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OIL IN ICE

Place and date
Kotka, Finland, 26-27 March 2014.

Organiser
The Finish Environment Institute (SYKE) jointly with the WINOIL R&D Consortium organised an International Seminar and Oil in Ice Operational Exercise.

Background for the exercise
SYKE requested that during the exercise EMSA demonstrate an arctic skimmer which is part of the Kontio arrangement. During the winter the Kontio is stationed in Oulu (North of Bothnian Bay). Sending the vessel to this exercise was therefore not justified due to the very high costs this would have involved. However, there was the possibility to send just the skimmer with the power pack and operators. Consequently, the Agency launched a tender for participation in an oil recovery in ice equipment demonstration. As a result of the tender the Contract Amendment for the provision of the service was signed with the EMSA contractor.

Participants
Finland, EMSA (equipment only).

Objective of the exercise
The purpose of the exercise was demonstration of the state of the art oil recovery equipment suitable for ice conditions.

Scenario of the exercise
The scenario included deployment and operation of different oil recovery equipment used in ice conditions.

Participating vessels
Two Finnish vessels took part in the exercise: the multipurpose vessel Seili and a new (2011) multipurpose vessel owned by SYKE and operated by the Finnish Navy – Louhi.

Seili was equipped with a high capacity ice brush skimmer of (first generation of skimmers developed by SYKE) and the LAMOR Arctic skimmer LAS 125 provided by EMSA. Louhi was equipped with three high capacity ice skimmers (second generation of ice skimmers developed by SYKE) and a Lamor brush skimmer.

Performance of the EMSA equipment
The LAMOR Arctic skimmer LAS 125 provided by EMSA performed well.

General conclusion from the exercise
The oil pollution response equipment for ice conditions presented by SYKE was “state of the art”. The technology developed by the Institute could in future be amongst the solutions considered for EMSA contracted vessels operating in areas with ice conditions.

It is worth noting that this type of service – provision to the Member State just the pollution response equipment (without mobilisation of the vessel) – has not been usual so far, but worked very well. The service was provided in an efficient and professional manner.
Figure 1. Seili with the SYKE ice skimmer (stern) and the Lamor LAS 125 Arctic Skimmer deployed.
NEMESIS 2014 CYPRUS

Place and date
The exercise NEMESIS 2014 took place in the wider maritime area of offshore installations within Cyprus EEZ, 10 April 2014.

Organiser
Republic of Cyprus - Ministry of Defence.

Background for the exercise
Following the entry into force of Regulation (EU) No 100/2013, which gave EMSA a new mandate to respond to marine pollution caused by oil and gas installations, EMSA accepted the invitation to the NEMESIS 2014 exercise as one of the actions to implement this new task.

Participants
Cyprus, Israel, USA, EMSA.

Objective of the exercise
The objective of the exercise was to promote personnel, assets, readiness and capabilities for effective response in SAR and oil spill response missions at regional level in the Eastern Mediterranean, with special consideration given to accidents from oil exploitation platforms.

Scenario of the exercise
According to the exercise scenario, a large volume of crude oil was released from an oil platform after a terrorist attack. Despite first attempts to limit and contain the oil by the installation operator, it was not possible to deal with the oil spill. The Republic of Cyprus received an urgent request to mobilise its counter pollution resources and to support the oil response operations. Following the initial report and assessment of the oil spill, the responsible government agency and the National On-Scene Commander (NOSC) requested the assistance of EMSA.

Participating vessels
EMSA - Alexandria (mechanical recovery);
Cyprus - Ammochostos (dispersant spraying);
Israel - Maagan (dispersant spraying).

Task for the EMSA vessel
The task of Alexandria was to perform mechanical oil recovery with the sweeping arms system in the assigned area.

Performance of the EMSA vessel
Alexandria fulfilled the role assigned by the Member State organising this exercise and also met the expectations of the Agency. The EMSA contracted vessel performed well and the crew showed high levels of motivation.
• **General conclusion from the exercise**
All exercise tasks including the coordination and communication between all participation units was smooth; no difficulties were experienced. All participants performed professionally and in the best possible manner.

