

CCB briefing on Eel -what you need to know about *Anguilla anguilla*



Crucial facts about eel (*Anguilla anguilla*)

- There is only one single stock of European eel
- Eel is a commercial species under the CFP and MSY objective
- Eels grow very old making management extremely challenging. Example: old adult eels we see now can be the result of parents potentially born in the 1970s!
- Eel cannot be farmed, all eels in aquaculture etc are wild eels taken as juveniles
- we cannot “enhance” spawning by other means than securing an increase of out-migrating adult eels
- One eel saved in one river does not automatically mean a return of 100 more to same river – the eels may increase somewhere else.

- ✓ ***A Baltic Sea based ban is not the perfect solution but it is a necessary start and Baltic TAC and Quota regulations proposals always comes first in the year. It may come as a surprise but considering that the state of the stock has been well known for years, a proposal to ban fishing cannot be a shock***
- ✓ ***Accepting the facts of the state of the stock and the fishery requires, under EU CFP rules in place, further measures quickly. Starting with a ban of fishing in the sea area, targeted eel fishery must be cut or stopped also upstream.***
- ✓ ***Scientific advice is clear and has been for a long time. The stock is in deteriorating state and dramatic efforts are needed. All mortality must be zero or as close to zero as possible.***
- ✓ ***All targeted eel fishery must be under serious scrutiny including the glass eel fishery. However to focus on juveniles first is backwards thinking, we must protect all mature eels now to increase the stock. The same reason we must allow all fish everywhere to spawn before catching them.***
- ✓ ***There is no sustainable solution built on catching juvenile eels and moving them to new location. It's not at all clear that it helps the stock, and especially not if we as a result of the stocking artificially uphold a fishery. Restocking as an emergency measure is paid for by taxpayers and should not be linked to fishing and fishermen.***
- ✓ ***Managing the eel is very difficult as results take long to materialize and one eel saved may mean many juvenile eels elsewhere. The fact remains, we must see eels alive now in light of the past situation to be able to understand tomorrow's state of the stock***

Proposal to ban eel fishing in the Baltic Sea – the right one to start with

Eels have since 2007 an EU recovery plan, regulation 2007/1100 that requires all member states to develop a recovery plan for their country. The plans put in place have not worked and implementation is very poor in some countries. The decline in the stock continues and so does fishing, even though it has been reduced in some areas.

The Commission recently proposed to ban all fishing in marine waters in the Baltic Sea, making the first step to reduce mortality faster where we can. The proposal is a part of the annual TAC and Quota regulation and it proposes to list eel as a prohibited species. Besides the actual ban, this proposal by the Commission makes it clear that eel is a commercial species like any other and the CFP objectives apply. The Commission added a prohibition to fish eel in the TAC and Quota regulation for the Baltic Sea first and will consider similar actions elsewhere. The proposal is based on:

1. The eel catches in Baltic is highest reported in EU
2. The fishery targets mature adult and migrating eels hugely important for spawning
3. Scientific advice is clear and has been clear for a long time, the stock is in catastrophic state
4. The management plans in force has not delivered an increase of the stock
5. The CFP is clear, in stock situations like this, further remedial measures must be taken regardless of existing management plans

Conclusion: it's not the perfect solution but it is a necessary start and Baltic TAC and Quota regulations proposals always comes first in the year. The Commissions proposal may come as a surprise but considering that the state of the stock has been well known for years, a proposal to ban fishing cannot be a shock.

The CFP rules and legal options to protect eel

CFP applies to commercial fish species and eel clearly falls in that category with no exceptions. Eels are caught and sold in all life stages at high prices. The reach of CFP rules is debated, but without a doubt it covers by definitions in article 4 of the Basic Regulation 2013/1380: “marine biological resources' means available and accessible living marine aquatic species, including anadromous and catadromous species during their marine life”

The MSY goal is valid for eel as well as possible use of articles regarding safeguards and emergency measures, but note that such measures are only for a short time (6 months). To actually set a TAC for eel in accordance with CFP is not really possible and therefore the zero TAC option is the correct one. Other plans have been declared to not be in line with the CFP/MSY target and therefore set aside as not valid. It's clear that MSY is the central principle of the CFP and the eel regulation does not meet that principle as it never really was intended for that. The Eel regulation from 2007 was created before the new CFP. Also, it's important to note that the eel regulation 2007/1100 is not a management plan with targets for fishing and so on, it is a recovery plan “establishing measures for the recovery of the stock of European eel”

To oppose a starting point with closing the sea fishery may mean that either the EU must go through a longer process of changing the EU eel regulation 2007 or trying to agree on an EU wide ban in for example the Technical Framework Regulation by adding eel to the Annex 1, Prohibited Species. Several member states have already argued against a Baltic only ban, pointing to other areas and fisheries as equally important to close, the glass eel fishery in France and Spain for example. Indeed an EU wide ban is preferable but to act now and then a zero TAC within the reach of the CFP is the fastest and best option to start with.

Conclusion: accepting the facts of the state of the stock and the fishery requires, under EU CFP rules in place, further measures quickly. Starting with a ban of fishing in the sea area, targeted eel fishery must be cut or stopped also upstream.

The Science

Eel is listed as critically endangered by IUCN. Stock recruitment is seriously impaired and down by 97-99% compared to average in years between 1960-1979. A [joint](#) scientific assessment done by ICES has called for reduction of all mortality on eel down to zero or as close to it as possible for over ten years. The data situation and knowledge of eel catches etc leaves a lot to ask. So does monitoring and control of illegal catches and black market sales. However, the advice is very clear and the decline of the stock is well documented.

