



Workshop Report

"MASTERING MARINE POLLUTION RESPONSE - EXERCISE PLANNING, IMPLEMENTING AND EVALUATING"

LISBON, EMSA, 19TH OCTOBER 2007

**Workshop Report: "MASTERING MARINE POLLUTION RESPONSE -
EXERCISE****PLANNING, IMPLEMENTING AND EVALUATING"**

Background

The European Maritime Safety Agency (EMSA) has two legal obligations in the field of pollution preparedness and response, as defined in the EMSA Regulation:

- "To provide Member States and the Commission with technical and scientific assistance in the field of accidental or deliberate pollution by ships."
- "To support upon request with additional means in a cost efficient way the pollution response mechanisms of Member States."

As part of these activities, EMSA established a Consultative Technical Group (CTG) for Marine Pollution Preparedness and Response, composed of Member State pollution response experts. The main objective of the CTG is to provide a platform at European level between Member States for improving preparedness for and response to marine pollution. The forum is used for the exchange of views and opinions and defining current and future priority actions to be addressed by the CTG.

During the first meeting of the CTG held on 30 May 2007, it was agreed by the participants that 5 priority actions would be undertaken in 2007. One of these actions was to hold a workshop on the marine pollution exercises in European waters.

Preparedness to respond to large scale oil spills in European waters is based upon the international multi layer framework for co-operation under the umbrella of The International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC 1990). The framework encompasses various pollution response structures at the national, international and European levels. These include bilateral, multilateral and regional agreements between European states, through mutual support and assistance in case of a pollution emergency and activities of the European Community.

Exercises are a very important part of the process of maintaining preparedness to respond to marine pollution incidents. They serve as both training and a validating tool for the response system. There are several different types of exercises organised and conducted every year in Europe on national, bilateral and regional levels. With the co-operation framework expanding in recent years, exercising and evaluating the European pollution response system has become an urgent issue to be discussed.

Workshop Objectives

The Workshop had the following objectives:

- To provide a platform for discussion and stimulate the exchange of views and knowledge among Member States in this field,
- To present and discuss with Member State experts the existing status of marine pollution exercises in Europe.
- To identify the gaps in exercise planning, implementation and evaluation as well as the needs for exercising at a European level. To this effect, the workshop attendees were asked to discuss and to look for answers to the problems described in the Workshop discussion paper.

Workshop Programme

The workshop was divided into five sessions (The Workshop Agenda is attached as Annex 1):

Session 1 Exercise Planning

In an introductory presentation EMSA presented a Discussion Paper for the workshop (attached in Annex 2). The presentation gave an overview of the:

- European marine pollution response structures,
- Types of exercises conducted in Europe,
- Role of exercises in the process of maintaining response preparedness,
- Issues to be discussed during the workshop.

Furthermore past case studies and methods for planning a desk top pollution response exercises on the national level and equipment exercises at sea at a multinational level were presented by speakers from UK and Germany.

Both presentations were received with interest.

In the course of the ensuing discussion, the presenters answered numerous questions from the audience. Member States representatives were especially interested in costs of organising the desktop and equipment exercises as well as manpower and working hours needed. UK experience shows that full scale desk top exercises are very costly in terms of time and staff.

Session 2 Conducting Exercises

The second session was dedicated to the presentation of the operational exercises at sea conducted in different regions of Europe. During the discussions following the presentations, MS representatives underlined the differences in the exercises scale and resources involved.

Session 3 Role of Industry in Oil Pollution Response Exercises

During the third session representatives of industry presented the role and involvement of industry in planning, organising and conducting marine pollution response exercises in Europe.

During the ensuing discussion, participants underlined the importance of industry which in many cases provide expertise, plans and resources (trained personnel and equipment) for different types of exercise.

Session 4 Exercise evaluation

Methods applied for exercise evaluation in Denmark and those used by EMSA were presented during this session.

Session 5 Working Groups

Participants were divided into two working groups and given questions/issues to discuss and report back to the group. Their answers to the questions formed the basis for developing workshop conclusions.

The questions given to working groups and their respective answers were as follows:

WORKING GROUP 1**QUESTION 1:**

Exercises at the national/bilateral/multilateral and regional level are established and carried out on a regular basis. However there are different approaches exercises in different areas. The number and types of exercises carried out under different agreements varies. For example under the Bonn Agreement the annual exercise is the alarm exercise while under the Helsinki Convention, an Alarm and operational exercise is carried out every year. A topic for the workshop discussion relating to these differences is:

Would it be useful and feasible to harmonise the approach for the number and types of exercises carried out in different regions of Europe?

ANSWER:

- Although, it would be useful, this is not feasible. However we believe that EMSA could issue guidelines on good practice as to the type and number of exercises to be carried out, recognising it is up to the Member State or Regional Agreement to decide actually what exercises and frequency.
- Member States and Regional Agreements are encouraged to advise EMSA of Exercises being planned, stating date and type. This should prevent any clashes, and make all other member states aware of upcoming events that they may wish to send observers to.

