

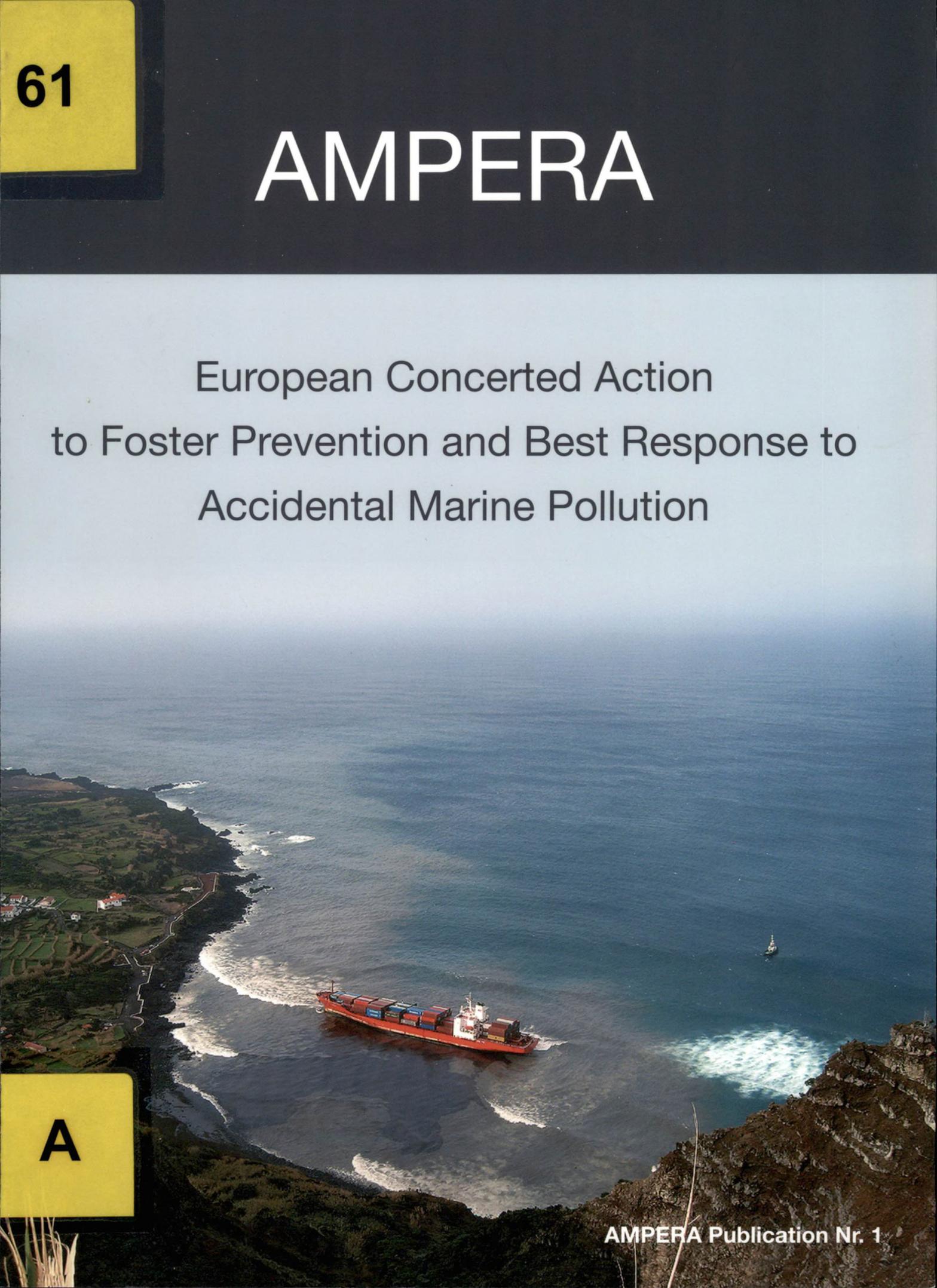
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AMPERA

European Concerted Action
to Foster Prevention and Best Response to
Accidental Marine Pollution

A

AMPERA Publication Nr. 1



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Foreword

■ We have all seen the television pictures illustrating the devastating effects of accidental marine pollution (AMP), and particularly of oil spills, with damaged ecosystems, ruined coastlines and a widespread impact on coastal economies. Although there may exist a general perception that these accidents are unavoidable, they could be averted in two ways. First, preventative measures can reduce the number of incidents that occur (80% of oil spills are caused by human error). Secondly, fast and appropriate emergency response systems can help to limit the immediate and long-term damages and restore sites to their natural conditions.

Policy led scientific research plays a key role in addressing these issues. Decisions based on sound scientific principles are indispensable for effective and efficient formulation of contingency plans and improve decision-making processes. International co-operation may also be needed, taking into account the often transboundary implications of these accidents.

Bearing this in mind, the AMPERA network was established to provide a platform where governmental policy-makers and scientists could meet to discuss many aspects of accidental marine pollution (AMP), and to provide guidance to implement EU-wide measures as required. By moving towards the co-ordination – and eventual integration – of national and regional AMP research programmes, the network will maximise the EU's research output. Bringing stakeholders together to agree overarching strategies, share best practices and disseminate results, it will make important contributions to the protection of Europe's coastal ecosystems and economies.

In short, AMPERA provides the forum for an EU perspective on AMP research. This is the first time that European national funding agencies will combine efforts to enhance coordination and plan a more efficient use of existing RTD capabilities for preventing and better responding to accidental marine pollution incidents. The network will enable research to be planned strategically to address the needs for the entire Community, not just individual nations, and maximise the outputs from existing efforts.

I am confident that AMPERA comprises a significant potential of pioneering a European Research Area not only on accidental marine pollution, but can exemplify other fields of environmental science and technology. I am anticipating that the existence of AMPERA should increase not only the EU's research capabilities but also its ability to implement preventative legislation and effective response systems at the Community level and enhance the public awareness of European marine environmental policy issues.

