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**MEDITERRANEAN ACTION PLAN (MAP)  
REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR THE  
MEDITERRANEAN SEA (REMPEC)**

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Regional Workshop on response to spill incidents  
Involving Hazardous and Noxious Substances (HNS)  
(MEDEXPOL 2018)

REMPEC/WG.43/9  
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Malta, 20-21 June 2018

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**REPORT**  
**OF THE REGIONAL WORKSHOP ON RESPONSE TO SPILL INCIDENTS**  
**INVOLVING HAZARDOUS AND NOXIOUS SUBSTANCES (HNS)**  
**(MEDEXPOL 2018)**

**Malta, 20–21 June 2018**



## **INTRODUCTION**

1 The Regional Workshop on Response to Spill Incidents involving Hazardous and Noxious Substances (HNS) (MEDEXPOL 2018) was held in Valetta, Malta from 20 to 21 June 2018, pursuant to the Programme of Work and Budget for 2018-2019 of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UN Environment), also referred to as UN Environment/MAP, adopted by the Twentieth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (“the Barcelona Convention”) and its Protocols (COP 20), which was held in Tirana, Albania from 17 to 20 December 2017.

2 The principal objectives of the Meeting were:

- .1 to examine and agree upon the draft updated “Guide for Risks of Gaseous Releases resulting from Marine Accidents”;
- .2 to agree on the way forward for a joint inter-regional effort, between the Secretariat of the Bonn Agreement, the Secretariat of the Baltic Marine Environment Protection Commission (HELCOM) and the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), aiming at updating their respective response manuals for HNS spills through the possible production of a Joint Inter-Regional Response Manual for HNS Spills; and
- .3 to provide an overview of achievements and undergoing works on guidelines and tools related to HNS, discuss their complementarity and the way forward for future developments to address identified challenges.

3 All REMPEC Governmental Focal Points were invited to nominate, jointly and in consultation with their respective REMPEC Prevention and OPRC Focal Points, their representatives in the Meeting. The participation of observers representing the oil, chemical, port and shipping industries in national delegations was strongly encouraged. The invitation to attend the Workshop was also extended to the specialised agencies of the United Nations, other governmental and non-governmental organisations, as well as to the international professional organisations and associations, the activities of which are relevant to the work of the Centre.

4 The Meeting was attended by delegations from the following Contracting Parties to the Barcelona Convention:

ALBANIA	ITALY
ALGERIA	MALTA
CROATIA	MONTENEGRO
EGYPT	MOROCCO
EUROPEAN UNION	SLOVENIA
FRANCE	SPAIN
GREECE	TUNISIA
ISRAEL	TURKEY

by representatives from the following UN organisations:

- INTERNATIONAL MARITIME ORGANIZATION (IMO)

by a representative from the following inter-governmental organisation:

- INTERNATIONAL OIL POLLUTION COMPENSATION FUNDS (IOPC FUNDS)

by a representative from the following European Agency:

- EUROPEAN MARITIME SAFETY AGENCY (EMSA)

by representatives from other organisations:

- CENTRE OF DOCUMENTATION, RESEARCH AND EXPERIMENTATION ON ACCIDENTAL WATER POLLUTION (CEDRE)
- BALTIC MARINE ENVIRONMENT PROTECTION COMMISSION (HELCOM)
- TRANSPORT CANADA
- INTERNATIONAL TANKER OWNERS POLLUTION FEDERATION LIMITED (ITOPF)
- CENTRO TECNOLÓGICO DEL MAR (CETMAR)

5 A complete list of participants appears in **Annex I** to the present report.

#### **AGENDA ITEM 1: OPENING OF THE WORKSHOP**

6 The Workshop was opened by the Head of Office of REMPEC on Wednesday, 20 June 2018 at 09:00 hours. M. Gonzalez welcomed the participants to the Regional Workshop on response to spill incidents involving Hazardous and Noxious Substances (HNS) (MEDEXPOL 2018).

7 M. Gonzalez reminded that MEDEXPOL 2018 is co-financed by the Integrated Technical Cooperation Programme (ITCP) of the International Maritime Organization and the Mediterranean Trust Fund (MTF). He thanked IMO, represented during the Workshop by Mr. Hoenders, Technical Officer, for its permanent support.

8 He also stated that MEDEXPOL regional workshops are organized every two years to address at the Mediterranean scale with REMPEC focal points, technical aspects related to the implementation of the Protocol concerning Co-operation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (the 2002 "Prevention and Emergency" Protocol).

#### **AGENDA ITEM 2: ORGANISATION OF THE WORKSHOP**

##### 2.1 Rules of Procedure

9 The Workshop decided to apply, *mutatis mutandis*, the rules of procedure for Meetings and Conferences of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its related Protocols (UNEP/IG.43/6, **Annex XI**) to its deliberations.

