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TAKING ACTION FOR EUROPEAN EEL

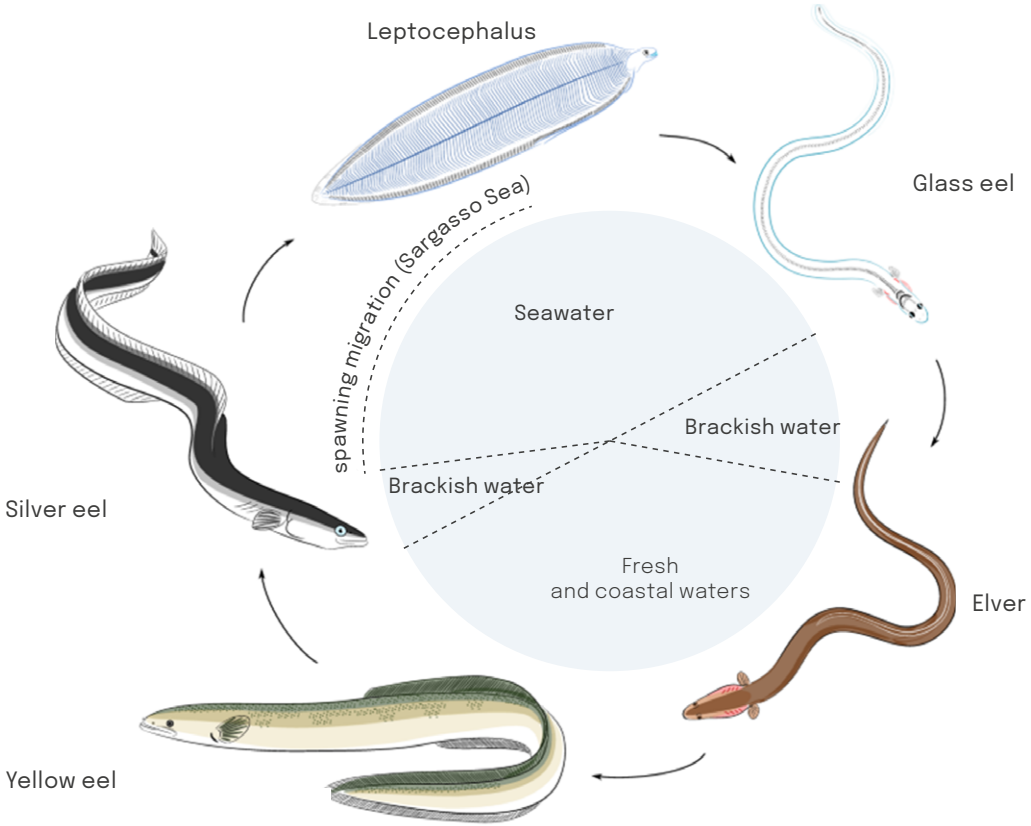
A CALL FOR FULL IMPLEMENTATION OF MANAGEMENT MEASURES IN THE MEDITERRANEAN

The European eel (*Anguilla anguilla*) is a remarkable and enigmatic species that has fed people and the human imagination for millennia. It is one of 15–18 species of eel found around the world.
All European eels belong to the same, very widespread population inhabiting coastal and inland waterways from the Baltic region to the Mediterranean, including the north and north-western parts of Africa.

Since the 1960s, European eel has declined dramatically and recruitment – the spawning and survival of young eels, which can then grow into adult eels and one day give rise to new eels – is now very low. Today, just over 1 percent of historical numbers of glass eels arrive in the North Sea region and around 7 percent elsewhere in Europe, including the Mediterranean[1].
Changes in the marine environment, such as ocean currents and rising temperatures, as well as overfishing, habitat destruction, pollution, parasites and hydro-electric power turbines have all contributed to the sharp decline in the once so abundant eel population.

