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GUIDELINES ON THE IMPLEMENTATION OF THE OPRC CONVENTION AND THE OPRC-HNS PROTOCOL

Note by the Secretariat

SUMMARY

Executive Summary: This document provides the second draft of the Guidelines on the Implementation of the OPRC Convention and the OPRC-HNS Protocol. The proposed Guidelines would be offered as a technical source for reference to facilitate the ratification and implementation of the above-mentioned Convention and Protocol.

Action to be taken: Paragraph 6

Background

1 By Resolution A. 674(16) of October 1989, the Assembly of the International Maritime Organization (IMO), recognizing the severity of recent oil pollution incidents, decided to convene an international conference on oil pollution preparedness and response. As a result of this, the Marine Environment Protection Committee (MEPC) was requested to develop an international convention on oil pollution preparedness and response. A working group was established by MEPC 29 and a preparatory meeting in May 1990 agreed on a draft convention on oil pollution preparedness and response. A Diplomatic Conference held in November 1990 adopted the OPRC Convention. In addition, the 1990 OPRC Conference invited IMO to initiate work to expand the scope of the OPRC Convention. The OPRC Convention entered into force on 13 May 1995. Following this, MEPC 48 adopted in principle, a draft protocol on preparedness, response and co-operation to pollution incidents involving hazardous and noxious substances (HNS). The OPRC-HNS Protocol was adopted by IMO at a Diplomatic Conference in March 2000 and entered into force on 14 June 2007. Together with the OPRC Convention, the OPRC-HNS Protocol provided a framework for international cooperation in establishing a system for preparedness and response to marine pollution incidents at the national, regional and global levels.

2 For more than 20 years, the OPRC Convention has been an important tool for the improvement of oil spill preparedness and response throughout the world and currently has 112 Contracting States. The OPRC-HNS Protocol currently has 39 Contracting States. However, there remain parts of the world in which many countries have still not ratified the Convention or its Protocol, or have ratified the Convention, but it has not been implemented.

Development of the first draft of the Guidelines

3 In this connection, Norway submitted a proposal to MEPC 70 (MEPC 70/15/2) for a new work item to facilitate the ratification and implementation of the OPRC Convention and the OPRC-HNS

Protocol, through the development of a practical guidance document, which was approved by the Committee.

4 In order to facilitate the work on the Guide, Norway commissioned the development of a draft Guide for the consideration of this Sub-Committee. A tendering process for a consultant who could assist in developing the proposed Guide was undertaken. The company Petronia Consulting Limited was selected and they started to develop a draft Guide during summer 2017. The first draft Guide was finalised in mid-September 2017 and was submitted for comment to the Fifth Session of the Sub-committee on Pollution Prevention and Response (PPR 5), held in London from 5 to 9 February 2018.

5 The second draft “Guidelines on the Implementation of the OPRC Convention and the OPRC-HNS Protocol”, presented in the **Appendix** to the present document was produced by the drafting group based on the comments received at PPR5, and those of the correspondence group.

Action requested by the Workshop

6 **The Workshop is invited to take note** of the information provided in the present document and to comment its content as deemed appropriate.

APPENDIX
GUIDELINES ON THE IMPLEMENTATION OF THE OPRC CONVENTION AND THE HNS PROTOCOL (Second draft)

Guidelines on the Implementation of the OPRC Convention and the OPRC-HNS Protocol