QUESTION 2:

Information on the exercises carried out under the Regional Agreements is accessible in the reports of the relevant working groups. However, in many cases it is difficult to access information on other exercises carried out at the national, bilateral and multilateral levels and there is a lack of consolidated reports on the pollution response exercises carried out in Europe. In EMSA's opinion such reports could be very useful for evaluating the level of preparedness to pollution response in Europe. Exercise reports and lessons learnt could be disseminated to all Member States (perhaps in the form of a consolidated report), to share areas of best practice for response, e.g. effective incident management structure, co-operation between different countries and integration of EMSA's resources into a Member State's pollution response mechanism (via the MIC).

How can we ensure that information on all types of exercises carried out under bilateral and multilateral agreements are available? Could EMSA be an addressee of all exercise reports so that outcomes can be disseminated throughout Europe?

ANSWER:

- No, we cannot ensure that this information is available. However EMSA can ask that all Member States that hold a National Exercise, and those Regional Agreements that hold exercises send their reports to EMSA indicating the level of circulation that is allowed.
- It is recognised that EMSA will receive a report for exercises it participates in, in its own right, but it is not for circulation without the approval of the other exercise participants and the level of circulation agreed.
- It is recognised that no reports will be forwarded to EMSA by Member States or NGO's without approval of the other exercise participants and the level of circulation is agreed.

WORKING GROUP 2**QUESTION 1:**

The international framework for co-operation in response to marine pollution in Europe has been expanded in recent years. The constantly growing EMSA network of oil recovery vessels and resources of the new EU States Bulgaria and Romania added significant resources to the European response capacity. Organisational and operational capabilities of the expanded framework have to be evaluated and improved on the basis of results of the appropriate exercises. Pollution response within the European framework needs effective co-ordination and co-operation between Member States and relevant European institutions – which in turn requires training and exercising.

In addition to those already held, what type of exercises should be organised and conducted at the European level? Which organisation should take a leading role in organisation of these exercises?

ANSWER:

- No more exercises are considered necessary. However,
- Non participating MS and interested agencies should be encouraged to participate as observers in exercises being conducted in other countries and regions,
- Additional cooperation could take the form of communication exercises between the different regional agreements,
- It would be beneficial to consider harmonisation of training and exercise requirements between the different regional agreements use same format (bullet points above and below?)
- EMSA can help by developing a dedicated website or using the EMSA platform and developing a dedicated web page.
- Exercises should be held back to back to related workshops or CTG meetings.
- What may be needed is perhaps dedicated training on how to plan training efficiently.

QUESTION 2:

The number of publications concerning marine pollution response exercises is limited. Most of the available publications are listed at the end of this paper and their content does not provide extensive information on the theoretical aspects of exercise organisation, implementation and especially evaluation. In general, exercises in Europe are based on the professional experience and knowledge of the staff responsible for organising them.

Would it be feasible to develop operational European guidelines on conducting marine pollution exercises to have a common process/procedure which is then adapted to each country/situation and exercise?

ANSWER:

- Participants consider that it is difficult to have a common procedure for organising and conducting pollution response exercises, however it could be beneficial to develop:
 - Standard checklists (IMO guidelines)
 - Exchange of experts using the EMSA CTG exchange programme which will begin June 2008 and in the meantime they could use the Civil Protection Exchange programme to try and obtain support to attend other exercises as observers.
 - They specifically mentioned that observers should attend exercises and especially participate in the Exercise Evaluation Team (EET)

QUESTION 3:

One of the most important goals of an exercise is to evaluate results and draw conclusions as to the necessary improvements to the response system. However, exercise evaluation methodology has not been described in detail in any available publication.

Can practical European guidelines be developed on exercise evaluation which would be a useful tool for Member States? Perhaps a common guide could be produced which addresses the various stages of exercise planning, conducting and evaluating?

ANSWER:

- EMSA should develop reporting standards to facilitate sharing “lessons learnt” from the exercises conducted in different part of Europe.

Workshop Conclusions

1. Exchange of information on best practice for exercise planning, organising, conducting, evaluating and reporting could be beneficial for Member States.
2. Member States should advise EMSA well in advance about pollution response exercises being planned, stating the date and type to prevent any clashes with other events, and make all other Member States aware of upcoming events that they may wish to send observers to.
3. Publishing exercise reports from different Member States and Regional Agreements on EMSA web site is feasible on the password protected area of the CTG website but as long as the exercise participants agree to its publication there.
4. Non participating MS and interested agencies should be encouraged to participate as observers in exercises being conducted in other countries and regions and participate as much as possible in the exercise evaluation teams. Financial support for this can be sought through the Civil Protection Exchange Programme and in June 2008 through the new EMSA Marine Pollution Experts Exchange Programme.
5. Additional cooperation could take the form of communication exercises between the different regional agreements.
6. It would be beneficial to consider harmonisation of training and exercise requirements between the different Regional Agreements.
7. If possible exercises should be held back to back to related workshops or CTG meetings.
8. EMSA should participate in the Regional Agreement Exercise Evaluation Team (EET).
9. EMSA can help by developing a dedicated website or using the EMSA platform and developing a dedicated web page.

