

ARCOPOL & ARCOPOL+ projects

Atlantic Regions Coastal POLLution Response

ARCOPOL

Interspill - 14th March 2012 - London

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Atlantic Regions' Coastal Pollution Response

Main aim: To improve preparedness, response and mitigation capabilities to accidental coastal pollution of local and regional responders.



ARCOPOL

Total budget: ~ 3 million €

January 2009 - April 2012

ARCOPOL+

ATLANTIC AREA
Transnational Programme
FOR A COMMON FUTURE



Project Part-Financed
by the European Union
European Regional
Development Fund

Partnership

IRELAND



SPAIN



METEOGALICIA



UK



UK associated



FRANCE



PORTUGAL



Partnership



Advisory board

UK: Maritime and Coastguard Agency.

FRANCE: Michel Girin; Préfecture Maritime Atlantique; Association Grand Littoral Atlantique.

IRELAND: Irish Coast Guard.

PORTUGAL: Direcção-Geral da Autoridade Marítima; Instituto Portuário e dos Transportes Marítimos.

SPAIN: Salvamento Marítimo (SASEMAR); Ministerio de Agricultura, Alimentación y Medio Ambiente; Consejería de Gobernación y Justicia de la Junta de Andalucía.

ACTIVITIES

ARCOPOL

Activity 1:
Coordination
and project
management

Activity 2:
Open
perpetuation
of the
network and
project
outputs

Activity 3:
HNS spills
response:
techniques
and
management

Activity 4:
Tools for
response
management

Activity 5:
Training and
transfer of
know-how:
awareness
raising of key
stakeholders

Activity 6:
Claims and
compensation
for minor,
medium and
major spills

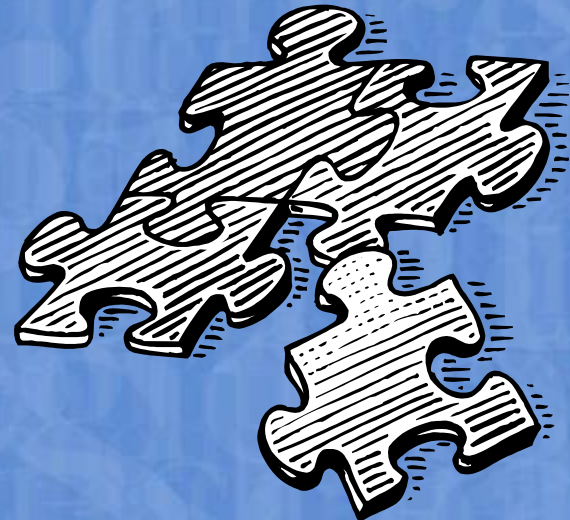
Activity 7:
Dissemination
of results



Project Part-Financed
by the European Union
European Regional
Development Fund

Activity 1: Project management and coordination

- Put in place mechanisms to ensure that ARCOPOL meets its objectives and delivers its results and outputs on time.
- Keep an efficient communication flow between the partners.
- Ensure that robust financial management systems are put in place by all the partners.



Activity 2: Opening and perpetuation of the network and project outputs

- To **review** and **exploit** existing experience in oil, HNS and inert pollution spills at sea in the Atlantic regions.
- To establish the basis for a sustainable network of experts on spill and HNS response in the Atlantic Area: **ARCOPOL Atlantic Network**



Activity 2: Opening and perpetuation of the network and project outputs

ARCOPOL ATLANTIC NETWORK



Objectives:

- Draw a map of knowledge and capabilities
- Supply relevant information
- Promote collaborative research and interactions among members



ARCOPOL+

ARCOPOL Atlantic Network

www.arcopol.eu

ARCOPOL
The Atlantic Regions' Coastal Pollution Response

HOME

Spain UK France Portugal

Members area

Project Partners Documentation Events Related Projects Legislation Links

Arcopol Summary

ARCOPOL is a project framed in the Atlantic Area Transnational Programme focused on the preparedness, response to and mitigation of accidental marine pollution impacting on the shoreline.

Based on the experience acquired through a previous project, EROCIPS (Interreg IIIB), ARCOPOL aims to improve local responders' prevention, response and mitigation capabilities against oil, HNS and inert spills; and to establish the basis for a sustainable Atlantic network of experts supported by adequate information, data exchange and management tools.

3rd ARCOPOL Coordination meeting at EMSA's premises in Lisbon
29th April 2010

Workshop: Novas ferramentas para um melhor planeamento e gestão da resposta e avaliação dos danos em derrames de hidrocarbonetos, inertes e HHS: Projecto ARCOPOL
30 Abril 2010

[CONTACT US](#)

ARCOPOL ATLANTIC NETWORK

Related Documentation

ACTIVITIES

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A4 A5 A6
A7

erocips

This project is funded by The Atlantic Area Transnational Programme

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ARCOPOL Atlantic Network

WEB

[Member's profile](#)[Specific Objectives](#)[Register](#)[Log In](#)

The main objective of ARCOPOL Atlantic network is to create a forum of dialogue and to promote the experience, knowledge and information exchange in the Atlantic Area by the integration of the principal actors that deal with prevention, preparedness, response and mitigation against spills.





