling”.


\textsuperscript{17}ICES advice on European eel, ICES advice 2012, Book 9, Section 9.4.7: “Given the current record-low abundance of glass eels, ICES reiterates its concern that glass eel stocking programmes are unlikely to contribute to the recovery of the European eel stock in a substantial manner. The overall burden of proof should be that stocking will generate net benefits, in terms of contributions to silver eel escapement and spawning potential. Prior to stocking, or for continuing existing stocking, a risk assessment should be conducted, taking into account fishing, holding, transport, post-stocking mortalities, and other factors such as disease and parasite transfers. To facilitate stock recovery all catches of glass eel should be used for stocking.”
questioned. Large amounts of eels have been relocated for well over 10 years, and in many areas far longer than that, without any measurable effect on recruitment. Based on the ICES advice, we strongly recommend that all glass eel fishing and restocking practices are halted as a matter of urgency.

2. The relocation of eels masks the real situation, making it very difficult to assess natural recruitment and mortality. Other measures to improve natural recruitment must be prioritized, such as ensuring water connectivity in areas with relatively high natural recruitment.

3. The eel regulation sets out very clearly that the purpose of restocking is to increase the escapement of silver eels (Art. 7.1). However, in contradiction to the regulation, restocking in many Member States takes place above migration barriers, preventing rather than maximizing escapement, and resulting in unnecessary suffering and artificially created mortality in hydropower turbines, skewing mortality figures. We call on the Commission to clamp down on this practice - it needs to be banned across all regions immediately.

4. Under no circumstances should releases above barriers be eligible to receive public funding, as they cannot be considered a “conservation measure” and will not be contributing to achievement of the 40% escapement target, as specified in Regulation (EC) 1100/2007, Art. 7.8.

5. Despite decades of restocking, there is very little evidence that restocked eels actually contribute to increased recruitment and population recovery. The issue of whether stocked eels are able to find their way back to the spawning grounds remains contested, and only very few studies\(^\text{18}\) show some individuals likely to be stocked eels following the migration route some part of the way. A recent paper concludes that the migration of several eel species is likely to rely on the Earth’s magnetic field and that relocation of eels may confuse this mechanism\(^\text{19}\).

6. We argue that all glass eel fishing and subsequent restocking should be stopped until we can see a clear recovery of the population. However, should restocking continue (as set out in Regulation (EC 1100/2007)), an EU framework to maximize the conservation benefits and cost-effectiveness, while minimizing the spread of pathogens, needs to be put in place, taking earlier ICES advice into account.\(^\text{20}\)

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\(^\text{20}\)The most recent WGEEL report (2021) contains an overview of, among other things, diseases and pathogens in eels. One conclusion is that the introduction of infectious diseases into the local eel stocks of rivers and connected lakes through restocking urgently needs to be contained, particularly as disease is likely to compromise the condition of spawners, and ultimately lead to less successful spawning migration and breeding.
naturally recruited eels in monitoring and evaluation, e) only relocate eels to carefully selected waters without migration barriers and with higher water quality than the source site, and f) maintain a national/EU register of relocations, amounts restocked and origin of material.

7. It is widely recognized that the reporting system set out in the eel regulation on the use of glass eels (eels < 12 cm) for restocking and associated changes in the market prices (Art. 7, EC 1100/2007) is not working. In its evaluation published in 2020, the Commission states that “this represents a major failure in the Regulation’s monitoring requirement”\textsuperscript{21}. There are also problems with “double-counting” when the same eels are sold several times, for example from France to Sweden, and then on to Finland. These shortcomings in reporting and traceability is a contributing factor to the continued illegal trade in eel.

There are discrepancies between supply of and demand for glass eel. The EU requirement to use > 60% of fished glass eels for restocking together with the EU trade ban (EU, 2010), has most likely contributed to illegal trade within and beyond the EU. A complete stop of all glass eel fisheries would be easier to control, but a framework such as the one proposed above would help to control the internal trade in glass eels. Continued improvements in control and enforcement and cooperation with Europol are also needed. We welcome the recent inclusion of European eel in the regional Joint Deployment Programmes (JDPs) under EFCA.

Eel aquaculture

The current ICES advice is that no eel catches for aquaculture purposes should be allowed, since cultured eels are always wild caught and either permanently removed from the stock (for consumption) or used for restocking. We call on the Commission to adhere to this advice.

However, ICES makes an exception for catches of eels, which are then transferred across barriers within the same waterbody - so called “translocation” or trap-and-transport - and suggests this could be considered a conservation measure, provided that any associated mortality is lower than it would have been in the absence of such measures.

“Extensive aquaculture” is widespread in the Mediterranean, where it is traditional to stock coastal lagoons and in a few cases lakes with young eels from the same body of water/coastal area. This should perhaps qualify as translocation of eel, in line with the ICES description, and could continue. The practice also greatly reduces the risks of transferring pathogens from one area to another. However, ICES also states that upstream migration assistance should only be used if the future escapement of silver eels is ensured.

The Commission and the Mediterranean Member States need to carefully consider the finer points of the ICES advice here. It is our view that translocation of eels to support a continued fishery is currently not sustainable; the objective needs to be increased silver eel escapement to support population recovery.

Other recommendations

Aside from immediately reducing the fishing pressure, particularly on silver eel, a much more comprehensive approach is needed, working together with non-EU countries and international bodies to support the recovery of European eel across its geographical range.

1. We call upon the European Commission and the Member States to support the process under the Convention for Migratory Species (CMS) to create a Single Species Action Plan for eel that can address issues across the full population range, including working with the Sargasso Sea Commission to protect the spawning areas of both European and American eel.

2. A shift from escapement biomass to mortality targets should be considered, as pristine biomass is often impossible to calculate without a large margin of error, and natural recruitment in some parts of the EU is now so low that the 40% escapement objective cannot be reached within a foreseeable future without extensive restocking efforts, a measure that the Commission evaluation deemed “an ineffective long-term management measure”\(^\text{22}\).

3. Data collection and monitoring of eel still need to be improved. In particular, better monitoring of the coastal stocks and studies of the role of eels in the ecosystem are needed. There is much less monitoring of both biomass and mortality of eel in transitional, coastal and marine open waters, resulting in poorer knowledge about the marine component of the eel population. ICES has highlighted this in its reports\(^\text{23}\). It is also important to increase fishery independent monitoring of the population. Furthermore, the mortality of recreational fishing on the stock is poorly monitored and hence likely to be underestimated in many countries, including Denmark and Germany. These are issues that the Commission can address through the EU Data Collection Framework and annual data calls.

4. Ongoing work on the Directive on the protection of the environment through criminal law and replacing Directive 2008/99/EC is closely linked to IUU eel fishing and trade and the Commission should make sure this link is made clear.

5. It is also crucial to work closely with DG SANTE, which is currently updating Regulation 1881/2006 setting maximum levels for certain contaminants in foodstuffs. Eel often contains high to very high mean and P95 levels for PCDD/Fs and for the sum of PCDD/Fs and DL-PCBs\(^\text{24}\).


\(^\text{24}\)EFSA 2018, Scientific Opinion - “Risk for animal and human health related to the presence of dioxins and dioxin-like PCBs in feed and food.” https://doi.org/10.2903/j.efsa.2018.5333
The European eel needs a break. It used to be so common that it made up more than 50% of all freshwater biomass in many countries. That is almost impossible to imagine today. We ask you to carefully consider our proposals, and to apply both biodiversity objectives and the objectives of the Common Fisheries Policy to eel. Close the fisheries and make habitat restoration, water quality and the opening of migration pathways priorities across the EU.

Yours sincerely, all the undersigned NGOs