1. ICES. 2024. European eel (*Anguilla anguilla*) throughout its natural range. In Report of the ICES Advisory Committee, 2024. ICES Advice 2024 , ele.2737.nea, https://doi.org/10.17895/ices.advice.27100516

THE LIFE CYCLE OF EUROPEAN EEL



(artwork credit A. Cresci)

The life cycle of European eel and the journey it undertakes is amazing. After spawning in the Sargasso Sea, the newly hatched larvae begin a passive 5 000 km ocean migration towards European and Mediterranean continental waters. After about two years, the young larvae transform into translucent glass eels, many of which will migrate into freshwater habitats, gradually transforming into yellow eels as they grow. Several years later, the mature adults transform once more into silver eels and begin their return trip. The silver eels will leave inland and coastal waters and migrate back to the Sargasso Sea, where they spawn, i.e. lay eggs, and die.

Since 1970, over 50 percent of European eel habitats have been lost, with the greatest loss observed in rivers, mainly due to migration barriers, such as dams. In Spain, Turkey and France large proportions of eel habitats are no longer accessible.

Still, the European eel is found in almost every European country and throughout the Mediterranean, linking habitats as diverse as the high seas, coastal waters, lagoons, large lakes and small ponds, big rivers and the smallest streams. However, stock abundance and fishing yields have declined by about 5 percent annually, down to less than 10 percent of their historical levels[2]. Despite being so depleted, its exploitation remains a source of income and employment.

2. Dekker, W., 2019. The history of commercial fisheries for European eel commenced only a century ago. Fisheries Management and Ecology, 26: 6–19. doi:10.1111/fme.12302.

INTERNATIONAL MANAGEMENT FRAMEWORK

The European eel has been listed as Critically Endangered by the International Union for Conservation of Nature (IUCN) since 2008[3] and is currently the focus of several international and national conservation measures.

In 2007, the European Union agreed on a recovery plan[4] and European eel was included in the CITES Appendix II for species threatened by international trade. As a result, a unilateral EU trade ban was put in place in 2010, and is still in force.

European eel is also listed under Annex II of the Convention on Migratory Species (CMS), as a species that would benefit from international cooperation.

The EU recovery plan and other measures, such as the annual eel fishing closures first agreed in 2017 and the transitional management measures adopted the following year by the General Fisheries Commission for the Mediterranean (GFCM)[5], have all strengthened the management

3. Pike, C., Crook, V. &Gollock, M., 2020. Anguilla anguilla. The IUCN Red List of Threatened Species 2020: e.T60344A152845178.
4. EU. 2007. Council Regulation (EC) No. 1100/2007 of 18 September 2007 establishing measures for the recovery of the stock of European eel. Official Journal of the European Union, L 248: 17–23. data.europa.eu/eli/reg/2007/1100/oj
5. Recommendation GFCM/42/2018/1on a multiannual management plan for European eel in the Mediterranean Sea, https://www.fao.org/gfcm/decisions/en/.

framework for European eel. So far, however, the eel population shows little sign of recovery. While the decline may have slowed down, recent years have seen the lowest recruitment levels ever recorded[6] in the Mediterranean and elsewhere, and a recent scientific assessment[7] showed little overall progress on the objective of the EU recovery plan, indicating that more needs to be done.

6. SAC, 2022. General Fisheries Commission for the Mediterranean – Report of the twenty-third session of the Scientific Advisory Committee on Fisheries, FAO headquarters, Rome, Italy, 21–24 June 2022. FAO Fisheries and Aquaculture Report No. 1395. Rome. https://doi.org/10.4060/cc3109en.
7. EU request for technical evaluation of the Eel Management Plan progress reports. In Report of the ICES Advisory Committee, 2025. ICES Advice 2025, sr.2025.06: https://doi.org/10.17895/ices.advice.28381268.

EEL MANAGEMENT IN THE MEDITERRANEAN

Since 2018, the GFCM has been on the forefront of European eel management and conservation, taking steps going further than those adopted by the European Union, which also apply to key eel fishing countries such as Egypt, Turkey and Tunisia. The long-term management measures adopted by the GFCM in 2024 include a >30% reduction in fishing effort or catches, a total ban on recreational fisheries, a six-month eel fishing closure and a 10 months closure of the glass eel fishing period. However, these measures are still far from aligned with the scientific advice of zero catches provided by the International Council for Exploration of the Seas (ICES)[8] since 2021.