This project is funded by The Atlantic Area Transnational Programme

ARCOPOL Atlantic Network

112 members on 14th March 2012

Some examples:

UK



Ireland



Commissioners of
Irish Lights

Portugal



France



Spain



Activity 3: HNS spills response: techniques and management

To improve the preparedness and actual response to shoreline pollution from HNS.

- Review HNS knowledge, guidance and legislation
- Guidelines, technical reports and manuals
 - Local Responders Methodology on Air Quality Monitoring
 - Waste management guide
 - Risk communication and media management & Guidance and Incident Response Procedure
- Develop key information and tools for responders
 - HNS prioritization tool
 - HNS datasheets



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Activity 3: HNS spills response: techniques and management

Some deliverables...

HNS Risk prioritisation matrix

Arcopol HNS Risk Assessment Tool

Risk Assessment

Clear Risk Assessment Print Current Risk Assessment

Current Risk Assessment 0 Chemicals

Chemical Name	Tonnage	Freq.

Import Risk Assessment Export Current Risk Assessment

Chemical Database

Search by CAS Number - - Search by UN Number

Chemical



View Chemicals without CAS Number View All Chemicals View all user chemicals View Chemicals without UN Number

Results



Chemical Name	CAS No.	UN No.
(ALKENYL) SUCCINIC ANHYDRIDE	108-30-5	NO UN
1,2 DICHLOROETHANE	107-06-2	1184
1,2 DICHLOROPROPANE	78-87-5	1279
1,2,3 TRICHLOROPROPANE	96-18-4	2810
1,2-BUTYLENE OXIDE	106-88-7	3022
1,3 DICHLOROPROPENE	542-75-6	2047
1,3,5 TRIOXANE	110-88-3	1325
1,3-CYCLOPENTADIENE	287-92-3	2646
1,5 PENTANEDIAL SOLUTION	111-30-8	2810
1,6-HEXANEDIOL	629-11-8	NO UN

Manage chemical database

View HNS Risk Assessment Methodology View User Manual Exit Database

European Union

Activity 3: HNS spills response: techniques and management

Some deliverables...

HNS Datasheets

HNS MARITIME SAFETY DATA SHEET FILE NO.: 002 DATE: 24/06/2010

ETHYLENE OXIDE CAS No: 75-21-8 UN No: 1040
 GHS Cat 2, T – Toxic, Xi – Irritant, F+ – Extremely Flammable
 R123, R36/37/38, R45 R46
 S45, S53

GAS

SECTION 1: OVERVIEW

KEY POINTS

- Colourless gas with sweet taste and odour (bruised apples). Heavier than air.
- Extremely Flammable. Reactive with anhydrous metal chlorides and oxides, reacts violently with copper, alkali metal hydroxides, water, acids and alkalis. Corrosive to some plastics.
- Probable carcinogen. Toxic and irritant.
- Minor exposures (100 ppm) may result in nose and throat irritation. Moderate exposure may cause breathing difficulties, abdominal pain, vomiting and numbness. May burn skin and eyes on contact.
- Exposure to high concentrations may be fatal.
- Chronic effects may include cataracts, liver / kidney damage, neuropathy, allergic reactions.
- There is evidence to suggest that ethylene oxide is a probable human carcinogen.

Human Health Exposure Routes

- Due to its gaseous nature inhalation and eye exposure are most likely routes.
- Contact with liquefied gas can cause frostbite.
- Lung or eye irritation may occur following short-term exposure. Effects may be delayed (72 hours).
- Contact with dissolved gas may cause burns.

Reactivity with Sea Water

- Reacts to form Ethylene Glycol and 2-Chloroethanol.

Fire

- Extremely flammable.
- Will self sustain combustion
- Leaking containers may explode
- protective clothing and breathing apparatus required

Environment

- Non persistent.
- Does not bioaccumulate.
- Harmful to vegetation

INCIDENT MANAGEMENT

- Alert Emergency Services. Extinguish ignition sources.
- Non-essential personnel should move at least 150 m away from the incident.
- There may be a public safety hazard outside the immediate area of the incident (See Table 1).
- Initiate real-time ambient monitoring, for use with meteorological and marine forecasts.
- Emergency department staff treating chemically contaminated casualties should be equipped with approved, decontamination suits and breathing apparatus. Ventilate enclosed spaces.
- Secondary contamination unlikely from exposure to gas but may occur from exposure to solutions / liquid ethylene oxide. For latter, decontaminate patients at scene. Bag clothing.
- Decontamination run-off should be prevented from entering drains and watercourses.

