

SIXTH FRAMEWORK PROGRAMME



Deliverable 1.2.2 – Collation of the Responses from the RTD Actors Questionnaire.

ERA-NET

**To foster prevention and best response to Accidental Marine
Pollution**



This document outlines the key organisations involved in the area of Accidental Marine Pollution operating within each of the AMPERA partner countries.

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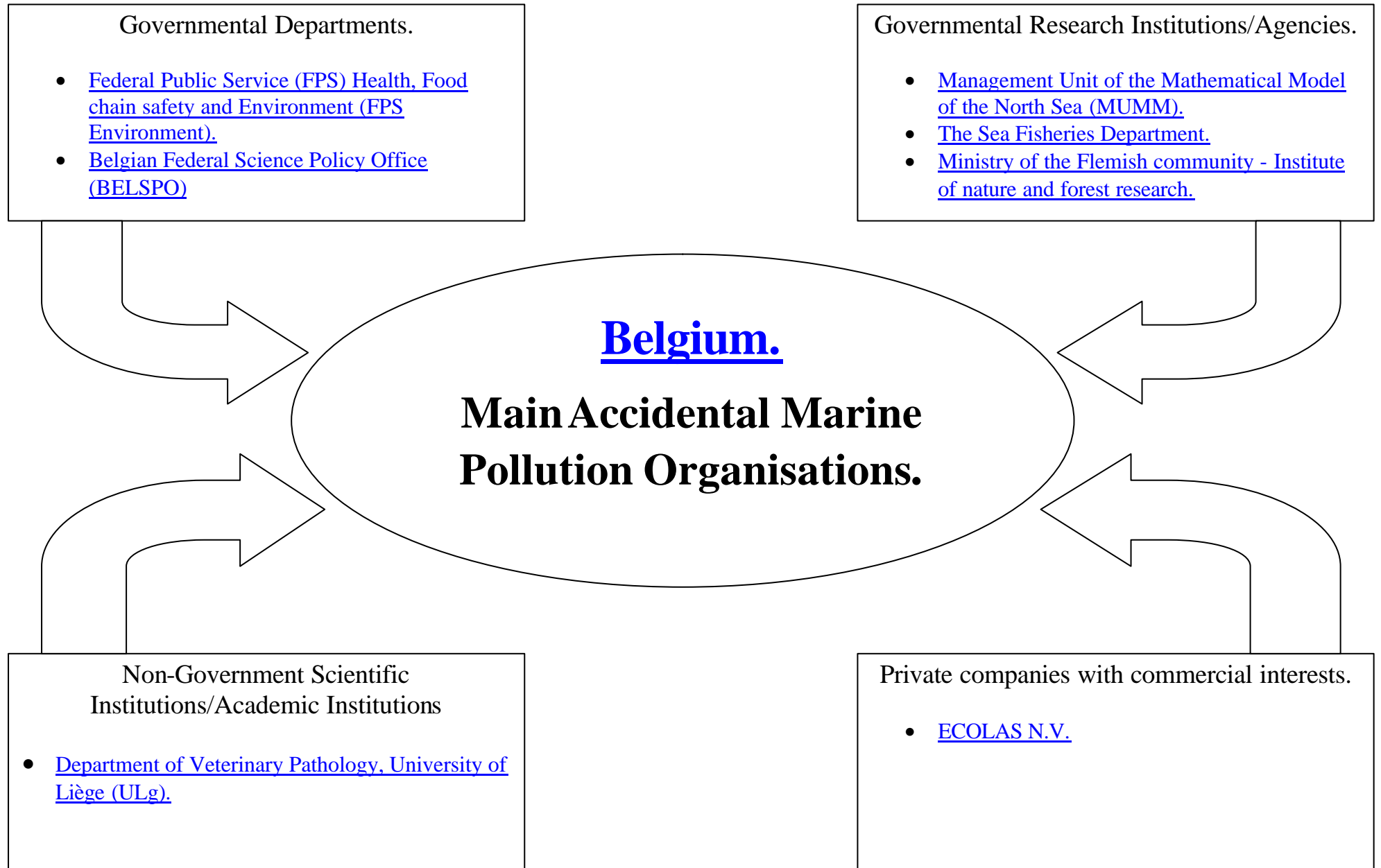
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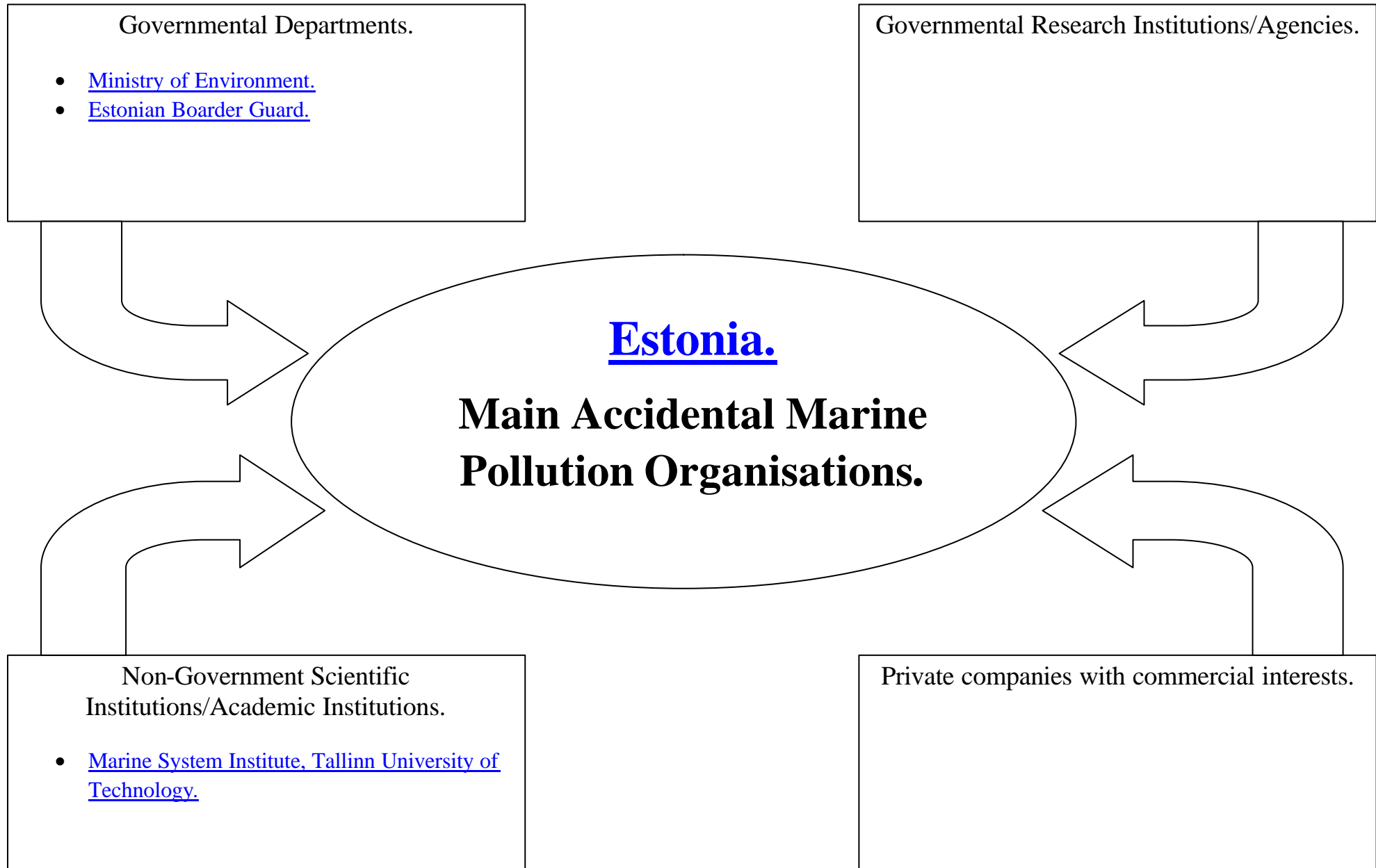