ANNEXES

ANNEX 1

WORKSHOP PROGRAMME
“MASTERING MARINE POLLUTION RESPONSE - EXERCISE
PLANNING, IMPLEMENTING AND EVALUATING
LISBON, EMSA, 19TH OCTOBER 2007

Friday, 19th October

Chairman of the Workshop:

Mr. Bernd Bluhm, Head of Unit G - Pollution Response, EMSA

08.30 – 09.00 Registration & Coffee

09.00– 09.15 **Mr Bernd Bluhm**, EMSA, Head of Unit-Pollution Response
Welcome address

Session 1 Exercise Planning

09.15 – 09.35 **Mr Lech Auriga**, EMSA, Senior Project Officer-Pollution
Response
“The role of exercises in pollution preparedness in Europe”

09.35– 09.55 **Mr Hugh Shaw**, Deputy to the Secretary of States
Representative (SOSREP), Maritime and Coastguard Agency,
UK
“Planning a desk top pollution response exercise on the national
level”

09.55 – 10.15 **Mr Dieter Schmidt**, Havariekommando, Germany
“Organising equipment exercises at sea at a multinational
level” (to be confirmed)

10.15 – 10.30 Discussion

10.30 – 11.00 Coffee Break
Session 2 *Conducting Exercises*

- 11.00 – 11.20 **Mr Leszek Szymanski**, EMSA, Project Officer-Pollution
“EMSA participation in international exercises”
- 11.20 – 11.40 **Ms** , Estonian Coastguard, Estonia
“Balex Delta 2007 Report”
- 11.40 – 12.00 **Mr Cem Orkun Kirac**, Turkish Maritime Administration,
Turkey
“Black Sea Delta 2007 SULH Exercise” (to be confirmed)
- 12.00 – 12.15 Discussion

Session 3 *Role of Industry in OPR Exercises*

- 12.15 – 12.35 **Mr Simon Rickaby**, DV Hovells Ltd. UK
“Role of industry in pollution response exercises”
- 12.35 – 12.55 **Mr Ridha Dhaoui**, Mediterranean Oil Industry Group
“Industry involvement in pollution response exercises
in Med. Sea area”.
- 12.55 – 13.10 Discussion
- 13.10 – 14.40 Lunch

Session 4 *Exercise evaluation*

- 14.40 – 15.00 **Mr Victor Diaz Seco**, EMSA, Project Officer-Pollution
Response
“Evaluation methods for drills and exercises conducted by the
EMSA contracted vessels”
- 15.00 – 15.20 **Mr Peter Poulsen**, Danish Admiral Fleet, Denmark
“Evaluation of international operational exercises in pollution
combating at sea”
- 15.20 – 15.35 Discussion
- 15.35 – 15.45 **Mr Lech Auriga**, EMSA, Senior Project Officer-Pollution
Response
Instructions to Working Groups
- 15.45 – 16.15 Coffee Break

Session 5 Working Groups

16.15 – 17.15	Working Groups Discussion
17.15 – 18.00	Rapporteurs report back to plenary and final discussion
18.00 – 18.15	Mr Bernd Bluhm , EMSA, Head of Unit-Pollution Response “Conclusions of the workshop”

ANNEX 2 List of Participants

Country	Title	Name	First Name	Organisation	E-mail
Bulgaria	Mr	Stankovich	Konstantin	Bulgarian Maritime Administration	mep_vn@marad.bg
Croatia	Mr	Mandic	Mladen		Mladen.Mandic@pomorstvo.hr
Cyprus	Mr	Agapiou	Michael	Department of Merchant Shipping	magapiou@dms.mcw.gov.cy
Estonia	Mr	Meerits	Merje	Estonian Ministry of the Interior	Merje.Meerits@siseministeerium.ee
Finland	Mrs	Hietala	Meri	Finnish Environment Institute	meri.hietala@ymparisto.fi
France	Mrs	Bailly	Gaelle	préfecture maritime for the Channel and North Sea	sec.aem@premar-manche.gouv.fr
France	Mr	Rousseau	Christophe	CEDRE	
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Greece	Mr	Lianos	Antonios	Ministry of Mercantile Marine	alianos@yen.gr
Iceland	Mr	Geirsson	Kristjan	Environment and Food Agency	KRISTJAN@UST.IS
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Italy	Mr	Mancini	Marco	Italian Coast Guard	dariocau@yahoo.com
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Netherlands	Mr	Kool	Jan	Ministry of Transport, Public Works and Water Management	jan.kool@rws.nl
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Romania	Mrs	Casiade	Irina	Romanian Naval Authority	icasiade@rna.ro
Slovenia	Mr	Marsetic	Igor	Administration for Civil Protection and Disaster Relief	
Slovenia	Mr	Arturo	Steffe	Slovenian Maritime Administration	ursp.box@gov.si
Spain	Mr	Otero	Luis	DIRECTORATE GENERAL FOR MERCHANT MARINE	lotero@fomento.es

