



CONVENAV

ECO-FRIENDLY SHIPS FROM DESIGN TO DISMANTLING

The CONVENAV project, as in "CONception et cycle de Vie Environnemental des NAVires" (Eco Ship Design and Life Cycle), was aimed at reducing the environmental impact of ships by developing innovative tools. From design through to dismantling, and encompassing the operational lifetime of a vessel including maintenance and refit programmes, the tools were intended to assess and reduce the environmental impact of ships and, by means of modelling, to facilitate inspection at each of these various stages.

During the project, an environmental assessment method, adapted to suit the complex and specific nature of ships, was devised. Comprising a marine eco-indicator, it refined calculations relating to the impact on the marine environment and took account of the different types of bodies of water (coastal, estuary, harbour, open sea, etc.) and their respective vulnerability factors.

Two demonstrators were created: a tool to aid design (OCEAN) and an operational monitoring tool. The naval eco-design tool 'OCEAN', suitable for complex products and lengthy design processes, enables rapid and accurate environmental evaluation and optimisation based on Life Cycle Assessment (LCA). Created for the shipbuilding sector, this tool is of potential interest to other industrial sectors - rail, aeronautic, etc.

The operational monitoring tool, a logical follow-up to the design tool, extends the impact and monitoring work of the latter beyond the design phase, a crucial development for products such as ships or transport methods with extremely long life cycles in general.

The outcomes have proved satisfactory: these tools will together provide an accurate environmental assessment of ships based on multiple criteria, opening up the way in the longer term for the future eco-labelling of ships.

Work is being carried out to patent the environmental assessment method.

The CONVENAV project was the subject of 3 presentations, 4 international papers and 14 promotional campaigns. Nine articles also appeared in the French press.

The CONVENAV consortium is today seeking a partner to produce these tools on an industrial scale (IT developer, distributor of Life Cycle Assessment or Eco-design tools, etc.), and is examining several possible options for carrying on the work: collaborative platform for exchanging environmental data for the naval sector, interfacing with the 'Green Passport'

Partners

Companies

Naval Group, Brest et Lorient [Project Developer]
SITA, Paris

Research centers

ENSAM, Paris
Ifremer, Brest
MAPIE, Chambéry

Funder

- Agence Nationale de la Recherche

Labelisation

23/11/2007

Overall budget

1 030 K€

(Inventory of Hazardous Materials Onboard), etc.

The future of the marine eco-indicator is also being studied within Ifremer.