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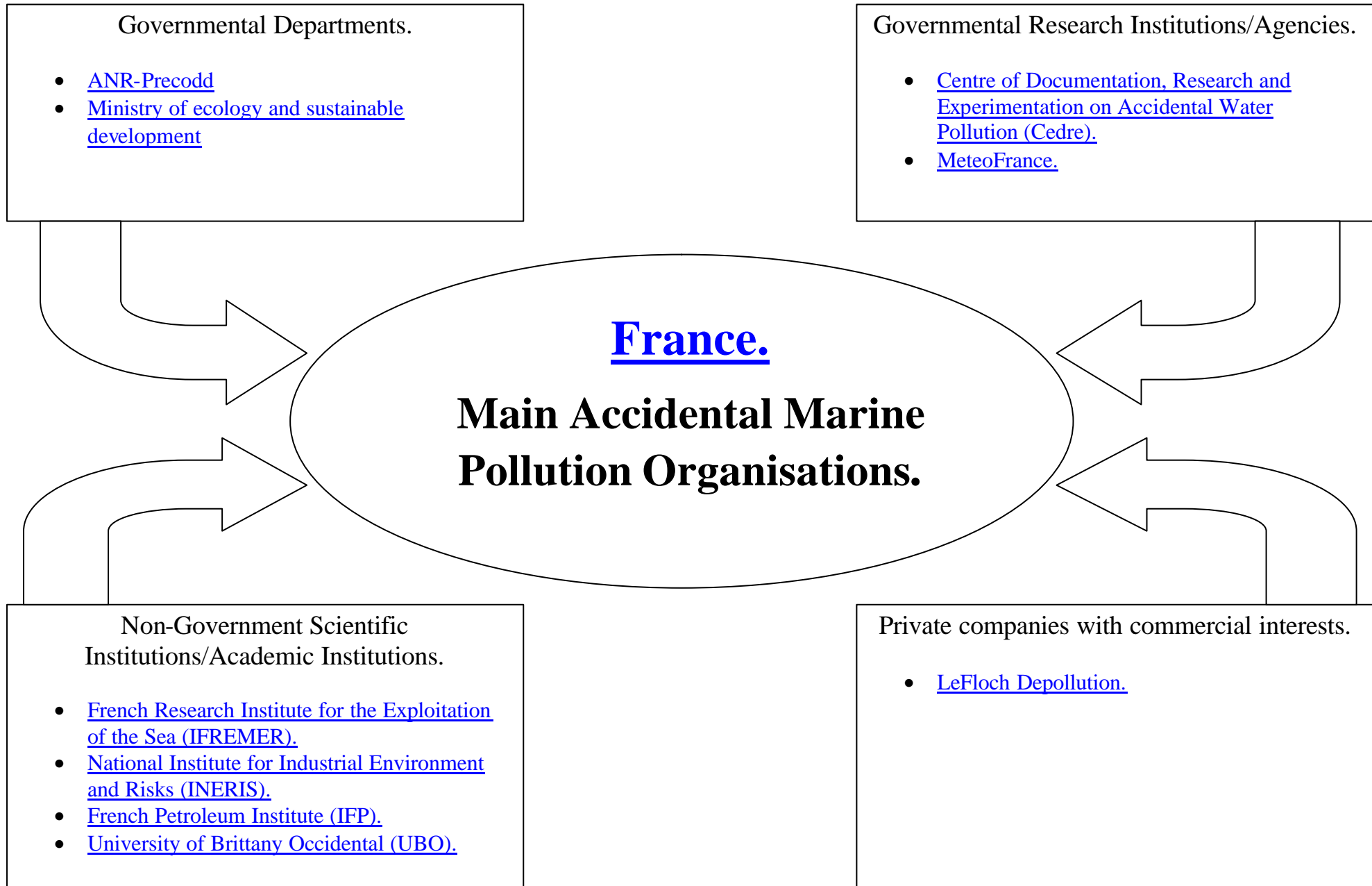
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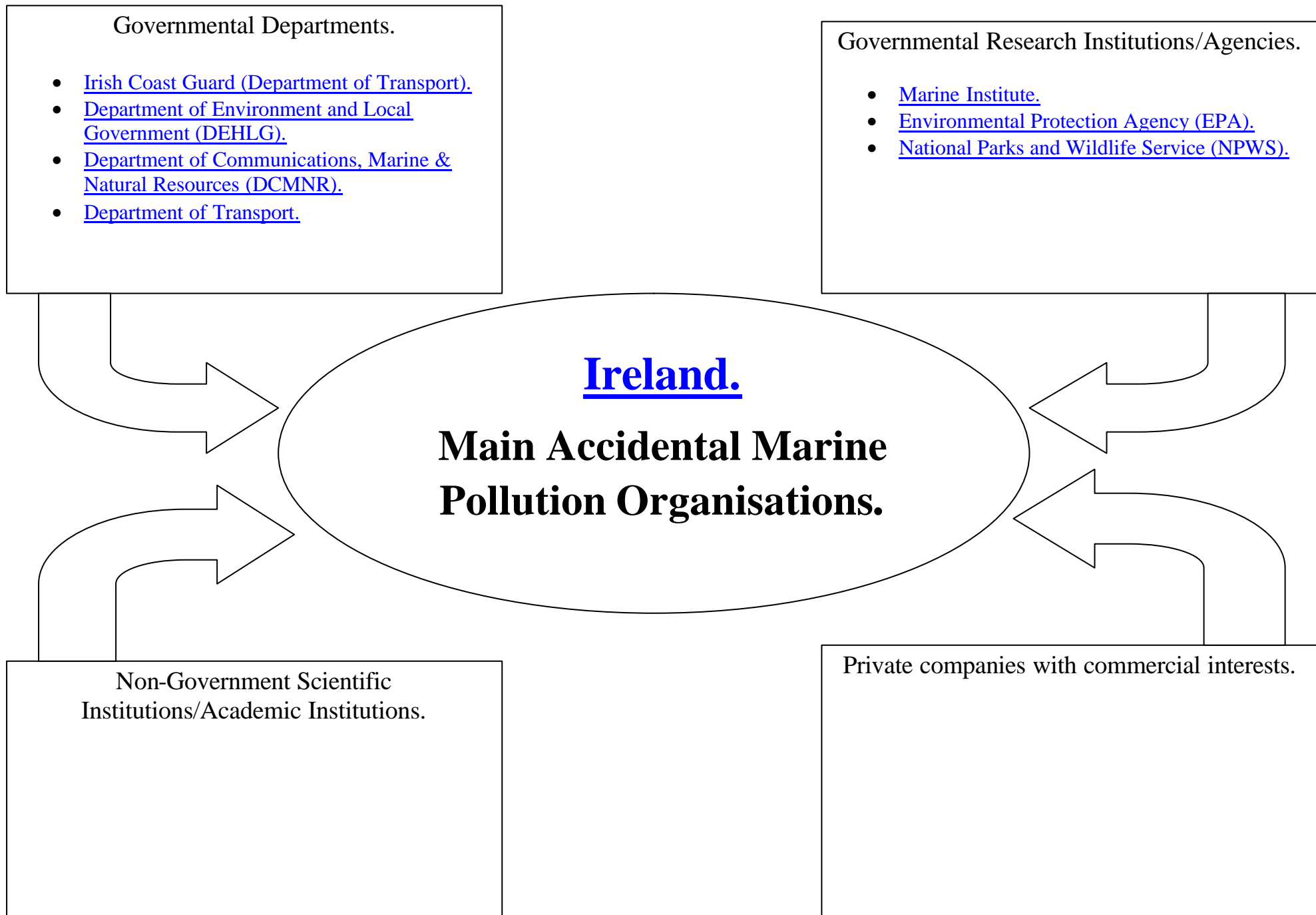
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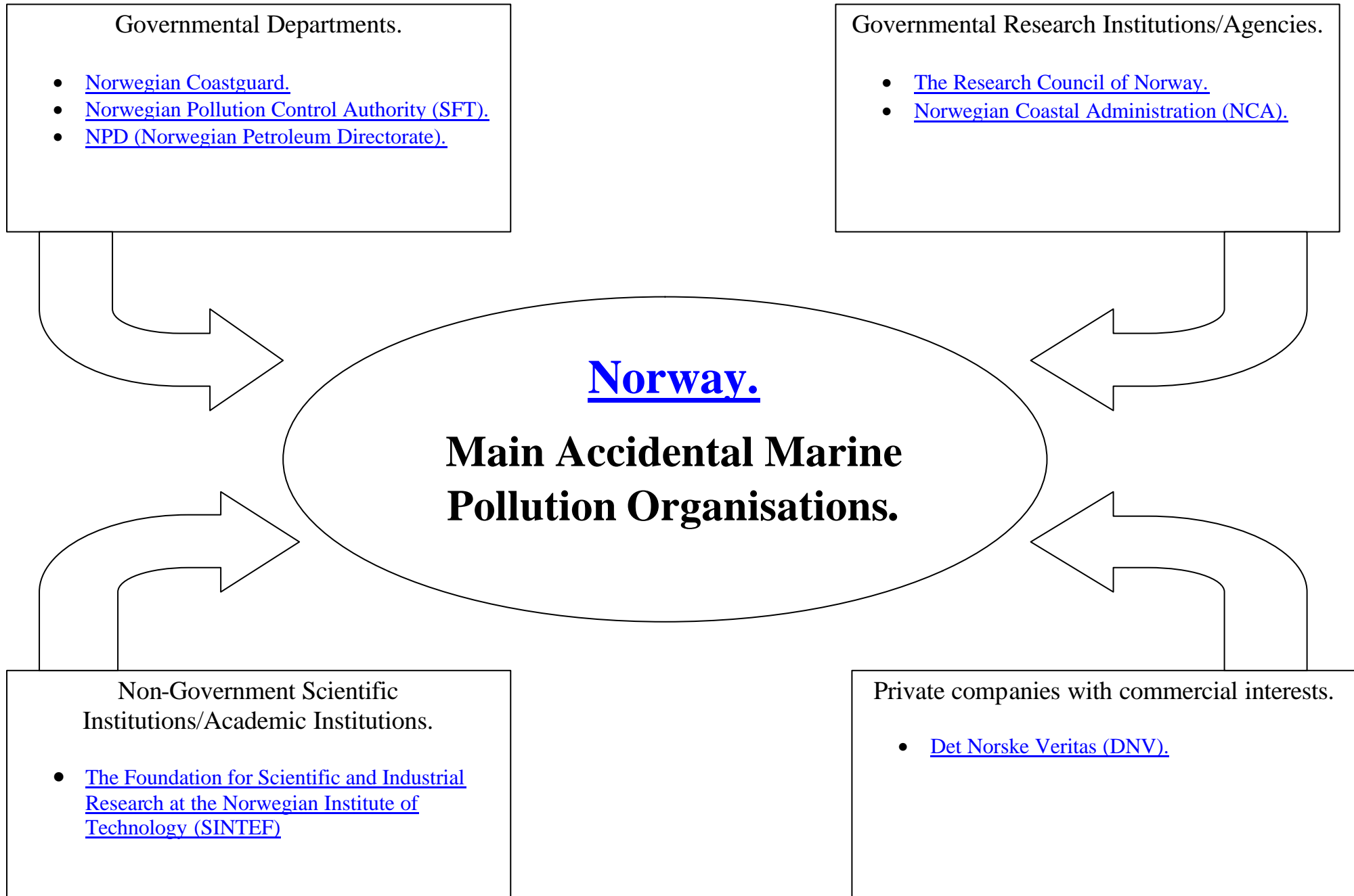
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6. [Joint Nature Conservation Committee \(JNCC\).](#)
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Governmental Departments.