Joan Albaiges, MEC
AMPERA Co-ordinator

ERA-NET SCHEME

The ERA-NET scheme ^[1] is the principal means within the Sixth Framework Programme (FP6, DG Research, European Commission) to promote long-term co-ordination of national research programmes and to encourage transnational networking. It is aimed at national and regional programme funders and managers and its goal is to establish long term links between national research programmes.

^[1] www.cordis.lu/coordination/era-net.htm

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■ Marine pollution, in general, and **accidental marine pollution (AMP)**, in particular, are issues of major concern from the standpoint of their impacts on the health and socio-economic use of the marine environment. These issues, which originate largely from shipping and offshore and coastal installations, have placed increased pressure on the need for the better protection of the world's marine ecosystems through the implementation of new or improved methods of prevention and response, based on sound scientific principles. Research in the area of accidental marine pollution is largely undertaken by those European countries most at risk from oil spills. Considering such environment issues are trans-boundary by definition, greater collaboration is essential if Europe is to successfully protect all of its coastlines and its maritime economies effectively.

In this context, **AMPERA** (European Concerted Action to foster prevention and best response to Accidental Marine Pollution), an **ERA-NET project** with a total funding of 1.57 million euros for the years 2005-2009, endeavors to create a platform where governmental policy developers and scientists from European coastal countries can meet to discuss all aspects of AMP and to implement EU-wide measures as required. By moving towards the co-ordination and eventual integration, of national and regional AMP research programmes, the project will maximise the EU's research output and make important contributions to the protection of Europe's coastal ecosystems and economies.

■ The main RTD areas of reference in AMPERA project are:

- Operational forecasting.
- Damage assessment.
- Protection of sensitive areas.
- Restoration methodologies.
- Environmental monitoring.



ImagDOP, University of Azores

... *AMPERA objectives*

■ AMPERA aims at creating a platform where governmental policy developers and scientists from European coastal countries can meet and discuss all aspects of AMP research. This will facilitate the implementation of measures necessary to enhance European competitiveness and provide the basis for the implementation of best practice in prevention, avoidance and remediation. Specifically, objectives of the project include:

1. Setting priorities in trans-disciplinary AMP research, including policy and socio-economic aspects, providing incentives for initiating new or strategic areas of innovative research.
2. Improved linking of AMP research with prevention and mitigation activities, to underpin and emphasize the role of sound knowledge in decision making.
3. Improving co-ordination of national and regional research programmes on AMP.
4. Design strategies to overcome barriers that hinder trans-national co-operation aimed at opening up of national/regional programmes.
5. Launching long-term RTD strategies, by identifying synergies and complementarities that will act as nuclei for sustainable co-operations between partners and improve the use of R&D outputs.
6. Dissemination of knowledge at different levels, underscoring the science-public interface and the importance of adopting this approach for society.



... AMPERA work packages

■ To pursue its objectives within the main RTD areas of reference, AMPERA has divided its work into five work packages (WP):

WP 1 aims at information exchange as basis for the definition of AMPERA strategic priorities, by performing a complete inventory on the state of the art of all existing AMP national programmes and their components.

WP 2 involves using this knowledge to agree on a common research strategy and identify joint activities. The participants will identify possible structural or legal barriers that could hinder co-operation and suggest ways to remove them. They will also begin to harmonise their administrative system (e.g. synchronised joint calls for proposals, joint evaluations) to make it easier to open up national programmes.

WP 3 involves the linking of AMP research with prevention and mitigation activities, addressing and promoting developments targeted at the administration and policy makers at a national, regional and international level as well as promoting innovation within different maritime industries.

WP 4 focus on the dissemination of knowledge at different levels, giving special emphasis to the scientific-public interface and the formation of sound public awareness.

WP 5 accommodates the management activities, including review and assessment, and co-ordination with other existing ERA initiatives.

AMPERA work packages and tasks

WP 1: Information exchange as basis for the establishment of AMPERA

- 1.1. National programmes content
- 1.2. RTD actors and overall environment
- 1.3. European competitiveness
- 1.4. Information exchange scheme

WP 2: Implementation of joint strategic programmes

- 2.1. Prospective analysis of trans-national programmes
- 2.2. Barriers that hinder trans-national co-operation
- 2.3. Improving inter regional co-operation
- 2.4. Joint Programme management

WP 3: Improving the linkage of AMP research with prevention and mitigation activities

- 3.1. Utilising R&D since 1990

- 3.2. Through an interactive web site
- 3.3. Make a proposal for joint R&D Programmes
- 3.4. Design joint training activity, exchange of programme managers and facility sharing

WP 4: Dissemination of knowledge at different levels

- 4.1. Promoting the exchange of information and diffusion of AMPERA results
- 4.2. Diffusion of results in media
- 4.3. Diffusion of results in video media

WP 5: Consortium management

- 5.1. Management
- 5.2. Establishment of co-ordination with other ERA activities
- 5.3. Collecting all information generated

■ The **AMPERA consortium** is composed of a total of 10 partner organisations from 8 European countries. All these organisations have initiated and managed a national strategic research programme on accidental marine pollution or have related programmes in different degrees of development. The consortium leading partner is the Ministry of Education and Science, from Spain. A short overview of the partner organisations will be given on the following pages.

■ Several Advisory members are associated with AMPERA, including high-level representatives from academia, industry, administrations and other end-users. This **External Advisory Committee (EAC)** ensures cross-cutting dialogue with different stakeholders, including environmental NGOs. This committee will also interact with the one established within the Community framework in order to exchange views and define current and future priorities on AMP activities.



Figure 1. Participants of the 3rd AMPERA Executive Board meeting held in Tallinn on May 4th, 2006.