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Spain	Mr	Ruiz de Lobera	Alfonso	Spanish Maritime Safety Agency	interop@sasemar.es
Spain	Mr	Ortega Díez	Óscar Carlos	Spanish Maritime Safety & Rescue Agency	oscarod@sasemar.es
Sweden	Mr	Stedt	Bernt	Swedish Coast Guard	bernt.stedt@coastguard.se
Turkey	Mr	Aktürk	Gühran	Undesecretariat for Maritime Affairs	akturkgurhan@yahoo.com
Turkey	Mr	Buyuran	Turgay	Undesecretariat for Maritime Affairs	tbuyuran@yahoo.com
REMPEC	Mr	Gonzalez	Gabino	REMPEC	ggonzalez@rempec.org
Lisbon Agreement	Mr	Cerqueira	Tito	Lisbon Agreement	cilpanlisboa@mail.telepac.pt
Speaker	Mr	Dhaoui	Ridha	Mediterranean Oil Industry Group	dhaoui.moig@planet.tn
Speaker	Mr	Shaw	Hugh	Maritime and Coastguard agency	-
Speaker	Mr	Vahtra	Silver	Estonian Coast Guard	-
Speaker	Mr	Kirac	Cem Orkun	Turkish Maritime Administration	-
Speaker	Mr	Rickaby	Simon	DV Hovells Ltd.	-
Speaker	Mr	Soberg Poulsen	Peter	Admiral Danish Fleet HQ	pol.con.den@sok.dk
EMSA	Mr	Bluhm	Bernd	EMSA	-
EMSA	Mr	Vasiliev	Veselin	EMSA	-
EMSA	Ms	Sessions	Saskia	EMSA	-
EMSA	Ms	Seddon-Brown	Stephanie	EMSA	-
EMSA	Mr.	Auriga	Lech	EMSA	-
EMSA	Mr	Szymanski	Leszek	EMSA	-
EMSA	Mr	Diaz Seco	Victor	EMSA	-
EMSA	Mr	Stoyanov	Lyubomir	EMSA	-

ANNEX 3

**EMSA CTG WORKSHOP "MASTERING MARINE POLLUTION RESPONSE,
EXERCISE PLANNING, IMPLEMENTING AND EVALUATING
EMSA, LISBON, 19TH OCTOBER 2007**

Discussion Paper

1. INTRODUCTION

Preparedness to respond to large scale oil spills in European waters is based upon the international multi layer framework for co-operation under the umbrella of The International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC 1990). The framework encompasses various pollution response structures at the national, international and European levels. These include bilateral, multilateral and regional agreements between European states, through mutual support and assistance in case of a pollution emergency and activities of the European Community.

Exercises are a very important part of the process of maintaining preparedness to respond to marine pollution incidents. They serve as both training and a validating tool for the response system.

There are several different types of exercises organised and conducted every year in Europe on national, bilateral and regional levels.

With the co-operation framework expanding in recent years, exercising and evaluating the European pollution response system has become an issue to be discussed.

Newly created in 2007, the EMSA Consultative Technical Group for Marine Pollution Preparedness and Response decided that there is a need to discuss issues concerning marine pollution response exercises in Europe during a workshop and tasked EMSA with its organisation.

The objectives of this workshop are:

- To provide a platform for discussion and stimulate the exchange of views and knowledge among Member States in this field,
- To present and discuss with Member States experts existing status of marine pollution exercises in Europe,
- To identify the gaps in the exercise planning, implementation and evaluation as well as needs for exercising at the European level.

This paper contains a brief overview of the exercises conducted in Europe and proposals for topics to be discussed during the workshop.

2. THE ROLE OF EXERCISES IN POLLUTION PREPAREDNESS & RESPONSE

Response preparedness is a continuous process with three integral components: planning, training and exercising. Each function is dependent on the other two and there is always interaction between these functions. The process generally begins with planning, moves to training, then to exercising, and back to planning.

Preparedness activities should not concentrate solely on development of an Oil spill response contingency plan, but on all functions that lead to an organisation being well prepared and equipped to meet the needs that arise during an incident. Once a plan has been developed, response equipment tested, and personnel trained in its implementation, the response organisation is ready to validate its plan and determine its adequacy to fulfil its objectives. The Plan should then be adjusted and revised based on the evaluation of the exercise.

Improvement in current response capability will always be dependent on a well-developed exercise and training plan to support response/contingency plans. Every major function or activity in the response contingency plan, whether organisational, operational, or supportive, should have a counterpart objective in an exercise to test that function.

The importance of exercises cannot be overstressed. Exercises serve several important purposes including:

- To increase readiness in the event of an actual emergency;
- Provide a means to assess the effectiveness of response plans and response capabilities;
- To test the knowledge and skill of those implementing the plan;
- To serve as a training tool for response personnel;
- To provide an opportunity to practise skills, improve individual and team performance;
- To require participants to collaborate with each other and pre-plan decisions on resources;
- To provide means to educate and involve the public, media, and key community organisations in response planning;
- To validate existing policies and procedures;
- To identify resource needs; and
- To clarify and familiarise personnel with their roles and responsibilities.

3. TYPES OF EXERCISES

Several different types of exercises can be held to verify preparedness for at-sea pollution response. The commonly accepted types of exercises are described in the table below.

