AMPERA

How Research can better Support Policy Development in Accidental Marine Pollution

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FOREWORD

The effectiveness of prevention and mitigation of accidental marine pollution is based on the latest scientific research, technical and technological developments and on knowledge based decision-making. One of the objectives of AMPERA was to improve linking of accidental marine contamination research with prevention and mitigation activities, to underpin and emphasise the role of sound knowledge in decision making.

To this end, a dedicated workshop was organized in London, 23rd – 24th April 2008, where governmental policy developers and scientists from European coastal countries met and discussed the different aspects of accidental marine pollution research, how they are taken in policy decisions and whether there were potential barriers to communicating policy needs or scientific data in a language that non specialists could understand.

The present brochure is a major outcome of that meeting, and is targeted at decision makers involved with responding to accidental marine pollution incidents. Having summarized views from a wide range of European participants, the aim of this guide is to provide assistance with deciding how science – based evidence can be derived and extended as demanded by policy customers. The guide also emphasises the need for strategic planning and funding between emergencies. These especially relate to undertaking base-line environmental monitoring, as well as having readily available key resources and suitably trained technical and administrative personnel.

We hope this document will provide and updated vision of how research can better support policy development in accidental marine pollution and strengthen the links between scientists and End-users.

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AMPERA Coordinator

INTRODUCTION

Policy Requirements for Marine Accidental Pollution Research in a Regulatory Framework

Policy makers are usually very clear about their areas of responsibility. Marine pollution accidents may present a difficult challenge, potentially involving environmental, social and economic considerations, especially when such events become of national importance. An additional challenge may result from changing environmental legislation and the need to improve science-based evidence.

Minor accidents with some local environmental impact are likely to occur somewhere in the EU on a daily basis. More major events are likely to be infrequent but involve many players, many of whom may not have previous experience in such situations. A familiarity with legislation, existing demographics and the need for science-based evidence will help address their concerns. Such knowledge is, ideally, gained before involvement in any major emergency incidents. In normal circumstances, policy makers may have only a small budget with which to undertake research on the risks and impacts of marine accidental pollution. Although major accidents attract increased funding, the prioritisation of the scale and scope for research may prove difficult.

The funding of international research for marine emergencies is recognised as a major challenge and was central to the remit of the EU funded ERA-NET Concerted Action on Accidental Marine Pollution (AMPERA). While many of the policy issues that demand R&D may be common across different countries, the way that funds are allocated and administered poses potential difficulties. Although co-operation between scientists from different countries may be productive, such joint working may be problematic as any research initiatives are usually supported by only one national funding organisation funding their own scientists.

Science – based evidence is often provided to meet specific policy demands that can change as new legislation is enacted. One example is the recent EU Marine Strategy[1] which has key targets for delivery. Mechanisms are needed to facilitate and improve the awareness of scientists of such policy requirements. Conversely, policy representatives need to be able to easily access science-based evidence in terms they readily understand.

It was therefore proposed, as one of the key deliverables for AMPERA, that a 'Policy lead' workshop under the theme "Linking AMP R&D with policy stakeholders / End-users" would be held to discuss the barriers and challenges to undertaking appropriate research, at which both senior scientists and policy customers would be present.

1 http://ec.europa.eu/environment/water/marine

The Context of the Ampera Policy Workshop

The Ampera Policy Workshop[2] included the participation of, and contributions from, senior Policy representatives, responders and R&D experts from the AMPERA partners, other EU countries and representing Regional Agreements. The general aims were to examine the link between End-users/ Policy stakeholders needs and R&D outputs, and to identify existing mechanisms and barriers to the successful uptake of R&D outputs into policy.

The workshop also considered different aspects in relation to the development of a trans-national /regional approach. A preparatory study[3] aimed at improving our understanding of the Policy Stakeholders' concerns beyond the national level, by providing an overview of the current AMP policy context at regional and European level regarding existing strategies, policy instruments, concerns and R&D initiatives, was submitted to the workshop as background material. For the purposes of this workshop distinction was made between End-user/policy stakeholders and R&D providers in this context; policy/end users are those who develop the policy aspects once an incident has occurred. In order to do this most effectively, they need to be aware of relevant findings from studies undertaken by the R&D communities. The 'policy' term here refers to plans of action or proposed ideas adopted by a government.

2 Garnacho E & Law RJ 2008. Ampera Policy Workshop, 'Linking Accidental Marine Pollution R&D with Policy Stakeholders / End-users'. Deliverable 3.4.2. Report of workshop held as emergency response activity phase 2. Coordinated Action 'AMPERA' (ERAC-CT2005-016165), 92 pp.

3 Schallier R 2008. R&D – Policy Stakeholder Study in preparation of AMPERA 'Policy' Workshop, London (UK), 22-23 April 2008. Final Report MUMM (BELSPO) under WP2 in support of task 3.4, Coordinated Action 'AMPERA' (ERAC-CT2005-016165), 32 pp. + Annexes.