- [Ministry of National Defence, Navy-National Maritime Authority \(AMN\)](#)

Governmental Research Institutions/Agencies.

- [Hydrographical Institute \(IH\).](#)
- [National Agricultural and Fisheries Investigation Institute \(INIAP\)](#)
- [Institute for the Environment \(IA\)](#)
- [National Institute for Water \(INAG\)](#)
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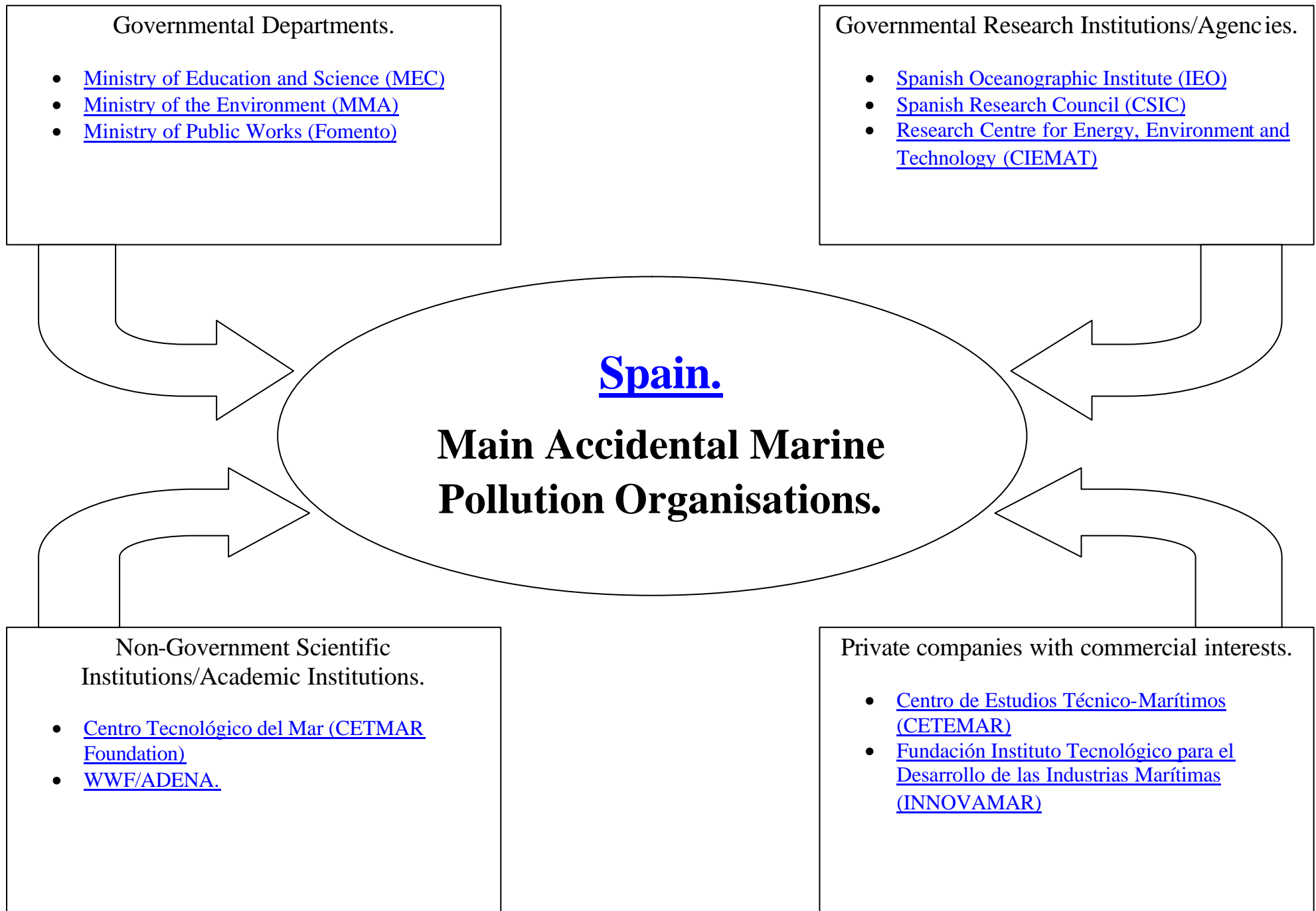
Portugal.

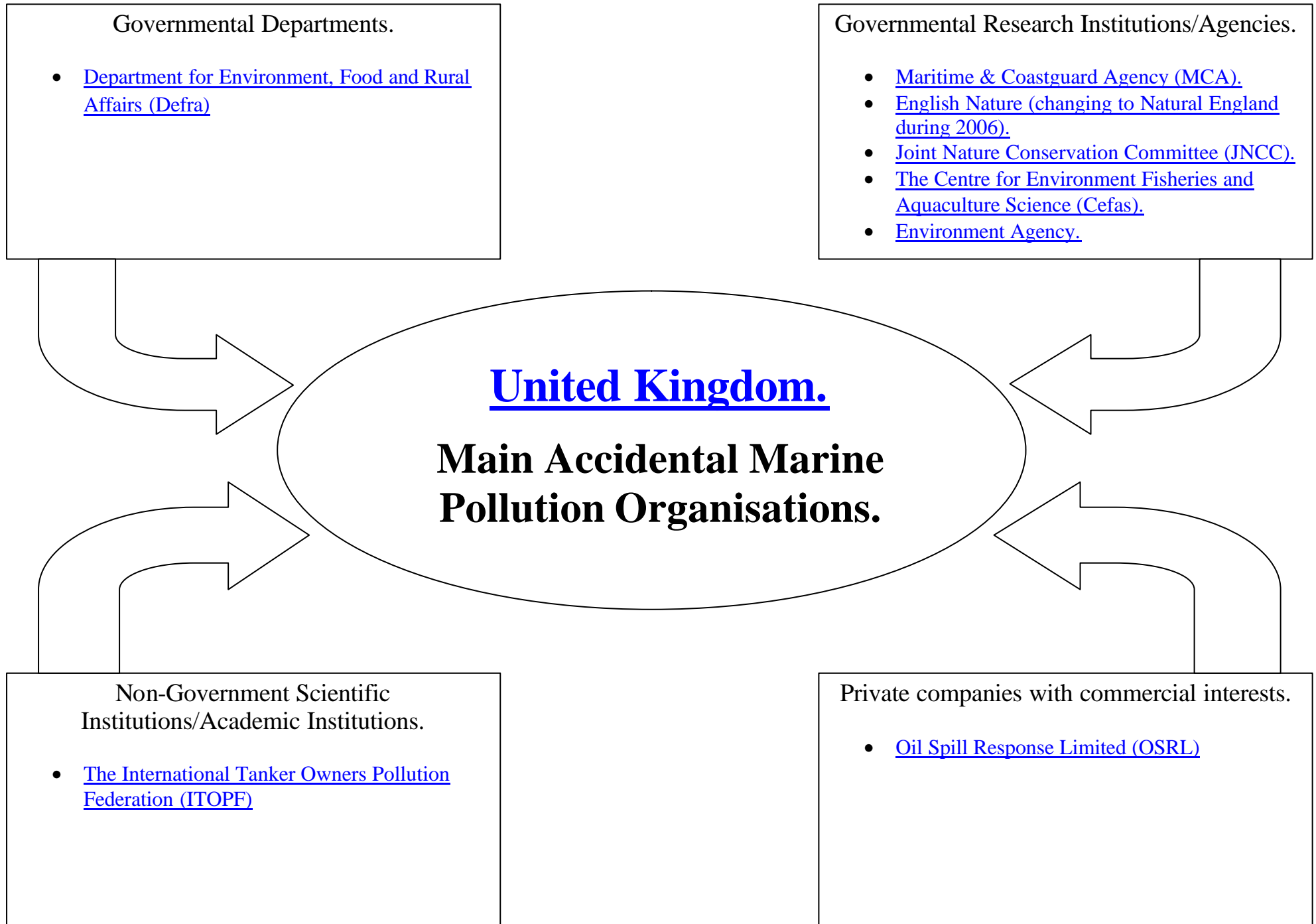
Main Accidental Marine Pollution Organisations.