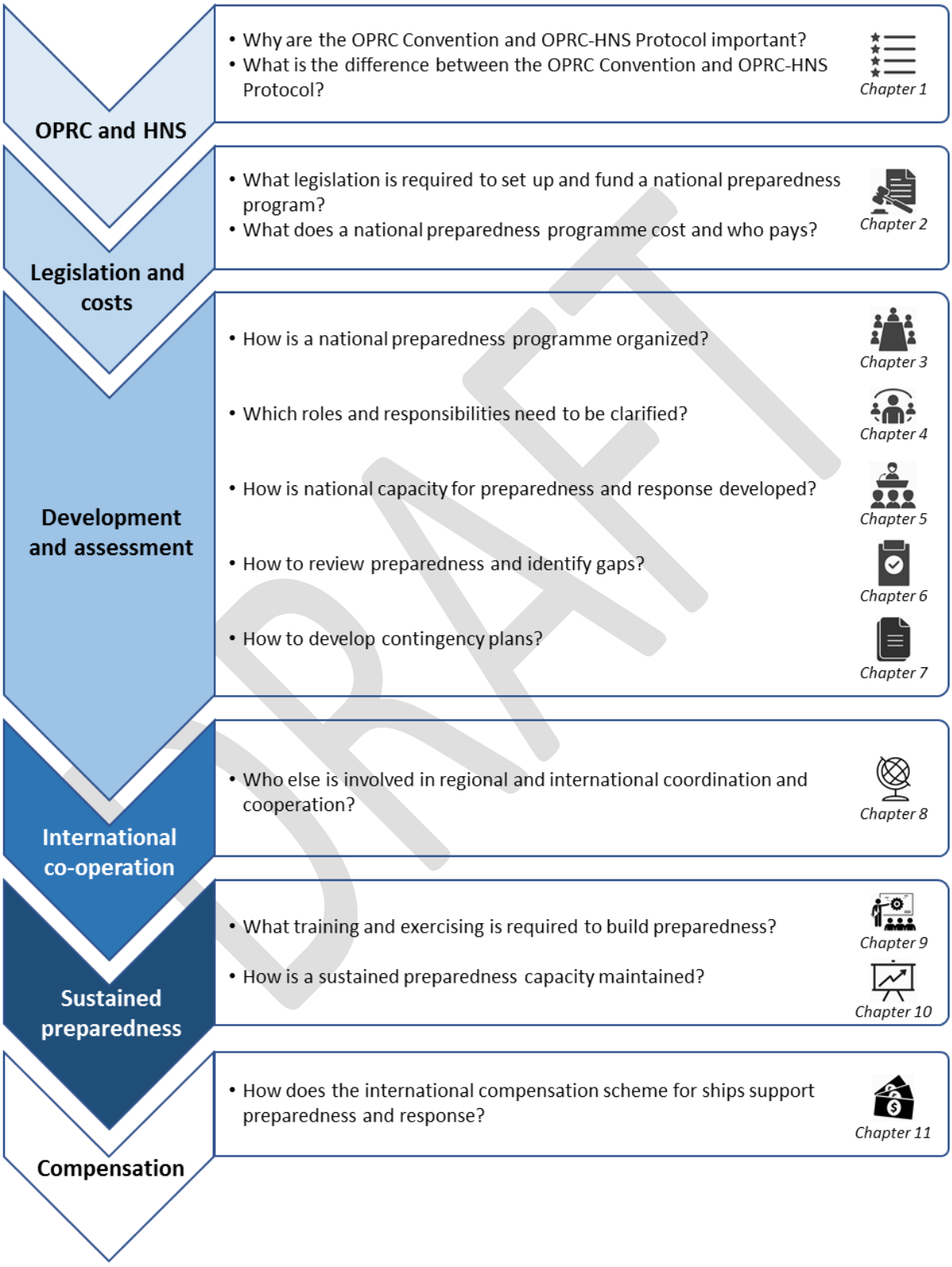
Contents

ACRONYMS

API	American Petroleum Industry
ARPEL	Regional Association of Oil, Gas and Biofuels Sector Companies in Latin America and the Caribbean (from Spanish)
CLC	Civil Liability Convention
COLREG	International Regulations for Preventing Collisions at Sea
GEF	Global Environment Facility
GI	Global Initiative
HNS	Hazardous and Noxious Substances
IMO	International Maritime Organization
IMS	Incident Management System
IOA	International Offers of Assistance
IOGP	International Association of Oil & Gas Producers
IOPC Funds	International Oil Pollution Compensation Funds
IOSC	International Oil Spill Conference
IPIECA	The global oil and gas industry association for environmental and social issues
ISO	International Standards Organization
ITCP	International Technical Cooperation Programme (of the IMO)
ITOPF	International Tanker Owners Pollution Federation
MARPOL	International Convention for the Prevention of Pollution from Ships
MEPC	Marine Environment Protection Committee (of the IMO)
NCP	National Contingency Plan
NEBA	Net Environmental Benefit Analysis
NGO	Non-Governmental Organisation
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation
P&I	Protection and Indemnity Associations ('P&I Clubs')
POLREP	Pollution Report
PPE	Personal Protective Equipment
RAC	Regional Activity Centre
REMPEITC	Regional Marine Pollution Emergency, Information and Training Centre
RETOS	Readiness Evaluation Tool for Oil Spills
SIMA	Spill Impact Mitigation Assessment
SOLAS	Safety of Life at Sea
SOPEP	Shipboard Oil Pollution Emergency Plans
STOPIA	Small Tanker Oil Pollution Indemnification Agreement
TOPIA	Tanker Oil Pollution Indemnification Agreement
UNDP	United Nations Development Programme
WACAF	(Global Initiative for) West, Central and Southern Africa

OVERVIEW

Summary of the guide's layout and steps



1. INTRODUCTION

The International Convention on Oil Pollution Preparedness, Response and Co-operation ('OPRC Convention') was adopted in 1990 to define appropriate levels of planning and preparation for marine oil pollution. To broaden the scope of the OPRC Convention, the Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances ('OPRC-HNS Protocol') was adopted in 2000.

Whilst prevention of spills is the primary focus of all parties involved with the activities bringing marine pollution risk, it is also important to ensure that adequate forethought and planning are given to being prepared for possible incidents.

This guide is intended to:

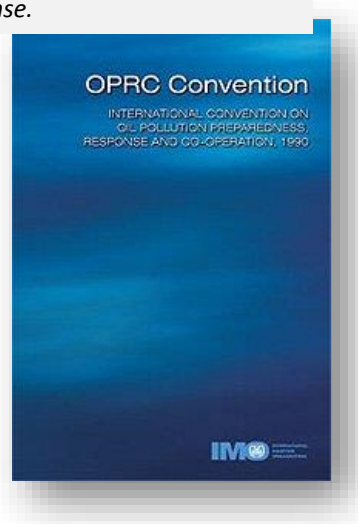
- promote understanding of the overall OPRC Convention and OPRC-HNS Protocol concept,
- explain the benefits of participation in this international regime,
- provide a step-wise approach for the planning, preparedness and implementation process at national and regional levels, and
- identify existing publications and support mechanisms.