Table 1: Definition of various types of exercises and their duration

Types of Exercises	Regional Agreement Categories	Purpose /Objectives	Characteristics of the exercise	Duration / Planned or not
Tabletop / Desktop	ALPHA	<ul style="list-style-type: none"> – Focuses on individual & team roles & responsibilities; decisions & actions; & interactions between the players – Provide individual & team training & will reinforce teamwork skills – Assists to establish criteria for defining what constitutes an emergency for the Agency – Initial spill assessment & monitoring 	<ul style="list-style-type: none"> – Consists of interactive discussions of hypothetical scenario among members of response team or staff that have a role in the contingency plan. – Does not generally involve mobilization of personnel or equipment to conduct operations. – Normally conducted in a conference room in small groups 	A planned exercise to last about <u>two hours to full day</u> .
Notification	BRAVO	<ul style="list-style-type: none"> – Demonstrate availability to respond – Verifies the communications systems – Generally performed to alert & call out the response teams and relevant personnel that are involved in the Contingency Plan – Team interaction and decision makings capability. 	<ul style="list-style-type: none"> – Conducted through telephone & other means of communications i.e. standby mobile phones, telephone, email, etc. – Does not generally involve deployment of personnel or equipment but could involve notification of these parties. – Normally conducted in a conference room in small groups & can involve other parties i.e. MIC, MS, etc. 	<u>A few hours</u> & may be held at any time of day or night, either announced or unannounced.

Types of Exercises	Regional Agreement Categories	Purpose /Objectives	Characteristics of the exercise	Duration / Planned or not
Equipment Deployment	CHARLIE / DELTA (could be ECHO if demonstrating state-of-the art)	<ul style="list-style-type: none"> – Test equipment is mobilized and working – Test equipment deployment procedures & strategies – Practice individual skills & teamwork – Test communications (i.e. VHF, etc.) 	<ul style="list-style-type: none"> – Equipment is mobilized and tested – Generally takes place at a simulated response location. – For EMSA this would involve contractors & their equipment & personnel. 	A planned exercise to last <u>a few hours to full day.</u>
Incident Management	ALPHA/DELTA (could be ECHO if demonstrating state-of-the art)	<ul style="list-style-type: none"> – Demonstrates spill response management capabilities – Integrates/tests all roles & responsibilities of different players/parties/teams – Response strategy developed & agreed – Crisis Management – Involvement of external parties 	<ul style="list-style-type: none"> – Generally takes place at different geographic locations i.e. EMSA in Lisbon, simulated response location in Europe, MS location, MIC in Brussels, where contractors are, etc. – For EMSA this would generally involve MIC, MS, contractors, and other external parties as appropriate. 	Planned or unplanned <u>exercises to last a full day or more.</u>

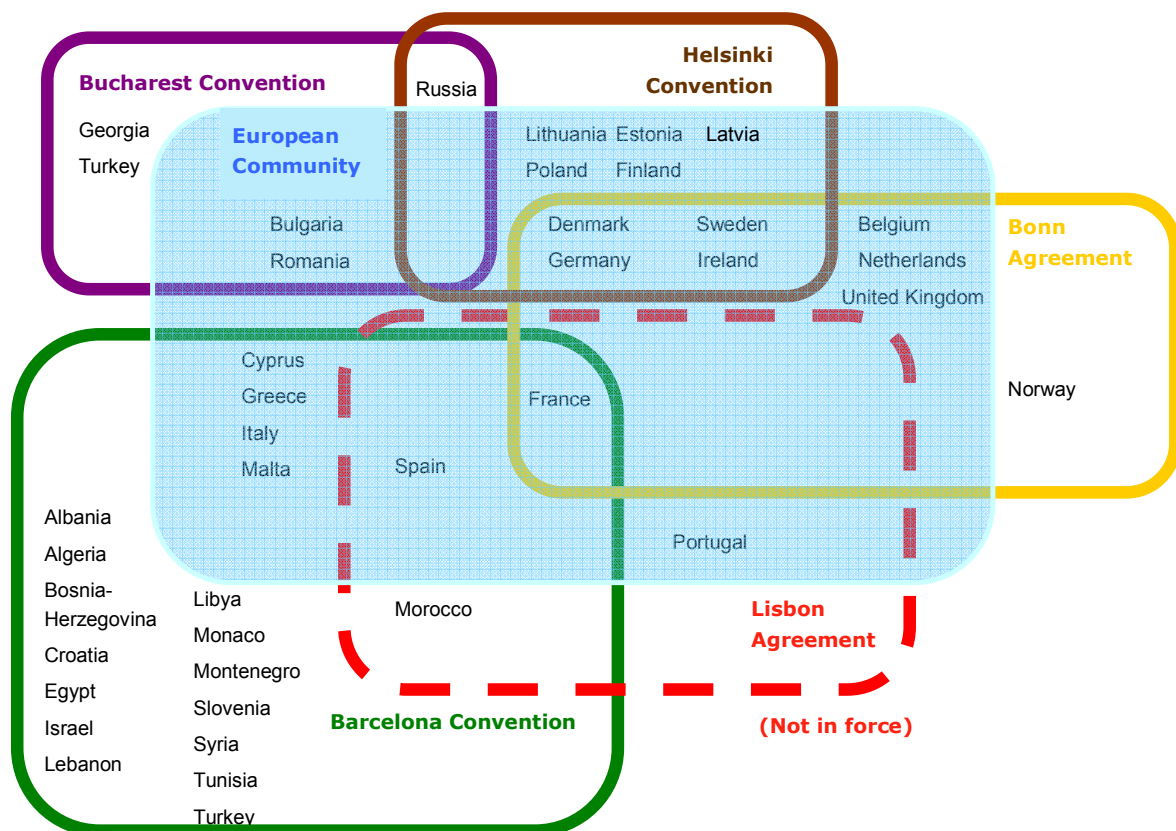
4. MARINE POLLUTION RESPONSE EXERCISES CONDUCTED IN EUROPE

The International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC 1990) is the international agreement on which many Member States' response policy is based. It has been available for signing since 30 November 1990 and entered into force on 13 May 1995.