[All ICES eel advice today and historically can be found here.](#)

The listing as [critically endangered by IUCN](#) is made on the basis of the dramatic drop in incoming amounts of elvers or so called glass eels to EU coasts compared to average numbers 1960-1979 and it is not because there are very few actual eel alive today. Eel is therefore not comparable to other endangered species with only low total numbers in existence but it is because the recruitment is so seriously impaired. Simply put, scientists are worried that the eels we see now are too few compared to earlier generations of spawners/adult eels to conclude an effective spawning stock biomass.

Conclusion: Scientific advice is clear and has been for a long time. The stock is in deteriorating state and dramatic efforts are needed. All mortality must be zero or as close to zero as possible.

Importance of protection of adult spawners vs glass eel

Mortality on all life stages of eel is problematic and should be reduced to zero, in line with scientific advice. However voices to consider fishing on juveniles, the glass eels, first instead of adult eels in the Baltic for example is slightly flawed in three ways:

1. Eels in the Baltic area are not stemming from inflow of young eels to for example the south French or Spanish coast where the glass eel fishery is present. Eels that meet the coast there do not swim far north but rather stay on the coast, in estuaries or rivers in that area. The eels in the Baltic have a separate inflow of juveniles around the British islands, thus a halt to fishing there would not automatically lead to larger numbers in the Baltic and North Sea areas.

2. To target the adult eels effectively destroys any chance of increased reproduction here and now. These are the eels that miraculously have survived for as long as 25 years or more and now are ready to spawn.
3. Most juvenile glass eels will die of natural causes, and even though also this fishery should be stopped until stock recovers, catching glass eel has less direct impact on spawning biomass than the taking of mature adult eels.

Conclusion: All targeted eel fishery must be under serious scrutiny including the glass eel fishery. However to focus on juveniles first is backwards thinking, we must protect all mature eels now to increase the stock. For the same reason we must allow all fish to spawn before catching them.

Glass eel fishery and restocking eel to save the stock

It is important to note that many, if not most, eel management plans in force are built on the idea of restocking eel. This implies that a glass eel fishery should continue to sustain such releases because there are no ways possible to actually farm eels. All eels part of restocking and aquaculture are wild eels. The effectiveness of eel restocking is under serious scientific challenge as the results of restocking seem mainly to be sustaining a fishery and not adding to the recovery of the stock. [Read a published study of effects of eel restocking from Marine Biology](#) showing that eels moved to the Baltic Sea region do not find their way out of the Baltic Sea.

What is very clear is that restocking gives an “artificial” sense that the eel stock is doing fine. One example of this is from Ukraine and the western part of the river Bug, a river system without restocking. In that area the eel has always been present but that last 4 years, no fisherman has caught any eel. In contrast, fishermen in Sweden and Denmark say eel fishery is better now than in many years. The fishermen are simply catching a lot of stocked eels and it is not linked to improved reproduction at all. All restocking to date is clearly feeding the fishery and in that sense it has major support among fishermen. However the support stocking of eel should not and never was a measure aimed to keep up high catches. We cannot solve the eel problem by taking juveniles and moving them where the fishing is. It solves nothing and it is of course not sustainable over time.

The costs of eel restocking are considerable, paid by taxpayer’s money. Feeding the fishery with subsidized eel and paying a high price as a consumer for adult eels is a waste of money and not in line with the ambition of the eel regulation or the CFP.

Conclusion: There is no sustainable solution built on catching juvenile eels and moving them to new location. It’s not at all clear that it helps the stock, and especially not if we as a result of the stocking artificially uphold a fishery. Restocking as an emergency measure is paid for by taxpayers and should not be linked to fishing and fishermen.

Difficulty of eel management and eel life cycle

Eel come to Europe as small thin eels, called glass eels, after 2-3 years in the Atlantic Sargasso sea area. Most but far from all swim all the way upstream, deep into Europe mainland water. Once arriving on EU

shores the eels do not migrate much along the shore meaning that eels finding land in Spain or south France will never end up on the coast of Wales, Denmark or Latvia

Eels are affected by a wide range of human activity. The most direct and obvious is fishing that occurs in all waters, sea, coast, estuaries, rivers and lakes. Disruption of water ways is a major problem and above all, hydropower turbines and inlets kill eels that migrate downstream once adult. However since many eels stay on the seaward side of many dams it is not true for all eels.

The few eels that manage to live a full life cycle and manage to pass dangers in rivers may well find themselves caught in traps in river mouths, or on the sea coasts. Available data clearly shows that a high percentage of adult eels are taken in the Baltic Sea area compared to the rest of the EU. The fishing does take place on the coast and sea, but also upstream. CCB considers such upstream fishing also must close and that CFP should be considered to cover the stock, not catch location.

It's important to understand the very long life cycle of eels and that the older adult eels we see now in our waters may be the result of spawning with parents that themselves were old. The parents of today's eel may have been born in the 1970-1980, a time when the stock was vastly larger than today. If we have low recruitment today, but still based on a much larger generation of the past, think of what the results will be from the current adults.

Conclusion: managing the eel is very difficult as results take long to materialize and one eel saved may mean many juvenile eels elsewhere. The fact remains, we must see eels alive now in light of the past situation to be able to understand tomorrow's state of the stock.