##### 2.2 Election of Officers

10 Following informal consultations held with the Contracting Parties to the Barcelona Convention, the Head of Office of REMPEC proposed Turkey as Chair, Algeria as Vice-Chair and Spain as Rapporteur. The Workshop unanimously decided to elect the following officers of the Workshop:

Mr Murat Korçak (Turkey)	Chairperson
Mr Hadj Aissa Raouf (Algeria)	Vice-Chairperson
Mr Pablo Pedrosa Rey (Spain)	Rapporteur

##### 2.3 Working Languages

11 The working languages of the Workshop were English and French. Simultaneous English/French/English interpretation was provided during the Workshop. All working documents were available in both official languages of the Centre. However, information documents were available in their original language only, unless a translation was provided in the second working language.

#### **AGENDA ITEM 3: ADOPTION OF THE AGENDA**

12 The Chairperson thanked the Workshop for supporting his election and proposed that the Provisional Agenda, contained in document REMPEC/WG.43/3/1 and annotated in document REMPEC/WG.43/3/2 Rev.2, be adopted.

13 The Workshop adopted the Agenda reproduced in **Annex II** to the present report. The list of documents is presented in **Annex III** thereto.

**AGENDA ITEM 4: THE MEDITERRANEAN GUIDELINES ON RISKS OF GASEOUS RELEASES RESULTING MARITIME INCIDENTS**

14 At the invitation of the Chairperson, the Secretariat introduced document REMPEC/WG.43/4 related to the Guide for Risks of Gaseous Releases resulting from Maritime Accidents and referred to document REMPEC/WG.43/4.

15 The Chairperson invited the consultant M. William Giraud, Chemist, Studies and Training department at Cedre, selected to support REMPEC on the revision of the guide, to join the Chair and present the draft guide.

16 The consultant presented briefly the 1996 version of the guide. Then he focused on new parts that were added in the framework of the update of the guide. He drew attention of the Workshop on active participation of Contracting Parties to the Barcelona Convention and its Protocols. He highlighted the relevant comments and amendments provided by the Mediterranean Technical Working Group (MTWG) via REMPEC which appeared very useful to build the updated version of the guide.

17 One delegation of the Contracting Parties to the Barcelona Convention asked whether it would be possible to add a response procedure in case of response to spill from vessel in fire and also for environmental response. Another delegation requested for an introduction to the issues related to ship-to-ship transfer with recommendations and safety measures for such types of operations.

18 Having taken note of the information provided the Workshop agreed upon the revised version 2018 of the "Guide for Risks of Gaseous releases resulting from Maritime Accidents" with the inclusion of additional information (e.g. ammonia, photographs provided by the ) and a general introduction of the scope of the document and its onward submission by the Secretariat to the Thirteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) to be held in Malta, June 2019, for adoption.

19 The regional Workshop concurred with the need to establish, in collaboration with the national competent authorities, a stronger partnership with the private sector, in particular with chemical companies, harbours and salvage companies, with the view to raise the awareness on the risks of gaseous releases and HNS marine pollution and improve knowledge on the operational response to be implemented.

**AGENDA ITEM 5: HNS GUIDELINES OVERVIEW**

20 The Chairperson gave the floor to M. Malek Smaoui, Programme Officer OPRC at REMPEC, to provide an overview of other existing guidelines developed by REMPEC in the field of preparedness for and response to HNS spills.

21 M. Smaoui provided an overview of guidelines developed by REMPEC in the field of preparedness for and response to HNS spills: Theory and practice of foams in chemical spill response (1992), the significance of a material safety data sheet (2001), Personal protective equipment and monitoring devices for maritime chemical emergencies (2003) and focused in particular on the Practical Guide for Marine Chemical Spills (2000). This guide is designed as a reference for use in the field or office, is to assist a person select such measures. Its scope is to provide a decision-maker with options for response to marine chemical emergencies and to present them in a structured format which can facilitate the decision given the amount of information available at the start of the event.

22 M. Smaoui reminded that this guide contains response options presented in decision-tree format which are reinforced by tables, matrices and diagrams, some of which represent actual experiences at marine incident sites. The decision-trees are based on the behaviour classification system for chemicals spilled at sea which is a scheme accepted by IMO and other regional arrangements for combating accidental marine pollution. Other sections have been included which contain information on the behaviour of commonly transported chemicals, the compatibility of

chemicals, the resistance of equipment material to chemicals and safety precautions when entering spill sites.

23 A delegation noticed that figures and procedures included in the guide are deemed relevant for response planners in its State.

24 The Chairperson gave the floor to M. Markus Helavuori, Professional Secretary, representative of Baltic Marine Environment Protection Commission, to present 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 2, 1 December 2002.

25 M. Helavuori delivered a presentation including the context of the creation of the HELCOM Manual and organizations involved. He pursued the presentation describing main elements included in the Manual. He also raised the will to update the manual with the HNS task group of HELCOM, not adopted yet. In this context he noted the importance of creating an Inter-Regional Response Manual for HNS Spills.

