

Overfishing threatens European bluefin tuna

November 7 2008

Bluefin tuna disappeared from Danish waters in the 1960s. Now the species could become depleted throughout the northeast Atlantic and Mediterranean, according to analyses by the Technical University of Denmark (DTU Aqua) and University of New Hampshire. The species is highly valued as sushi.

Bluefin tuna is a treasured delicatessen. A kilo of its much sought after meat can bring in prices reaching 130 Euros at fish auctions. The species in the Mediterranean Sea and northeast Atlantic is caught by fishermen from many countries, particularly France, Spain and Italy.

But there are fewer tuna left in the sea, and those that are left are younger and smaller. In 2006, the organisation that manages bluefin tuna fisheries (ICCAT; International Commission for the Conservation of Atlantic Tunas) launched a recovery plan whose main objective is to rebuild the population by 2022. Rebuilding would be achieved by gradually lowering fishing quotas between 2007-2010 and implementing other fishery regulations.

The management plan is however insufficient to stop the population from getting even smaller in the coming years. That is evident from analyses done by Brian MacKenzie (DTU Aqua) together with colleagues Henrik Mosegaard (DTU Aqua) and Andrew A. Rosenberg (University of New Hampshire, USA). Their results will be published later this year in an article in the scientific journal *Conservation Letters*.

"Our calculations show that the present recovery plan has little chance of

reaching its goal and will not be able to protect the population in the northeast Atlantic and Mediterranean from declining even further. The population is presently at its lowest level ever, and the adult biomass has fallen 10 years in a row. Every year we set a new record low," explains Professor Brian MacKenzie, National Institute of Aquatic Resources at The Technical University of Denmark (DTU Aqua).

Large illegal fishery

In 2006 (the last year for which data are available), the officially reported landings were 30,650 tonnes. On top of that come the illegal landings. ICCAT itself has estimated that the illegal landings were about 20,000 tonnes so that total landings (legal plus illegal) were ca. 50,000 tonnes. In 2007, ICCAT suspects the total legal and illegal landings were 60,000 tonnes.

Professor Brian MacKenzie, DTU Aqua, says: "New regulations and measures need to protect the fish that are still left in the wild. This will mean a substantial reduction of both fishing mortality and fishing effort, plus the political will to implement and enforce new regulations."

"The longer we wait, the more difficult it will be to rebuild the population. There is also a risk that the population might never come back if it declines too much. That is because the ecosystem could change so that it is less productive for bluefin tuna. Such a change happened on the Canadian East Coast when cod populations declined but still have not come back, even after a fishing moratorium.

The scientists have calculated how the bluefin tuna population will develop under the recovery plan – assuming that the existing quotas are enforced, and assuming that the illegal landings continue at recent levels.

"Even under the recovery plan, the population will likely fall to new

record low levels in the next 2-3 years. The existing quotas are too high and will allow fishing fleets to catch all or nearly all of the adult bluefin tuna in the entire northeast Atlantic and Mediterranean Sea. That situation will make reproductive success of the population much more vulnerable to bad environmental and ecosystem conditions," says Brian MacKenzie, DTU Aqua.

Important decision

ICCAT will meet later in November to decide about bluefin tuna fishing regulations, and whether the present recovery plan needs to be changed.

In June 2008, the EU closed its bluefin tuna fishing season early because 6 EU countries already had caught their share of the 2008 quota and because the fishing capacity of EU countries is so large that according to the EU there is a real risk of overfishing.

Bluefin tuna in Denmark

There used to be bluefin tuna in waters near Denmark. They were so abundant and landings so high that the first tuna cannery could be opened in 1929 at Skagen. In the 1950s, bluefin tuna weighing 100 kg and more were often caught with hooks in the Øresund and Kattegat. When the fishery in northern European waters (mainly the North and Norwegian Seas) was at its high point in the mid-1950s, fishermen in Norway, Denmark, Germany and Sweden landed in total ca. 15,000 tonnes per year. But the "tuna adventure" ended in the mid-1960s. Today bluefin tuna are extremely rare in the North Sea and Norwegian Sea.

Source: Census of Marine Life

Citation: Overfishing threatens European bluefin tuna (2008, November 7) retrieved 20 March 2024 from <https://phys.org/news/2008-11-overfishing-threatens-european-bluefin-tuna.html>

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