

ARCOPOL: The Atlantic Regions' Coastal Pollution Response

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ABSTRACT

ARCOPOL is an ERDF (European Regional Development Fund) funded project framed in the Atlantic Area Transnational Programme that aims at improving the preparedness, response and mitigation capabilities of local and regional responders to accidental coastal pollution; specifically against oil, HNS (Hazardous and Noxious Substances) and inert spills. ARCOPOL has been developed by 12 partners from Portugal, France, UK, Ireland and Spain, where regional and local competent agencies, authorities and research organizations are represented.

In the frame of ARCOPOL different topics have been addressed:

- Update of existent knowledge and reinforcement of collaboration. The ARCOPOL Atlantic Network is a forum for dialogue and a platform for sharing updated information to strengthen the management of accidental maritime pollution.
- Response to HNS. ARCOPOL has dealt with the development of operational guides and manuals on the shoreline response to HNS pollution from shipping. Some relevant deliverables are: a tool that enables to prioritise chemicals in terms of human health risks; datasheets for the 10 top priority substances; and a manual for waste management.
- Management of response. ARCOPOL has developed common protocols and support decision tools as the ARCOPOL web viewer and the Dynamic Risk Analysis.
- Training and awareness raising. Deliverables elaborated consist of a video on shoreline clean-up and guidelines to assist selected public

(local authorities, sea professionals, students and volunteers) when facing an accidental marine pollution.

- Claims for compensation. Conclusions have been included in an operational guideline to help local governments to claim and obtain compensation for environmental and socio-economic damages.

All ARCOPOL outputs are available on project website (www.arcopol.eu) and will be further updated and disseminated in the frame of the follow-up initiative named ARCOPOL+ (Improving maritime safety and Atlantic Regions Coastal Pollution Response through technology transfer, training and innovation), co-financed by the Atlantic Area Transnational Programme.

INTRODUCTION

ARCOPOL is an ERDF funded project framed in the Atlantic Area Transnational Programme with a total budget of 2.988.050,70 €. The project has been developed on the basis of the experience acquired through EROCIPS (Interreg IIIB), and aims to improve the preparedness, response and mitigation capabilities of local and regional responders to accidental coastal pollution; specifically against oil, HNS (Hazardous and Noxious Substances) and inert spills. Since the beginning of 2009 and until the end of April 2012, ARCOPOL is being developed by a consortium involving partners from 5 countries of the Atlantic Area (Portugal, France, UK, Ireland and Spain), where the regional and local competent agencies, authorities and research organizations are represented.

ACTIVITIES

In order to meet the project aim, it has been broken down in seven activities, being activity 1 and 7 related to project management and dissemination duties.

Activity 2 focuses on strengthening the management of accidental marine pollution in the Atlantic region by capitalizing the existent experience. This has been addressed by the creation of the ARCOPOL Atlantic Network (<http://www.arcopol.eu/network/Default.aspx>), a forum of dialogue bringing together key players across all countries for the exchange of knowledge, experience and good practices. All organisations (i.e. research institutions, industry, local, regional and national authorities, NGOs, etc.) involved in prevention, preparedness, response and mitigation are invited to join it. Moreover, the network is being supported by the revision and exploitation of existing experience in oil, HNS and inert products spills at sea in the Atlantic regions.

Activity 3 deals with the development of operational guides and manuals aimed at assisting local and regional responders in the shoreline response to HNS pollution from shipping. Among other deliverables, this activity has provided a tool that enables to prioritise HNS of concern for the Atlantic coastline in terms of human health risks. In addition, datasheets for ten key priority substances have been developed. These datasheets gather information ranging from exposure standards, incident response, to clean up methods. Both deliverables allow competent authorities to streamline their preparedness efforts on a risk prioritisation basis and have ready access to information during the response. Some other issues addressed under this activity are: monitoring and sampling for human health exposure; human health risk assessment; risk communication; response to HNS pollution accidents, and waste management.

In the frame of Activity 4, common procedures, techniques and decision tools for the management of response to accidental maritime pollution have been developed. Works were focussed on the integration in a simple tool/web viewer all the information required for managing the response to an accidental maritime spill from shipping (layers with information on coastal inventory, sensitivity maps, results from models, observation data, etc). Moreover, upgrading in models (wave and currents forecast and fate and behaviour of pollutants) has also been carried out, as the implantation of the 3D movement in MOHID. Another important output from activity 4 will be the Dynamic Risk Analysis tool. It integrates information from observations, modelling results, coastal sensitivities, current maritime traffic, and available counter-measures. It is flexible and will adapt to real-time needs and to all partner response contexts. This activity also addresses the modelling of fate and drifting of airborne pollution, which may be generated after a shipping accident. In addition, emergency meteorological stations have been developed to be placed in most suitable locations, considering models needs, and provide meteorological data. Furthermore, two complementary reports have been produced providing, on the one hand, practical recommendations to synthesize communications during the managing of a maritime spill crisis, and, on the other hand, a description of typical quality control standards for operational modelling systems to simulate the transport and fate of chemical and oil spills.

Activity 5 focuses on training and transferring of know-how to improve local responders' preparedness. A wide range of targeted audience reflecting the various actors that can potentially become involved has been taken into account. Deliverables consist of a video on shoreline clean-up and specific guidelines to

assist selected public, i.e. local authorities, sea professionals, students and volunteers, when facing an accidental marine pollution.

Finally, activity 6 focuses on claims for compensation from environmental damages caused by maritime accidental pollution. Specifically, it addresses the assessment of environmental damage. Under this topic several reports have been produced, as a review of ecological risk assessment methodologies and derivation of PNECs (Predictive No-Effect Concentration) for marine species; a bibliographic review of the marine toxicological data for chemicals that pose major environmental risk; a comparative study of the situations regarding environmental damages; the identification of chemicals that pose major environmental risk, which has been published in a scientific journal (Neuparth *et al.*, 2011); and standardize procedures for the management of contaminated marine marketable resources. In connection with activity 5, an operational guideline to help local governments to claim and obtain compensation for environmental and socio-economic damages has also been delivered. Moreover, aiming at local/regional authorities, a common methodology for evaluating ecological damage has been also developed.

SUMMARY AND CONCLUSIONS

As explained above, ARCOPOL addresses key issues as the management of response, training and awareness raising, environmental and human health risks and damage compensation. Through the transference and integration of all its products, ARCOPOL will contribute to the improvement of the maritime safety, in terms of preparedness, response and mitigation capabilities, of the participating countries and beyond the Atlantic Area.

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REFERENCES

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