26 M. Helavuori reminded that the guideline was created in 2002 within the framework of the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention). The aim of this Manual is to provide information to support proper decisions when responding to accidents in the marine environment involving chemicals and dangerous goods. However, it is not possible to provide turn-key solutions ready to retrieve from the Manual on the scene of the accident. The contents of the Manual must be thoroughly reviewed beforehand and the contents are primarily aimed for personnel who are familiar with the area. The chapters of this Manual focus on spills and lost packages. Chapters 1 - 2 deal with spill behaviour and drift forecasting. Chapters 3 - 6 address monitoring, sampling and response. The Annexes 1 - 7 contain facts on first response, resistivity of materials, case histories, classification of spills, body protection, labelling, and measurement units. Annex 8 contains references.

27 The Chairperson gave the floor to Ms Josée Lamoureux, Senior Advisor, Environmental Response, Transport Canada – Marine Safety to introduce the Operational Guide on Preparedness and Response to Accidental Spills of Hazardous and Noxious Substances (HNS) on Waters.

28 Ms Lamoureux described the context of the project as a partnership between Transport Canada and Cedre. Ms Josée Lamoureux said that the guide, available in both English and French, is divided into two main parts. The first part briefly describes the methodological approach and the key points to keep in mind in order to manage preparedness and response, with many cross-references to the second part of the guide, which comprises more than fifty operational sheets which can be used independently and describe strategies and techniques to implement relevant actions for preparedness but also during and after emergency response. Ms Josée Lamoureux illustrated her words by with different examples of iconography present or response sheets present in the guide.

29 M. Roel Hoenders, Technical Officer at Marine Environment Division IMO, pointed out that a practical guide under the Sub-Committee on Pollution Prevention and Response (PPR) of IMO is currently in progress, it aims at help States to ratify and implement the Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances, 2000 (OPRC-HNS Protocol).

30 M. Stephane Le Floch, Head of Research department at Cedre, on behalf of Bonn Agreement, requested the floor to inform the workshop that chapter 26 of Bonn Agreement Counter Pollution Manual related to HNS spill management is under update and review, recalling that this chapter is also concerned with the Inter-Regional Response Manual for HNS to be developed jointly between HELCOM, Bonn Agreement and REMPEC.

31 Having taken note of the information provided, the Workshop discussed the added value of each guide and recognised the value of this Workshop to analyse gaps and way forward as addressed in Agenda item 7.

**AGENDA ITEM 6:      HNS TOOLS OVERVIEW**

32 The Chairperson gave the floor to M. Gonzalez to introduce the decision support tool MIDSIS-TROCS and related tutorial video.

33 M. Gonzalez gave back the collaborative context of the development of this decision support tool as an internal REMPEC work with the with the assistance of a Steering Committee comprising the IMO, IOPC, Cedre, Transport Canada (Canutec) and ITOPF. He presented different information available thanks to the tool and other features such as safety precaution when entering in HNS spill site. He also mentioned references to different additional data sources: CAMEO, WIZER, GESAMP, Cedre's guidelines, CEFIC, HELCOM, ITOPF. Finally, he displayed a tutorial video on MIDSIS-TROCS.

34 M. Gonzalez reminded that the tool was designed as a reference for use in the field (downloadable offline application) or office (Online version), is aimed at assisting a person to select such measures. He added that the scope is to provide a decision-maker with options for response to marine chemical emergencies and to present them in a structured format which can facilitate the decision given the amount of information available at the start of the event.

35 M. Gonzalez described the content of the tool:

- .1 Find Chemical: chemicals can be searched by name, by UN number or CAS Number;
- .2 Information: for each chemical a set of information is available including Physical Chemical Data, Transportation Data, Reactivity Data, GESAMP Hazard Profile, Human Toxicity Threshold, Shore Emergency Guide, at Sea Emergency Guide and Decision Trees;
- .3 Useful Links: a list of chemical related links is made available to access to other relevant websites;
- .4 Incident Reports: the main added value of this tool in comparison with other existing HNS tools is the availability of accidents reports linked to a specific chemical;
- .5 Tools: additional tools are available on Beaufort Scale, Unit Conversion, Explosion risk areas, Classification Behaviour, Labels, and Identification of unknown chemical;
- .6 Guide: the guide is a compilation of information originating from different sources which the Centre has assembled to reflect the current state-of-the-art for responding to marine chemical emergencies, with the hope that the final product is a workable guide to the end-user.

36 The Chairperson gave the floor to Ms Ana Sofia Catarino, Project Officer, Cooperation and Information Pollution Response Services, European Maritime Safety Agency (EMSA) to present the Marine Chemical Information Sheets (MAR-CIS).

37 Ms Catarino presented Marine Chemical Information Sheets (MARCIS) decision support tool through the web portal application of EMSA. She described MARCIS, corresponding to individual chemical substances for marine pollution response to incidents involving chemicals. MARCIS provide concise information on each of the substances' physical and chemical properties, handling and emergency spill response procedures, and maritime transport requirements for safe transport at sea.