Figure 2. *Alexandria* performing oil recovery with the sweeping arm system.
**BALEX DELTA 2014**

**Place and date**
Ventspils, Latvia, 11 June 2014.

**Organiser**
The exercise was organised by the Latvian Coast Guard Service.

**Background for the exercise**
The exercise was carried out within the framework of the Helsinki Convention (contracting parties are Denmark, Estonia, EU, Finland, Germany, Latvia, Lithuania, Poland, Sweden and Russia).

**Participants**
Denmark, Estonia, Finland, Latvia, Lithuania, Poland, Sweden and EMSA took part in the exercise.

**Objective of the exercise**
- To test PolRep alert procedures with all maritime emergency communication points of the Baltic Sea countries and the European Commission, assistance request, as well as national alert procedures;
- To verify cooperation ability, response capability and efficiency of the Baltic Sea response fleet in a unified combating operation;
- To test and train staff operations of the Baltic response fleet combating units and combating equipment on board the vessels; and, in addition,
- To exercise national shoreline response capability, test national wildlife response alert procedures and procedures of granting place of refuge.

**Scenario of the exercise**
On 10 June 2014 at 12.00 LT oil tanker "X" reported collision with a fishing vessel “Z” at 57035’00 N 021030’00 E. Cargo on board the tanker was 70 000 tonnes of crude oil (CAS No 8002-05-9, density 870 kg/m³ (at 200C)). At 13.00 LT due to hull damage, a spill of 10 000 t of crude oil occurred. Approximately 100 tonnes of crude oil was drifting to the shoreline to the South of Ventspils port. The Latvian national oil spill response fleet was alerted and oil spill contingency operations were performed. Due to significant amount of crude oil spilt Latvia requested international assistance from the Baltic Sea countries and the European Commission.

**Participating vessels**

**Strike team Alfa**
NOSC – Gunnar Thorson
Assisting ship – Kapteinis Orle
Subgroup Leading ship – Sakiai
Assisting ship – Hvidsten

**Strike team Bravo**
NOSC – OW Copenhagen (EMSA)
Assisting ship – Holger Danske
Subgroup Leading ship – Kapitan Poinc
Assisting ship – KA 14 Astra

**Strike team Charlie**
NOSC – KBV 031
Assisting ship – Valpas
Subgroup Leading ship – Kindral Kurvits
Assisting ship – Uisko

Strike team Delta
NOSC – Varonis
Assisting ship – Jelgava
Assisting ship – Halli

Task for the EMSA vessel
The strike team Bravo led by OW Copenhagen was given a task to deploy an oil boom in “J” formation. Vessel Kapitan Poinc was to deploy the boom and tow it with assistance of Astra. OW Copenhagen and Holger Danske were to follow the oil boom collecting oil with sweeping arms.

Performance of the EMSA vessel
At-sea oil recovery operations: OW Copenhagen deployed her sweeping arms and Normar 250 TI skimmer undertaking “oil recovery” operations. OW Copenhagen was appointed as a group NOSC and lead successfully operation of the strike team Bravo. The EMSA vessel fulfilled the role assigned by the Member State (Latvia) organising this exercise and also met the expectations of the Agency.

General conclusion from the exercise
- The “BALEX DELTA 2014” exercise was very well organised. The scenario was realistic, taking into account the vessel traffic in the Port of Ventspils;
- The exercise was a positive experience for all the participants. The coordination between the different participating countries and response units was positively tested;
- The communication (mainly in English) between SOSC/national on scene commander (NOSC) and the participating units ran smoothly;
- Due to the large exercise area, strike teams had some difficulties in following the work of other teams and the progress of the whole operation;
- The popcorn, used for simulating the oil spill, was visible from a long distance.

Figure 3. OW Copenhagen during Balex Delta 2014 Exercise
GALICIA 2014

Place and date
At-sea oil spill response exercise “SASEMAR – EMSA Galicia 2014” was carried out in Ria de Arousa, Spain, 18 June 2014.

Organiser
The exercise was organised by the Spanish Maritime Safety Agency (SASEMAR).