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The objectives were defined as follows:

- Examination of the link between Policy/End-users needs and R&D outputs.
- Identification of barriers to a successful uptake of R&D outputs into policy.
- Identification of mechanisms for uptake of policy / End-users concerns in R&D programmes/ initiatives.
- Identification of mechanisms to develop an AMP thematic and/ or regional approach: including areas for joint research proposals, development of suitable networks or partnerships, involvement of stakeholders.
- Discuss aspects concerning the development of a regional approach for AMP R&D programmes with Policy stakeholder involvement. Cooperation within marine regions.

LINKING MECHANISMS BETWEEN AMP R&D AND END-USERS

The linkage between R&D and End-users/policy stakeholders is recognised as an essential process with which to ensure the following:

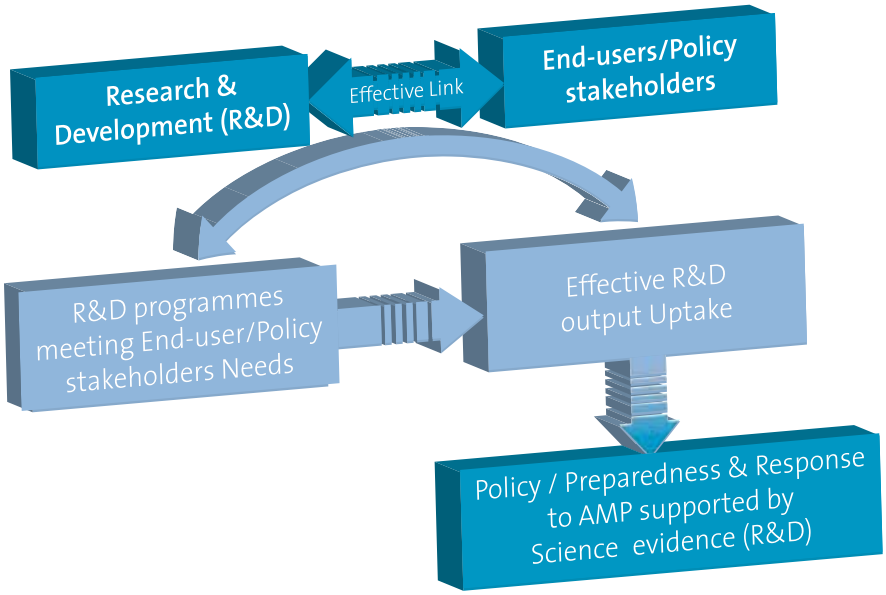
> The effectiveness and relevance of R&D programmes, so they can meet the needs of End-users and policy stakeholders.

> The effectiveness on the uptake of R&D outputs by policy stakeholders and End-users; so policy, preparedness and response to accidental marine pollution is supported adequately by science, and thereby improved.

An effective linkage mechanism between End-users/ policy stakeholders and R&D would ensure the following:

> Appropriate design of R&D programmes so as to meet the needs of End-users / policy stakeholders, by facilitating the input of those needs into the design of calls for R&D programmes.

> Suitable development of R&D outputs and effective uptake and use of such R&D outputs into policy and response, by facilitating an adequate exchange of information between the different parties during and after the R&D programmes.



It was found that the countries participating in Ampera employed different systems to identify and manage: a) R&D priorities, b) call for proposals for R&D programmes, c) uptake of R&D outputs. The effectiveness of the existing mechanisms also varied considerably between countries, resulting in a variety of issues in terms of targeting adequately the responders and policy needs and the uptake of R&D outputs.

Although each country has a different system for the development and management of R&D programmes, both top-down processes (topic & priorities defined by policy-makers and included in the calls for tenders) and bottom-up processes (R&D outputs are fed into policy) are used. Several countries use both simultaneously, this being seen as the most appropriate approach, while in others there is no clear mechanism established.

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IDENTIFICATION OF ISSUES ON THE ESTABLISHMENT OF EFFECTIVE LINKING MECHANISMS

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There are a series of issues and barriers that were identified and discussed during the Ampera Policy Workshop[2] by policy stakeholders, End-users, responders and scientists that need to be addressed in order to establish effective links between the R&D and End-users / policy stakeholders, which are summarised below:

> Barriers to effective communication between the different stakeholders involved in Accidental Marine Pollution can often be an issue.
  - The differences in the language used between scientists, responders and policy stakeholders, and the wider range of End-users.
  - Lack of suitable mechanisms and organisational structures to facilitate communication and the exchange of information between the different parties involved in AMP.

> Lack of trans-national funding for Accidental Marine Pollution R&D to support the development of a trans-national or regional approach.

> Issues regarding the uptake of R&D outputs into operational procedures at both a national and international level.

AREAS FOR JOINT TRANS-NATIONAL R&D

The development of a trans-national / regional approach for Accidental Marine Pollution is very important, as incidents are likely to affect to more than one country at the same time. Existing Regional and Trans-national agreements (such as the Bonn Agreement in the NE Atlantic, the Helsinki Commission in the Baltic, the Barcelona Convention in the Mediterranean, the Biscay Plan – in the Bay of Biscay, etc) provide a framework for communication and exchange of information activities, but there is no structure for sharing funds and resources at a trans-national / regional level. There is a need for joint R&D efforts to address common areas of concern, harmonise tools and approaches, and establish best practice.