38 The datasheets are intended for emergency response operations at sea. They collect different types of information on individual chemical substances:

- .1 Key properties: main hazards, and physical and chemical properties that define the emergency response operations from the very beginning, e.g; flash point, vapour pressure;
- .2 Identification: reference numbers and names used to identify the substance;
- .3 Substance properties: main properties, appearance and behaviour;
- .4 Shipping information: explanatory information from the maritime transportation codes (e.g. IMDG, IBC and IMSBC codes) to help understand how the substance is transported by sea and what responders can expect when they go on-board a vessel. Graphical representation of the GESAMP hazard profile;

- .5 Hazards and risks: classification and labelling, health and environmental hazards and substance intrinsic hazards;
- .6 Emergency measures: emergency health measures, emergency measures on board of vessels, exposure safety limits, environmental protection measures and danger zones for six different spill scenarios;
- .7 Case histories: past incidents involving the substances and response used;
- .8 Physical and chemical properties: the fingerprint of the substance.

39 Ms Catarino added that the information gathered helps the competent authorities to answer questions such as 'How will the substance spread in seawater?', 'What are the existing safeguards on board the ship?', 'How should the situation be controlled?'. The aim is to assist the competent authorities during the initial stage of the response to maritime incidents involving chemicals. To help identify and evaluate the hazards and risks before deploying the emergency response teams.

40 Ms Catarino also presented the way to share information from MARCIS and development under progress. Despite MARCIS has a restricted access, Ms Ana Sofia added that Contracting Parties of Convection of Barcelona has access to MARCIS through CECIS, the Common Emergency Communication and Information System.

41 The Chairperson gave the floor to M. Le Floch to present the tool developed under the project Improving Member States preparedness to face an HNS pollution of the Marine System (HNS-MS).

42 M. Le Floch briefly presented the Bonn Agreement mechanism with its Contracting Parties (the North Sea States, and the European). Then, he presented the HNS-MS DG ECHO funded project and its main outcomes, the HNS-MS tool and said that the European project HNS-MS aimed at developing a decision-support system that national maritime authorities and coastguard stations can activate to forecast the drift, fate and behaviour of acute marine pollution by HNS accidentally or deliberately released in the marine environment.

43 M. Le Floch added that the project focused on the Greater North Sea and Bay of Biscay, with four specific objectives:

- .1 To develop a freely accessible data base documenting the most important HNS transported from or to the ports of Antwerp, Rotterdam, Hamburg, Nantes and Bordeaux;
- .2 To conduct lab experiments in order to improve the understanding of the physico-chemical behaviour of HNS spilt at sea;
- .3 To develop a 3D mathematical modelling system that can forecast the drift, fate and (SEBC) behaviours of HNS spilt at sea. Advanced processes such as chemical reactivity, explosions, fire or interaction with sediment were not considered in this first project;
- .4 To produce environmental and socioeconomic vulnerability maps dedicated to HNS that will help end - users assessing the likely impacts of HNS pollution on the marine environment, human health, marine life, coastal or offshore amenities and other legitimate uses of the sea.

44 He concluded that all these contributions have been integrated into a web application that will help coastguard stations to evaluate the risks for maritime safety, civil protection and marine environment in case of an acute pollution at sea.

45 The Chairperson gave the floor to Ms Marisa Fernandez, Coordinadora del Área de Control y Gestión del Medio y los Recursos Marinos, Centro Tecnológico del Mar (CETMAR) and Mr William Giraud to provide an overview of the HNS Knowledge Tool developed within the Project Enhancing HNS preparedness and response through training and exercise (MARINER).

46 Ms Fernandez presented the MARINER Knowledge Tool, saying that it is an online repository that includes a comprehensive compilation of marine research and technical resources specifically focused on the preparedness and response to HNS (Hazardous and Noxious Substances) spills.

47 Ms Fernandez added that the Resources included in this database were carefully extracted from two main types of sources:

- .1 EU and national research and cooperation projects addressing maritime pollution and chemical spills, referring to the outputs/resources selected from these projects as "Knowledge Outputs" (MarineTT project, 2010-2012);
- .2 Key organisations working on the fields of maritime pollution and health and environmental protection.

48 Ms Fernandez concluded that online database can be accessed by using tailor-made search engines that help browsing the list of projects and organisations considered during the collection process (click on "Projects" or on "Organisations") or selecting the resources of interest from a list of more than 400 records (click on "Resources").

49 M. Giraud presented the training package developed in the framework of MARINER project, including:

- .1 Training package on HNS spill management;
- .2 Exercise Web Tool for bespoke desk-top maritime HNS exercises;
- .3 Training package on HNS modelling and environmental impact;
- .4 E-learning: International Health Regulations and HNS maritime incidents.

50 The two members of the MARINER DG ECHO funded project presented successively the Knowledge Tool developed in the framework of the project and the training package and its different components: presentation supports for trainers, e-learning, exercise web support tool for table top exercise, etc.