Non-Government Scientific Institutions/Academic Institutions.

- [Centre for Environmental and Marine Studies \(CESAM\)](#)
- [Centre of Marine and Environmental Research \(CIMAR\)](#)
- [Institute of Geophysics Infante D. Luis \(IGIDL\)](#)
- [Institute of Telecommunications](#)
- [Institute of Marine Research \(IMAR\)](#)

Private companies with commercial interests.





Main RTD actors since 2000 – Belgium.

1. Management Unit of the Mathematical Model of the North Sea (MUMM).

MUMM, is a department of the Royal Belgian Institute of Natural Sciences (RBINS), a federal scientific establishment that comes under the Belgian Science Policy.

MUMM/RBINS combines two roles relating to Accidental Marine Pollution, one as an expert scientific institution and a second as a policy support organisation. Because of this 'double position', MUMM/RBINS has also funded Accidental Marine Pollution related R&D, monitoring of oiled seabird strandings (INBO), and the autopsy of beached seabirds and marine mammals (ULG).

Besides research MUMM performs some tasks for the Federal Public Service Health, Food chain safety and Environment:

- Preparation and execution of the federal policy regarding the protection of the marine environment.
- Execution of the federal legislation and reglementation and the international agreements regarding the protection of the marine environment and the control of it respect.
- Execution of cooperation agreements between the State and the Regions Regarding the protection of the marine environment.
- Representation of the federal authority in international organisations and fora competent for the protection of the marine environment in which Belgium is member.

In the field of Accidental Marine Pollution, MUMM:

- Performs aerial monitoring (aerial surveillance programme) and ground truth monitoring of AMP.
- Makes environmental impact evaluations.
- Has expertise in mathematical modelling (oil behaviour and impact models) and marine chemistry (e.g. oil sample analysis).
- Is the national authority to decide upon the use of dispersants to treat oil slicks at sea.
- Has an advisory role for all aspects of Accidental Marine Pollution.

Web link - <http://www.mumm.ac.be/>

2. Federal Public Service (FPS) Health, Food chain safety and Environment (FPS Environment).

FPS Environment's mission is to develop a transparent, dynamic and scientifically-based policy that takes care of people's health, provides a safe food chain and a better environment for everyone, both today and in the future.

The role of the Marine Environment unit within the FPS Environment is:

- Coordinating, preparing, participating in and following up on international activities relating to the marine environment

- Managing and making available equipment to combat marine pollution (fuel pollution)
- Participate in the coast watch.
- Participate in relevant international instruments such as the OSPAR convention.

Especially in crisis situations of Accidental Marine Pollution it is possible for FPS Environment to fund research.

Web link - <http://portal.health.fgov.be>

3. The Sea Fisheries Department.

The Sea Fisheries Department is a public research organisation supervised by, and operating within, the remit of the Ministry of the Flemish Community. The Department was established in 1962 as one of the satellites of the Centre for Agricultural Research in Ghent. Until 2001 this Centre was part of the federal Ministry of Agriculture, Traders and Small Enterprises, however in 2002 it was re-assigned to the Flemish Government (one of the three regional governments in the federalised State of Belgium).

The Sea Fisheries Department comprises four operational sections:

- Biology.
- Monitoring.
- Fishing Gear.
- Technology and Product Technology.

Research at the Department is strongly service-oriented towards international scientific organisations and management bodies, the Government, the fishing industry and the consumer.

The main tasks of the Sea Fisheries Department is to provide the scientific basis for:

- The rational and sustainable exploitation/management of living marine resources, from a biological, technical and socio-economic point of view.
- The protection of the marine environment as a habitat for these resources.
- The quality control and assurance of fishery products.

Web link - <http://www.dvz.be/>

4. Ministry of the Flemish community - Institute of nature and forest research.

The Institute of nature and forest research (INBO) is a scientific institution of the Flemish Community. The INBO was founded on the 1st January 2006 by the fusion of the Institute for Nature conservation (IN) and the Institute for Forestry and Game Management (IBW).

The INBO undertakes policy directed research and provides scientific services for the development, sustainable management and use of biodiversity and the environment.

With respect to Accidental Marine Pollution the INBO plays a part in the monitoring of oiled sea birds.

Web link - <http://www.inbo.be/>

5. Department of Veterinary Pathology, University of Liège (ULg).

The Department of Veterinary Pathology specialises in the field of wild marine animal diseases. With respect to Accidental Marine Pollution expertise within the department are called upon for medical diagnosis of beached sea birds and marine mammals in order to determine causes of death.

Web link - <http://www.ulg.ac.be/fmv/>

6. ECOLAS N.V.

ECOLAS is a specialised environmental consulting company within the Belgian AXE (Ahlers-Xylos-Ecolas) group of companies. The activities of the group are maritime transport and logistics, information technology services, environmental studies and consultancy.

ECOLAS provide a number of services in the field of Accidental Marine Pollution, including:

- Environmental impact.
- Risk assessment.
- Counter pollution activities.
- Contingency planning.

Web link - <http://www.ecolas.com/>

7. Belgian Federal Science Policy Office (BELSPO)

BELSPO is a federal agency funding marine research (incl. AMP) in support of Belgium's marine environmental protection policy.

The Belgian Federal Science Policy Office is tasked with the preparation, execution and evaluation of science policy, implementation of science and technology and the development of a permanent knowledge resource.

Web link - <http://www.belspo.be>

Main R&D actors since 2000 – Estonia.

1. Ministry of Environment.

The task of the Ministry of the Environment within Estonia is to organise and coordinate environmental policy. Their responsibilities include:

- Management of national environmental and nature protection.
- Responsibility for the storage of spatial data.
- Management of the use, protection, recycling and registration of natural resources.
- Radiation protection.
- Environmental supervision.
- Management of meteorological observations.
- Nature and marine research.
- Geological, cartographic and geodetic operations.
- Maintenance of the land cadastre and water cadastre.
- Preparation of corresponding draft legislation.

The vision of the Ministry is to create an integrated system of environmental protection in order to guarantee the preservation of natural biodiversity, ensure a clean environment and to maintain the sustainable use of natural resources.

Web link - www.envir.ee

2. Estonian Border Guard.

The Border Guard is a national armed organisation which, during peacetime, is included in the area of administration of the Ministry of the Interior.

The responsibilities of the Border Guard include:

- Guarding and defending state borders on both land and water, including preventing illegal crossing and the transport of goods.
- Organising, conducting and managing search and rescue operations in the Estonian marine rescue region.
- The discovery, localisation and liquidation of marine pollution.
- Execution of national defence tasks.

The government of the republic transferred the duty of locating and eliminating sea pollution to the Board of the Border Guard in 2000.

Web link - www.pv.ee

3. Marine System Institute, Tallinn University of Technology.

The institute carries out basic marine research related to the marine environment, harbours and maritime navigation and is funded by the Ministry of Education and Science.

The main goals of the Marine Systems Institute include:

- Modelling of physical and biogeochemical processes in the sea and waterbodies.
- Investigation of the stability and functioning of aquatic ecosystems.
- Quantification and modelling of the processes of interaction between coastal waters, land and human activity.
- Development and application of operational oceanographic nowcast and forecast methods and appropriate information systems.

Web link - www.msi.ttu.ee

Main R&D actors since 2000 – France.

1. Centre of Documentation, Research and Experimentation on Accidental Water Pollution (Cedre).

Cedre was created in 1978 following the tanker spill Amoco Cadiz, to improve preparedness against Accidental Marine Pollution and strengthen the national response organisation. It is responsible, at national level, for documentation, research and experimentation on pollutants, their effects and the response means and tools to combat them. Its expertise encompasses both marine and inland waters. Its budget comes from contracts and public and private subsidies. It is the adviser to the French authorities on all aspects of accidental marine pollution.

Web link - http://www.cedre.fr/index_gb.html

2. French Research Institute for the Exploitation of the Sea (IFREMER).

IFREMER is a public institute of industrial and commercial nature which provides impact assessments and contributes to technological developments pertinent to Accidental Marine Pollution response i.e. sensors

Web link - <http://www.ifremer.fr/anglais/>

3. National Institute for Industrial Environment and Risks (INERIS).

INERIS is a public research institute of industrial and commercial character and operates under the supervision of the French Ministry of the Environment and Sustainable Development. It contributes to Accidental Marine Pollution response through the completion of risk assessments and research into chemical hazards.

Web link - <http://www.ineris.fr/index.php>

4. French Petroleum Institute (IFP).

This is a private institute without commercial character. The president and the members of the administrative council are nominated by a departmental order (signed by the Ministry of Industry) . The budget approbation is under State control. It plays a role in Accidental Marine Pollution through the provision of oil characterisation and analytical laboratory services.

Web link - <http://www.ifp.fr/IFP/en/aa.htm>

5. MeteoFrance.

This is the French meteorological institute which is an Administrative Public Institute operating under the supervision of the French Ministry of Transport. It pays a role in Accidental Marine Pollution with respect to weather forecasting and spill drift forecasting (24 hour/day).