Background for the exercise
Exercise GALICIA 2014 was organised by SASEMAR in order to strengthen the integration of the EMSA Network of Standby Oil recovery vessels with the Spanish mechanism for pollution response at sea. The exercise was a continuation of the joint EMSA/Spain exercises arranged usually once a year.

Participants
Spain (SASEMAR, Xunta da Galicia), EMSA.

Objective of the exercise
The overall aim of this exercise was to:
- test the performance of the participating units, including crews, to reinforce cooperation between SASEMAR and EMSA during oil recovery operations and to verify the functionality and preparedness of the pollution response equipment;
- test the established mobilisation procedures between ERCC, Spain, EMSA and Remolcanosa to request the assistance by EMSA contracted vessels.

Scenario of the exercise
The area of incident was selected taking into account traffic density and the statistics regarding the most common type of marine emergencies in the area as well as proximity of Protected Areas. The scenario was related to a drifting vessel leaking fuel oil. The oil spill was moving towards the “Playa Compostela” threatening the “Parque National de las Islas Atlanticas”.

Participating vessels
The following Spanish vessels were involved in the exercise: B/S María Pita and E/S Salvamar Sargadelos from the Spanish Maritime Safety Agency and E/V Punta Roncadoira from Xunta da Galicia.
EMSA participated with the Ria de Vigo, contracted from Remolcanosa, based in Vigo, Spain.
The oil recovery actions had the support of aerial surveillance. In this regard one helicopter from Xunta da Galicia (Pesca I) was over-flying the area of operations exercising the detection and monitoring of the oil spill.

Task for the EMSA vessel
Deploying the response equipment and oil recovery at sea.

Performance of the EMSA vessel
The organisers were satisfied with the performance of the participants of the exercise. The Ria de Vigo, her crew and equipment performed well during the exercise. The equipment (250 metres boom and sweeping arms system) was successfully tested.
General conclusion from the exercise

“SASEMAR – EMSA Galicia 2014” exercise was a fruitful experience for all the participants. The coordination between the different units was positively tested. Overall, the exercise was a good opportunity for the participating units to improve the cooperation during oil pollution response operations. The level of coordination was good.

Figure 4. *Ria de Vigo* with the sweeping arms deployed
ORSEC BISCAYE 33

Place and date
The exercise took place in the estuary of Gironde, 19 June 2014.

Organiser
France - Préfecture Maritime de l’Atlantique.

Background for the exercise
An oil pollution response exercise in the Bay of Biscay is organised by France annually.

Participants
France, Spain, EMSA.

Objective of the exercise
The objective of the exercise was to test the international/national/local emergency response procedures, train personnel and exercise cooperation between response units, including EMSA assets.

Scenario of the exercise
A collision between two ships happened in the vicinity of Gironde estuary. The vessel, with a damaged hull, was towed to place of refuge. The damage of the hull worsened and a significant pollution was detected in front of Arcachon. After mobilisation of local and national resources and assessment of the situation, France requested international assistance (including from an EMSA vessel).

Participating units
Airborne assets:
FRANCE:
F406 POLMAR III
Helicopter DAUPHIN SP
Helicopter PUMA

Maritime assets:
FRANCE:
BSAD Argonaute, 2 Navy intrusion ships, Ocean buoy tender Gascogne
Siba II, Fishing vessels Bienvenue and Petit Simone and oysters barges
EMSA:
Monte Arucas
SPAIN:
Maria de Maetzu

Task for the EMSA vessel
Monte Arucas was tasked by the OSC to locate the oil slick (at given position) and to recover oil using the sweeping arm system.
Performance of the EMSA vessel
The *Monte Arucas* found the oil slick using the on board Miros slick detection system. Simulation of oil recovery was successfully performed by means of sweeping arm system. *Monte Arucas* fulfilled the role assigned by the exercise command and also met the expectations of the Agency.

General conclusion from the exercise
The ORSEC BISCAYE 33 Exercise was a positive experience for all the participants. The coordination between the different units was positively tested. The communications between the participating French units were in French, and in English with *Monte Arucas* and *Maria de Maetzu*. The exercise strengthened the integration of the EMSA vessel at the operational level with the French ships and the command structure.