■ Throughout the duration of the project, the consortium will seek to include all interested European countries, helping to extend AMP research into coastal states that have no such programmes at present.

AMPERA partner organisations

MEC - Ministry of Education and Science, Spain

IFREMER - French Research Institute for Exploitation of the Sea, France

Defra - Department for Environment Food and Rural Affairs, UK

EstSF - Estonian Science Foundation, Estonia

BELSPO - Belgian Federal Public Planning Service Science Policy, Belgium

FCT - Science and Technology Foundation, Portugal

RCN - Research Council of Norway, Norway

MI - Marine Institute, Ireland

XUNTA Consellería de Innovación e Industria, Xunta de Galicia, Spain

MB-ESF - Marine Board-European Science Foundation

Ministry of Education and Science Spain



Spanish research is mainly funded by the **Ministry of Education and Science** (MEC, www.mec.es). The MEC activities are aimed at pushing back the frontiers of knowledge in all disciplines by stimulating and funding fundamental academic research at the Spanish universities and scientific research institutes. MEC is funding research through the National Plans of Research, development and Technological Innovation (PN I+D+I). These plans are sectoral and have a duration of four years with annual public and competitive call which are peer-reviewed. The design of priority areas and the programmes addressing them is carried out by the Ministry within the framework of the National priorities as well as through the current topics addressed in the European Union Science and Technology Programmes.

AMP research funding

■ In the PN I+D+I for 2004-2007, there are several Programmes related to AMPERA: Chemical Technologies, Transport Safety, Biodiversity, Marine Sciences and Accidental Marine Pollution. In particular, a three year Strategic Action on accidental marine spills (VEM) was launched after the 2002 “Prestige” oil-spill in the Spanish NW Atlantic coast and Biscay Gulf. The initial aim of the Strategic Action was to improve the knowledge and technology related to the assessment and mitigation of the consequences of marine spills, with particular emphasis on oil events such as the Prestige tanker.



These efforts will be directed through R&D projects like those considered in VEM, as well as through others specified in priority areas of the different programs of the National Plan for Scientific Research, Development and Technology, including those on Natural Resources and Environment, Chemical Technologies, Transport Safety, Biodiversity and Marine Sciences. Although the initial interest was directed on oil spills, the programme is now open to all types of accidental marine pollution. The general areas of research are: operational forecasting, risk and damage assessment, protection of sensitive areas, restoration methodologies, and environmental monitoring.

During 2003 nine urgent projects were funded at a cost of 1.4 M€. The first call for proposals was held in March 2003 and 79 three-year projects were funded at a value of 8.6 M€. This included 31 projects with an international team participant at a value of 2.8 M€. The second call was in February 2004 and resulted in the submission of 88 proposals. From these 18 new projects were funded at a total value of 1.6 M€ (The amounts quoted do not include indirect and oceanographic ship costs).

MEC in AMPERA

■ MEC coordinates the AMPERA project and hosts the Technical Secretary and the Financial Officer. In addition to Consortium management (Work package 5), MEC is responsible for the implementation of Task 1.4.-Information exchange scheme, and Task 4.2.-Diffusion of results in media.

French Research Institute for Exploitation of the Sea



■ **The French Research Institute for Exploitation of the Sea** (IFREMER, www.ifremer.fr) is a public body of industrial and commercial nature created in 1986. It is under the protection of the four Ministries in charge of: Research, Transport, Fisheries and marine aquaculture, and Environment.

The organisation of IFREMER is based on two structures:

- the Direction of Programmes and Strategy which is in charge of the development, the management, the implementation and the control of the programmes and their budgets;
- the Direction of Operations which controls the 25 Departments in charge of the execution of the programmes and projects.

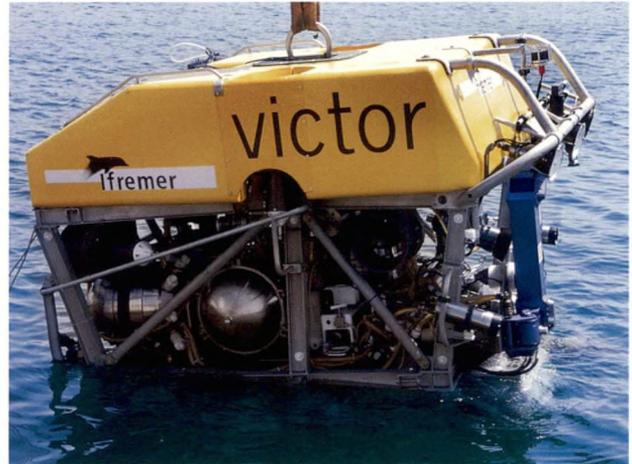
IFREMER activities aims at:

1. Provide assistance to the government, public authorities and organisations concerned with technical and economic marine research.
2. Gather, disseminate and enhance national and international oceanographic information.
3. Contribute to the implementation of international co-operation agreements in the marine field.

Budget

■ The annual budget of IFREMER is approximately 150 M€. The 2004 budget for the accidental marine pollution research programme is nearly 0.8 M€.

IFREMER also contributes to the Cedre, which is the Institution responsible, at national level, for documentation, research and experimentation on marine pollutants, their effects and the response means and tools to combat them.



AMP related projects

■ A number of programmes of IFREMER are linked to the monitoring and control of water quality in the coastal zone which may have direct applications in case of accidental marine pollution. IFREMER provides expertise to the authorities in charge of the POLMAR plan for forecast, monitoring and evaluation of environmental impact of pollution events on the marine environment. Since 2000, IFREMER has been in charge of co-ordinating the monitoring programme named "suivi Erika" and since 2001, has been in charge of co-ordinating the technological research network Ritmer, in response to the French Government demand. These programmes represent an annual budget of approximately 10 M€.