National Contingency plans provide the basis for European preparedness to marine pollution. Based on requirements of the OPRC Convention, States have established national response systems through contingency plans, response organisation, oil recovery vessels, equipment and trained personnel.

Above national level, most Member States have established bilateral or multilateral sub-regional agreements. In most cases such agreements take the form of a common contingency plan for the geographical area of interest (e.g. sub-regional or regional contingency plans). At the regional level, there are Regional Agreements covering defined areas of the regional seas.

Regional Agreements for co-operation in marine pollution response in Europe



The main regional framework agreements in effect within EU waters are:

A. HELCOM: The Convention on the Protection of the Marine Environment of the Baltic Sea Area, known as the **Helsinki Convention**, 1974/1992 was signed by countries bordering the Baltic sea. The main goal of HELCOM is to protect the marine environment of the Baltic Sea from all sources of pollution, not only pollution from shipping sourced oil pollution. Contracting parties to HELCOM are

Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, the Russian Federation, Sweden and the European Community while Belarus, Ukraine and the Bonn Agreement retain Observer Status.

Other bi-lateral/multi-lateral Agreements within the region:

- Estonia and Finland - Gulf of Finland,
- Finland and the Russian Federation - Gulf of Finland,
- Sweden, Denmark and Germany - the SWEDENGER Agreement,
- Sweden, Estonia, Latvia – SWEESTLAT plan,
- Poland, Germany – POLGER.

Under the framework of the Helsinki Convention the following types of combating exercises have been agreed upon:

- Synthetic Exercise (BALEX ALPHA)
- Alarm Exercise (BALEX BRAVO)
- Equipment Exercise (BALEX CHARLIE)
- Operational Exercise (BALEX DELTA)
- State-of-the-art Exercise (BALEX ECHO)

Decisions on the yearly exercise programme including the types of exercises, aims and goals for the exercises, time for the execution and appointment of Lead Countries are taken during the meetings of the HELCOM Response Group. BALEX BRAVO, CHARLIE, DELTA and ECHO can be executed independently or in combination with each other.

Guidelines on conducting exercises are contained in the HELCOM Manual on Co-operation in Response to Marine Pollution within the framework of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, (Helsinki Convention) Volume 1.

Parties to the Helsinki Convention test their response system annually by conducting alarm and operational exercises (BALEX BRAVO and BALEX DELTA). At the sub-regional level

Parties to bilateral and multilateral agreements also conduct frequent alarm, equipment and operational exercises.

Table 2. Recent BALTEX DELTA and BALEX BRAVO Exercises

Year	Host Country	No. of Participating Parties	No. of Participating Vessels	No. of Participating Aircrafts
2000	Russia	5	12	1
2001	Denmark	7	11	2
2002	Latvia	6	18	2
2003	Finland	5	16	-
2004	Germany	6	18	5 CEPCO
2005	Sweden	7	19	2
2006	Poland	7	23	3

B. BONN AGREEMENT: Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil and Other Harmful Substances (Bonn Agreement, 1969) with contracting parties Belgium, Denmark, France, Germany, the Netherlands, Norway, Sweden, the United Kingdom and the European Community while Spain, Ireland, HELCOM and REMPEC retain Observer Status.

Other bi-lateral/multi-lateral Agreements within the region:

- Netherlands and Germany - NETHGER Plan
- Norway and U.K. - North Sea / Norbrit Plan
- U.K. and France - English Channel / Mancheplan
- U.K. and Ireland - Irish Sea

Under the framework of the Bonn Agreement the following exercises in combating spillages at sea (BONNEX) have been agreed upon:

- Alarm exercise (BONNEX BRAVO),
- Equipment exercise (BONNEX CHARLIE),
- Operational exercise (BONNEX DELTA).

Guidelines on the Bonn Agreement exercises are contained in the Bonn Agreement Counter Pollution Manual.

Parties to the Bonn Agreement have held annual alarm exercises (BONNEX BRAVO) since 2001.

Additional exercises are organised by individual countries or groups on a bilateral or multi-lateral basis, as opposed to being formally under the umbrella of the Bonn Agreement. Often all the Contracting Parties are invited to participate. These exercises cover a range of issues and involve the deployment of aircraft and vessels. Some examples of these exercises in 2003 include the Bonn Agreement Oil Appearance Code Validation exercise as organised by the Netherlands.

C. THE BARCELONA CONVENTION: The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, known as the **Barcelona Convention**, 1976.

Contracting Parties are Albania, Algeria, Bosnia & Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Morocco, Montenegro, Slovenia, Spain, Syria, Tunisia, Turkey, European Community.