Specific areas of need for joint R&D funding at a trans-national / regional level were identified and discussed by policy stakeholders, responders, and scientists during the Ampera Policy Workshop[2] that can be summarised as follows:

- Environmental decision support tools (such as sensitivity mapping, modelling of pollutant behaviour and movement, ecological and socio-economic impacts) in relation to the risk and strategy efficiency of the response (input from experts and responders on the decision making process).
- Harmonisation and inter-comparison of tools (e.g. models), especially the assessment of the efficiency of these tools.
- Identification of risks to help identify priorities for R&D, responders and decision makers. Assessment of results/products from R&D projects and investment efficiency.
- Development of procedures to facilitate sharing resources and expertise, not only between countries, but also between public and private stakeholders and teams.
- Establishment of best practice to identify suitable places of refuge.
- Address responses to cross border incidents and possible lack of consistency from the different approaches used in neighbouring countries.
- Modelling the behaviour and toxicity of Hazardous and Noxious Substances (HNS) compounds.
- Modelling the behaviour of heavy oil products which sink, and their subsequent detection and recovery.
- Tracking, identifying and recovery of containers lost at sea. Identify priorities from the outcome of the ongoing Interreg project 'Lostcont' (www.cedre.fr).
- Chemical properties, behaviour and toxicology of new chemicals should include consideration of the impact of complex mistures under typical environmental conditions and the use of bioindicators in addition to chemical analysis.
- Linkage of climate change to accidental marine pollution, in relation to changing behaviour, toxicology and movement at sea.
- Liquified Natural Gas (LNG) is an area where additional efforts are needed. Identify priorities taking into account outcome from on going project 'Galerne' (www.cedre.fr).
- Development of contingency planning at a transnational and regional level, through: i) clarification of roles, responsibilities and competencies; ii) improving channels of information on existing good coordination practice in response at sea and coast (such as Bonn Agreement, Biscaye and Mancheplan); iii) exchange of experiences of response activities and outcomes; iv) harmonise methodology for developing risk assessment and spill surveillance methods; v) create guidelines for effective cost recovery; vi) include pollutants other than oil.
- The development of novel spill sensors is an area that would benefit from a trans--national approach. Results from previous and ongoing projects (e.g. ASMA - EC DG Env, www.cedre.fr, sinking and submerged oil, www.mcga.gov.uk) could help in the identification of future R&D needs.

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RECOMMENDATIONS FOR ESTABLISHING EFFECTIVE LINKING MECHANISMS BETWEEN R&D WITH END-USERS AND POLICY STAKEHOLDERS

> Facilitating the communication of science to policy makers, addressing the differences in language used and understanding between scientists, End-users and policy stakeholders.

> Including End-users and policy stakeholders in all stages of R&D activities (definition, development, management and dissemination of outcomes), so as to ensure that their needs are met.

> Ensuring effective cross attendance from scientists and End-users/policy stakeholders in relevant national and international fora in order to maintain links between them.

> Establishing appropriate mechanisms for general public dissemination.

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AMPERA PROJECT

AMPERA

European Concerted Action to foster prevention and best response to Accidental Marine Pollution (2005-2009)

AMPERA, a EU 6th Framework Programme ERA-NET, endeavors to create a platform where governmental policy-makers and scientists from European coastal countries could meet to discuss R&D aspects of accidental marine pollution (AMP), and to provide guidance on the implementation of EU-wide measures as required. By moving towards the coordination – and eventual integration – of national and regional AMP research programmes, the network proposes to maximise the EU's research output and make important contributions to the protection of Europe's coastal ecosystems and economies. This is the first time that European national funding agencies have combined their efforts to enhance co-ordination. This has lead to a series of workshops and outputs that aids more efficient use of existing RTD capabilities for preventing and better responding to accidental marine pollution incidents.

The specific objectives of the AMPERA project are to:

1. Set priorities in trans-disciplinary AMP research, including policy and socioeconomic aspects, providing incentives for initiating new or strategic areas of innovative research.
2. Improve linking of AMP research with prevention and mitigation activities, to underpin and emphasize the role of sound knowledge in decision making.
3. Improve 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. Launch 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, underpinning the science-public interface and the importance of adopting this approach for society.

AMPERA partner organisations

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 AMP or have related programmes in different degrees of development.

1. MICINN - Ministry of Education and Science, Spain
2. IFREMER - French Research Institute for the Exploitation of the Sea, France
3. Defra - Department for Environment Food and Rural Affairs, UK
4. EstSF - Estonian Science Foundation, Estonia
5. BELSPO - Belgian Federal Public Planning Service Science Policy, Belgium
6. FCT - Science and Technology Foundation, Portugal
7. RCN - Research Council of Norway, Norway
8. MI - Marine Institute, Ireland
9. Consellería de Innovación e Industria - Xunta de Galicia, Spain
10. Marine Board - European Science Foundation

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