IFREMER in AMPERA

■ IFREMER is the task leader of Work package 1 - Information exchange as basis for the establishment of AMPERA, and is responsible for the implementation of Task 1.1.-National programmes content, Task 2.3.-Improving inter-regional co-operation, Task 2.4.-Join Programme management, and Task 4.3.-Diffusion of results in video-media.

Department for Environment Food and Rural Affairs, UK



■ **The Department for Environment Food and Rural Affairs** (Defra, www.defra.gov.uk) promotes sustainable development through a framework of 5 strategic priorities: climate change and energy, sustainable consumption and production, protecting the countryside and natural resources, sustainable rural communities and a sustainable farming and food sector including animal health and welfare. A significant part of its work is concerned with preparedness for emergencies and contingency planning.

AMP research funding

■ The UK has a well run and regularly tested AMP contingency plan which involves all our relevant authorities. Current R&D funding for AMP is largely reactive and although the resources available to the program have not reduced the money invested in new research from Defra's research budget has. This is largely due to new emerging priorities facing Defra.

R&D is usually commissioned by Defra through a process of open competition with any suitably experienced contractor able to apply. Defra will take advice on research requirements from various sources such as: Centre for Environment Fisheries and Aquaculture Science (Cefas), Department for Transport, Department of Trade & Industry, English Nature, Environment Agency, Fisheries Research Services (FRS), Food Standards Agency (FSA), Home Office, International Tanker Owners Pollution Federation Limited (ITOPF), Joint Nature Conservation Committee (JNCC), Maritime & Coastguard Agency (MCA), Met Office (NCOF), Ministry of Defence (MoD), Oil Spill Response Limited (OSRL), South Wales Sea Fisheries Committee, and World Wildlife Fund (WWF).

Defra currently undertakes AMP research under the programme ME13 -Managing marine activities: Marine Emergencies although due to the multiple use nature of some project outputs they may fall under other programmes. The programmes R&D objectives aim to take account of improvements in oil spill response and address the more common and demanding risks of pollution from shipping and offshore installations. Additionally it aims to ensure appropriate response products can be used by UK responders and supply relevant information for UK legislation.

The program was internally reviewed in October 2005 and is due for a full external review in 3 years time.

Defra in AMPERA

■ Defra is the task leader of Work package 3 – Improving the linkage of marine accidental pollution research with prevention and mitigation activities, and is responsible for Task 1.2.-RTD actors and overall environment, Task 3.1.-Utilising R&D since 1990, Task 3.3.-Make a proposal for joint R&D programmes, and Task 3.4.-Design joint training activity, exchange of programmes managers and facility sharing.

Estonian Science Foundation



■ **The Estonian Science Foundation** (EstSF, www.etf.ee) is a research funding organisation for basic and applied research, established in July 1990 by the Estonian Government. Its main goal is to support the most promising research initiatives in all fields of research. The EstSF uses state budget appropriations to award peer-reviewed research grants to individuals and research groups on a competitive basis. The highest decision-making body is a seven-member Council. The Council consists of the Chair, the heads of the four expert commissions and the representatives of the Estonian Ministry of Education and Research and the Estonian Academy of Sciences.

Marine research funding

■ The total annual research budget of EstSF was 6.0 M€ in 2005. The allocated amount to the Natural Sciences was 0.7 M€ and to Marine Sciences 0.15 M€.

■ EstSF funds bottom-up initiated research projects. The projects last up to four years. EstSF also funds interdisciplinary projects between research areas.

Once a year research project proposals are submitted to the EstSF by Estonian or foreign researchers working permanently in Estonia. The project proposals are peer-reviewed and the Council makes the final funding decision on the basis of the evaluators report and a careful assessment of the applicants' former scientific accomplishments.

In 2005 EstSF financed 14 marine research projects which are indirectly related to accidental marine pollution.



EstSF in AMPERA

■ EstSF is responsible for the implementation of Task 2.1.-Prospective analysis of trans-national programmes, and Task 3.2.-Through an interactive web site.

Belgian Federal Public Planning Service Science Policy



BELGIAN SCIENCE POLICY

■ The **Belgian Federal Public Planning Service Science Policy** (BELSPO, www.belspo.be) is a federal administration that is responsible for the preparation and implementation of research programmes in several fields (fundamental research, sustainable development, social cohesion, information society, space technology, ...). It is also responsible for ten Research Institutions of which the Royal Belgian Institute of Natural Sciences and its department VI: the Management Unit of the Mathematic Model of the North Sea (MUMM) should be mentioned.

Marine research programmes

■ Marine research and the theme accidental marine pollution is financed within the “Second scientific support plan for sustainable development policy-SPSD II (2002-2006)”. This plan is composed of:

- Part I: Sustainable modes of production and consumption (themes: general problems, energy, mobility and agrofood).
- Part II: Global change, ecosystem and biodiversity (themes: atmosphere and climate, terrestrial, freshwater and North Sea ecosystems, biodiversity).
- Part III: Supporting Actions: synthesis of research results, communication between actors involved.

It is completed by a series of mixed actions: interdisciplinary research (human and exact sciences) to give a better support to the integration of the decision making process needed for a sustainable development policy.

Marine research is mainly situated within the second part:

- within the theme ecosystems, a specific action can be distinguished: “Sustainable Management of the North Sea”.
- within the theme atmosphere and climate: marine research including the Antarctic is funded.
- within the theme biodiversity: marine research in relation with the North Sea and the Antarctic ecosystem is funded.

The total budget of the SPSP-II (2002-2006) is approximately 58 M€. The yearly budget for marine research is +/-5 M€ of which 678.000 € is devoted to the theme accidental marine pollution.

The programme “Science for a Sustainable Development” was approved by the Council of Ministers in 2005. The programme is the successor of the SPSP II and will run from 2005 to 2013 with a budget of 65.4 M€. The programme is composed of 8 priority research domains: energy, transport and mobility, agrofood, environment and health, climate, biodiversity, atmosphere and terrestrial and marine ecosystems and transversal research.

