

GALICIA DEMO 2014

POBRA DO CARAMINAL OCTOBER 1st, 2014

DEMO ORGANIZER

Portos de Galicia

PARTICIPANTS

Portos de Galicia

Partners NETMAR project

Galicia Coastguard

Spanish Army

INTECMAR

Maritime Authority Arousa

SASEMAR

CETMAR

Guardia Civil

Brotherhood of fishermen Pobra do Caramiñal

Civil Protection Pobra do Caramiñal

AXEGA

OBSERVERS

NETMAR Partners (to be specified)

Members of the Advisory Committee Portos de Galicia

COURSE

A Reefer vessel “NET GALICIA” in the Finisterre VTS, has suffered storm damage to its hull and is proceeding to anchorage in Arosa estuary to assess this damage. NET GALICIA is being escorted by a rescue ship. The CCS Finisterre has informed the Galicia Coastguards operating room and they, in turn, alerted the Port Authorities “Portos de Galicia” and “Vilagarcia”, and the Maritime Authority. These are the authorities responsible for the ports in the area of the estuary. At 06:00 LT (GMT+02), whilst anchoring, fuel was discovered leaking from NET GALICIA’s hull, possibly due to a crack in the hull. The Pollution Response Plans are activated and it is decided that the ship will be moved to the Port of Pobra do Caramiñal. The fuel spill sample taken identifies the fuel leaking as IFO 180 fuel type. The fuel pollution from NET GALICIA has extended to the harbor basin area and is also drifting towards the estuary areas. Local weather conditions along with tide and currents are contributing to the pollution spread

As a result, the following actions are required:

1. Deploy UAV to conduct reconnaissance of the area and allow initial assessment of contaminated areas.
2. Launch drifter buoys to obtain data on the evolution of the pollution displacement
3. Deployment of Troil-Boom GP 750 around the stricken vessel for containment of the spill. Mobilization of one or several unmanned underwater vehicles (AUV's) for the inspection of the ship in order to assess the damage. The product will be pumped by the Desmi Belt Terminator skimmer to Fast Tank.
4. Protection from spill spreading to the estuary by installing a coastal booms at the harbour entrance and booms for protection of the marina and mussel production areas.
5. Once the spots are located in the estuary, they are removed for their containment by a boom Current Buster for collection and subsequent pumping by a SKIMMER.
6. Recovery of pollution in the port area by the use of a Desmi-belt Terminator skimmerpumping to a Fast tank.
7. Detection of ammonia bottle by AUV and inspection thereof with a UAV.

8. Transfer of the product recovered from the Fast Tank to a tanker for management.

OBJECTIVES OF THE DEMO

- Test the creation and operation "in situ" of the coordination of operations at sea and ashore both with them and also with CECOP of the Pollution Response Plans. Capacity for coordination and communication through the IT's implemented will be checked.
- Plan and implement a coordinated response exercise for a pollution event at sea, with particular attention to regarding the methodology and organization of decision-making and coordination between technical experts and the bodies responsible for decision making, communications, logistics, etc .
- Deploy new technologies for the detection and control of pollutions, and coordinate its use with conventional tools normally used in the standard response of these types of incidents / accidents, to show their specific capabilities, and assess its merits in an operational exercise. These new technologies (UAV- Unmanned Air Vehicle and Autonomous Underwater Vehicles AUV-and management platform, mainly) are developed and / or improved by industries and European scientific institutions that take part in the NETMAR project.
- Check the actual condition and correct operation of the equipment.
- Instruct operating personnel that takes part in the exercise in the use of means for combating marine pollution by hydrocarbons.

MATERIALS

Anti-pollution booms, remote control skimmer Desmi Terminator Belt. AUVs, UAVs, ROVs, R / S, SAR helicopters, SAR ships, fishing ships

HUMAN RESOURCES

- Portos de Galicia
- Project Partners NETMAR
- Galicia Coastguards
- INTECMAR

- Maritime Authority Arousa
- SASEMAR
- CETMAR
- Civil Guard
- Brotherhood of fishermen Pobra do Caramiñal
- Civil Protection Pobra do Caramiñal
- AXEGA

DEVELOPMENT OF DEMO (LT = GMT + 02)

06:00 L.T. The reefer vessel “NET-GALICIA”, proceeds by Vilagarcía estuary towards the anchorage, escorted by a rescue ship. Once fuel spill is detected, the ship is sent to berth to the Port of Pobra do Caramiñal.