In order to formulate scientific advice on eel management in the region, the GFCM requires Contracting Parties to submit catch data each year. In 2020, the GFCM launched a regional eel research programme to identify suitable management and protection measures, as well as establish a joint framework for long-term monitoring.

The results highlighted the continued lack of consistent reporting on, for example, eel catches and fishing effort, that is not only a major obstacle to transparency and accountability but also for sound management of this critically endangered species. Despite repeated calls for better reporting, the data remains piecemeal, with countries

8. ICES, 2021; 2022; 2023 – the scientific advice on fishing opportunities for European eel has been zero catches for all life stages and in all habitats for the past year; and before that "as close as possible to zero" for almost 20 years.

like Egypt, Montenegro, Libya, Albania and Algeria providing only some or none, and even EU countries failing to report consistently[9].

Moreover, poor compliance can further undermine eel conservation efforts. The GFCM Compliance Committee has been given a stronger role in assessing the level of implementation and compliance with eel measures, and States are required to meet and report on their management obligations and to fight illegal eel fishing.

9. Report of the Expert Group on European Eel in the Mediterranean (EGEMed), 2024.

THE NEED FOR FULL IMPLEMENTATION AND ADDITIONAL CONSERVATION MEASURES

While the Mediterranean region has been moving ahead since 2018, adopting progressive eel management measures, these are still likely insufficient to ensure the recovery of this critically endangered species for the future of eels and fishers.

Until a clear recovery can be seen in the population, a full fishing closure should be introduced in line with current scientific advice. If this is not politically feasible, a substantial reduction in the glass eel fishery to protect recruitment and a better application of the eel fishing closures to protect the spawners, should be applied as first steps.

Fishing for glass eels in the Mediterranean can no longer be justified given the low recruitment levels, as stated by GFCM eel research programme, which also support a reduction of all glass eel fishing mortalities to zero[10]. Spain and Italy are the only countries in the Mediterranean with glass eel fisheries[11], although catches are limited.

In 2024, the GFCM adopted a long-term management plan for European eel in the Mediterranean Sea through the Recommendation GFCM/47/2024/1.

10. "*Given such low recruitment levels, carrying out any type of fishing activity for glass eels in the Mediterranean for any use, including for restocking, does not seem to be justified*". In: Ciccotti, E. & Morello, E.B. (eds). 2023. European eel in the Mediterranean Sea – Outcomes of the GFCM Research programme. Studies and Reviews No. 103 (General Fisheries Commission for the Mediterranean). Rome, FAO. doi.org/10.4060/cc7252en.
11. GFCM, 2023. European eel in the Mediterranean Sea. Outcomes of the GFCM Research programme.

The management measures do not include a total ban on glass eel fishing, but commercial fishing for glass eel is only allowed for two months per year. Moreover, the 6 month eel fishing closures and the full recreational fishing ban remain in place.

Considering the extensive recommendations made by the GFCM Research Programme, there was scope for further and more stringent measures, including a full glass eel fishing ban and better alignment of fishing closures with eel migration periods. These long-term management measures will be in place until 2029, and strengthening implementation, control and reporting during that time will be crucial.

Finally, the Recommendation GFCM/47/2024/1 states that the expert Group on European eel in the Mediterranean shall meet in 2029 to assess the effectiveness of the measures and that the 29th session of the SAC shall advise the GFCM on whether to revise the measures or adopt complementary measures at that point.

The agreed long-term measures need to be fully implemented, and nothing is stopping the GFCM Contracting Parties from going further. Going forward, their focus should be on, as a minimum:

- a full ban of the remaining glass eel fishing in Mediterranean waters to protect recruitment;
- alignment of the six month closures with peak migration periods to protect the spawners;
- better implementation, reporting and compliance with all agreed management measures;
- better control and traceability to curb illegal fishing activities;
- addressing, together with the UNEP Mediterranean Action Plan program (UNEP/MAP), the restoration of key eel habitats in marine waters, including aspects such as water quality and pollution;
- efforts to restore and protect key eel habitats should be extended into freshwater.

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