

“CAFÉ”

Linking fleet capacity and fishing effort to fishing mortality

The European fishing fleet has long been characterized by a fishing capacity that far exceeds the capacity required to harvest the available fishery resources in a sustainable manner. This overcapacity has inevitably led to the depletion of certain fish stocks, to the point where their biological condition now gives serious cause for concern. Overcapacity in the fishing fleet not only constitutes a risk to the survival of fish stocks but also produces negative economic effects in the fishing industry. It reduces the ability of each vessel to remain profitable, which in turn reduces the possibility of paying for the modernisation which is necessary for competitiveness.

An overall reduction in the level of capital employed in the catching sector is the first essential step towards improving economic performance. The Community has long sought to restrain the growth of fleet capacity brought on by technological innovation, so as to keep fishing effort and fish availability in balance. However, the four Multi-Annual Guidance Plans (MAGPs) which were implemented prior to 2002 failed to produce effective reductions in fleet capacity.

As part of the reform of the Common Fisheries Policy, therefore, a new scheme – known as the **Entry-Exit Scheme** – was introduced, which is designed to be more effective, and simpler to manage. Under this new scheme, **all new capacity introduced must be directly compensated by the withdrawal of equivalent capacity, without public aid.** Aid is now targeted at decommissioning vessels affected by the new long-term recovery plans. This new scheme gives the Member States greater responsibility for fleet management, and eliminates public subsidies for vessel renewal.

The adoption of the Entry-Exit Scheme is based on the assumption that reducing fleet catching capacity and limiting

fishing effort will reduce fishing mortality. However, the scientific basis for this assumption is not yet fully established, particularly for pelagic fisheries. For the future of healthy fish stocks, the interaction between these factors needs urgent study.

The **CAFÉ** project, which started in February 2006, **aims to carry out a comprehensive study of capacity and effort metrics and model their relationships to fishing mortality, and the economic drivers for capacity development.** For this purpose, it will:

- examine the relationship between these factors for six case studies: North Sea, Biscay & East Mediterranean pelagic fisheries; and North Sea, western (Biscay & Celtic Sea) and north east Mediterranean demersal fisheries;
- review existing approaches to measuring capacity and effort and control measures derived from these;
- collate data on fleets (catch, vessel & gear metrics, costs & profits, and investment & capital values) and on fish stocks (abundance, distribution, and fishing mortality); and
- include analyses of fisher’s behaviour from targeted fine scale studies.

Project acronym:

CAFÉ

Full title of Project:

Capacity, F and Effort.

EU contract number:

022644

Web-site:

<http://fish.jrc.cec.eu.int/fisheries/cafe/cafe.php>

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Statistical and mathematical modelling tools will be used to explore and quantify relationships between metrics for the three factors. Metrics will be selected that are suitable for capacity and effort modelling and have good explanatory power in the model systems. Appropriate models and metrics will be developed to quantify the links between capacity, effort and species mortality, partitioned by fleet and area.

A key element will be a study of capacity utilisation, i.e. the match between capacity and real effort, including a quantitative study of the factors that drive capacity change, i.e. investment strategy, control legislation and economic factors.

Finally, the project will propose a series of new effort and capacity control measures and scenarios. These will be tested and compared to current measures using operational models. At all stages explicit measures will be taken to quantify structural and parametric uncertainty.

The final outcome will be a comprehensive review of possible management measures and their likely effect in conserving fish stock resources. This way, **CAFÉ will provide an improved scientific basis through which policy-makers will be able to match fishing capacity to the resources available.**

“THE CAFÉ PROJECT WILL PROPOSE A SERIES OF NEW EFFORT AND CAPACITY CONTROL MEASURES AND SCENARIOS”