Figure 5. Equipment presentation during Orsec Biscaye 33 exercise
MALTEX 2014

Place and date
Valletta, Malta, 3 September 2014.

Organiser
The exercise was organised by the Maltese Ministry of Transport, Ports and Yachting Directorate.

Background for the exercise
It was a national exercise in conjunction with a notification exercise the day before.

Participants
Malta, EMSA

Objective of the exercise
The main purpose of this exercise was to:
- train Member State’s command and communication system and pollution response operations, practical use of recovery equipment and cooperation of participating units;
- test the established mobilisation procedures between ERCC, MALTA, EMSA and EMSA contractors (Falzon and Tankship) to request the assistance by EMSA contracted vessel.

Scenario of the exercise
The OSC provided the scenario via radio. 450 m$^3$ Arabian Light crude oil has been spilled on position Lat: 35° 49.4’ N and Long:  014° 35.5’ E.

Participating vessels
EMSA - Santa Maria and Balluta Bay.
Malta - Saint Elmo, Sea Dog and the pilot boat.

Task for the EMSA vessels
Deploying the response equipment and oil recovery at sea.

Performance of the EMSA vessel
Santa Maria and Balluta Bay deployed sweeping arm systems. The weather conditions did not allow the deployment of both sweeping arms. The OSC on board the pilot boat decided to deploy only one sweeping arm of each vessel. EMSA vessels performed well during the exercise. Equipment deployment and crew performance was good. The coordination with other units, led by the tug boat, was good.

General conclusion from the exercise
“MALTEX 2014” Exercise was a positive experience for all the participants. The coordination between the different units was positively tested. The weather conditions were unfortunate because the Island of Malta gave no shelter against prevailing North-westerly winds. Nevertheless, the exercise provided a good opportunity to test the communication procedure at sea and in the command centre at the Transport Malta offices.
Figure 6. “U”-formation with tugs *Saint Elmo* and *Sea Dog*
RAMOGEPOL 2014

Place and date
The annual RAMOGEPOL Exercise was held in Portoferraio on Elba, Italy, between 16 and 17 September 2014.

Organiser
The exercise was organised by the Italian Ministry of the Environment in cooperation with the Governments of France, Italy, Monaco and Spain.

Background for the exercise
The exercise was arranged within the framework of the RAMOGEPOL Agreement (France, Italy and Monaco, Spain).

Participants
France, Italy, Monaco Spain.

Objective of the exercise
The overall aim of this exercise was to train the participants to manage a major pollution at sea in close cooperation with the neighbouring countries and EMSA.
The objectives of the exercise were to test the alarm procedures, and the response time and capability of the RAMOGEPOL Plan and EMSA participating units to deal with oil pollution at sea.

Scenario of the exercise
The scenario selected for the exercise involved a collision between an oil tanker carrying Arabian crude and a container ship. This major accident resulted in a number of people being injured and caused several thousand tonnes of oil to spill to the north of Elba, threatening the Corsican and Sardinian coasts due to prevailing currents.
In the immediate aftermath of the collision, a search and rescue (SAR) operation was launched to rescue members of the crew injured during the incident.
During this phase, the Italian Ministry for the Environment activated the RAMOGEPOL Plan to seek assistance from neighbouring states in managing this serious incident.
The following day, nautical, air and land-based assets, from the countries which are signatories to the RAMOGE Agreement, along with a Spanish aircraft to identify pollution and an oil tanker contracted by the European Maritime Safety Agency, were at the site of the accident.
Sea- and land-based operations to combat oil pollution were then implemented. These operations were carried out in deep-sea, coastal and near-shore zones, using the assets of the various departments of participating states (including the Italian Coastguard and Ministry of the Environment, the French and Italian Navies, the French Customs Authorities, the Monaco Marine and Airport Police Division and Department of Maritime Affairs, and the Spanish Maritime Security and Rescue Society).

