



GRAND LARGUE

MIXED SAIL/ENGINE PROPULSION FOR FISHING BOATS AND MERCHANT NAVY VESSELS

The aim of the Grand Largue project, officially recognised in 2007, was to develop a system of automated auxiliary sails for hybrid diesel/wind propulsion, coupled with adapted and optimised routing software, to reduce fuel consumption of fishing boats and merchant navy vessels in general. A feasibility study of equipment using the 'Grand Largue' system is currently underway on board a shell-fishing boat from Erquy, a drift netter from Le Conquet, a longliner from the Island of Reunion and a trawler from Le Guilvinec.

A former trawler, 'Le Grand Largue', was fitted out as an experimental vessel to test and validate the systems for reducing fishing's energy dependence. The results have been conclusive, with fuel savings in the order of 20% confirmed, depending on wind conditions and the type of steering. This has been achieved without any impact on life on board, which, moreover, is made more comfortable, as the roll of the vessel is considerably reduced.

The Grand Largue project has seen the creation of a mixed sail/engine system of propulsion combined with intelligent software. The latter comprises sail management software, capable of exploiting automatic learning to adapt to different configurations, and routing software that integrates weather forecasts to optimise the course set.

As part of the project, a permanent R&D engineering post was created. The project has also been the subject of a 'Soleau Envelope' (an interim form of French patent, pending a patent application), an INSA thesis and four scientific publications.

The Grand Largue project partners are working in collaboration with the syndicate of longline fisheries in the Island of Reunion and with the Qualitropic technopole. Exchanges are also underway with Senegal and Brazil.

The Grand Largue project has been succeeded by two new projects to develop the fishing boat of the future: Ecomer (iXElek, AVT, etc.), which is working on an intelligent econometer, and Bali (SDA, AVT, iXelek, etc.), which is researching electrically-assisted propulsion. In addition, the An Aocher project (SDA, Ulmo, AVT, iXElek, etc.) involves adapting the Grand Largue project for leisure craft and for people with disabilities in particular.

Partners

Companies

Avel Vor Technologie, Mellac et
Rennes [Project Developer]
Alunox, Saint-Malo
Cabinet SDA, Quimper
iXElek, Loctudy
Le Lokeya, Saint-Malo
Scapêche, Lorient
Ulmo, Morlaix

Research centers

INSA, Rennes
Institut Maritime de Prévention, Lorient

Funders

- Conseil régional de Bretagne
- Conseil départemental du Finistère
- Conseil départemental d'Ille-et-Vilaine
- Quimper Communauté
- Morlaix Agglomération
- Rennes Métropole
- Saint-Malo Agglomération

Labelisation

09/02/2007

Overall budget

690 K€