51 Having taken note of the information provided, the Workshop discussed the added value of each tool and reiterated its recognition of the value of this Workshop to analyse gaps and way forward as addressed in Agenda item 7.

#### **AGENDA ITEM 7: GAP ANALYSIS, COOPERATION AND WAY FORWARD**

52 The Chairperson gave the floor to Ms Nicola Beer, Senior Technical Adviser, of the International Tanker Owners Pollution Federation Limited (ITOPF) to present the maritime traffic flows for HNS and the statistical analysis on the incidents involving HNS.

53 Ms Beer recalled the definition of HNS in terms of risks and international conventions. She then presented the assessment of the risks related to HNS through physico-chemical properties, behaviour and risks and impacts on different targets, be it human health, the environment or socio-economic. She added that the definition of HNS, under the 2010 HNS Convention, also includes products that are not inherently considered hazardous. Finally she presented different incident reviews to illustrate her words.

54 The Chairperson gave the floor to Ms Chiara DellaMea, Claims Manager, of the International Oil Pollution Compensation Funds (IOPC Funds) to provide an overview on the compensation for damage caused by HNS transported by sea.

55 Ms DellaMea gave a comprehensive overview on the possible compensation for damage caused by HNS transported at sea under the HNS Convention. First, she described the current regime with requirements for its entry into force, the two-tier regime for compensation, the thresholds for each account and reporting for the HNS Fund. Then she recalled the definition of HNS depending on their classification in existing Codes, the scope of application of the HNS convention with possible claims covered. Finally, she added technical information on claims are assessed, the important consideration of loss of life and personal injury, the time bar to keep rights to compensation and the role of IOPC Funds.

56 The Chairperson gave the floor to M. Hoenders to introduce the under-progress outputs of IMO related to HNS.

57 After an introduction on the missions of IMO, M. Hoenders provided an overview of the Guide on Practical Methods for the Implementation of the OPRC Convention and the OPRC-HNS Protocol, the updating of the OPRC HNS Model Training and the development of an International Guide on Response to HNS Spills. He mentioned that an interregional guide could be useful for such development.

58 The secretariat recalled the participants that the MTWG was invited to examine and provide REMPEC with its comments on the draft Guide for the Implementation of the OPRC Convention and the OPRC-HNS for consideration when drafting the final version of the guide which will be submitted for adoption by the 6th session of PPR.

59 The Chairperson gave the floor to M. Giraud and M. le Floch to provide an overview of the state of the art of preparedness for and response to HNS spills and to share the main outcome of previous works which could help to identify priorities in terms of response planning, impact assessment, liability and compensation.

60 M. Le Floch introduced the presentation by reminding the relevant steps required for proper preparedness. Then, he focused on response strategies and technics depending on the behaviour of HNS.

61 M. Giraud pursued the presentation by emphasising the importance of guidance and decision-support tools to strengthen regional and national capacities for preparedness for and response to HNS spills. Then, showing the results obtained from a comparative analysis Mr Giraud highlighted the main outcomes of previous works and existing gaps between different main existing guides and decision support tools. He noted that information found in the different guides present complementarities, what reinforces the necessity to create a Joint Inter-Regional Manual. He added that the obsolescence of certain information in browsed guides (non-updated regulation for instance or HNS convention when ratification and entry into force) shows the need for regular updates, facilitated through a common effort. Especially related to decision support tools, Mr Giraud put forward that the lack of knowledge or feedback from real incident, both for information (modelling) or procedures (network measurement with sampling/sensors for instance) or techniques (recent response vessel), showing the importance to pursue R&D projects to improve response efficiency. Moreover, special attention should be given to media concern, especially in case of major chemical spill.

62 The main elements resulting from the comparative analysis between the different guides and tools are presented in **Annex IV**. Priorities identified were to develop an interregional chemical guide.

63 The Chairperson gave the floor to Mr Gonzalez who informed the participants on how the works will continue under this Agenda Item within the Working Groups.

64 The Contracting Parties representatives as well as the Partners joined the corresponding groups depending on the geographical distribution. Two facilitators animated the discussions assisted in recording the discussion in a predefine template, for each group.

- .1 Group A. Participants: Algeria, France, Italy, Morocco, Tunisia, Transport Canada.  
Facilitators: Mrs Hoenders and Smaoui.
- .2 Group B. Participants: Croatia, Israel, Montenegro, Slovenia, Spain and Turkey, EMSA, HELCOM, IOPC.  
Facilitators: Mrs Gonzalez and Le Floch.
- .3 Group C. Participants: Albania, Egypt, EU, Greece, Malta (2), Spain (1), CETMAR, ITOFF, HELCOM.  
Facilitators: Mrs Giraud and Poirier.