Participating vessels
Oil spill response vessel (OSRV) Tito
OSRV Bonassola
OSRV Jerzy
OSRV Ailette
M/t Seanosstrum (vessel in distress)
Italian Navy vessel Casiopea
Italian Navy aircraft
EMSA: Brezzamare

Task for the EMSA vessel
Brezzamare was tasked to deploy the sweeping arm system and perform oil recovery in the assigned area.

Performance of the EMSA vessel
The Brezzamare performance during the exercise was up to the expected standards, particularly taking into account the adverse weather conditions. The equipment was positively tested in a very demanding environment.

General conclusion from the exercise
The RAMOGEPOL 2014 exercise was a fruitful experience for all the participants and a good opportunity to strengthen cooperation.
MASTIA 2014

Place and date
Cartagena Roads, Spain, 25 September 2014.

Organiser
Spanish Maritime Safety Agency (SASEMAR).

Background for the exercise
This was a joint SASEMAR – EMSA exercise. This type of exercise is usually arranged on an annual basis in order to strengthen integration of EMSA vessels with the Spanish pollution response mechanism.

Participants
Spain (SASEMAR, Spanish Navy), EMSA

Objective of the exercise
The objectives of the exercise were:
- Testing the established mobilisation procedures between ERCC, Spain, EMSA and the EMSA contractor (Naviera Altube) to request the assistance of EMSA contracted vessel;
- Integration of the Monte Anaga with the response fleet under the coordination of SASEMAR.

Scenario of the exercise
The scenario simulated the release of 5,000 tonnes of heavy fuel oil from a tanker bound to Cartagena refinery suffering a structural failure.

Participating vessels
EMSA: Monte Anaga;
SASEMAR: Multi-purpose vessel Clara Campoamor, Rescue boat Salvamar Mimosa, Tug boat Las Palmas;
Spanish Navy vessels.

Task for the EMSA vessel
The Monte Anaga was tasked to deploy first her sweeping arms and then the oil boom and high capacity skimmer undertaking “oil recovery” operations, following instructions by the NOSC.

Performance of the EMSA vessel
The NOSC on board the Clara Campoamor instructed the Monte Anaga to deploy the sweeping arms and conduct recovery of oil. After fulfilling this task the Monte Anaga was ordered to deploy the oil boom (250 metre starboard boom) and to maintain the “J” configuration with the assistance of Salvamar Mimosa. It was noted that two sections of the boom were detached. In order to prevent additional damage to the boom it was decided that the towing operation should stop and that the boom should be taken on board for further inspection and repairs. As the next task the Monte Anaga deployed the NORMAR high capacity skimmer. Monte Anaga fulfilled the role assigned by the Member State organising this exercise (Spain) and also met the expectations of the Agency. The EMSA contracted vessel and its crew performed well.
General conclusion from the exercise
Overall, the exercise was a good opportunity for the participating units to improve the cooperation during oil pollution response operations. The objective of the Agency for “Mastia 2014” was achieved by improving the already established cooperation in pollution response matters between SASEMAR and EMSA as well as through the integration of the Monte Anaga with the response chain under SASEMAR command.

Figure 7. “J”-formation with tugs Monte Anaga and Salvamar Mimosa
MANCHEX 2014

Place and date
The exercise was performed off the North coast of France, with a starting point at Anchor off the Port of Calais, 30 September 2014.

Organiser
Préfecture Maritime de la Manche et de la Mer du Nord Division.

Background for the exercise
An oil pollution response exercise in the Channel area is organised by France annually.

Participants
France, Belgium, EMSA.

Objective of the exercise
The overall aim of this exercise was to train the participants to manage a major event at sea in close cooperation with neighbouring countries and EMSA.

The objectives of the exercise were to test the alarm procedures, the response time and capability of the Bonn Agreement Contracting Parties and EMSA participating units to deal with oil pollution at sea.

The objectives for this exercise related to the participation of the EMSA contracted vessel Thames Fisher were:
- Testing the established mobilisation procedures between ERCC, France, EMSA and EMSA contractor (James Fisher Everard) to request the assistance by EMSA contracted vessels;
- Fulfilling the tasks assigned by SOSC;
- Deploying response equipment at sea, and cooperation with other participating units.

