

“NECESSITY”

Reducing the by-catch in European fisheries

High by-catch, the accidental entanglement of non-targeted species in fishing gear, is one of the major factors that endanger the long-term sustainability of European fisheries.

In many Nephrops fisheries, the non-target catch is dominated by species such as cod and haddock, which are subject to total allowable catch (TAC) and quota management controls. These may be netted adults that are in excess of the permitted quota, or juveniles. According to the legislation on by-catch, they must all be discarded; few survive, however.

In pelagic fisheries, porpoises and dolphins are caught and drown in numbers that may exceed the population regeneration rate.

In its reform of the Common Fisheries Policy in 2002, the Commission decided to come forward with regulatory measures to reduce these by-catches and discards. Such measures include amongst others the introduction of more selective fishing gear, such as nets with larger meshes, square-mesh panels, separator grids, and changes in design and rigging of such gear in order to improve selectivity.

In line with this policy, the **NECESSITY** project was launched in 2004. NECESSITY is a pan-European project involving 22 partners from 13 different countries that aimed to develop ways of **modifying trawls to enable by-catch species to escape from the trawl unharmed**.

The project objectives were to:

- study the behavioural characteristics that make small cetaceans (i.e. porpoises and dolphins), and certain fish species or age groups vulnerable to capture in trawl fisheries;
- develop alternative fishing strategies, or fishing gear modifications (such as by-catch reduction devices and acoustical deterrents), to

reduce the by-catch in trawl fisheries;

- consider the biological and socio-economic ramifications of modifying the fishing gear and practices; and
- transfer the information gathered to other fisheries subject to similar concerns.

To this extent, novel species-selective gear prototypes have been developed, as well as alternative fishing tactics in co-operation with the fishing industry for use in the European **Nephrops fisheries**.

The current status of knowledge of cetacean by-catches in **pelagic fisheries** has been reviewed, using existing data sources and ongoing data collection programmes, and additional biological data of landed cetaceans, such as age, year of maturity and cause of death, have been collected.

For pelagic fisheries where these by-catches occur, being pair trawling on bass, pair trawling on albacore, single boat and pair pelagic trawling on herring, mackerel and horse mackerel, fishery with high opening bottom trawls and midwater pair trawls on hake, novel species-selective gear prototypes and alternative fishing tactics have also been

Project acronym:

NECESSITY

Full title of Project:

Nephrops and cetacean species selection information and technology

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www.rivo.dlo.nl/sites/necessity/

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**“NECESSITY AIMED TO
MODIFY TRAWLS SO AS TO
ENABLE BY-CATCH SPECIES
TO ESCAPE FROM THE
TRAWL UNHARMED”**

developed in co-operation with the fishing industry.

Another objective of the Cetacean task group was to compare the effectiveness of commercial available acoustic deterrents (pingers), and consequently to develop an interactive pinger in co-operation with a manufacturer. Once the potential biological and economic impacts of the technologies and tactics developed have been evaluated, the results will be disseminated to relevant sectors in the fishing industry, and efforts will be made for their implementation.

By reducing by-catch of non-targeted commercial fish species, NECESSITY will help the EU meet its commitments under the Common Fisheries Policy to protect and conserve available and accessible living marine aquatic resources.

By reducing by-catch of cetaceans, the project will support the EU Council Regulation requiring Member States to take steps to ensure that incidental capture does not have a negative impact on cetacean species (Council Regulation (EC) No. 812/2004). Moreover, it supports the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS), which was concluded in 1991

under the auspices of the Convention on Migratory Species (UNEP/CMS or Bonn Convention) and entered into force in 1994.

The socio-economic aspects of the project will help provide for rational and responsible exploitation, on a sustainable basis. Finally, NECESSITY will increase understanding of the consequences of adopting or varying particular fishery management measures.

The results of the NECESSITY project will be presented at the PROFET Policy workshop “Atlantic fisheries, marine cage and shellfish culture”, taking place in Dublin, September 13-14, 2007.