Information is provided on the benefits of participation in the IMO conventions that relate to liability and compensation for ship-source pollution, which are an important element of the pollution preparedness and response framework.

This chapter:

- explains the benefits of participation in the OPRC Convention and OPRC-HNS Protocol,
- describes the differences between the two agreements,
- presents six integrated steps that would be necessary to ratify and implement the OPRC Convention and the OPRC-HNS Protocol, and
- provides a case study for how one country implemented the OPRC convention.

The OPRC Convention involves the establishment of national and regional systems for oil pollution preparedness and response.



1.1. Background and Context

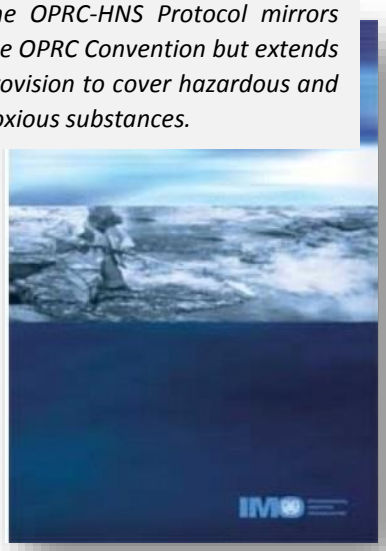
Accidental oil pollution from ships, offshore units, sea ports and oil handling facilities can cause various impacts to ecological, socio-economic and cultural resources. In the case of major incidents, or in locations where the resources are particularly vulnerable, these impacts can be serious for the area's environment, economy, and communities.

Experience has shown that the most effective response to major oil spills stems from coordinated and cooperative preparedness involving a wide range of organizations. This typically includes national and local government; the private sector, as represented by the oil, ports and shipping industries; and international organizations. Recognizing the importance and challenges of coordination and planning, the International Maritime Organization

(IMO), a specialized agency within the United Nations responsible for the safety and security of shipping and the prevention of marine pollution by ships, developed the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) which was adopted in 1990 (hereafter the 'OPRC Convention'[1]). Parties to the OPRC Convention are required to establish procedures for dealing with oil pollution incidents, either nationally or in co-operation with other countries. Provision is made for the reimbursement of costs associated with any assistance provided. The Convention also sets out requirements relating to spill reporting and oil pollution response preparedness for those organizations with oil spill risks.

At the time of the OPRC Convention's development, IMO recognized the potential benefits of expanding the scope at a future date to include pollution incidents from hazardous substances other than oil. The Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances (HNS), which was adopted by the IMO in 2000 (hereafter the 'OPRC-HNS Protocol'[2]) was the result. For the purposes of the Protocol, a Hazardous and Noxious Substance is defined as any substance other than oil which, if introduced into the marine environment is likely to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

The OPRC-HNS Protocol mirrors the OPRC Convention but extends provision to cover hazardous and noxious substances.



The OPRC-HNS entered into force in 2007, and within 10 years the Protocol had been ratified by more than 20% of IMO Members States, whilst more than 65% of Member States had ratified the OPRC Convention at that point. **A country must be a Party to the OPRC Convention prior to signing the OPRC-HNS Protocol**.

The IMO is responsible for various functions and activities under the OPRC Convention and OPRC-HNS Protocol and has provided significant support to their implementation, including:

The IMO has various functions under the OPRC Convention and the OPRC-HNS Protocol.

- detailed publications covering various technical aspects of preparedness and response;
- development and assistance in the delivery of OPRC Model Training Courses (Chapter 9.1);
- national and regional workshops focussed on the development of preparedness and response frameworks;
- facilitation of the development of multilateral cooperation agreements;

[1] See http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-on-Oil-Pollution-Preparedness%2c-Response-and-Co-operation-%28OPRC%29.aspx.
[2] See http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/Protocol-on-Preparedness%2c-Response-and-Co-operation-to-pollution-Incidents-by-Hazardous-and-Noxious-Substances-%28OPRC-HNS-Pr.aspx.

- co-operation with the private sector, including the joint Global Initiative with the international oil industry (Chapter 3.3); and
- providing postgraduate education and research programmes for key personnel in maritime administrations through the IMO's World Maritime University; this includes promotion of key conventions and protocols.

Feedback to the IMO indicated that some Member States, notably small island States and developing countries, were encountering challenges with the OPRC Convention and OPRC-HNS-Protocol implementation process. This guide has been produced to promote understanding of the overall process. Furthermore, the guide assists in identifying available publications that can be accessed and helpful in the implementation process. Information is provided on the benefits of the international framework relating to liability and compensation for ship-source pollution, which are an important element of the pollution preparedness and response framework (Chapter 11).

The framework relating to liability and compensation for ship-source pollution are an integral part of pollution preparedness and response.

1.2. Benefits of the OPRC Convention and OPRC-HNS Protocol

The ratification and implementation by IMO Member States of the OPRC Convention and OPRC-HNS Protocol provide a range of direct and indirect benefits. These include measures that lead to marine environmental protection through cost-effective and efficient oil and HNS pollution preparedness. The key benefits are identified in Table 1-1.