BELSPO in AMPERA

- BELSPO is the task leader of Work package 2 – Implementation of joint strategic programmes, and is responsible for Task 2.2.-Barriers that hinder trans-national co-operation.



■ The **Science and Technology Foundation** (FCT, www.fct.mces.pt) is a Portuguese governmental agency with a status of a public organisation with administrative and financial autonomy, created in 1997 and integrated in the Ministry of Science, Technology and Higher Education. It aims to:

1. Promote, fund, pursue and evaluate science and technology institutions, programmes and projects, as well as the training and qualification of human resources.
2. Foster the development and reinforcement of infrastructures for scientific research and technological development.
3. Enhance the diffusion and dissemination of scientific and technological culture and knowledge, as well as the scientific and technological education.
4. Stimulate the modernisation, co-ordination and public availability of science and technology sources. Its mission is mainly carried out through funding of R&D proposals presented by institutions, research groups and individuals, and also through co-operation agreements and other forms of partnerships with universities and other public and private institutions.

Marine Research Funding

■ FCT funds R&D projects through general and thematic programs, normally in a responsive mode aiming at capability enhancement and research excellence.

From 2000 to 2005, FCT financed projects in all scientific domains under the funding programme POCTI (Operational Programme in Science, Technology and Innovation). A total of 8 research projects related to AMP were financed with a budget of 0.6 M€.



A specific thematic programme on Marine Sciences, PDCTM (Programme for the Enhancement of Marine Sciences and Technology), was established for the period between 2000 and 2004, with a budget of near 10 M€. Among the 29 research projects funded, 6 projects were related to AMP research with a total budget of 1.6 M€. Other specific programmes, PDCTE and PLE (Programme for the Enhancement of Space Science and Technology, and Support Programme for the Amendment of State Laboratories), supported or are supporting projects related to AMP with a budget of 1.4 M€.

A new funding programme, POCI 2010 (Operational Programme in Science and Innovation), has been launched for the period between 2005 and 2010, with a specific scientific domain in Marine Science and Technology. In the first call for proposals, two AMP related projects were funded with a total budget of near 0.2 M€

FCT in AMPERA

■ FCT is the task leader of Work package 4 – Dissemination of knowledge at different levels, and is responsible for Task 4.1.-Promoting the exchange of information and diffusion of AMPERA results.

■ In Norway accidental marine pollution has been a major concern since the “blow out” on the Bravo oil platform in 1977. A lot of effort has been done to reduce the risk of accidents, and contingency plans and equipment have been put in place to try to handle accidental spills that may occur. Both the industry and government agencies have been responsible for these activities. All oil companies who are in charge of operating an oil field on the Norwegian Continental Shelf, are responsible for contingency plans for accidental oil spills from their activity, including equipment and organisation for emergency response. The Norwegian Coastal Directorate has the overall responsibility for accidental marine pollution, but a number of other government agencies also have a role.

In recent years the concern for accidental marine pollution from shipping has been growing in Norway, due to the fact that the number of tankers transporting oil & gas along the Norwegian coast from the Barents Sea and from Russia has increased significantly.

AMP Research Funding

Several programmes in the **Research Council of Norway** (RCN, www.rcn.no/english) have some activities related to accidental marine pollution. The research programme on the long-term effects of discharges from the petroleum activities was initiated in 2002. From 2006 this programme is included as a sub-programme in the co-ordinated marine research programme Oceans and the Coastal Areas. The main objective is to increase the long-term effects of discharges from the offshore activities so as to provide a better basis for the authorities to make decisions when co-ordinating the petroleum activities with other uses and protection of the marine environment. The key concern is that the overall impact on the marine environment must not lead to changes in the biological diversity or the marine system. The annual budget for this sub-programme is 2.5 M€.

The overall objective of the Innovation programme Maritime Activities and Offshore Operations (MAROFF) is to increase the competitiveness and the performance of the maritime industry. This includes the performance on environmental impact. The MAROFF programme started in 2002 and is intended to last 8 years. It superseded the previous MARITIM programme which had a similar objective. Since 2004 research related to the maritime industry has received an increased attention from the Government, and the annual budget of MAROFF has increased from approximately 3.5 M€ in 2004 to 8.5 M€ in 2006. At the same time several new thematic priorities has been added. One of these is cold climate operations, which includes safety issues related to the transport by tankers of oil & gas along the Norwegian Coast from Russia and the Barents Sea. The more general objective of improving the safety and the sustainability of shipping is unchanged.

Norwegian research institutions, companies and government agencies also participate in projects financed by the EU 6th Framework Programme, of which some are related to accidental marine pollution.

RCN in AMPERA

■ RCN is responsible for Task 1.3.-European competitiveness.

Marine Institute, Ireland



■ The Irish **Marine Institute** (MI, www.marine.ie) was established in 1991 and is a State Agency under the aegis of the Department of Communications, Marine & Natural Resources (DCMNR). It is the national agency with the following general functions: *“to undertake, to co-ordinate, to promote and to assist in marine research and development and to provide such services related to marine research and development, that in the opinion of the Institute will promote economic development and create employment and protect the environment.”* (Marine Institute Act, 1991).

The Marine Institute’s role is to:

1. Provide its parent Department (Ministry) and other government bodies with scientific advice and services relating to the marine sector (e.g. fish stock assessment, aquaculture, shipping, marine environmental monitoring, etc).
2. Support RTDI (research, technology, development and innovation) in-house and through the provision of a competitive Marine RTDI Funding Programme.
3. Support marine enterprise and related activities through the provision of key scientific services and advice and through the results of research.
4. Underpin the sustainable development of the marine resource through the provision of key scientific services, advice and research.