Scenario of the exercise
Following a collision between a tanker and a ferry, 600 to 1200 tonnes of oil were spilled in the North sea at coordinates: 50°57'30N 001°43'55E on the 29 September 2014. During the night, the pollution drifted to find itself centered on Dunkirk harbour.

Participating vessels
FRANCE: Alcyon, Elan, Abeille Languedoc, and a number of tug-boats and fishing vessels based in the Harbour of Dunkerque.
BELGIUM: Zeetijger
EMSA: Thames Fisher

Task for the EMSA vessel
The role of Thames Fisher was to perform oil recovery using her 15 metre rigid sweeping arms under the command of the French OSC.

Performance of the EMSA vessel
During the exercise the Thames Fisher, her crew and associated oil recovery equipment all performed to the standard that is expected of them. Close liaison via VHF radio was maintained with the OSC throughout and all manoeuvres were conducted as requested by the host country.
**General conclusion from the exercise**

The Manchex 2014 exercise was well organised. The main benefit of the exercise for the Agency was strengthening the integration of EMSA vessels at the operational level with Member State ships and the command structure.

![Image of two ships in a U-formation with Alcyon and Zeetiger](image)

**Figure 8. “U”-formation with Alcyon and Zeetiger**
POLLEX 2014

Place and date
The exercise “POLLEX 2014”, hosted by the Netherlands, was carried out in waters of Vlakte van de Raan, 2 October 2014.

Organiser
Rijkswaterstaat, the Netherlands.

Background for the exercise
The exercise was carried out within the framework of Belgian/Dutch/EMSA cooperation in pollution response at sea.

Participants
The Netherlands, Belgium, EMSA

Objective of the exercise
The objectives of the exercise were:
- to strengthen the integration at the operational level of EMSA contracted vessels with the Belgian and Dutch marine pollution response mechanisms, and
- to exercise an operational formation of the oil pollution response vessels at sea (five oil spill response vessels in a column formation following the oil boom in open "U" formation towed by the Belgian tugs).

Scenario of the exercise
Exercise programme:
- All vessels made rendez-vous in agreed area;
- DC Vlaanderen 3000 deployed both sweeping arms;
- Interballast III deployed both sweeping arms and took position behind DC Vlaanderen 3000, 10 metres to port side;
- Interballast I deployed sweeping arms and took position behind Interballast III with 10 metres to port side;
- Rio deployed sweeping arm taking position behind Interballast I with 10 metres to port side;
- Arca deployed 200 metres Ro-boom, picked up by BE tugs Zeehond and Zeetijger;
- Arca and other vesels manoeuvred behind the Open-U configuration;
- Sailing speed: 1,5 knts.

Participating vessels
Two EMSA contracted vessels (dredgers): DC Vlaanderen 3000 and Interballast III;
Two vessels (dredgers) contracted by Rijkswaterstaat from DCI: Interballast I and Rio;
Dutch Coastguard vessel: Arca;
Tender boat: Provider;
Belgian tugs Zeehond and Zeetijger;
Belgian air surveillance aircrafts.
Task for the EMSA vessels
EMSA vessels were requested to take place in the column of five vessels, deploy their sweeping arms and to conduct oil recovery following an open U formation of the oil boom.

Performance of the EMSA vessel
During the exercise, the DC Vlaanderen 3000 and Interballast III fulfilled the role assigned by the Member State (the Netherlands) in charge of the event and also met the expectations of the Agency.

General conclusion from the exercise
The formation of five oil recovery vessels in a column following an open U formation was exercised for the first time with the EMSA vessels participation. The formation is very impressive and proved to be effective.

The exercise scenario was realistic and the manoeuvring of the hopper-dredgers with their sweeping arms behind the Open-U boom configuration was successfully conducted. The cooperation with the Netherlands and Belgium for organising and executing an operational pollution response exercise at sea was very efficient.

Figure 9. Tugs Zeehoud and Zeetiger towing boom in"U" formation. Vessels in column (from the left): DC Vlandersen 3000, Interballast III, Rio, Arca and Interballast I