Web link - <http://www.meteofrance.com/FR/index.jsp>

6. University of Brittany Occidental (UBO).

The University undertakes research and provides advice within the area of impact assessment and facilitates technological development within the field of Accidental Marine Pollution.

Web link - <http://www.univ-brest.fr/>

7. LeFloch Depollution.

LeFloch Depollution is a service company specialising in the operational development of pollution countermeasures.

Web link - <http://www.leflochdepollution.com/>

8. ANR-Precodd.

ANR-Precodd is a national research agency for Eco-technology and sustainable development and was created on the 7th of February 2005.

The role of the ANR is to fund research projects from all areas of the scientific community and enhance co-operation between research organisations and industry.

Web link - <http://www.gip-anr.fr/>

9. Ministry of ecology and sustainable development.

The Ministry is a government body with the responsibility for integrating sustainable development, ecology and the management of natural parks and resources into policy.

Web link - <http://www.ecologie.gouv.fr/sommaire.php3>

Main R&D actors since 2000 – Ireland.

1. Irish Coast Guard (Department of Transport).

The Irish Coast Guards strategic objective in relation to marine pollution is to develop and co-ordinate an effective regime for preparedness and response to spills of oil and other hazardous substances from vessels and offshore platforms within the Irish Pollution Responsibility Zone, to provide an efficient and effective response to marine casualty incidents and to monitor/intervene in marine salvage operations.

In practice this means that the Irish Coast Guard is responsible for:

- The provision of an efficient and effective marine pollution and salvage notification, monitoring and response system.
- Establishing, maintaining and exercising Local and National Contingency Plans for marine pollution preparedness and response.
- Approval of Port Oil, Local Authority and Offshore Installation Contingency Plans.
- Pollution prevention and counter measure decisions in the event of a spill..
- The implementation and enforcement of national and international marine pollution legislation.
- Procuring and maintaining the statutory national stockpile of pollution response equipment.
- Maintaining computer based risk assessment, decision support and response models.
- Providing national training courses on marine pollution response.
- Improving effective communication and co-ordination arrangements at national and international level in preparedness and response (OPRC).

The IRCG has the primary co-ordinating role in the event of major AMP incidents and while the Irish Coast Guard does not have a specific R&D role they are potential users of Accidental Marine Pollution research and may have an input into the future research agenda.

Web link - <http://www.dcmnr.gov.ie/Marine>

2. Marine Institute.

The Irish Marine Institute is a State Agency under the aegis of the Department of Communications, Marine & Natural Resources (DCMNR).

The Marine Institute's role is to:

- Provide its parent Department (Ministry) and other government bodies with scientific advice and services relating to the marine sector.
- Support RTDI (research, technology, development and innovation) in-house and through the provision of an open and competitive Marine RTDI Funding Programme.
- Support marine enterprise and related activities through the provision of key scientific services and advice and through the results of research.

- Underpin the sustainable development of the marine resource through the provision of key scientific services, advice and research.

MI provides a technical service to the Department of Communications Marine and Natural Resources, which includes the Irish Coastguard, and also to other government bodies.

With respect to Accidental Marine Pollution, the Marine Institute provides:

- Specific scientific services and advice in support of oil spill response, oil spill characterisation and identification, advice on suitability of dispersants etc.
- A national research vessels to assist in emergency response if required.
- Relevant data and information, such as oceanographic data that may support oil spill response strategies.

The Marine Institute also undertakes environmental and monitoring, assessment and research to fulfil various legislative requirements (e.g. EC Directives, OSPAR) and advise on issues in relation to fisheries, and aquaculture and coastal and marine development.

Web link - www.marine.ie

3. Environmental Protection Agency (EPA).

The Environmental Protection Agency (EPA) is an independent public body established under the Environmental Protection Agency Act, 1992. The mission of the EPA is to protect and improve the natural environment for present and future generations, taking into account the environmental, social and economic principles of sustainable development.

The EPA undertakes a wide range of functions in order to protect the environment, these include:

- Environmental licensing.
- Enforcement of environmental law.
- Environmental planning and guidance.
- Monitoring and reporting on the environmental status of air, water, waste, noise, land and soil.
- Environmental research.

The EPA has been designated as a competent authority in accordance with article 3 of the water framework Directive in Ireland under SI 722 of 2003.

Web link - <http://www.epa.ie/>

Web link - <http://www.wfdireland.ie/>

4. Department of Environment and Local Government (DEHLG).

The DEHLG is charged with promoting sustainable development and improving the quality of life through the protection of the environment and heritage, infrastructure provision, balanced regional development and good local government.

The DEHLG has a broad remit, however, within the remit of Accidental Marine Pollution response the department is responsible for:

- Enactment and implementation of the EC Environmental legislation in Ireland including the Water Framework Directive (WFD).
- Overseeing the operation of the local government system and implementing policy in relation to local government structures, functions, human resources and financing.
- Local Authorities who have a key responsibility for response to coastal pollution incidents.
- Implementation of the 1992 OSPAR convention along with the Dept. of Communications, Marine and Natural Resources (DCMNR)

Web link - <http://www.environ.ie/DOEI/DOEIHome.nsf>

5. National Parks and Wildlife Service (NPWS).

The National Parks & Wildlife Service (NPWS), part of the Department of the Environment, Heritage & Local Government (DEHLG), manages the Irish State's nature conservation responsibilities under National and European law. NPWS is charged with the conservation of a range of ecosystems and populations of flora and fauna in Ireland.

A particular responsibility of NPWS is the designation and protection of Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Natural Heritage Areas (NHAs).

Web link - www.npws.ie

6. Department of Communications, Marine & Natural Resources (DCMNR).

The Department has a wide range of roles and functions in the areas of public safety, environmental protection, coastal zone and sustainable development of sea fisheries. Key activities include:

- Policy, economic and sustainable development of the aquaculture sector.
- Management and development of the marine coastal zone.
- Environmental engineering work in rivers, lakes, harbours and coastal zones.
- Foreshore Administration Leases, licences and offshore electricity generating stations.
- Inland Fisheries Management and development of the inland fisheries sectors.
- Marine Leisure and Tourism Research.
- Environmental assessment.

Web link - www.dcmnr.ie

7. Department of Transport.

This Department is responsible for implementing an integrated transport policy as called for in the Programme for Government. In January 2006 the Irish Coast Guard,

the Marine Survey office and the maritime safety unit and the marine environment division transferred from the Dept of Communications Marine and Natural Resources (DCMNR) to the Dept of Transport.

The overall goal of the marine environment division is to:

- Preserve and protect the quality of the marine environment through prevention of marine pollution from vessels and efficient and effective response to marine pollution incidents.
- Secure the adoption and implementation of appropriate measures at national, EU and international level in order to protect and enhance the marine environment.
- To promote awareness of the marine environment.

The Marine Survey Office (MSO) is responsible for the implementation of all national and international legislation in relation to safety of shipping and the prevention of pollution of the marine environment from ship-based sources.

Web link - www.transport.gov.ie

Main R&D actors since 2000 – Norway.

1. The Research Council of Norway.

The Research Council of Norway is a national strategic body and funding agency which covers all fields of research and innovation and works together with research institutions as well as the private and public sectors. The Research Council plays a vital role in developing and implementing the country's national research strategy. It acts as:

- A government adviser, identifying present and future needs for knowledge and research, and recommending national priorities.
- A funding agency for independent projects, research programmes, strategic programmes at research institutions, and Norwegian participation in international research activities.
- A co-ordinator, initiating networks and promoting co-operation between research institutions, ministries, businesses and industry, public agencies and enterprises, other sources of funding, and users of research.

Web link - www.forskningsradet.no

2. Norwegian Coastal Administration (NCA).

NCA is a governmental organisation who has the responsibility for:

- Fairways.
- Aids to Navigation (traditional, electrical and information systems).
- Pilot services.
- Maritime traffic controls.
- Fishery harbours.
- Governmental preparedness for pollution incidents.

In order to meet their responsibilities the NCA implements 6 overarching strategies directly related to their statutory obligations:

- Strategy I: Safety voyage.
- Strategy II: Clean environment.
- Strategy III: From road to sea.
- Strategy IV: Viable coastal communities.
- Strategy V: Quality in all parts of the organisation.
- Strategy VI: Always available.

With respect to Accidental Marine Pollution Response the NCA is responsible for the provision of practical advice relating to all aspects of response to both the Norwegian government and all other relevant stakeholders.

Web link - <http://www.kystverket.no>

3. Norwegian Coastguard.

The Norwegian Coastguard is an integrated part of the Norwegian Navy and is, therefore, a military organisation.

It's role and tasks are described in the Coastguard Act and although it is under military control, civilian authorities describe its functions.

The main responsibilities of the Norwegian Coastguard are:

- Upholding sovereignty.
- Maritime search and rescue.
- Fishery protection and surveillance.
- Environmental surveillance and protection.
- Control of ships in Norwegian waters.
- Assistance to police, custom and coastal agencies.

Web link - www.mil.no

Web link - www.kystvakt.no

4. Norwegian Pollution Control Authority (SFT).

The SFT is a directorate under the Ministry of Environment whose main goal is to promote sustainable development. In order to achieve this the SFT enforces acts and regulations connected to all aspects of polluting activity, including prevention, preparedness and response to acute pollution.