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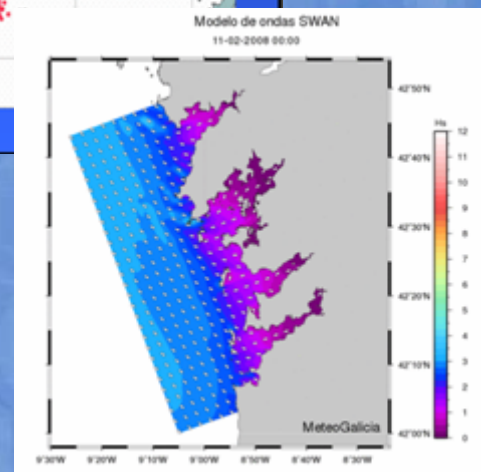
1. Chlorine gas
2. Ethylene oxide
3. Methyl amine
4. Ammonia
5. 2-(2-aminoethoxy) ethanol
6. Vinyl chloride
7. 2-amino-2-methyl-1-propanol
8. 3-methyl pyridine
9. Formaldehyde
10. Dimethylamine

Activity 4: Tools for responders

- Improving response management: Protocols for data exchange. Communication among observers, modellers, responders.
- Modelling the spread of airborne pollutants produced during incidents.
- Modelling of pollutants drift and behaviour on sea.
- Dynamic Risk Analysis tool.



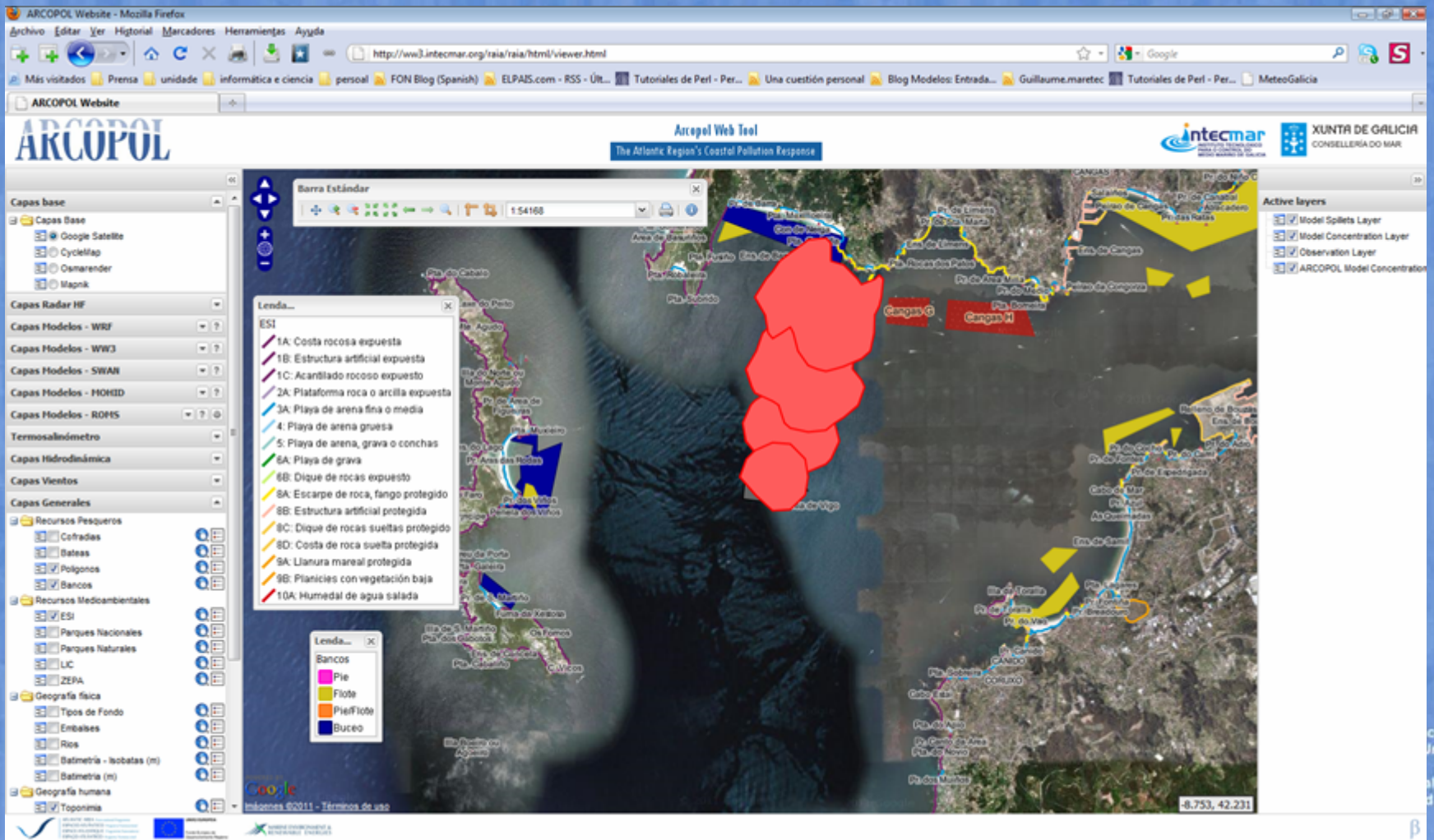
XUNTA DE GALICIA
CONSELLERÍA DO MEDIO RURAL
E DO MAR



