

PROJECT

DIVEST

Dismantling of Vessels with Enhanced Safety and Technology

Funding: European (7th RTD Framework Programme)

Duration: Aug 2008 - Dec 2011

Status: Complete with results

Total project cost: €3,370,570

EU contribution: €2,442,568



Call for proposal: FP7-SST-2007-RTD-1

[CORDIS RCN : 89937](#)

Background & policy context:

Policy-makers are in dire need of up-to-date objective scientific data to support their decision making as applied to ship dismantling. The project focussed on defining an integrated risk and economic framework applicable to the optimisation of ship dismantling activities and infrastructure, from a social, economic and environmental point of view. The framework will apply across the lifecycle of a ship and it will be developed using risk-based and economic modelling/value-based analysis.

Particular emphasis will be on the dismantling value and competence chain. Therefore the implementation steps of the project focussed on:

- selection of the risk and economic analysis process that best fits the needs and constraints of the dismantling process;
- validation of the applicability of selected methods by case studies, with emphasis on dynamic combination of technical, environmental and human factors;
- organisation of the research output into a database to support risk management and decision making.

The subjects of concern that have been identified for this project were as follows:

- a process to answer safety concerns linked to ecological processes for clean and safe dismantling & clean and safe disposal;
- analysis of ships, infrastructure, personnel, with focus on the dynamic interfaces between them, to support research on vessels and infrastructure end of life analysis addressing industrial, ecological and economic criteria;
- economic analysis of the main risk drivers of identified ship/infrastructure/process combinations to answer questions on the cost effectiveness of ship recycling.

Objectives:

The project objectives were to identify and analyse the various social, technical, economic and environmental drivers using a combination of risk-based analysis and economic modelling (also referred to as value-base analysis).

The project team involved partners from India. It also played an active part in technology transfer and the betterment of human and environmental conditions in Asian countries through a dissemination and training programme. The main deliverables were:

- validated risk and economic models;
- policy recommendations on the optimum dismantling facility and process;
- knowledge-exchange platform.

Methodology:

Project activities followed three main steps, being:

1. reviewing various risk and economic analysis methodologies and the selection of those which best fit the needs and constraints of the ship dismantling activity;
2. validation of the applicability of the methods selected using modelling and actual case studies;
3. organisation of the research data and output into a readily accessible database.

DIVEST was structured around eight inter-dependent Technical Work Packages and one Project Management Work Package organised around four main phases. The main phases of the project were distinctive groupings of one or more Work Packages, which were created to provide clearly defined review and decision points for enhanced levels of control over the Project.

The work Packages were:

- WP 1 : Management and Coordination;
- WP 2 : Review and analysis of legal, policy and market dimensions of ship dismantling;
- WP 3 : Review and selection of risk assessment methodologies;
- WP 4 : Value-base analysis;
- WP 5 : Analysis of HSEQ;
- WP 6 : Development of the integrated risk and value-base framework;
- WP 7 : Case studies and implementation;
- WP 8 : Development of the Knowledge Exchange Platform;
- WP 9 : Dissemination and training.

Parent Programmes:

[FP7-TRANSPORT - Transport \(Including Aeronautics\) - Horizontal activities for implementation of the transport programme \(TPT\)](#)

Institute type: Public institution

Institute name: The European Commission

Funding type: Public (EU)

Lead Organisation:

V.navy

Address:

Rue Victor Hugo 130-136
92300 Levallois Perret
France

EU Contribution: €331,469

Partner Organisations:

Swerea Ivf Ab

Address:

Argongatan 30
43153 Moelndal
Sweden

EU Contribution: €282,151

Veolia Proprete

Address:

Avenue Georges Clemenceau 169
92735 Nanterre
France

EU Contribution: €0

Dokuz Eylul Universitesi

Address:

Cumhuriyet Bulvari 144
35210 Alsancak - Izmir
Turkey

Organisation Website:

<http://www.deu.edu.tr>

EU Contribution: €138,000

Nederlands Organisation For Applied Scientific Research**Address:**

Schoemakerstraat 97
6060 DELFT
Netherlands

Organisation Website:

<http://www.tno.nl>

EU Contribution: €144,000

Dnv Gl Se**Address:**

BROOKTORKAI 18
20457 HAMBURG
Germany

EU Contribution: €207,669

Indian Institute Of Technology Bombay**Address:**

Powai
Mumbai 400076
India

EU Contribution: €139,616

Bae Systems Surface Ships Limited**Address:**

Warwick House, Farnborough Aerospace Centre
Farnborough
PO1 3NJ
United Kingdom

EU Contribution: €122,445

Medi Metal Aktiebolag**Address:**

Vaktargatan 40C
75145 Uppsala
Sweden

EU Contribution: €161,250

S.c. Navalink Rom Srl**Address:**

Incinta Port Midia Cladire A 3

905700 Navodari, Constanta
Romania

EU Contribution: €0

Panepistimio Patron

Address:

University Campus- Rio
26500 Patras
Greece

Organisation Website:

<http://www.upatras.gr>

EU Contribution: €174,000

Twi Limited

Address:

Granta Park Great Abington
Cambridge
CB1 6AL
United Kingdom

EU Contribution: €280,500

University Of Strathclyde

Address:

Richmond Street
Glasgow
G1 1XQ
United Kingdom

Organisation Website:

<http://www.strath.ac.uk>

EU Contribution: €461,468

Technologies:

Ship design and manufacturing
Ship dismantling processes

Development phase: Validation

Key Results:

The DIVEST project provided a core: validated and practical definition of ship dismantling that will be common to and useable by all stakeholders. The project also makes an immediate and positive contribution to business practices globally, as business risk, operational risks and value drivers are now better defined and understood. Furthermore the DIVEST project has facilitated technological improvement and the betterment of human and environmental conditions in countries involved in the study. This is done through training and practical case studies (e.g. collection of environmental data), but also through the involvement of non-European partners into the Project Consortium.

Policy implications

Fundamental tenets to the project are: a broad public engagement and international dialogues through active dissemination of knowledge.

Other results

Various risk and economic analysis methodologies have been reviewed. Those which best fit the needs and constraints of ship dismantling activity, have been selected. The applicability of the selected

methods have been validated, using modelling and actual case studies. In addition, all research data and output have been organised into an accessible database.

Policy objectives

Innovating for the future (technology and behaviour): *Promoting more sustainable development*

Vehicle design and manufacturing, Other

STRIA Roadmaps: specified

Water transport (sea &

Transport mode: inland)

Transport sectors: Freight transport

Transport policies:

Societal/Economic issues, Environmental/Emissions aspects, Safety/Security,
Decarbonisation

Geo-spatial type: Other