



FORGOTTEN FISH PROJECT

EUROPEAN EEL LIFE CYCLE

CLIMATE CHANGE

This affects **all life stages** as it does with all species including ourselves.



Stage 7 SILVER EEL

Ready to go back to the Sargasso Sea the eel undergoes another huge metamorphosis. The eyes massively enlarge as do the pectoral fins. The digestive tract slows and stops functioning diverting attention to developing the sexual reproductive organs. The eels colour changes to a metallic silver underside and a darker almost black back. This is not yet a fully mature eel, rather more a puberty stage.



Stage 5 ELVER

As the Glass eels start to move upstream into freshwater, they gain pigment, providing camouflage in their new habitat. These are now known as elvers and are the first stage of an eel's freshwater life.

RIVER BARRIERS



These weirs, dams sluice gates etc affect the upstream migration of glass eels, elvers and the seaward migration of silver eels. Hydroelectric schemes are a particular issue due to their size and turbines, that often kill seaward migrating eels. It also limits the available habitat for yellow eels.

DISEASE AND PARASITES



Some diseases and parasites are natural in all wild species. Though an introduced nematode *Anguillicoloides crassus* that originated from the Japanese eel is infecting European eels and lowering the success rate of silver eels making it to the Sargasso Sea.

FISHING



Legal fishing works off quotas and is regulated using robust scientific data. Illegal, unregulated and unreported exploitation could threaten sustainable practices.

ILLEGAL FISHING AND SMUGGLING



Glass eels are targeted from Europe to sustain the Asian market. These are smuggled in their millions in shipments and even suitcases before being grown on to a saleable size in Asia for consumption.

HABITAT DESTRUCTION



As we do not know the exact location of the spawning ground we do not know if habitat destruction is happening at sea. What we do know is that there has been a huge reduction of habitat for eels once they reach their freshwater habitats.



Stage 8 MATURE EEL

Over the journey back to the spawning grounds the silver eel fully matures. Females arrive carrying millions of eggs and the whole cycle starts again.

Stage 2 HATCHING

Fertilised eggs quickly hatch and the preleptocephali larvae join the planktonic community and start feeding.

Stage 3 LEPTOCEPHALI

As the larval eel grows it changes to the shape of a willow leaf. Now known as a leptocephali these transparent animal drift on oceanic currents toward Europe.

Stage 1 SPAWNING

Adult fully mature eels spawn somewhere in the Sargasso Sea roughly 4000 miles from Europe.



NATURAL PREDATORS

They affect **all life stages** from life in the planktonic layer at sea to the freshwater rivers of Europe. These pressures are completely natural and in balanced ecosystem are essential.



Stage 4 GLASS EEL

As the young eels get closer to the continental shelf of Europe they undergo metamorphosis into glass eels. These eel shaped fish are 8cm long and have no pigment when they arrive at Europe's coastline.