Activity 4: Tools for responders

Some deliverables

Web tool: versions for observers, modellers and managers

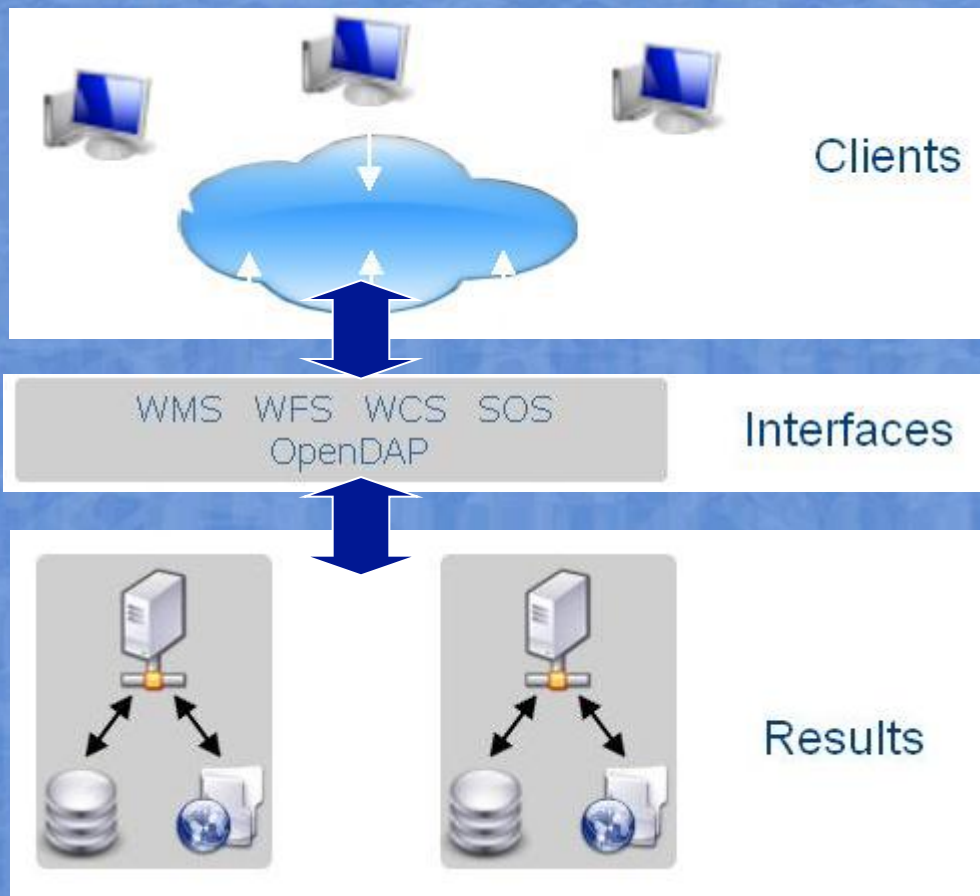


Activity 4: Tools for responders

Web tool: versions for observers, modellers and managers

Structure of the system

- The visualization and observation ingesting tools
- Interfaces link data servers and tools (OGC standards: WMS, WFS, NetCDF)
- Data bases and observations storage



Activity 4: Tools for responders**Some deliverables****Emergency Meteorological Station (EMS)**

Source of meteorological data for airborne pollution models.