Table 1-1 – *Benefits of the OPRC Convention and OPRC-HNS Protocol*

Benefit	***Comment***
Ensures timely reporting of discharge or probable discharge of oil or HNS pollution	*Rapid reporting and response leads to more effective outcomes following a marine pollution incident.*
Entities with oil or HNS pollution risks shall have relevant pollution emergency plans	*Plans ensure that ships, offshore facilities, sea ports and marine terminals establish contingency arrangements that are aligned to the national response system and that meet minimum requirements set by the competent national authority.*
Clarifies roles and responsibilities of the involved organizations	*Avoids the pitfalls and potential confusion associated with emergency response functions either being missed or duplicated by different organizations during an incident.*

There are substantial benefits associated with implementing the OPRC Convention and OPRC-HNS Protocol.

Benefit	***Comment***
Establishes a national contingency for preparedness and response	*A national contingency plan captures and disseminates the overall policy, responsibilities and organizational framework within a single document.*
Provides a conduit to regional and international support	*Regional and global pollution response capability can be accessed through co-operation mechanisms developed under the Convention and Protocol.*
Requires that oil spill combating equipment stockpiles are established, commensurate with the risks involved	*The link to a risk assessment ensures that suitable pre-positioned local capability is integrated with national, regional and international support.*
Mandates suitable training and exercising of relevant personnel	*Long-term and sustainable implementation requires an on-going training and exercising programme.*
Requires that detailed plans, communication procedures and co-ordination arrangements are established	*Ensures integrated co-ordination of key organizations' plans and procedures across governments and with the private sector.*
Facilitates the exchange of research and development outcomes and technical co-operation	*Lessons learned from research or international experiences in dealing with incidents are shared and incorporated into national and regional preparedness.*
Provides a pathway to access international compensation funds following a ship-source marine pollution incident	*International instruments have been established by the IMO for ship-source pollution liability and compensation for Member States who ratify these agreements.*

Understanding the benefits of the OPRC Convention and OPRC-HNS Protocol allows suitable priority to be given to their ratification and implementation.

Significant efforts are expended to prevent oil or chemical spills and it is evident that many countries face many immediate social and economic challenges beyond the consequences of potential marine pollution. Thus, the ratification and implementation of the OPRC Convention and OPRC-HNS Protocol are at risk of being assigned a low priority on a governmental agenda. A potential consequence of this policy is that a serious marine pollution incident can cause widespread and long term ecological, socio-economic and cultural impacts where preparedness, response and co-operation are weak. This consequence may be especially the case for small and developing nations, particularly those with a heavy reliance on the sea for fishing, mariculture, or tourism. Gaining high-level political support for

ratification and implementation of the OPRC Convention and the OPRC-HNS Protocol is a key factor in having the capacity to reduce the effects of marine pollution incidents.

An effective national preparedness and response framework can be established only where adequate time and resources are allocated to planning, preparedness, and sustained capacity.

Once the political desire has been established and a decision made to become a Party to the OPRC Convention and subsequently the OPRC-HNS Protocol, it is necessary to consider the means of ratification and implementation. The implementation process requires a clear legislative basis to mandate the obligations and actions required by the Convention and Protocol. The benefits to Member States can only be fully realized when all Parties carry out these obligations.

1.3. Overall Approach and Checklists

The six integrated steps necessary to ratify and implement the OPRC Convention and the OPRC-HNS Protocol are:

1. Establish the legislative basis and necessary funding to implement the Convention and the Protocol (Chapter 2) that includes the IMO ship-source marine pollution compensation Conventions (Chapter 11).
2. Create a national organizational structure that embraces appropriate government agencies and private sector participants (Chapter 3).
3. Prepare a National Plan (Chapter 7) and define the roles and responsibilities of each agency or entity involved (Chapter 4) in the plan.
4. Develop the response capacity (Chapter 5) and assess the level of preparedness (Chapter 6).
5. Foster regional and international relationships and agreements for mutual support and cooperation (Chapter 8).
6. Develop and maintain a regular training and exercising programme at local, national and regional levels (Chapter 9).

A summary of the key recommendations within this Guide is provided in the following checklists.

Steps for establishing a sound legislative basis for implementing the OPRC Convention and OPRC-HNS Protocol			
	Pending	**In progress**	**Complete**
Establish the government authority for spill preparedness and response and task with developing draft laws and regulations to address the six conditions for implementation			
Identify legal counsel to work with the drafting authority			
Define in law concepts of polluter pays principle and requirements for contingency planning			
Establish requirements for notification and reporting of spill incidents or imminent threat of release			
Establish regulatory language for funding mechanisms, enforcement, and sustained response capacity			

Steps for undertaking spill response preparedness and planning coordination			
	Pending	**In progress**	**Complete**
Identify government and industry entities with established responsibilities within emergency spill response			
Formalize participating and contributing members of a national pollution preparedness and response forum (through legislation or intragovernmental agreements)			
Consider contributions or membership to the national forum from other private interests, non-governmental organisations (NGOs) and stakeholders			