Marine Research Funding

■ The Marine Institute acts as a national focal point and catalyst for marine research. MI is mandated by the DCMNR to implement and manage the 52 M€ Marine RDTI Measure of the National Development Plan (2000-2006). Programme expenditure/agreement to date includes 31.7 M€ for the purchase of the RV Celtic Explorer research vessel; 0.25 M€ for upgrading essential laboratory infrastructure; and 13 M€ in grant-aid under a competitive Marine RTDI Funding Programme to support a range of strategic, applied (industry), PhD and Post-Doctoral fellowships and networking and technology transfer projects.



A new Marine Knowledge, Research and Innovation Strategy for Ireland for the period 2007-2013 is being finalised. This will incorporate 3 Research Measures and 2 Supporting Programmes:

1. Industry Research Measure: designed to integrate the existing research base with market and commercial opportunities and to grow stronger in-house business research and innovation.
2. Discovery Research Measure: to pursue long-term development of new economic opportunities associated with bio-pharmaceuticals, industrial chemicals, diagnostics and environmental technologies.
3. Policy Support Research Measure: to provide stronger support for the determination of public policy relating to the marine sector.
4. Infrastructure Supporting Programme: an investment programme to deliver essential infrastructure that will enable research and innovation.
5. Innovation Supporting Programme: targeted specifically at improving in-company R&D management and commercialization capabilities.

Ireland has no specific AMP research funding call although AMP related research could fit into broader research themes.

■ **Xunta de Galicia** (Autonomous Government) created in 1999 the Secretariat of Research and Development which, in 2003, turned into the General Direction of R&D within the Consellería de Innovación e Industria, whose objective is to define and apply a co-ordinated R&D and Innovation Policy. The decision making process in Galicia related to R&D and Innovation planning is autonomous, therefore, the decisions related to Innovation Policy follow a short authority line, not depending on National Authorities.

The **Consellería de Innovación e Industria** (www.xunta.es/conselle/in/) through the General Direction of R&D is responsible for the Galician R&D and Innovation Plan, which include thirteen programmes to support R&D in main Galician sectors and is focused on three groups: Natural resources, Innovation technologies and Citizen services. The main purpose is funding research through both financial support and measures to generate support to R&D and innovation projects, networks, innovation awareness, technology transfer, etc. These plans are sectoral and have a duration of several years with annual budget and annual public and competitive call. The first Plan covered the period 1999 to 2001 while the current one covers from 2002 to 2005 with an overtime in 2006. The next plan is being submitted to a committee's approval and cover the period 2006 to 2010 with an overall budget of 800 M€, which means an important increase concerning the previous plan.



AMP Research Funding by XUNTA

■ The current plan includes two programmes related to Accidental Marine Pollution:

- Marine resources,
- Environmental technologies.

These programmes support R&D and innovation in universities, research centres, technology centres and firms and main attention is given to co-operation among agents in order to support innovation in firms. In 2003, after the Prestige accident, the Plan was modified in order to give priority to R&D and Innovation projects related to prevention of accidental marine pollution and also to reduce the effect of the Prestige. The plan has an industrial development component, where the major part of the funds are located, dedicated to clean technologies. Overall over 1 M€ year are invested.



Marine Board European Science Foundation



■ The Marine Board, established in 1995, operates as a strategic board within the European Science Foundation. Its members are major national marine scientific institutes or funding agencies within European countries: at present it is composed of 25 member organisations from 17 countries. The Marine Board provides a forum for the development of foresight and strategic activities in support of policy development for national agencies, resulting in enhanced synergy.

The Marine Board-ESF aims to:

1. Facilitate the development of scientific strategies (organising and sponsoring workshops and conferences, setting up of targeted working groups).
2. Coordinate policies with regard to infrastructure investments.
3. Advise on strategic and scientific policy issues at the European level.
4. Publish position papers on key topics.

With its current membership the Marine Board represents a unique forum for Marine Science in Europe and world-wide. The Marine Board's activity is based on four pillars:

1. Forum: Creating a forum for its member organisations.
2. Strategy: Identifying scientific strategic issues.
3. Voice: Providing a voice for European Marine Science.
4. Synergy: Promoting synergy among national programmes and research facilities.

Whilst the emphasis is on science, the Marine Board fully recognises the increasing interdependence between science and technology and, as a result, promotes the appropriate technological developments for the achievement of its scientific objectives.

Marine Board-ESF in MarinERA and other ERA-NETs

The Marine Board-ESF developed, in collaboration with Ifremer, the successful MarinERA ERA-NET project, to enhance co-operation and co-ordination of national marine research programmes across 13 (in the first instance) European Member States. The Marine Board-ESF is responsible for the operational and strategic management of the MarinERA project that began in November 2004. It is also an observer to two other ERA-NETs: BONUS and MarIFISH.

Marine Board-ESF in AMPERA

■ The Marine Board establishes effective interactions with the relevant structures at the national level (Marine Board Member Organizations), European level (political – European Commission, European Parliament and scientific – e.g. EFARO, EuroGOOS) and international level (e.g. ICES). The Marine Board-ESF, as MarinERA Secretariat, reinforces links between several European initiatives and schemes (ERA-NETs, FP6 Networks of Excellence, ESF EUROCORES), exchanges best practice and avoids duplication of efforts. Thus the Marine Board-ESF, as AMPERA partner, is responsible for Task 5.2.-Establishment of co-ordination with other ERA activities.

... Creation of the website

■ The AMPERA website was launched in November 2005. Its creation and implementation was conducted within WP 1, Task 1.4.-Information exchange scheme, under the lead of MEC. It functions as the main repository of knowledge generated by the programme, being the main tool for the dissemination and exchange of information among the partners and between these and other interested parts.

■ The AMPERA webpage contains a public and a restricted area, only accessible to project partners.

www.ampera-net.info



■ Find out from the website:

- Basic information about AMPERA.
- List of participants.
- Definition of management and tasks.
- Latest news and events.
- Reports.
- Links to related websites.
- Contact information.