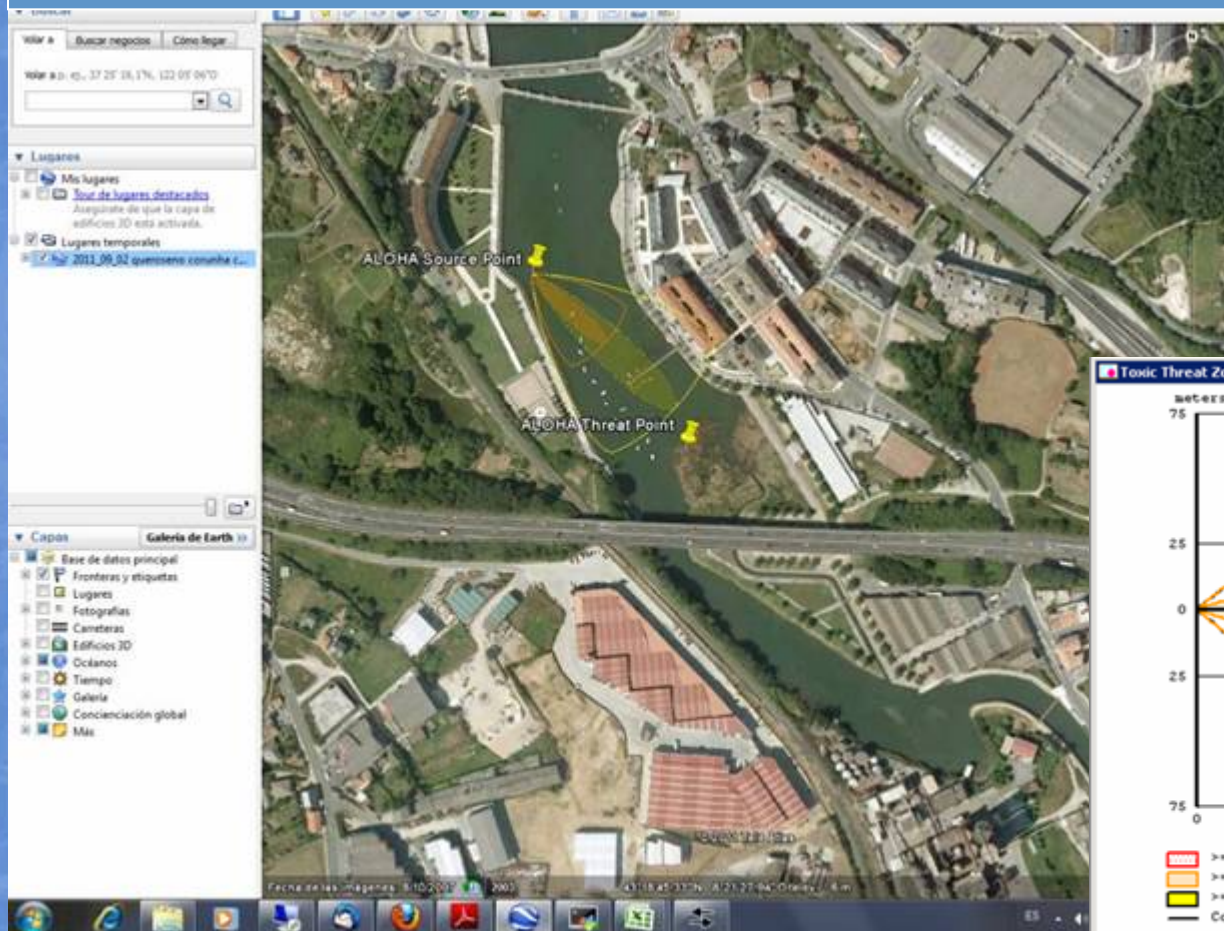
End-users: first responders (firemen, civil protection staff, environmental inspectors).

Rapid deployment: plug and play.

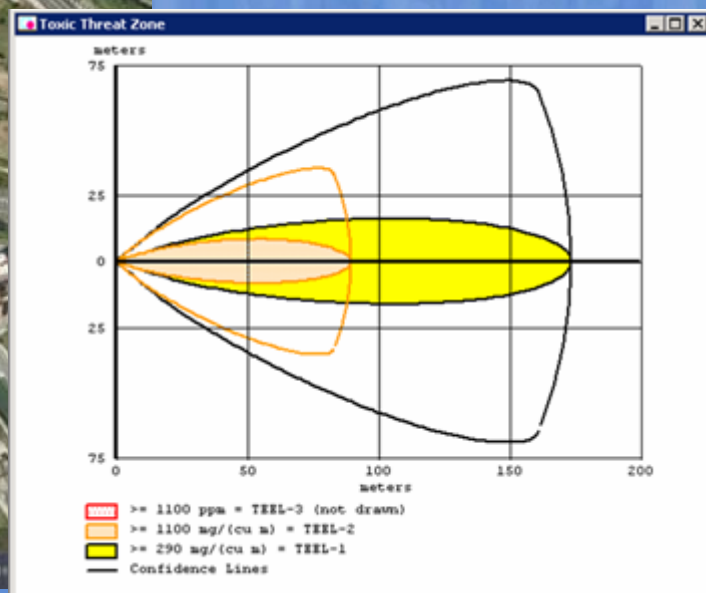
Activity 4: Tools for responders

Some deliverables

Emergency Meteorological Station (EMS)