Steps for undertaking clear definition of roles and responsibilities in context of spill emergency preparedness			
	Pending	**In progress**	**Complete**
Define the specific government entity (agency/staff) assigned as the competent national authority for preparedness			
If, and as needed, identify the operational response lead agency(ies) for spills within the marine environment and, if other, to shorelines			
Establish clear spill emergency response management organization such as the incident management system or one adopted for national emergencies			
Identify agency leads assigned to key functions within the spill emergency management structure			

Steps for developing capacity in country	Pending	In progress	Complete
Identify key topics and areas needed for capacity building within membership of the national pollution preparedness and response forum			
Develop a step-wise approach to deliver training and obtain experience and expertise			
Enlist international, national, and/or industry assistance and expertise to conduct training workshops (e.g., IMO, regional initiatives such as the Global Initiative, Regional Seas)			
Consider national funding mechanisms with contributions from international partnerships and initiatives			
Ensure personnel that are developing capacity remain engaged in the national spill preparedness effort or forum			

Steps for undertaking the review and assessment of the status of national preparedness	Pending	In progress	Complete
Identify qualified personnel to conduct assessment (in country and/or supplemented with international expertise)			
Compile and review information available (e.g. plans and regulations)			
Conduct interviews with key response authorities			
Inspect and assess spill response equipment and logistical support assets			
Complete review and identify gaps using international guides (e.g. the ARPEL Manual and RETOS tool)			
Prioritize steps to address gaps and identify personnel/groups responsible, resources needed, and timelines			

Recommended steps for development of a national contingency plan	Pending	In progress	Complete
Select contents for a combined oil and HNS contingency plan or for separate plans, and list appendices to plan(s) (see examples in ARPEL, IMO, and neighbouring/regional countries)			
Identify the threats related to HNS and oil at the national level (locations, products and volumes handled) as well as records of spills			

Recommended steps for development of a national contingency plan			
	Pending	**In progress**	**Complete**
Conduct at a minimum a qualitative risk assessment, including prevention and minimization measures, to identify potential impacts and priority areas through use of technically sound trajectory modelling for key spill scenarios			
Establish an inventory of response resources (nationally, regionally and internationally; or Tier 1, 2 and 3), including equipment, manpower, and technical expertise appropriate to the spill hazards and ranges of environmental operating conditions			
Prepare a draft plan using information gathered from risk assessment and assessment of preparedness (Chapter 6) through National Planning Committee efforts			
Utilize flow-diagrams for required notifications, callout procedures, and decision diagrams			
Minimize text to the extent realistic and provide linkages to external supporting documents and tools			

Recommended steps for developing national participation in regional and international preparedness programmes			
	Pending	**In progress**	**Complete**
Enact outreach and liaison with neighbouring countries and counterparts on spill emergency preparedness and planning			
Nominate participating expertise (likely the Competent National Authority) to participate in bi-lateral and regional preparedness initiatives (i.e., Regional Seas)			
Develop procedures and protocols, including spill notification and reporting, to obtain and provide mutual assistance for spill response and for managing International Offers of Assistance			

Steps for establishing and maintaining effective spill emergencies training and exercise programmes			
	Pending	**In progress**	**Complete**
Undertake national training and exercise programme for capacity building (see Chapter 5)			
Establish criteria for minimum training requirements applicable to initial oil spill and HNS responders and incident management team personnel			
Enlist international, regional, and industry expertise for delivering model OPRC and complementary training courses			

Define minimum requirements for exercises to entail notifications, table-tops, and deployments relevant to each tier			
Establish mechanisms to verify training and exercises meet compliance (see also Chapter 10)			

Case Study

The specific legal framework, government organization and regional setting will differ between countries. However, the principles detailed within this guidance can be applied universally. The table below provides a summary of how one country addressed the primary steps needed for implementation of the OPRC Convention. It is hoped this provides motivation and inspiration for others to follow a similar route.

Year	Actions	Comments
-2	CLC and Fund Convention signed	
0	OPRC Convention signed	
2	Oil pollution response Law enacted	Established the principles of preparedness and response, including the powers, duties, liabilities and responsibilities of government institutions, organizations, ships and facilities. Two competent national authorities were established, from the environmental and transportation Ministries.
	National working group established	Key organizations have forum to discuss required legislation and implementation strategy.
3	Regulation on implementation	Defines the actions and methods for the implementation of the Law.
4	Government notification on minimum capabilities for organizations preparing risk assessments and contingency plans	Set standards for organizations compiling contingency plans.
	Order on facilities' contingency plans	Set standards for the content of contingency plans.
5	Order concerning training and exercise	Set standards for the type and frequency of training and exercising. Schedule of national exercises established.
	Government notification on rules for financial insurance for coastal facilities	Established national insurance and liability requirements for facilities not covered by the IMO conventions.
	National plan developed	Established the response organization and operational roles and responsibilities for relevant government entities and private sector.
6	Coastal sensitivity maps developed	Whole coastline mapped by government institute and data consolidated into a geographic information system.
	Regional engagement	Country hosts regional full-scale exercise.