... National programmes content

■ A report on the inventory of the public and private research programmes conducted on technological and scientific aspects of accidental marine pollution, more particularly focused on European countries, was conducted within WP 1, Task 1.1.-National programmes content, under the lead of Cedre/IFREMER. The data was collected by mean of two questionnaires, sent to all AMPERA partners and concerned European countries, and summarised in a report.

■ A first analysis of the data gave the following indications:

• The influence of the major spills (Erika - Dec. 1999, France; Prestige - Nov. 2002, Spain) on the AMP RTD funding is significant. It has a consequence on the disparities between the countries whereas they were directly concerned or not (Figure 2).

• AMP RTD efforts appear to be mainly devoted to oil spills; only very few projects dedicated to other Hazardous & Noxious Substance (HNS) spills.

• Globally the AMPERA partners have a relative balance between the three defined AMP fields (Pollution countermeasures, Impacts, and Response preparedness) except France and United Kingdom who mainly developed respectively Pollution countermeasures RTD and Response preparedness RTD during the studied period (Figure 3).

• Following a major spill, a succession in the developed fields in AMP RTD is deductible: first Impacts/Pollution countermeasures studies and then Response preparedness projects. This succession is generally followed by a “technological plateau” preceding the decrease of funding as it is estimated that further improvements in techniques and equipment could only be attained at significantly greater expenses.

• The effort does not appear to be constant, but decreases as major spills are getting far.

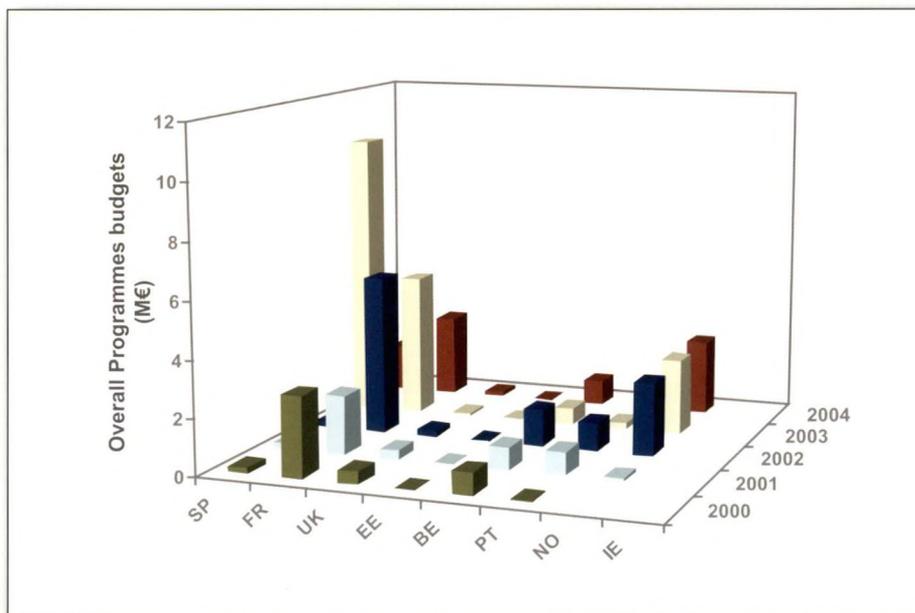


Figure 2. Competitive Accidental Marine Pollution RTD Funding (2000-2004) within the AMPERA partner countries.

- It is also significant to note that for Programmes management, two types of general organisation have been distinguished:

- The programmes with definition of general research axis.
- The programmes enclosing a pre-definition of specific research fields.

- As a fact, the countries with a clear AMP policy pre-defined specific thematic in order either to draw lessons from spills incidents, or to improve response techniques and preparedness in fields where gaps were perceived during the response to these spills.

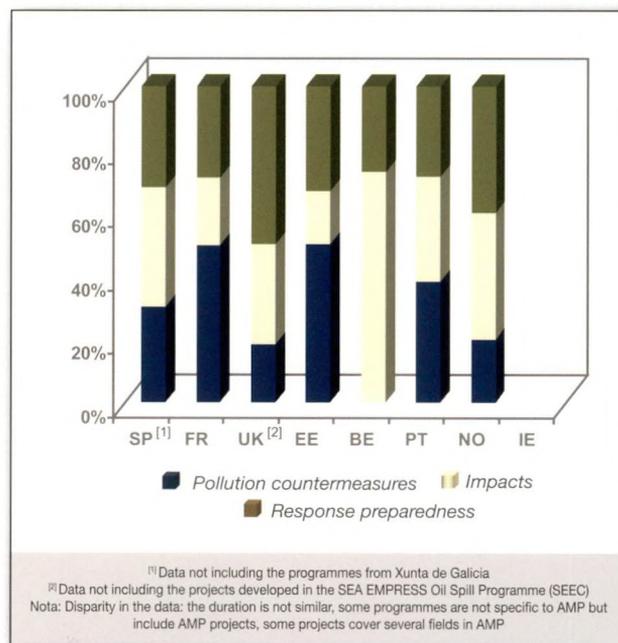


Figure 3. Indicative percentages of RTD projects per field in Accidental Marine Pollution within the AMPERA partner countries.

... RTD Actors and overall environment

■ A summary of the key organisations/ institutions involved in the area of accidental marine pollution, in relation to their statutory and advisory responsibilities, for each of the member countries was produced within WP 2, Task 1.2.-RTD Actors and Overall Environment, under the lead of Defra.

The data was collected by mean of a questionnaire, sent to all AMPERA partners.

Figure 4. Key organisations and institutions involved in the area of Accidental Marine Pollution operating within each of the AMPERA partner countries.