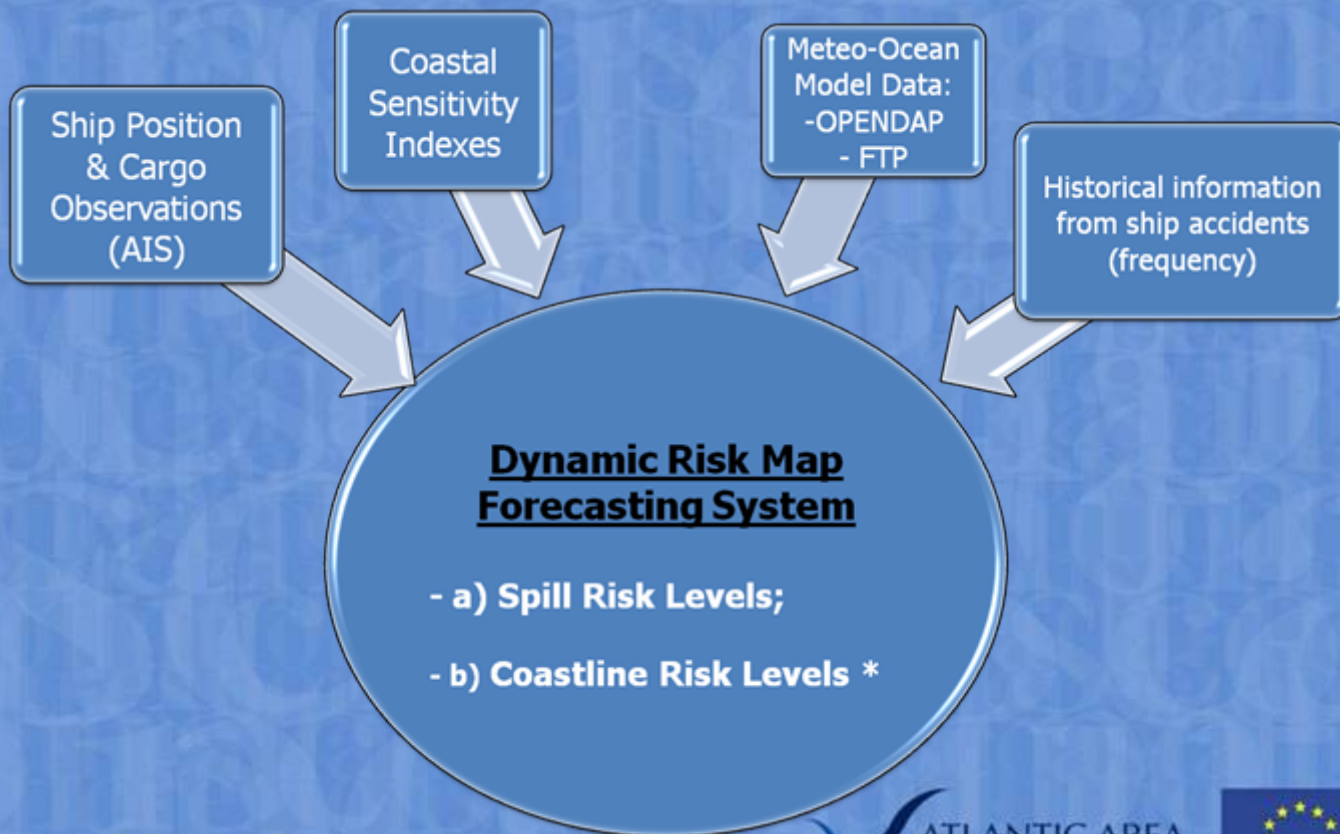
Simulation of
kerosene spill in
an estuary