08:00 L.T. Ship alongside.

08:00 L.T. Launch of drifting buoys to monitor the evolution of the pollution.

09:00 L.T. Pre-operational meeting in the Operations Centre, where team operating instructions shall be provided. Mobilize the coordinating bodies for both sea and shore operations

Deployment of IT means, computers and integrate them in the exercise-demo (AXEGA, INTECMAR, CETMAR, partners NETMAR, Tecnalia ...).

SHORE OPERATIONS

Boom deployment and equipment, Fast Tank assembly and tankers deployment to receiving the collected product.

OPERATIONS AT SEA (LT = GMT + 02)

They consist mainly in deployment of different types of booms for protecting the mussel production areas, insulation of the docked ship and closing the port's entrance, as well as the collection of dispersed pollution. Use of drones to detect and seal the crack in the hull, to locate the ammonia cylinder bottle on the seabed, inspect the result of the cleaning procedure and detect pollution in the estuary:

10:00 LT Launch an AUV from the Bateiros ramp at the port to inspect the ship's hull. (ETR = estimated time return) ETR at 10:45 LT.

Taking off TECNALIA UAV with gas sensor to inspect the area where the object that gives off vapors of ammonia has been sunk to check for gas presence, and to explore the estuary for possible scattered patches. ETR at 10:40 LT.

Port boom deployment by SASEMAR and Portos de Galicia staff from the commercial dock at Port of Pobra, with the collaboration of an auxiliary boat with the aim of creating the closure of the basin.

Deployment, from the bateiros ramp Port, of the Current Buster boom by Gardacostas of Galicia's staff, with the assistance of auxiliary boat that will later hand working ends to two fishing boats for collecting the fuel at the estuary .

Deployment of the Troil BOOOM GP750 from the commercial dock by Portos de Galicia and Sasemar's staff in collaboration with an auxiliary boat to encircle the spill around the reefer vessel.

Deployment of an oceanic boom from a Galicia Coastguards' vessel for protecting mussel production areas affected.

10:45 LT Launch an AUV from the Bateiros ramp to inspect the mussels production areas and a submerged object that has been located outside the breakwater, and from which ammonia vapor is released. ETR at 11:30 LT.

11:00 LT Operation with booms in different areas, in collaboration with fishing vessels and auxiliaries boats.

Mounting the fast-tank with SASEMAR, Portos de Galicia and Galicia Coastguards staff at the commercial dock.

Use of Skimmers in the port area by Portos de Galicia, Galicia Coastguards and SASEMAR's staff

12:00 LT Taking off X8 UAV in recognition mode, after the different units have carried out the cleaning of the estuary and the port basin in order to verify the cleaning process. ETR at 12:45 LT

12:15 LT Launch of ROV for inspection of the reefer ship and to certify that the fuel leak has been fixed and leaking has stopped. ETR at 13:00 LT

13:15 LT. Collecting material.

14:30 LT. Lunch time

16:00 LT postoperative Meeting on the Operations Centre.

COMMUNICATIONS

VHF Channels: 73, 74, 75, 76 (Maritime Channels)

CONCLUSIONS

The findings of the Demo can be a guide to improve current pollution plans (Maritimes Contingency plans for spills, basically).

WHEATHER FORECAST

It will be presented in time and it will be provided by Meteogalicia

SCHEDULE OF TIDES (LT = GMT + 02)

High water	0921 L.T.	3.10 m.
Low water	1535 L.T.	1.20 m

SAFETY

The proposed development Demo, may be amended by the coordinators if conditions so require. It may also be canceled in part or in full if a real emergency situation happens and where the participating units are declared necessary. Captains are responsible for the safety of the vessel and the onboard staff. The coordinators shall be informed of any situation in which they are at risk of human life. In the case of personal injury, this



Networked systems for situational awareness
and intervention in maritime incidents

situation has priority over any other action of Demo and this real emergency will be coordinated by the CCS Finisterre.