



EFFICHALUT

BETTER FISHING FOR GREATER ECONOMY

The EFFICHALUT project, officially recognised in 2009, was aimed at developing software that would simulate trawling at sea, making it possible to reduce gear drag and thus fuel consumption. A trawler's fuel consumption regularly accounts for two-thirds of the energy costs of a business.

EFFICHALUT has therefore been mainly interested in using numerical simulation to examine the various possible ways of fitting out a trawler.

The research was accompanied by tests at sea on board a 24-metre fishing boat, the Arc en ciel, at Boulogne sur Mer to measure the tension of trawl warps and arms.

The results of the project have been satisfactory: by combining technical optimisation and boat owner practice, the trawl gear, developed as part of the EFFICHALUT project, has been used to generate energy savings in the order of 17%.

EFFICHALUT project partners firstly established what constituted benchmark fishing equipment (trawler - otter boards - catch gear), integrating both fishing industry and scientific knowledge. They then tested the results with professional fishing crews, who compared it to their usual trawlers.

Several improvements were made to lighten the trawler and make it more streamlined in the water: shape of the side sections of the net, mesh size, replacing upper wing tips with rope and using Breztop netting.

Initial calculations arrived at using numerical simulation were then followed up by measurements at sea to report on the overall energy-saving benefits. The fishing gear developed by the EFFICHALUT project was used on board fifteen trawlers from Etaples and resulted in reduced fuel consumption for the same amount of catch which translated as annual savings for the Etaples fleet of around 800,000 euros.

The project demonstrated that a combination of scientific and technical knowledge can lead to innovations which contribute to the economic stability of fishing businesses.

EFFICHALUT has been the subject of presentations at international conferences (Vigo, Seattle) and of scientific publications.

The EFFICHALUT project is recognised jointly by the Pôle Mer Bretagne and the Pôle Aquimer.

Partners

Companies

Coopératives Maritimes Etaploises, Etaples-sur-mer [\[Project Developer\]](#)
AEMI, Caen et Boulogne
Le Drezen, Treffiagat-Le Guilvinec

Research center

Ifremer, Brest, Boulogne-sur-mer et Lorient

Other partners

Comité Régional des Pêches Maritimes et des élevages Marins de Bretagne, Rennes
Comité Régional des Pêches Maritimes et des élevages Marins, Boulogne-sur-mer

Funders

- Direction des pêches maritimes et de l'aquaculture (DPMA)
- Fonds européen pour la pêche (FEP)

Labelisation

18/09/2009

Overall budget

285 K€