65 Within each group, Contracting Parties representatives provided a brief oral presentation on the recent national developments (legal, operational, administrative, ...) on response to spill incidents involving HNS and barriers to progress and needs for assistance, as appropriate. Then the participants discussed and identified measures and opportunities to address the following points:

- .1 The Guide for Risks of Gaseous Releases resulting from Maritime Accidents: the identification of national needs to strengthen capacity and knowledge in the field of

preparedness for and response to HNS spills in particular gaseous releases and of the way forward;

- .2 The Inter-Regional Manual on HNS response: discussion and agreement on the joint effort and steps to be followed to develop the Manual;
- .3 Existing and planned HNS guidelines and tools: the identification of the most important features from the guidelines and tools presented under Agenda Items 4, 5 and 6, the gaps and complementary of existing guidelines and tools and deliberation on the need for further developments of guidelines and tools.

66 The discussions were guided by questions agreed during the plenary on matters linked with preparedness for and responses to HNS spills: private sector, contingency planning, training, expert advice, common approach: tools and guides, reporting of accidents and lessons learnt, legislation, research & development, funding.

67 The Chairperson welcomed the participants back to the plenary and thanked them for their constructive discussion and contribution in their respective groups.

68 The rapporteur of each Working Group presented the state of the art related to HNS preparedness and response of the countries represented in their group and then the conclusions and recommendations of the group on the above-mentioned questions.

69 The Workshop took note of the information provided and recommended the Secretariat to consolidate the conclusions and recommendations of the Working Groups together with those made under Agenda Item 4.

#### **AGENDA ITEM 8**      **OTHER BUSINESS**

70 No delegation has requested under Agenda Item 3 to intervene under this Agenda Item. The Chairperson moved to Agenda Item 9.

#### **AGENDA ITEM 9:**      **CONCLUSIONS AND RECOMMENDATIONS**

71 The Chairman invited the Workshop to review paragraph by paragraph the draft conclusions and recommendations and to comment as deemed appropriate.

72 The main outcomes of this Agenda Item including the conclusions and recommendations of the Workshop are reported in **Annex V**.

#### **AGENDA ITEM 10:**      **CLOSURE OF THE WORKSHOP**

73 The Chairperson closed the Workshop at 16:30 hours on Thursday, 21 June 2018.

**ANNEX(E) I**

**LIST OF PARTICIPANTS / LISTE DES PARTICIPANTS**

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**ANNEX II**

**AGENDA**

1. Opening of the Workshop
2. Organisation of the Workshop
3. Adoption of the agenda
4. The Mediterranean Guidelines on Risk of gaseous releases resulting from marine incidents
5. HNS Guidelines achievements and undergoing works overview
6. HNS Tools achievements and undergoing works overview
7. Gap analysis, cooperation and way forward
8. Other business
9. Conclusions and recommendations
10. Closure of the Workshop

**ANNEX III**

**LIST OF DOCUMENTS**

**WORKING DOCUMENTS**

REMPEC/WG.43/3/1	Provisional agenda
REMPEC/WG.43/3/2.Rev2	Annotated provisional agenda and draft timetable
REMPEC/WG.43/4	Guide on Risk of gaseous releases resulting from marine incidents
REMPEC/WG.43/WP/1	Draft conclusions and recommendations
REMPEC/WG.43/9	Report of the Meeting

**INFORMATION DOCUMENTS**

REMPEC/WG.43/INF.1	List of documents
REMPEC/WG.43/J/1	Provisional list of participants
REMPEC/WG.43/INF.2	List of participants
REMPEC/WG.43/INF.3	Practical Guide for Marine Chemical Spills (2000)
REMPEC/WG.42/INF.4	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 2, December 2002
REMPEC/WG.42/INF.6	Bonn Agreement Counter-Pollution Manual
REMPEC/WG.42/INF.7	Guidelines on the Implementation of the OPRC Convention and the OPRC-HNS Protocol (Second Draft)

**INFORMATION SHEET**

All logistic arrangements are listed in the document: Information Sheet

**ANNEX IV**

**NOTABLE OUTCOMES OF EXISTING TOOLS**

Notable outcomes and opportunities of improvement of the different existing guidelines and tools are gathered in the following table:

Title of the source of information	Generalities		Planning and response		Impact assessment	
	Notable outcomes	Opportunities for improvement	Notable outcomes	Opportunities for improvement	Notable outcomes	Opportunities for improvement
<b>Guide for Marine Chemical Spills (REMPEC, 2000)</b>	- Solid base for illustrations.	- Interesting graphic material, improve design.	- Relevant description of protocols and equipment, - Decision trees with cross-references to action steps.	- Identification (labelling and marking) of chemicals, - Liability and compensation to be introduced.	- References to databanks (including GESAMP profiles), forecasting models.	- Add MARPOL categories.
<b>Manual on Co-operation in Response to Marine Pollution (HELCOM, 2002)</b>	- A single document containing a wide range of technical and operational information.	- Update for regulation and codes.	- Description of the fate of chemicals and techniques for sampling in different locations, - Operational response sheets, including limitations, and cross references with accidents.	- Decision trees with cross-references to action steps, - Update with recent techniques and accidents, - Introduce European norms for PPE.	- Interesting description of modelling tools: capacities and limitations.	- Ecotoxicological effects could be described.
<b>Accidental water pollution by HNS (Transport Canada – Cedre, 2017)</b>	- User-friendly in a two part guide: cross references between methodological approach and operational sheets, - Comprehensive overview on the response on HNS spill management.	- Addition of more specialized technical data sheets, - Electronic tool.	- Includes response and media communication.	- Decision trees with cross-references to action steps, - Customization with cross-references to regional conventions and protocols could be added.	- Collection of fixed and variable data, - Interpretation of a modelling result, - Post-spill monitoring.	- Introduce way to determine MARPOL categories.
<b>MIDSIS TROCS (REMPEC, 2003)</b>	- User-friendly and reactive online tool, - Existing offline tool (still possible?).	- Offline setup, - Allow easy extraction of information.	- Well delivered incident reviews, - Decision trees.	- Data to be completed for some chemicals, - Recent incident reviews to be added, - Figures to be added.	- Includes GESAMP profiles, - Link towards external resources (CAMEO/WIZER).	- No information on post-spill monitoring.
<b>Marine Chemical Information Sheets (MAR-CIS) (EMSA, 2017)</b>	- <i>Restricted access</i> , - Easy-to-share and extraction of information, - Reference of source for each data.	- Improve efficiency of research engine, - Speed loading access to be improved, - Allow direct access for all sources of information, - Include gases.	- Limitation to first measures.	- Few references to incidents.	- Includes GESAMP profiles, - Ecotoxicological data.	- No information on post-spill monitoring.
<b>HNS-MS (EU DG ECHO project, 2017)</b>	- Innovative tool including environmental and socio-economic vulnerability maps.		- Environmental and socio-economic vulnerability maps (Belgium and Bonn Agreement areas).	- Enlarge environmental and socio-economic vulnerability maps to other areas.	- 3D mathematical model.	- Vulnerability maps to be extended to other regions.
<b>MARINER (EU DG ECHO project, 2017)</b>	- Knowledge tool refers to many relevant sources of information, - Ready to use preparedness and training material.	- E-learning to be pursued, - Update of training package in several years.	- Comprehensive compilation of marine research and technical resources (Knowledge tool).	- Trial of tools developed during a major chemical exercise.	- Guidelines and protocols for HNS environmental impact assessment, - HNS spill model integrated into a Common Operational Picture.	

## ANNEX V

### CONCLUSIONS AND RECOMMENDATIONS

#### CONCLUSIONS

The Regional Workshop on response to spill incidents involving Hazardous and Noxious Substances (HNS) (MEDEXPOL 2018), which met in Valletta, Malta from 20 to 21 June 2018:

1. expressed appreciation for the financial support provided to this activity by the Mediterranean Trust Fund (MTF), the International Maritime Organization (IMO)'s Integrated Technical Cooperation Programme (ITCP);
2. acknowledged the valuable contribution of IMO, IOPC Funds, EMSA, HELCOM, Transport Canada, Cedre, CETMAR and ITOPF which provided a holistic overview of existing guidelines, tools and best practices in HNS Response;
3. agreed upon the revised version 2018 of the **Guide for Risks of gaseous releases resulting from maritime accidents** with the inclusion of additional information (e.g. ammonia, photographs) and a general introduction of the scope of the document and its onward submission by the Secretariat to the Thirteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) to be held in Malta, June 2019, for adoption;
4. noted that the workshop supported the implementation of the Specific Objective 21 of the Regional Strategy for the Prevention of and Response to Marine Pollution from Ships (2016-2021), aiming at revising the existing recommendations, principles and guidelines, and developing new ones to facilitate international cooperation and mutual assistance within the framework of the Prevention and Emergency Protocol;
5. welcomed the initiative to include the development of the Joint Inter-Regional HNS Response Manual in the West MOPoCo project proposal submitted in April 2018 under the European Civil Protection and Humanitarian Aid Operations (DG ECHO) Call for proposals for the biennium 2019-2020;
6. acknowledged the financial contribution of DG ECHO in developments related to HNS Response, which have been crucial in recent years and encourage maintaining such valuable support;
7. concurred with the need to establish, in collaboration with the national competent authorities, a stronger partnership with the private sector, in particular with chemical companies, harbours and salvage companies, with the view to raise the awareness on the risks of gaseous releases and HNS marine pollution and improve knowledge on the operational response to be implemented.