Country	Governmental Departments	Governmental Research Institutions / Agencies	Non-Government Scientific Institutions	Private companies with commercial interests
Spain	<ul style="list-style-type: none"> • Ministry of Education and Science (MEC) • Ministry of the Environment (MMA) • Ministry of Public Works (Fomento) From Galicia: <ul style="list-style-type: none"> • Regional Departments of: Innovation and Industry; Environment and Sustainable Development; Fisheries and Maritime Affairs 	<ul style="list-style-type: none"> • Spanish Oceanographic Institute (IEO) • Spanish Research Council (CSIC) • Research Center for Energy, Environment and Technology (CIEMAT) From Galicia: <ul style="list-style-type: none"> • Technology Institute for Control of Marine Environment (INTECMAR) • Marine Research Center (CIMA) 	<ul style="list-style-type: none"> • WWW/ADENA From Galicia: <ul style="list-style-type: none"> • Centro Tecnológico del Mar (CETMAR) • Arao Foundation 	<ul style="list-style-type: none"> • Centro de Estudios Técnico-Marítimos (CETEMAR) • Fundación Instituto Tecnológico para el Desarrollo de las Industrias Marítimas (INNOVAMAR)
France	<ul style="list-style-type: none"> • National Research Agency (ANR- PRECODD) – Ministry of Research • Ministry of Ecology and Sustainable Development 	<ul style="list-style-type: none"> • Centre of Documentation, Research and Experimentation on Accidental Water Pollution (Cedre) • MeteoFrance 	<ul style="list-style-type: none"> • IFREMER • National Institute for Industrial Environment and Risks (INERIS) • French Petroleum Institute (IFP) • University of Brittany Occidental (UBO) 	<ul style="list-style-type: none"> • LeFloch Depollution
United Kingdom	<ul style="list-style-type: none"> • Defra 	<ul style="list-style-type: none"> • Maritime & Coastguard Agency (MCA) • English Nature (changing to Natural England during 2006) • Joint Nature Conservation Committee (JNCC) • The Centre for Environment Fisheries and Aquaculture Science (Cefas) • Environment Agency 	<ul style="list-style-type: none"> • The International Tanker Owners Pollution Federation (ITOPF) 	<ul style="list-style-type: none"> • Oil Spill Response Limited (OSRL)
Estonia	<ul style="list-style-type: none"> • Ministry of Environment • Estonian Border Guard 		<ul style="list-style-type: none"> • Marine System Institute, Tallinn Univ. of Technology 	
Belgium	<ul style="list-style-type: none"> • Federal Public Service (FPS) • Food Chain Safety and Environment (FPS Environment) • BELSPO 	<ul style="list-style-type: none"> • Management Unit of the Mathematical Model of the North Sea (MUMM) • The Sea Fisheries Department - Ministry of the Flemish Community – Institute of Nature and Forest Research 	<ul style="list-style-type: none"> • Department of Veterinary Pathology, Univ. of Liège (ULg) 	<ul style="list-style-type: none"> • ECOLAS N.V.
Portugal	<ul style="list-style-type: none"> • Ministry of National Defence, Navy - National Maritime Authority (AMN) 	<ul style="list-style-type: none"> • Hydrographical Institute (IH) • National Agricultural and Fisheries Investigation (INIAP) • Institute for the Environment (IA) • National Institute for Water (INAG) • Nature Conservation Institute (ICN) • National Council for Ports and Sea Transport 	<ul style="list-style-type: none"> • Centre of Marine and Environmental Research (CIMAR) • Centre for Environmental and Marine Studies (CESAM) • Institute of Geophysics Infante D. Luis • Institute of Marine Research (IMAR) • Institute of Telecommunications 	
Norway	<ul style="list-style-type: none"> • Norwegian Coastguard • Norwegian Pollution Control Authority (SFT) • Norwegian Petroleum Directorate (NPD) 	<ul style="list-style-type: none"> • RCN • Norwegian Coastal Administration (NCA) 	<ul style="list-style-type: none"> • The Foundation for Scientific and Industrial Research at the Norwegian Institute of Technology (SINTEF) 	<ul style="list-style-type: none"> • Det Norske Veritas (DNV)
Ireland	<ul style="list-style-type: none"> • Irish Coast Guard (Department of Transport) 	<ul style="list-style-type: none"> • Marine Institute • Environmental Protection Agency (EPA) 		

... ERA-NETS



MarinERA is an ERA-NET project of the 6th FP, with an EC funding of 2.95 M€ for the years 2004-2008. It is a partnership of the leading Marine RTD Funding Organisations in 13 European Member States. It aims to the co-ordination of national and regional marine RTD activities.

Web address: www.marinera.net



BONUS for the Baltic Sea Science is an ERA-NET project of the 6th FP with an EC funding of 3.03 M€ for the years 2004-2007. The project brings together the key research funding organisations in all EU Member States around the Baltic Sea. The aim is to gradually and systematically create conditions for a joint Baltic Sea research programme.

Web address: www.bonusportal.org

... co-ordination actions

spreex

SPREEX (Spill Response Experience) is a co-ordination action of the 6th FP with an EC funding of 0.9 M€ for the years 2005-2006. It aims to identify research needs, propose clusters of existing projects included in different work programmes, generate synergies for building new projects and partnerships between authorities and regulators, end users, university and researchers.

Web address: www.spreex.net

... SME networks



MAPO is the first European SME network on Marine Pollution, funded by the 6th FP for the years 2005-2007. Its goal is to enhance the integration of SMEs into RTD European projects to find solutions to struggle against various types of marine pollutions.

Web address: www.marine-pollutions.org

... interregional co-operation



EROCIPS (Emergency Response to Coastal Oil and Inert Pollution from Shipping) is funded by the European Regional Development fund through Interreg IIIB for the years 2004-2007. It seeks to develop common methodologies, and tools for dealing at national and local levels with shoreline responses to coastal pollution incidents, transferable across the EU, in order to support the sustainability of the sea transport industry.

Web address: www.erocips.org





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