Other bi-lateral/multi-lateral Agreements within the region:

- France, Italy & Monaco - Ligurian Sea / RAMOGE
- Italy, Croatia and Slovenia - Adriatic Sea / not yet operational
- Italy and Greece (Ionian Sea) – not yet active
- Spain and Morocco – to be confirmed
- Between the Prefecture Maritime de la Méditerranée (France) and SASEMAR (Spain), the LION PLAN for response in the North West Mediterranean
- Cyprus, Egypt and Israel (1995)
- Algeria, Morocco and Tunisia (2005)

Within the framework of the convention, Contracting Parties set up the Regional Marine Pollution Emergency Response Centre for the Mediterranean (REMPEC) in Malta. The Centre is administered by IMO and UNEP and plays an important role in facilitating co-operation and mutual assistance through the organisation of joint training for responders, the organisation of major exercises, as well as the provision of historical and statistical data on past incidents.

REMPEC regularly uses national oil spill response exercises organized by individual Mediterranean coastal states as Alert Exercises for testing the functioning of arrangements for mutual assistance in the region. The most recent examples of Alert Exercises are Algeria (May 2002), Morocco (June 2002) and Morocco (June 2004)

Three major full-scale exercises were also organized in Cyprus (off Larnaca in November 1998), Egypt (off Port Said in October 1995) and Israel (off Haifa in November 1999). Each exercise lasted three days with three response vessels participating in exercises in Egypt and Cyprus respectively, in addition to a number of smaller units, surveillance aircraft and helicopters from the host countries. The Israeli exercise involved several local spraying vessels, spraying aircraft, surveillance aircraft, and shore clean-up units. Observers from the Palestinian Authority also attended the exercise in Israel.

In May 2006 France hosted the Pollux exercise which was carried out within the framework of the international co-operation with the (SASEMAR), the Italian Coast Guard and the maritime and air police of Monaco, pursuant to existing emergency plans such RAMOGEPOL and LION plans.

D. THE LISBON AGREEMENT, 1990: Agreement for Cooperation in Protecting the Shores and Coastal Waters of the NE Atlantic Ocean from Accidental Pollution by Oil and Other Harmful Substances with contracting parties France, Morocco, Portugal and Spain. The Lisbon Agreement is not yet in force.

E. THE BUCHAREST CONVENTION, 1992: Consist of the basic framework of agreement and three specific Protocols, which are:

- The control of land-based sources of pollution;
- Dumping of waste; and
- Joint action in the case of accidents (such as oil spills).

Parties: Bulgaria, Romania, Georgia, Russian Federation, Turkey, Ukraine.

During the period 1999 – 2003 The Regional Oil Spill Contingency Plan has been developed for the area. At present three of the countries are parties to the plan (Bulgaria, Romania and Turkey), the other three states still working on the adoption of the Plan;

Under the framework of the Black Sea Contingency Plan the following types of combating exercises have been agreed upon:

- Synthetic Exercise (BLACK SEA ALPHA)
- Alarm Exercise (BLACK SEA BRAVO)
- Equipment Exercise (BLACK SEA CHARLIE)
- Operational Exercise (BLACK SEA DELTA)
- State-of-the-art Exercise (BLACK SEA ECHO)

First regional exercise Black Sea ALPHA Exercise – was conducted on 17 June 2005.

The following Black Sea BRAVO exercises were conducted:

- by Bulgaria – 25 January 2006;
- by Georgia – 26 April 2006;
- by Romania – 14 November 2006;
- by the Russian Federation – 21 March 2007.

A bilateral regional DELTA exercise (Search and Rescue of People in Distress at Sea and on Oil Spill Response) – was conducted in June, 2006. The exercise was organized and implemented according to an agreement between the Russian Federation and Turkey.

The first international Black Sea DELTA exercise under the Black Sea Contingency Plan SULH-2007 was carried out on 5-7 September 2007 in Ereğli Bay, Turkey.

F. The **EUROPEAN COMMUNITY** is a contracting party to each of the above mentioned framework Regional Agreements (except the Bucharest Convention where EC currently has observer status).

At the European level, the Council Decision of 23 October 2001 established a Community Mechanism to facilitate reinforced co-operation in civil protection assistance interventions. This instrument covers both civil protection and marine pollution and provides for the following:

- The identification of intervention teams (and other intervention support), assessment teams and/or co-ordination teams in the event of emergencies;
- The setting up and implementation of a training programme for intervention teams, assessment experts, and/or co-ordination teams;
- The establishment and management of a Monitoring and Information Centre (MIC), which is operational on a continuous basis;
- The establishment and management of a common emergency communication and information system (CECIS);
- Other support action such as measures to facilitate transport of resources.

The Monitoring and Information Centre (MIC) conducts notification exercises and often is involved in exercises organised by EU Member States.

Following the accident of the oil tanker ERIKA in December 1999 and the ensuing proposal by the Commission, the European Parliament and the Council adopted Regulation 1406/2002, which established the European Maritime Safety Agency.

The Agency has been established for the purpose of ensuring a high, uniform and effective level of maritime safety, maritime security and prevention and response of pollution by ships within the Community. As of May 19th 2004, with the entering into force of Regulation 724/2004, the EMSA has a legal obligation in the field of response to ship-sourced pollution within the Community.

In the event of serious marine pollution in European waters upon request of the affected Member State, EMSA is obliged to provide assistance with additional response capacity. In order to fulfil this obligation EMSA has been developing a system of Standby Oil Recovery Vessels maintaining readiness to respond to oil spills in European waters. Nine vessels are currently in service, and another tender will be finalised in 2007 for ships entering service in 2008.