#### RECOMMENDATIONS

The Workshop recommended:

1. to cross reference existing decision-support tools made available to the Contracting Parties to the Barcelona Convention, the Helsinki Convention and the Bonn Agreement, building on the Joint Inter-Regional HNS Response Manual;
2. to address identified gaps (as detailed in the report), including the open access to the tools, geographical coverage of models and other features, lack of update of detailed incident reviews, etc;
3. to facilitate both online and offline access to common guidelines and tools, to ensure access to critical information in the field;
4. to keep updated tools and knowledge centres through an IMO portal, with contribution from counties and regional agreements;

5. to enhance exchange of detailed report of accident involving HNS and provide a wider access to lessons learnt from chemical incidents, involving IMO, regional agreements, EU, EMSA, ITOF and other institution, possibly through regular reporting through PPR;
6. to encourage transfer of knowledge and foster R&D adjusting models in accordance to the local environment (temperature, salinity, etc.);
7. to invite relevant international or regional observers during incident or exercises;
8. to establish a group of experts, similar to OSINET, meeting once a year to share information on HNS response, review projects, tools, guidelines and propose suitable solution to address gaps related to response to HNS incidents at Sea.

The Workshop requested the Secretariat (REMPEC):

1. to enhance the HNS response capacity of the Mediterranean Assistance Unit (MAU) and explore amongst other closer cooperation with the chemical industry, in particular through the European Chemical Industry Council (CEFIC);
2. to explore with MONGOOS (member of MAU) ways to expand HNS modelling opportunities for the Mediterranean coupled with experimentation at sea;
3. to further assess to which extent National Contingency Plan in Mediterranean coastal States addresses HNS response and evaluate the level of response capacity to combat HNS marine pollution taking into account the existing inventory reported through CECIS;
4. to increase the capacity building activities on HNS response at national, sub-regional and regional levels, through face-to-face trainings, e-learning tools and exercises (table-top, notification, large scale exercises);
5. to address trainings focused on maritime incidents;
6. to reiterate projects such as the Project Preparedness for Oil-polluted Shoreline clean-up and Oiled Wildlife intervention (POSOW) I and II, with Trains-the-Trainers and National Pilot Training Courses focusing on HNS response;
7. to inform the MTWG and the Focal Point Meeting about the outcome of the workshop in particular the need for further guidance documentation on:
  - a. sub-marine pipeline,
  - b. specific guidelines for specific chemicals, and
  - c. response to air contamination as a result of chemical incidents at sea, including combustion of products, to address safety and monitoring issues to be considered during search and rescue operations and response operations;
8. to pursue the effort for the development of a Joint Inter-Regional HNS Response Manual to be developed along the lines and on the basis of the Accidental water pollution by HNS (Transport Canada - Cedre, 2017) guide, offering a comprehensive overview on the response on HNS spill management (including media concern and post-spill monitoring for instance), integrating relevant information from:
  - .1 the Guide for the Marine Chemical Spills (REMPEC, 2000), especially decision trees, which are of high interest to support decision-making,
  - .2 the Manual on Co-operation in Response to Marine Pollution (HELCOM, 2002), in particular the approach to describe monitoring, sampling and techniques for the different behaviours of chemicals (evaporators, floaters, dissolver, sinker, reactive, etc.) or lost packages (under different conditions) as well as the techniques and concepts (including modelling) which are presented through possibilities and limitations, with cross-references to incident review, and
  - .3 regional specific elements to be annexed to the guide as a supplement; and
9. to revise of the MTWG Terms of Reference for documents submitted to the group in English and French.

The Workshop invited the Contracting Parties to the Barcelona Convention and its Protocols:

1. to ratify the OPRC Convention (1990) and the OPRC-HNS Protocol (2000), if they have not yet done so, eventually involving the support of the chemical industry;
2. to report to REMPEC all accidents causing or likely to cause pollution of the sea by oil and other harmful substances through the Mediterranean Integrated Geographical Information System on Marine Pollution Risk Assessment and Response (MEDGIS-MAR) and provide detailed information on measures taken to address problems encountered and lessons learnt;
3. to provide comments and suggestions on the Guide on practical methods for the implementation of the OPRC Convention and the OPRC-HNS Protocol, through the OPRC Focal Points and the designated members of the MTWG OPRC-HNS correspondents, to the Secretariat, no later than 2 July 2018, in view of its submission to the IMO Sub-Committee PRR;
4. to explore funding opportunities jointly to address common challenges and consider developing joint inter-regional projects/initiatives, rather than having scattered HNS related project;
5. to define objective and scope of such projects in order to identify the relevant source of funding;
6. to provide the Secretariat with photographs to be illustrate the Guide for Risks of gaseous releases resulting from marine incidents;
7. to raise the awareness of the national competent Authorities and stakeholders about the existence of the Guidelines and tools by including this information in training curriculum and by using them during exercises, drills and real cases, and provide feedback to the Secretariat, as required;
8. to encourage their national oceano-meteorological centre and related universities to join MONGOOS;
9. to keep updated REMPEC Country Profiles with HNS related information, including status of ratification of relevant conventions and protocol, measure taken to address obligations under these instruments (e.g. Contingency planning, response means, training, etc..), to satisfy the reporting obligation under the Barcelona Convention; and
10. to attend the Marine Environment Protection Committee (MEPC), to submit a request for new agenda items to update the IMO HNS Training Course, to develop a new HNS Operational Course and to develop an international HNS Response Manual.