Specific advisory responsibilities include:

- Monitoring and providing information about environmental development.
- Provision of advice, assessments and expert support.
- Assessment of the degree to which the different sectors of society have achieved their environmental goals.
- Promotion of Norwegian objectives in international environmental collaborations.
- Improving the efficiency of the environmental protection work of developing countries

Web link - <http://www.sft.no>

Web link - <http://www.environment.no>

5. NPD (Norwegian Petroleum Directorate).

The Norwegian Petroleum Directorate contributes to creating the greatest possible value for society from oil and gas activities by means of prudent resource management based on safety, emergency preparedness and safeguarding the natural environment. Specific responsibilities relating to Accidental Marine Pollution include:

- Contributing to cost-efficient exploration.
- Contributing to cost-effective recovery of petroleum, infrastructure utilisation and coordination across production licences.
- Ensuring that the industry minimises emissions or discharges which burden the natural environment.
- National responsibility for making data from petroleum activities accessible.

- Emergency preparedness responsibilities.

With respect to accidental marine pollution, the NPD keeps the Ministry of Petroleum and Energy (MPE) informed about severe acute discharges from the oil and gas industry on the Norwegian Continental Shelf.

Web link - www.npd.no

6. Det Norske Veritas (DNV).

DNV is an independent foundation with the objective of safeguarding life, property, and the environment through the provision of services for managing risk in the Maritime, Oil and Gas, Process and Transportation industries.

DNV contributes to managing risk in all phases of a ships life, through ship classification, statutory certification, fuel testing and a range of technical, business risk, financial and competency related services.

In the area of oil spill preparedness DNV has conducted oil-spill contingency planning, environmental risk assessment, oil-spill modelling and response, for the major oil companies, terminal and refinery operators, and the shipping industry worldwide.

Web link - www.dnv.com

7. The Foundation for Scientific and Industrial Research at the Norwegian Institute of Technology (SINTEF)

The SINTEF Group is the largest independent research organisation in Scandinavia. Every year, SINTEF supports the development of 2000 or so Norwegian and overseas companies via our research and development activity.

SINTEF's goal is to contribute to wealth creation and to the sound and sustainable development of society. We generate new knowledge and solutions for our customers, based on research and development in technology, the natural sciences, medicine and the social sciences.

Web link - <http://www.sintef.no/>

Main R&D actors since 2000 – Portugal.

1. Ministry of National Defence, Navy - National Maritime Authority (AMN - Autoridade Marítima Nacional).

The AMN is a Public Authority within the Portuguese Navy, under the aegis of the Ministry of National Defence, and is responsible for implementing the Government's maritime safety policy. It has competences in the areas of maritime security, search and rescue at sea and preservation of the maritime environment (including control of the maritime pollution, coastal surveillance and defence of the public patrimony areas).

With respect to Accidental Marine Pollution the AMN has the responsibility and the means to act in order to prevent or combat pollution situations within the scope of the Clean Sea Plan and through the 'Service of Combat to Maritime Pollution by Hydrocarbons'.

Web link - www.marinha.pt/Marinha/pt

2. Hydrographical Institute (IH - Instituto Hidrográfico).

The IH is a State Laboratory (governmental research institution) within the Portuguese Navy operating under the aegis of the Ministry of National Defence and the Ministry of Science, Technology and Higher Education. IH is dedicated to research and technological development of activities related to Ocean Sciences, for military and public service, contributing to the scientific study and protection of the marine environment of Portugal.

Its main areas of activity comprise:

- Hydrography and Cartography (multibeam survey, digital cartography, electronic navigation charts).
- Oceanography (geological and geophysical models, hydrocarbons, heavy metals and nutrients analysis, and, observational, numerical and military-operational oceanography).
- Navigation (Portuguese DGPS network, notice to Mariners Environmental Information System).
- IOC/IODE National Oceanographic Data Centre (NODC) for Portugal.

IH is responsible for the dissemination of information and for giving practical and technical advice related to their main areas of activity, especially in what concerns maritime safety, for both the Portuguese government and all other relevant stakeholders.

Web link - www.hidrografico.pt/hidrografico

3. National Agricultural and Fisheries Investigation Institute (INIAP– Instituto Nacional de Investigação Agrária e das Pescas).

The INIAP is a State Laboratory (governmental research institution) consisting of two units – agro/rural (INIA) and fisheries (IPIMAR) operating under the aegis of the Ministry of Agriculture, Rural Development and Fisheries and the Ministry of Science, Technology and Higher Education.

INIAP/IPIMAR is devoted to carrying out research and providing advice on sustainable exploitation of marine resources. It is also responsible for the development of the scientific and technological knowledge base required for the implementation of Portuguese fishing policy.

With respect to an Accidental Marine Pollution incident INIAP/IPIMAR would be mainly involved in the provision of advice relating to the management of fisheries activities and exploitation of marine resources for human consumption.

Web link - www.iniap.min-agricultura.pt

4. Institute for the Environment (IA – Instituto do Ambiente).

The IA is a Governmental Agency and Public Authority operating within the Ministry of the Environment, Spatial Planning and Regional Development. It operates within a number of key themes:

- Sustainable development.
- Environment and health.
- Climate changes.
- Ozone layer.
- Atmospheric environment.
- Genetically modified organisms.
- Chemical substances.
- Noise.
- Persistent organic pollutants.

The IA is the public authority responsible for environmental issues and policies in all national territories and is responsible for the coordination of EU policies and initiatives whilst being the national focal point of the European Environmental agency.

In the event of an accidental marine pollution IA can provide direction and advice for all activities that may adversely impact marine ecosystems.

Web link - www.iambiente.pt

5. National Institute for Water (INAG – Instituto da Água).

INAG, under the aegis of the Ministry of the Environment, Spatial Planning and Regional Development, is the National Water Authority.

It is responsible for:

- Developing information systems relating to the availability and national needs of hydro resources;
- Promotion of integrated planning for hydrographical basins and costal zones.

- Managing the protocol with Portuguese Air Force (PAF) for aerial surveillance of maritime pollution.

Web link - www.inag.pt

6. Nature Conservation Institute (ICN – Instituto de Conservação da Natureza).

The ICN is a Governmental Agency and Public Authority within the Ministry of the Environment, Spatial Planning and Regional Development and is responsible for nature conservation and Protected Areas management. It is also an administrative and scientific authority of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

The ICN has responsibilities for:

- Promoting strategies, plans and programs for the conservation of nature.
- Studying and inventorying ecological systems.
- Proposing measures to preserve genetic heritage and manage wild flora and fauna.
- Proposing protected areas and assuring their implementation and management.
- Initiating studies related to the dynamics of the sea coast and the microclimatology of the associated ecosystems and biotopes.

In the event of a spill in a Protected Area the ICN would be involved in the provision of advice relating to area clean-up and possible future impacts on marine ecosystem preservation.

Web link - www.icn.pt

7. National Council for Ports and Sea Transport (IPTM – Instituto Portuário e dos Transportes Marítimos).

IPTM is a Public Authority within the Ministry for Public Works, Transport and Communications. IPTM is responsible for the supervision, regulation and inspection of the maritime sector and ports, promotion of navigability and administration of ports under its jurisdiction.

Within its remit the IPTM is responsible for the implementation of two important components of maritime surveillance:

- Systems of maritime traffic control.
- Port inspections (Port State Control - PSC).

Web link - www.imarpor.pt

8. Centre for Environmental and Marine Studies (CESAM – Centro de Estudos do Ambiente e do Mar).

CESAM is a research institution (non-profit public association of public interest) of Aveiro University and is dedicated to research in the fields of Marine and Environment Sciences.

CESAM has a contract with the Portuguese government to undertake programmes of research specifically relevant to national scientific and technological policy requirements in the area of Marine and Environmental Sciences.

CESAM can be formally consulted by the government about national research policies in the area of Marine and Environmental Sciences and, in the event of a spill, the scientific and technical capabilities of CESAM allow its intervention as an adviser of the government and other stakeholders in the domains of their expertise.

Web link - www.ii.ua.pt

9. Centre of Marine and Environmental Research (CIMAR – Centro de Investigação Marinha e Ambiental).

CIMAR is a research institution (Associate Laboratory, non-profit private association of public interest) that comprises of two research centres:

- The Centre of Marine and Environmental Research of the University of Porto (CIIMAR).
- The Centre of Marine Sciences of the University of Algarve (CCMAR).

CIMAR is dedicated to research, dissemination and the transfer of technology in the area of Marine Sciences. The two main thematic areas of research are:

- Conservation and Management of Aquatic Ecosystems
- Aquaculture and Marine Biotechnologies.

CIMAR, as a research institution, has a contract with the government to carry out research programmes in the area of Marine Sciences deemed important for the development of national scientific and technological policy.

In the event of an Accidental Marine Pollution incident CIMAR can be called upon as an adviser to the government and other stakeholders, in particular addressing environmental impact assessment strategies.