The aim of the development of the system of Standby Oil Recovery Vessels is to provide Member States with additional oil recovery and on board storage capacity. An urgent need for such additional capacity was a conclusion of the Erika and Prestige incidents and also a result of assessment of the pollution risk and existing response capacity in Europe. Development of the system is progressing well and has been supported by the Member States, Regional Agreements and the Commission.

International exercises and drills conducted in 2006 with participation of EMSA contracted vessels proved them to be a valuable asset for the pollution response mechanisms of Member States. EMSA contracted vessels participated in the following operational exercises listed in the table below.

Table 3. Exercises with participation of the EMSA contracted vessels

N°	Name of the exercise, date and place of the exercise	Participating EMSA vessel
1	BALEX Delta, 06.09.2006, Gdynia, Poland	M/T Breeze M/T Otilia
2	EMSA/Spain, 11.09.2006, La Coruña, Spain	Ile de Brehat
3	EMSA/Portugal, 15.09.2006, Setubal, Portugal	Ile de Brehat
4	EMSA/Malta, 11.05.2007, Malta	M/T Mistra Bay
5	Biscay Plan, 21.06.2007, Gascogne, France	Ile de Brehat
6	BALEX Delta, 05.09.2007, Tallin, Estonia	M/T Breeze M/T Otilia
7	RAMOGEPOL, 17.09.2007, Sardinia, Italy	M/T Santa Maria
8	EMSA/GREECE 08.11.2007	M/T Santa Maria
9	EMSA/Portugal 15.11.2007	M/T Galp Marine

5. POINTS FOR DISCUSSION

Combined resources of the parties to the Bilateral/Multilateral/Regional Agreements provide an impressive force to combat large oil spills comparable to the ERIKA and PRESTIGE disasters. Preparedness to respond to marine pollution at sea within the European framework has to be tested by exercises planned, conducted and evaluated on all levels in order to practice and improve response capabilities.

- Exercises at the national/bilateral/multilateral and regional level are established and carried out on a regular basis. However there are different approaches to exercises in different areas. The number and types of exercises carried out under different agreements varies. For example under the Bonn Agreement the annual exercise is the alarm exercise while under the Helsinki Convention, an Alarm and operational

exercise is carried out every year. A topic for the workshop discussion relating to these differences is:

Would it be useful and feasible to harmonise the approach for the number and types of exercises carried out in different regions of Europe?

- Information on the exercises carried out under the Regional Agreements is accessible in the reports of the relevant working groups. However, in many cases it is difficult to access information on other exercises carried out at the national, bilateral and multilateral levels and there is a lack of consolidated reports on the pollution response exercises carried out in Europe. In EMSA's opinion such reports could be very useful for evaluating the level of preparedness to pollution response in Europe. Exercise reports and lessons learnt could be disseminated to all Member States (perhaps in the form of a consolidated report), to share areas of best practice for response, e.g. effective incident management structure, co-operation between different countries and integration of EMSA's resources into a Member State's pollution response mechanism (via the MIC).

How can we ensure that information on all types of exercises carried out under bilateral and multilateral agreements are available? Could EMSA be an addressee of all exercise reports so that outcomes can be disseminated throughout Europe?

- The international framework for co-operation in response to marine pollution in Europe has been expanded in recent years. The constantly growing EMSA network of oil recovery vessels and resources of the new EU States Bulgaria and Romania added significant resources to the European response capacity. Organisational and operational capabilities of the expanded framework have to be evaluated and improved on the basis of results of the appropriate exercises. Pollution response within the European framework needs effective co-ordination and co-operation between Member States and relevant European institutions – which in turn requires training and exercising.

In addition to those already held, what type of exercises should be organised and conducted at the European level? Which organisation should take a leading role in organisation of these exercises?

- The number of publications concerning marine pollution response exercises is limited. Most of the available publications are listed at the end of this paper and their content does not provide extensive information on the theoretical aspects of exercise organisation, implementation and especially evaluation. In general, exercises in Europe are based on the professional experience and knowledge of the staff responsible for organising them.

Would it be feasible to develop operational European guidelines on conducting marine pollution exercises to have a common process/procedure which is then adapted to each country/situation and exercise?

- One of the most important goals of an exercise is to evaluate results and draw conclusions as to the necessary improvements to the response system. However, exercise evaluation methodology has not been described in detail in any available publication.

Can practical European guidelines be developed on exercise evaluation which would be a useful tool for Member States? Perhaps a common guide could be produced which addresses the various stages of exercise planning, conducting and evaluating?

The last session of the Workshop is a panel discussion, in which EMSA would like to encourage participants to take part and try to answer the above questions

6. REFERENCES

1. Guide to oil spill planning. IMO/IPIECA REPORT SERIES, Volume 2.
2. HELCOM Response Manual, Volume 1.
3. Bonn Agreement Counter Pollution Manual, Volume 1.
4. Guidelines for developing and evaluating oil spill response exercise, U.S. Department of Transportation / Office of Pipeline.
5. Action Plan for Pollution Preparedness and Response. EMSA, 2004.