2. ESTABLISH THE LEGISLATIVE BASIS

Chapter 2 presents the process by which a State can meet the requirements of the OPRC Convention and OPRC-HNS Protocol and so benefit from that participation. The chapter addresses:

- The legislation and regulations necessary to create a national pollution response policy and to establish and fund a marine pollution preparedness programme are described in Chapters 2.1 and 2.2.
- The costs associated with, and the potential funding mechanisms for, creating and sustaining pollution preparedness and response are defined in Chapter 2.4.
- Differences between the OPRC Convention and the OPRC-HNS Protocol are described in Chapters 2.3 and 2.5.
- Other relevant conventions associated with maritime safety and marine pollution prevention, such as search and rescue, SOLAS, and MARPOL (chapter 2.6).
- Places of refuge and the recommendation to pre-identify locations where vessels in distress make be stabilized to minimize the risks associated with a spill (chapter 2.7).

The Government of a State that signs the OPRC Convention and OPRC-HNS Protocol should be able to ratify, implement, and enforce their provisions through appropriate national legislation. Given that the process for developing and approving national legislation can take a long time, other steps in the OPRC implementation process may be initiated in parallel with the legislative process.

The ratification process in many countries can be time-consuming. There may be standardized procedural and bureaucratic requirements including: certified translation of the text into the national language, analysis of the cost of implementation, parliamentary scrutiny and enactment of implementing regulations. However, acceptance and implementation of the OPRC Convention and OPRC-HNS Protocol brings significant benefits and should not be an onerous financial burden.

Typically, a State's marine administration administers the implementation of an IMO convention and provides advice to the legal branch and the Government of State as well as advising the oil and shipping industries and port authorities. The OPRC Convention and OPRC-HNS Protocol differ compared to most IMO instruments, in that the responsibilities for implementation may be divided between different government entities. A major oil or HNS pollution incident may potentially impact not only marine interests but also environmental, socio-economic and cultural resources. Such incidents can raise health and safety issues, local authority concerns and involve civil protection structures.

The cross-cutting complexity of marine pollution incidents brings potential challenges in establishing a legal basis for implementation of the OPRC Convention and HNS Protocol.

Recommendation
Allocation of responsibilities for legal issues within the key authorities is critical to progressing ratification and implementation.

See chapter 4 for more information on roles and responsibilities.

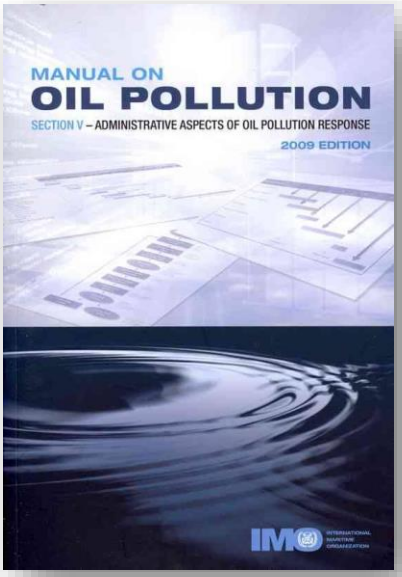
Almost all maritime States have accepted and implemented key existing international marine safety conventions (e.g. SOLAS, Load Lines, COLREG). Implementing these conventions requires some form of maritime administration exist. It is recommended that the existing marine administration be examined and lead coordination of the undertakings and duties involved in ratifying the OPRC Convention and OPRC-HNS Protocol. In some cases, the Government of State may delegate the lead coordination role to another entity early in the process. The entity delegated to lead the coordination is also likely to be designated as a competent national authority under Article 6(1)(a)(i) of the OPRC Convention and Article 4(1)(a)(i) of the OPRC-HNS Protocol.

Go to chapter 3.2 for more information on establishing a national forum for coordination.

TOOLS AND REFERENCES

IMO Manual on Oil Pollution Section II – Contingency Planning, 4th Edition (2016). Appendix 1 contains sample legislation establishing a National Response System.
http://cep.unep.org/racrempeitc/activities/steering-committee-reports/2016-8th-ordinary-steering-committee/OSC%208-10-2%20Section%20II%20of%20IMO%20Manaul%20on%20Oil%20Pollution.pdf

IMO Manual on Oil Pollution, Section V – Administrative Aspects of Oil Pollution Response (2009 edition).



Whichever entity or entities take the lead, early review and consultation within and across government should be conducted to establish a suitable legislative basis for implementation. This would be an early agenda item for a national pollution preparedness and response forum (chapter 3.2).

2.1. Amending Existing Laws or Codes

Many countries are Parties to the International Convention for the Prevention of Pollution from Ships (MARPOL) and have enacted environmental protection laws or codes to either prohibit or control oil or chemical discharges that may result in marine or air pollution. Punitive fines or criminal charges may be associated with violations of such laws.

Regulations or rules that control the creation, management and handling of waste may exist. The type, volume and location of waste generated during an oil spill can create abnormal challenges. It may be necessary to amend waste regulations to allow a relaxation of rules or specific exemptions from normal controls for pragmatic waste management procedures during an emergency response.

The OPRC Convention and OPRC-HNS Protocol require establishing pollution combatting capabilities under a national pollution response policy framework. The national policy considers response methods that may

Legitimate pollution response methods may unintendedly violate environmental protection laws.