Web link - www.cimar.org

10. Institute of Geophysics Infante D. Luis (IGIDL - Instituto Geofísico do Infante D. Luís).

IGIDL is a research institution (Associate Laboratory, non-profit public institution of public interest) that comprises two research centres:

- The Centre of Geophysics.
- The Laboratory of Tectonophysics and Experimental Tectonics (LATTEX) of the Faculty of Sciences of Lisbon University.

The IGIDL provides information about climatic, meteorological and seismologic phenomena to official and private entities and to the public. It keeps and updates geophysical series, collaborates in the organisation of courses at pre- and post-graduate levels, and undertakes activities of research organised by the University of Lisbon.

As a research institution it undertakes contracts with the government to carry out research programmes in the area of Geophysical Sciences, specifically important for meeting national scientific and technological policy requirements. In the event of an Accidental Marine Pollution incident the scientific and technical capabilities of the IGIDL can be called upon as an adviser of the government and other stakeholders in the specific areas of their expertise.

Web link - www.igidl.ul.pt

11. Institute of Telecommunications (IT – Instituto de Telecomunicações).

The IT is a research institution (Associate Laboratory, non-profit private institution of public interest) combining a partnership of four institutions with experience and traditions in research and development in the field of telecommunications:

- Instituto Superior Técnico (IST) of Technical University of Lisbon.
- University of Aveiro.
- Faculty of Sciences and Technologies of Coimbra University.
- Portugal Telecom Inovação S.A.

The IT mission is to create and disseminate scientific knowledge in the field of Telecommunications both at national and international level. Scientific expertise in IT includes Wireless Communications, Optical Communications, Networks and Multimedia, and Support Technologies for Telecommunications.

Recent R&D projects have focussed on the development of oil slick surveillance using ASAR and MERIA data. As a result of this expertise IT would be involved in the provision of advice relating to the surveillance operation resulting from a Accidental Marine Pollution incident.

Web link - www.it.pt

12. Institute of Marine Research (IMAR – Instituto do Mar).

IMAR is a non-profit private organisation whose general objective is the development of Marine Science and Technology in Portugal through the integration of different disciplines and the promotion of scientific cooperation. IMAR aims to:

- Contribute to the scientific basis of policy support.
- Establish and promote key areas of scientific research on a multi-year scale.
- Empower the Portuguese Marine Sciences community to ensure competitiveness on a European and International scale.

Within the IMAR network there are specific research centres which cover various aspects of accidental marine pollution. These are the:

- **Marine and Environment Technology Centre** (IMAR-MARETEC – Centro de Ambiente e Tecnologia Marítimos).
Addresses issues such as marine circulation and water contaminants dispersal (www.maretec.mohid.com).
- **Centre for Ecological Modelling** (IMAR-CEM – Centro de Modelação Ecológica).
Dedicated to research in ecological modelling, data gathering and analysis, and modelling applications (www.ecowin.org).

- **Coimbra Interdisciplinary Centre (IMAR-CIC – Centro Interdisciplinar de Coimbra)** (www.uc.pt/imar).
Dedicated to promoting fundamental and applied research in the scope of marine sciences and technology, aquatic environments, and related scientific areas.
- **Centre for Marine and Environmental Research of Algarve University (IMAR-CIMA – Centro de Investigação Marinha e Ambiental)**.
Carries out research in sedimentary dynamics, biogeochemical cycles, Natural and anthropogenic alterations of the environment, dynamics and energy transfers in the ocean, technologies in environmental rehabilitation (www.ualg.pt/cima).

The scientific and technical capabilities of the IMAR network allow it to act as in an advisory role in the event of an Accidental Marine Pollution incident, especially in the areas of ecological modelling, environmental impact assessment and environmental rehabilitation measures.

Web link - www.imar.pt

Main R&D actors since 2000 – Spain.

1. Ministry of Education and Science (MEC).

The Ministry has overall responsibility for educational and scientific policies, with local implementation the responsibility of the Autonomous Governments (regions). MEC funds R&D activities through the National Plans for Research, Development and Technological Innovation (PNI+D+I). It also runs a network of public research institutions dealing with areas relating to the environment (CSIC), fisheries and marine science (IEO) and energy and environment (CIEMAT).

With respect to Accidental Marine Pollution, the MEC has responsibilities for:

- Improving national expertise for the prevention of Accidental Marine Pollution
- Reducing the environmental and social impacts of Accidental Marine Pollution.
- Developing adequate scientific and technological knowledge for a better assessment of the environmental fate of marine pollutants and their ecological impact.
- Provision of adequate information for the implementation of contingency plans against oil and chemical spills.
- Provision of advice to government on key issues related to Accidental Marine Pollution.

Web link - www.mec.es

Web link - www.csic.es

Web link - www.ieo.es

Web link - www.ciemat.es

2. Ministry of the Environment (MMA).

The MMA's main role is policy and regulatory development in the field of environment protection and sustainable development and the implementation and co-ordination of national environmental policies of the Spanish Autonomous Communities (Regional governments).

The MMA responsibilities cover all aspects of the environment including:

- Environmental quality
- Coasts
- Water resources
- Basin Agencies and other
- Conservation of natural resources
- Climate Change

In 2001 the Marine Environment Unit was created within the MMA in order to:

- Foster and coordinate plans and programs for the protection of the marine environment and coastal ecosystems.
- Monitor activities in the marine environment.

- Participate in relevant international bodies.
- Negotiate and follow-up on international conventions (MAP, OSPAR, RAMSAR etc).
- Co-ordinate the integrated management of coastal zones.
- Provide advice to government with respect to international conventions and national policies.

Web link - www.mma.es

3. Ministry of Public Works (Fomento).

Within the Directorate of the Merchant Navy there are three organisations of interest:

- Sub-directorate of Maritime safety and pollution.
- National Ports Authority (Puertos del Estado).
- SASEMAR (Maritime rescue and safety agency).

The Sub-directorate of Maritime safety and pollutions remit is to ensure human safety in the seas and combat pollution of the marine ecosystem. It is specifically responsible for:

- The rescue of human beings and removal of pollution from the sea.
- The control and registry of ships.
- Regulating and controlling maritime traffic and civil maritime staff.
- Participating in commissions responsible for the determination of adequate systems of signalisation.

The National Ports Authority is a public agency specifically responsible for:

- The execution of government policy on ports and the coordination and control of efficiency of the national ports system.
- Co-ordinating with other authorities with responsibilities for ports and maritime transport
- Promoting training, research and technological development in fields related to port activities.
- Planning, coordinating and controlling signalisation systems.

SASEMAR is public agency responsible for rescue services, maritime safeguard, and tackling pollution incidents.

Organically dependent of SASEMAR, there is The Jovellanos Integral Maritime Safety Centre, which carries out activities such as:

- Training in safety and rescue activities with specific courses on tackling marine pollution.
- Technical assistance in the execution of port infrastructure works and environmental projects concerning marine pollution, survival at sea and new technologies.
- Equipment testing and certification.
- Organising congress, seminars and workshops.

Web link - <http://www.fomento.es>

Web link - <http://www.salvamentomaritimo.es>

Web link - <http://www.puertos.es/>

Web link - <http://www.centrojovellanos.com/>

4. Spanish Oceanographic Institute (IEO).

The Spanish Oceanographic Institute is devoted to the study of seas and oceans, from a multidisciplinary perspective, paying special attention to the sustainability of marine resources.

The IEO has the following statutory responsibilities:

- To develop, coordinate and manage marine related research programmes.
- To represent the Government in international events related to oceanography and fisheries.
- To inform about regulatory projects in its fields of activity.
- To advise competent authorities about requests for research campaigns from countries in Spanish sea waters.
- To establish covenants with public and private organisations.

The IEO is the research and advisory organisation to the Government in the field of sectoral policy on fisheries. According to its broad range of research fields, the IEO also provides advice to public administrations on the use of marine resources and protection against pollution.

Web link - www.ieo.es

5. Centro Tecnológico del Mar (CETMAR Foundation).

CETMAR is supported by a number of public and private bodies and is an initiative of the Xunta of Galicia and Spain's Central Government, through the Secretariat of State for Scientific and Technological Policy (a department of the Ministry of Science and Education).

The Foundation aims to foster and channel links between R&D and the marine-produce industry and it achieves this through inter-institutional coordination and interdisciplinary integration of all marine research and technology resources available in Galicia.

The Foundation aims to take all steps required for the conservation and responsible use of the marine environment and its resources, especially on the coast of Galicia.

The specific goals of the CETMAR Foundation are:

- The Compilation and analysis of available information systems with respect to the current state of knowledge within each field.
- Scientific and technical analysis of national and international fields of activity.
- The framing of proposals and recommendations for agents in the sector.
- Providing specific executive actions to meet emerging needs.
- Promoting, guiding and supporting companies' growth and modernisation.
- Collaborating with institutions, companies and individuals on any subject relating to the sea and marine resources, under the terms of the relevant collaboration agreements.
- Promoting, co-operating and organising courses, work groups and technical and scientific seminars.

- Publishing and disseminating work and research results deemed especially significant.
- Searching and obtaining funding for the Centre's activities.

Web link - www.cetmar.org

6. Fundación Instituto Tecnológico para el Desarrollo de las Industrias Marítimas (INNOVAMAR).

INNOVAMAR is a non profit private foundation which works towards two overarching objectives:

- To promote research and development of the ship building industry and auxiliary industry.
- To promote, in the above mentioned sectors, the scientific and technical research and capacity building activities.

