



## PRESS RELEASE

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# The eel at the brink of extinction: new study reveals its critical status

- A study by Ebro Delta Natural Park and the Estación Biológica de Doñana – CSIC highlights the severe decline of the European eel in recent years.
- The impacts of an invasive crab and inaction in fisheries management worsen the crisis of the European eel, considered a Critically Endangered species since 2008.



*Eels from the Ebro Delta. The one on top is a silver individual, ready to start its reproductive migration to the Sargasso Sea. Photo by Mariano Cebolla / PNDE*

**Seville (Spain), January 22th 2025.** A scientific team of the Estación Biológica de Doñana – CSIC and the Ebro Delta Natural Park has analyzed in a new study the long-term trends in the abundance of the European eel (*Anguilla anguilla*) in the Ebro Delta. Results reveal an extremely worrying situation, showing that since 2008, when the eel was categorized as a Critically Endangered species, its status has been severely and rapidly deteriorating. The article has just been published in the journal *Aquatic Conservation: Marine and Freshwater Ecosystems*.



The European eel performs one of the most amazing migrations among animals. Juveniles reach European and Northern African coasts in the form of glass eels, some two years after their birth, which occurs thousands of kilometers away, in the Sargasso Sea. In the past there were so many eels that virtually every human community, both coastal and inland, consumed them, and the species was targeted by fisheries that became industrial along the 20<sup>th</sup> century. But around 1980 the eel collapsed. The decline was sudden, and involved a reduction of recruitment (i.e. glass eel arrival to coasts) of around 95%. This means that for every one hundred European eel individuals that managed to fulfill the trip from the Sargasso Sea before 1980, in the 21<sup>st</sup> there are roughly 5 individuals that do so. After that collapse, the species has not shown signs of recovery.

The new study relied on two independent eel data series from the Ebro Delta. On the one hand, it analyzed eel harvest by traditional fisheries in three of the main lagoons in the area (Encanyissada, Tancada and Canal Vell), provided by the Sant Carles de la Ràpita fishermen guild. Fishery activities in the area go back to the 13<sup>th</sup> century and were pivotal for the settlement of the human population in the Ebro Delta. The Sant Pere fishermen guild has the fishing rights since 1879 and has maintained a harvest register since 1966. “Information of eel catches refer to both yellow eels, which we call *borda*, and silver eels, ready to go back to the Sargasso, which we call *vera*” says Nati Franch, employee of the Ebro Delta Natural Park and main author of the study.

On the other hand, the study used eel data generated by a scientific monitoring, which started in 2008 and uses fyke nets to estimate abundances of fish and other aquatic organisms in the Ebro Delta. The authors analyzed independently data from marshes (i.e. shallow wetlands) and lagoons, the two main aquatic systems in the Natural Park. “Monitoring programs providing standardized, long-term information on biological communities, such as the one developed by the Ebro Delta Natural Park, are critical to detect biodiversity trends”, says Miguel Clavero, researcher at the Estación Biológica de Doñana – CSIC and also author of the study.

### Recent decline: quicker and more severe than the one in the 1980s

Lagoon fisheries’ data showed a pronounced historical reduction in eel abundance in the Ebro Delta, which started around 1980, coinciding with the general trends observed across the species’ range. In the Ebro Delta, eel catches shrunk by 77% between the 1970s and the 1990s. “Information generated by the lagoon fisheries is particularly valuable because the use of a fixed fishing gear, the *panterna*, placed at the lagoon-sea connection, results in a relatively constant fishing effort through time”, points out Nati Franch.

“But our most concerning result is the striking decline in eel abundance observed in recent times, which of similar magnitude to that recorded in the 1980s and even faster”, emphasizes Miguel Clavero. Between 2015 and 2017, eel began to plummet in all Delta environments, with an overall decline exceeding 80%. This time, Clavero warns, “The drastic reduction affects a population already at extreme risk of extinction, unlike the larger population of the late 20th century.”

### Invasive Species and Policy Inaction

The exact causes of this recent decline remain unclear, but its timing coincides with the invasion of the Ebro Delta by the Atlantic blue crab (*Callinectes sapidus*), a skilled predator that reaches high densities. The blue crab has also caused population collapses of other fish, mollusks, and crustaceans in the Delta and other areas. “The scenario in the Ebro Delta is not unique, as recent eel declines have been reported in other Mediterranean area,” Clavero notes. “It is urgent to reassess eel stock status, especially in the Mediterranean, where data on the species is limited compared to Central and Northern Europe.”

For over two decades, the ICES expert group on eels, which advises EU fisheries policy, had recommended reducing eel catches “as close to zero as possible.” In the last three years, the group has called for a total ban on eel fishing, across all environments and for any purpose. However, the EU and most member states have ignored this advice. “Our findings indicate that the eel’s situation may be even worse than what led ICES to recommend closing the fishery, and it is deteriorating rapidly,” Clavero stresses. The study’s authors propose that halting eel exploitation should be paired with engaging the fishing sector in monitoring efforts and offering support for adapting their activities. “If we want to conserve this species, to ensure the European eel continues to exist, we must start by ceasing its fishing and commercialization”.

**Reference:**

Franch N, Capdevila P, Fanlo H, Qeral JM, Clavero M (2025) Recent eel decline in a large Mediterranean wetland. *Aquatic Conservation: Marine and Freshwater Ecosystems* <https://doi.org/10.1002/aqc.70046>