Activity 4: Tools for responders

Some deliverables

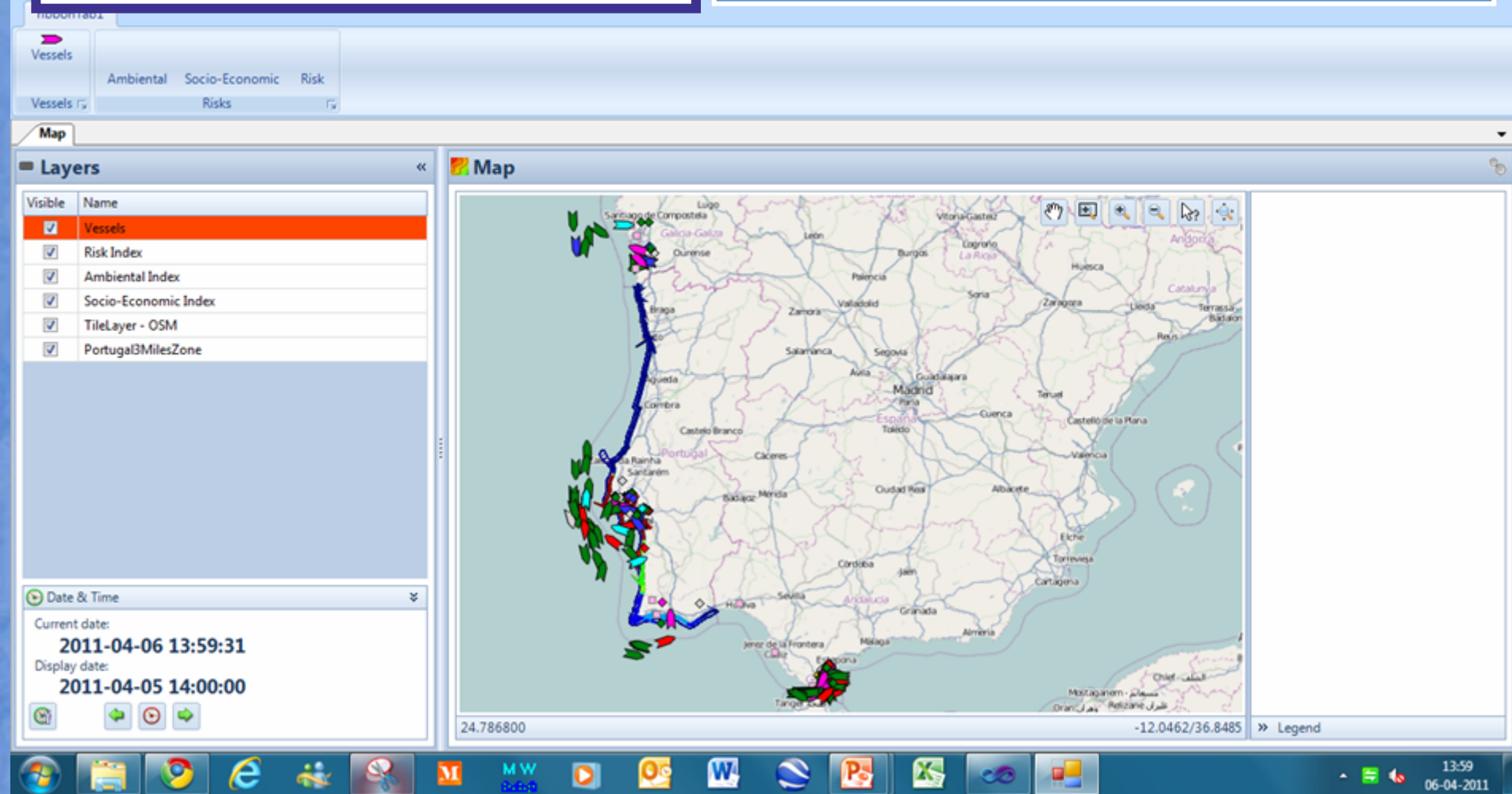
Dynamic Risk Analysis



Activity 4: Tools for responders

Some deliverables

Dynamic Risk Analysis



Activity 5: Training and transfer of Know How: awareness raising of key stakeholders

Raise awareness
and
improve preparedness



Activity 5: Training and transfer of Know How: awareness raising of key stakeholders

Video on main principles of shoreline clean-up



<http://www.arcopol.eu/buscaDocu.aspx?act=A5>

- ✓ **Training support** for anyone who may be or become involved in responding to a coastal pollution incident.
- ✓ **Target:** Local and regional authorities, decision makers...
- ✓ **Languages:** French, English, Portuguese and Spanish

Activity 5: Training and transfer of Know How: awareness raising of key stakeholders



UK response

General principles

Response at sea

Shoreline response

Waste management

Compensation

HNS

Media management

Glossary

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ARCOPOL

ENVIRONNEMENT MARITIME
ET ÉNERGIES RENOUVELABLES

ESPACE ATLANTIQUE
Programme Transnational



Union Européenne
Fonds Européen de
Développement Régional

Région
BRETAGNE
RÉGION
AQUITAINE



TRAINING LOCAL RESPONDERS

Emergency Response to Shipping Pollution Incident



Version 3: October 2011

All international projects working to improve response preparedness highlight the importance of more training, particularly for on site responders and decision makers, in order to prevent a minor incident becoming a major concern, and a major accident becoming a crisis. This Training CD-ROM was produced by Cedre (Centre of Documentation, Research and Experimentation on Accidental Water Pollution), with financial support from the European Project EROCIPS (Interreg IIIB Atlantic Area), then adapted by the UK Partners to make it relevant to UK legislation and the national context and finally updated within the framework of the ARCOPOL project. This work has been carried out in collaboration and agreement with the Maritime and Coastguard Agency (MCA) and the Environment Agency (EA). It is designed to act as a training support for anyone who may be or become involved in responding to a coastal pollution incident.