In order to meet these objectives INNOVAMAR:

- Provides awards, grants and subventions.
- Finances (total or partial) educational, research, artistic, cultural, technical and sportive activities.
- Sets-up contracts and agreements with public administrations and companies for the development of research programmes.

The INNOVAMAR Foundation signed an agreement with the Spanish Ministry of Science and Technology to promote research and technological development in the maritime sector and to serve as a collaborative entity to help in the evaluation of technological development projects (Programme PROFIT).

Web link - www.innovamar.org

7. Centro de Estudios Técnico-Marítimos (CETEMAR).

CETEMAR is a private consultancy which develops specialised projects for public authorities and private industries, as well as research projects for the European Commission in several area of the maritime sector, mainly related to safety and use of information technologies.

Web link - www.cetemar.com

8. Spanish Research Council (CSIC).

The CSIC is the largest public research body in Spain. They play an active role in the science policy of all the autonomous regions through their centres across Spain. As a multidisciplinary body all fields of knowledge are covered, from basic research through to advanced technological development. They are organised into eight scientific and technical areas:

- Multidisciplinary scientific and technical research.
- Scientific and technical advice.
- Transferring results to the private sector.

- Contributing to the creation of technology-driven companies.
- Training specialised personnel.
- Management of infrastructure and large facilities.
- Promoting scientific culture.

Web link - <http://www.csic.es>

9. Research Centre for Energy, Environment and Technology (CIEMAT).

CIEMAT is a Public Research Agency for excellence in energy and environment, as well as in many vanguard technologies and in various areas of fundamental research. CIEMAT activities are organised around research projects that span the bridge between R&D and the interests of society, these include:

- Promoting the introduction and improving the competitiveness of renewable energies on the power market.
- Improving the efficiency and environmental quality of fossil fuels.
- Optimising waste management and safety of nuclear fission energy.
- Contributing to demonstrating the role of nuclear fusion as a future power alternative.
- Assessing the environmental impact of energy and introducing new processes that minimise or avoid it through the promotion of environmentally-friendly technologies.
- Transferring the horizontal technologies developed in research products to industry.
- Improving scientific returns derived from Spain's participation in the CERN.
- Strengthening industrial participation in international projects with high technological content
- Fostering technology transfer, training and scientific diffusion.

Web link - <http://www.ciemat.es>

10. WWF/ADENA.

WWF/Adena is the Spanish arm of the WWF and has the following general objectives:

- Conservation of biologic diversity.
- To ensure the sustainable use of natural resources.
- To promote the reduction of pollution.

WWF/Adena in Spain has a specific Programme on Seas and Coasts which addresses topics such as integrated management, sustainable use of resources and impacts and mitigation of Accidental Marine Pollution.

Specific objectives of WWF/ADENA related to Accidental Marine Pollution include:

- Enforcing national legislation and harmonisation between Autonomous Communities in Spain.
- Improving the transparency and quality of information.
- Decreasing the impact of spills and improving environmental quality.

- Improving public awareness about marine pollution.

The WWF/Adena office in Canarias has developed an operative programme to fight against marine pollution (Operativo ERGOS)

Web link - www.wwf.es

Main R&D actors since 2000 – United Kingdom.

1. Department for Environment, Food and Rural Affairs (Defra).

Defra is a government department tasked with the pursuit of sustainable development Defra therefore:

- Brings all aspects of the environment, rural matters, farming and food production together
- Is a focal point for all rural policy, relating to people, the economy and the environment
- Has roles in both European Union and global policy making, so that its work has a strong international dimension.

With respect to accidental marine pollution Defra is responsible for co-ordinating the UK's emergency response in the event of a marine emergency and ensuring an adequate contingency plan exists. They work closely with the MCA to ensure an adequate response in the event of a spill and efficient monitoring of the area following an incident. Defra is also responsible for advising government ministers on current issues and providing key players with advice on policy requirements.

Web link - <http://www.defra.gov.uk>

2. Maritime & Coastguard Agency (MCA).

MCA is responsible throughout the UK for the provision of practical advice relating to all aspects of coastguard response including maritime emergencies, accidental marine pollution and maritime safety to both the UK government and all other relevant stakeholders.

Ministerial Targets are set by the Secretary of State for the MCA. These contribute to the Department for Transport's objective of "Improving the safety, security and accessibility of transport" through their commitment to the vision of Safer Lives, Safer Ships, Cleaner Seas underpinned by the values of "mutual respect and customer focus".

Specifically the MCA is responsible for executing and co-ordinating, from the ground, the UK emergency response contingency plan in the event of a spill in the marine environment.

Web link - <http://www.mcga.gov.uk>

3. The International Tanker Owners Pollution Federation (ITOPF).

ITOPF is a public body who devote considerable effort to a wide range of technical services, of which the most important is responding to spills of oil and chemicals. ITOPF has a small response team which is organised in a way which allows them to assist, when requested, at marine spills anywhere in the world. Other services provided include damage assessment, contingency planning, training and information.

ITOPF provides objective technical advice, expertise, assistance and information on effective response to ship-source pollution. Their services are usually employed on behalf of their Members (tanker-owners), Associates (other ship owners), oil pollution insurers (normally one of the P&I Clubs) or at the request of governments or international agencies such as the International Oil Pollution Compensation Fund.

Web link - <http://www.itopf.com>

4. Oil Spill Response Limited (OSRL).

OSRL are a private company providing immediate global response to oil spills whenever and wherever they occur through the use of their international response centre in Southampton, England and the Alliance partner East Asia Response Limited in Singapore.

Upon request OSRL delivers practical training and consultancy services in areas such as contingency planning, audits, emergency response exercises and environmental reviews.

Web link - <http://www.oilspillresponse.com>

5. English Nature (changing to Natural England during 2006).

English Nature are advisors to the government on all aspects relating to the conservation of wildlife, geology and wild places in England. English Nature are a Government agency funded by the Department of Environment, Food and Rural Affairs.

English Nature works with regional partners to develop robust frameworks for decision making and actions to achieve sustainable development. Overall they seek to secure and enhance wildlife and geology through regional working.

English Nature's main statutory duties arise through the enforcement of the following Acts of Parliament:

- National Parks and Access to the Countryside Act 1949
- Countryside Act 1968
- Nature Conservancy Council Act 1973
- Wildlife and Countryside Act 1981 (amended 1985)
- Environmental Protection Act 1990
- Countryside and Rights of Way Act 2000

With respect to accidental marine pollution English Nature would be called upon by the government to advise on the predicted impact of a spill and the proposed “clean-up” measures on the wellbeing of the wildlife in the area and the infringement of any associated legislation i.e. AONB's, SSSI's.

Web link - <http://www.english-nature.org.uk>

6. Joint Nature Conservation Committee (JNCC).

The JNCC is the UK Government's wildlife adviser, undertaking national and international conservation work on behalf of the three country nature conservation agencies English Nature, Scottish Natural Heritage and the Countryside Council for Wales. The JNCC act as a forum through which the three country conservation agencies deliver their statutory responsibilities for Great Britain as a whole, and internationally.

Specifically the JNCC:

- Provides advice on the development of policies for, or affecting, nature conservation in Great Britain and internationally.
- Works towards establishing common standards throughout Great Britain for the monitoring of nature conservation and for research into nature conservation and the analysis of the results.
- Commissions and supports relevant research.

In the event of an Accidental Marine Pollution incident JNCC would be involved in the provision of advice relating to area clean-up and possible future impacts on the marine ecosystem.

Web link - <http://www.jncc.gov.uk>

7. The Centre for Environment Fisheries and Aquaculture Science (Cefas).

Cefas is the Executive Agency of the Department for Environment, Food and Rural Affairs (Defra), and an internationally recognised centre of excellence for research, assessment and advice on fisheries management, aquaculture and environment protection. They undertake a wide range of research, advisory, consultancy, monitoring and training activities for a broad customer base which includes Government departments. Much of Cefas work is conducted for the UK Government and the European Union where their research and advice is utilised by policy makers,

Specifically Cefas provides the following services:

- Assessment and advice for managing and conserving fisheries.
- Environmental monitoring and assessment of nutrients, radionuclides, chemicals and other contaminants in the environment.
- Advice on aquaculture, disease control and hygiene of fish and shellfish.
- Incidents and emergency response service.
- Research and project management in support of the services above.

With respect to marine emergencies Cefas carry out research in order to advise Defra on all aspects of oil and chemical spill response, remediation and long term monitoring of spill sites.

Web link - <http://www.cefas.co.uk>

8. Environment Agency.

The Environment Agency, as a government agency, is the leading body for protecting and improving the air, land and water environment in England and Wales and assists in delivering Government Environmental Policy. They are designated by the Department for Environment, Food and Rural Affairs (Defra) and the Welsh Assembly Government as the 'Competent Authority' for implementing the Water Framework Directive.

Other important responsibilities include monitoring the health of the environment and the prosecution of those responsible for damage or abuse of the environment.

As a government agency the Environment agency is responsible for providing advice and data to the government on the state and health of the UK environment.

Web link - <http://www.environment-agency.gov.uk>