Recommendation
To ensure that the full suite of response methods can be considered when a national pollution response policy framework is being developed, a mechanism must be in place that can grant appropriate exemptions from environmental laws that prohibit discharges or emissions. This may require amendments to the existing laws.

include the containment and recovery of floating pollution, enhanced dispersion of oil using dispersants, and the controlled in-situ burning of oil contained by fire-resistant booms, ice or with herding chemicals. The deployment of these legitimate response methods could be interpreted as violations of existing environmental protection laws, e.g. discharging oily water from recovery operations to maximize on-board storage, the addition of dispersant or herding chemicals into the sea, the use of sorbent materials, and the creation of visible air pollution associated with controlled in-situ burning. Exemptions to allow the use of recognized response methods that may be considered polluting, in and of themselves, and a specified process for their approval, should be available for appropriate circumstances.

2.2. Regulating Pollution Preparedness and Response

The full implementation of the OPRC Convention and the OPRC-HNS Protocol requires the development of regulation(s) that address the following:

- Requirements for oil pollution emergency plans for ships, offshore units, sea ports and oil handling facilities aligned to the national system (OPRC Convention Article 3 and OPRC-HNS Protocol Article 3);
- Reporting procedures for discharges or probable discharges of oil or HNS irrespective of the source (OPRC Convention Article 4 and OPRC-HNS Protocol Article 3); and
- Establishing national and regional systems for preparedness and response (OPRC Convention Article 6 and OPRC-HNS Protocol Article 4). This should define clear mandates and responsibilities for key authorities (see Chapter 4 concerning roles and responsibilities).

Go to chapter 4 for more information on roles and responsibilities.

Further regulations or rules may be required to address technical aspects of preparedness and response, for example:

- The approval and authorization for use of oil spill control agents (e.g. dispersants, herders and sorbents);
- The approval of in-situ burning;
- The authorization for use of subsea dispersants; and
- The accreditation or approval of oil or HNS spill response organizations.

The IMO has published Guidelines for the Use of Dispersant for Combating Oil Pollution at Sea, Part II, Template for National Policy for Use of Dispersants. This template can assist in developing dispersant regulation.

Relevant regional or international published guidelines may be considered prior to finalizing legislation. This may include reporting or communication procedures used at the regional level or technical/operational guides. Such guidance can be incorporated or referenced in a draft national contingency plan.

2.3. Applicability to all Oil and HNS Pollution Risks

The OPRC Convention represented a landmark convention for IMO by extending its mandate beyond pollution from ships; the Convention applies to all oil pollution incidents no matter what their source. The OPRC-HNS Protocol adopted a similar approach. Sectors regulated under different laws, such as shipping, the offshore industry, pipelines and oil handling facilities, may require new or amended legal instruments that are aligned under the Convention and Protocol framework with respect to pollution preparedness and response.

The broad applicability of the OPRC Convention and OPRC-HNS Protocol requires that legislative developments or amendments may be required across sectors.

This requirement emphasizes the need for a national forum for coordination.

Coordination between different sectoral regulators may be an important factor in ensuring the timely and aligned development of the necessary new or amended legal instruments. Further information is provided in Chapter 3.

2.4. Funding Pollution Preparedness and Response

"What are the costs and who pays?" are high priority questions frequently raised when establishing a legislative basis for pollution preparedness and response. The "polluter pays" principle is generally accepted in international environmental law but implementing the concept can become complex.

The costs associated with managing oil and HNS pollution preparedness and response can be divided into two main categories:

- 'Fixed costs' are primarily associated with preparedness and are incurred in the absence of any incidents. They include:
    - the development and implementation of national and facility contingency plans;
    - procurement and maintenance of appropriate equipment stockpiles; and
    - the training and exercising of personnel.
- 'Additional costs' are incurred in the event of response to an incident and include, but are not limited to:
    - the mobilization of response capability to combat the pollution;
    - associated logistics;
    - personnel costs;
    - waste treatment;
    - environmental reinstatement;
    - third party claims; and
    - government and agency costs.

It is relatively straightforward to enact national legislation requiring certain entities with pollution risks, such as operators of offshore units, ports and marine terminals, to address their internal fixed costs (typically the development of facility plans, response capacity and trained personnel within an organization). The same entities can also be required to have a

financial mechanism in place, through insurance or reserves, to meet potential additional costs arising in case of a pollution incident. Such legislation addresses the requirements of the OPRC Convention Article 3 and OPRC-HNS Protocol Article 3.

The development of facility or port contingency plans, response capacity, and associated personnel is normally limited to internal capability of the facility operators, possibly supported by direct or retained contractors for larger incidents. Government agencies at local or national levels who incur fixed costs in the review, support, and monitoring of these pollution preparedness and response activities are typically funded through national budgets or other sources of authorities' income.

The overall national capacity for preparedness and response requires a budget. A national budget to cover fixed costs may include:

- the allocation of certain responsibilities with respect to development of a national contingency plan;
- engagement and regional co-operation; and
- an emergency fund to respond to possible mystery or orphan pollution events with no identified polluter or responsible entity.

Additional costs incurred during an incident by national / local government and their contractors can be reclaimed from the polluter when known. For incidents from ships, this issue can be addressed through the compensation regime established under various IMO instruments. For offshore units, it is possible to enact national legislation that places liability for incidents, including additional costs and compensation, squarely on the operator.

Go to chapter 11 for information on the international regime for compensation relating to ship-source pollution.