Any, even partial, reproduction must be subject to a written request addressed to Cedre or a person covered by the copyright. The presentations have been provided by Marine Coastguard Agency. Further training materials can be found on the MCA website.



Use Internet Explorer to read this CD-Rom

Training CD-ROM

Project Part-Financed
by the European Union

European Regional
Development Fund

Activity 5: Training and transfer of Know How: awareness raising of key stakeholders

Guidelines on:

- Volunteers management
- Involvement of sea professional on response operations
- Assistance to local authorities



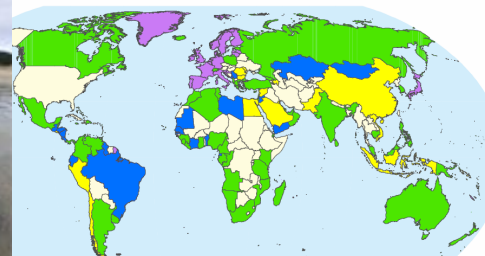
Available at www.arcopol.eu

Activity 6: Claims and compensation for small, medium and major spills

- Comprehensive guide to help local governments to demand and obtain compensation for damages suffered following a marine pollution event.
- Development of standard methodology for environmental and economic damage assessment.
 - Review of impacts of past oil and HNS incidents on marine ecosystems.
 - Identification of chemicals that pose major environmental risk.
 - Review of ecological risk assessment methodologies.
 - Experimental work: tools and procedures to assess environmental exposure



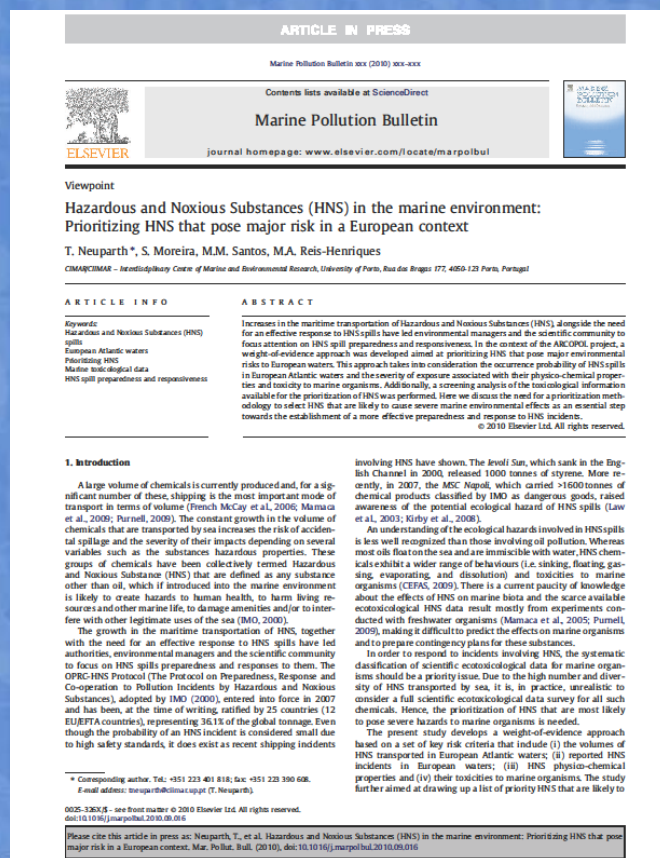
Civil Liability and Fund Conventions in force at 1 October 2006



Activity 6: Claims and compensation for small, medium and major spills

Some deliverables:

- Comparative study of the situations regarding environmental damages.
- Review of impacts of past oil and HNS pollution incidents on marine ecosystems.
- Identification of chemicals that pose major environmental risk.
- Review of ecological risk assessment methodologies and derivation of PNEC.
- Standardize procedures for management of contaminated marine marketable resources



Activity 7: Communication and dissemination

www.arcopol.eu



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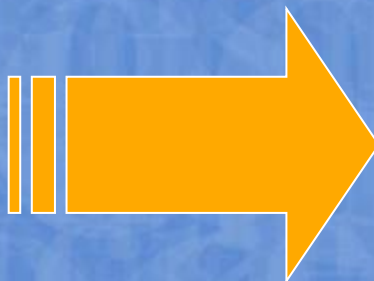
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ARCOPOL Outcomes

ARCOPOL + (2012-2013)

Significant and tangible improvement in the regional ability to cope with maritime pollution

- Operational tools
- Data exchange protocols and systems
- Manuals and guidelines
- Relevant knowledge, data and information
- Increased awareness & preparedness
- Sustainable network & information platform



Filling gaps in knowledge on HNS behaviour at sea

Capitalization of protocols and tools by implementation at contingency plans

Reinforce and consolidate the network involving the industry

Awareness raising through E-learning

ARCOPOL

www.arcopol.eu

Thank you for your attention!

Patricia Pérez

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