Challenges can be expected if government fixed costs are added to the costs incurred for an incident response. Successful and welcomed preventive actions reduce the occurrence of incidents and consequently the opportunity for government to recoup fixed costs through this route. Furthermore, a legal argument may be presented that under the international regime it is unreasonable to charge a polluter for fixed costs.

An alternative approach is for governments to impose a direct levy on industry or shipping operations or include a line item for preparedness and response in national budgets funded by State-owned oil companies. There may be a reluctance to do this as it could be detrimental to competitiveness. Furthermore, imposing a tax or levy raises practical issues. A national response framework invariably involves a multitude of entities from both local and national government, across different Ministries and Agencies. Some of these entities may already have established emergency or civil protection procedures and capacity, which are likely to be funded from disparate budgets. Efforts to bring them together under a single budget could be complex, challenging, and bureaucratic.

A country may overcome some of these funding complexities by enacting legislation that provides a preparedness budget line (derived either from overall national taxation or a specific tax or levy) for the competent national authority or authorities as identified under the OPRC Convention and OPRC-HNS Protocol. This budget would cover the clearly identified fixed costs of preparedness outside of the private sector's mandated emergency planning. Those government entities beyond the competent national authority would be expected to participate in preparedness activities, including training and exercising, within their existing means.

Table 2-1 summarises the types of fixed and additional costs arising from pollution preparedness and possible sources of funding and support to address them.

Table 2-1 – *Costs arising and possible sources of funding and support*

Costs		**Possible sources of funding and support**
Fixed (preparedness)	Development of national and local contingency plans	• IMO technical co-operation programme and assistance • International and/or regional programmes • Donor agencies or international financial institutions • Tax or levy on oil and HNS imports/exports • Line items in budgets funded by State Owned Oil Companies • NGO programmes
	Equipment stockpiles and supporting resources	
	Training and exercise programme	
Additional (response)	Personnel and equipment mobilization and deployment	• Polluter pays principle • International compensation regime for ship-source pollution • National emergency fund (from taxes or levies)
	Logistical support and services	
	Waste treatment and disposal	
	Reinstatement or restoration of environment	
	Claims for economic losses	

Go to chapter 5 for more information on building capacity.

2.5. Challenges of HNS Preparedness and Response

The foregoing sections have addressed issues associated with both the OPRC Convention and OPRC-HNS Protocol. However, it should be acknowledged that preparedness and response to oil versus HNS pollution incidents present some significant differences as summarized in Table 2-2.

Table 2-2 – *Summary of the differences between oil and HNS responses*

Oil	HNS
• Preparedness & response to marine oil spills is relatively well understood • Although there are different types of oil, there is some uniformity in properties and behaviour • Approach and equipment options are the same and relatively standard • Relative danger and hazard to human health is lower • Oil normally floats and spills are visible • Oil spill response technology is well developed • Greater potential for large spills to cross international maritime borders and require bi-lateral and multilateral coordination • Spills on the water surface may spread over extensive areas, presenting appearances that can drive media, social and political fears	• Response difficult or impossible, depending on substance • Large number and wide variety of substances (> 8 million), with differing properties and behaviour from substance to substance • Varying type and degree of hazard • Potential for significant danger (explosive, flammable) and hazard to human health (corrosive, toxic) • In many cases, spills would not be visible and/or not float • Potential adverse reactions from chemical reactions between substances and/or with seawater • Marine chemical spill response technology is still in its infancy • Specialized response equipment and personal protective equipment (PPE) may not be readily available or understood

The specific safety concerns and response complexities associated with HNS pollution incidents have direct implications for the development of national policy and legislation. The OPRC-HNS Protocol allows flexibility in its implementation but this raises various questions about applicability (e.g. types and volumes of HNS covered) and emergency planning requirements for those handling or shipping HNS.

For some countries, it may be decided that ratifying and implementing the OPRC Convention is the priority. Whilst the various challenges of HNS preparedness and response have been highlighted, some of the organizational framework for command, control, and co-ordination may overlap with oil spill preparedness. There will be a need for additional specialized advice on the behaviour, fate, threat to responders and the environment posed by HNS incidents. The conventional resources established for oil spill response may not be applicable to many HNS spills. In this context, after a functioning national response system for oil pollution is established and embedded, attention would then be turned to extending this to the OPRC-HNS Protocol.

2.6. Links to other Conventions

The OPRC Convention recognizes the importance of precautionary measures and prevention in avoiding oil pollution in the first instance, and the need for strict application of existing international instruments dealing with maritime safety and marine pollution prevention. Two key Conventions are:

- the International Convention for the Safety of Life at Sea (SOLAS)[3] 1974; as amended; and
- the International Convention for the Prevention of Pollution from Ships (MARPOL)[4] 1973, as modified in 1978 and as amended.

The latter is known as MARPOL and addresses pollution from ships by oil; by noxious liquid substances carried in bulk; harmful substances carried by sea in packaged form; sewage, garbage; and the prevention of air pollution from ships. MARPOL is primarily a technical instrument and has greatly contributed to a significant decrease in pollution from international shipping.

The OPRC Convention's Article 3(1)(b) on requirements for ships to have on board an oil pollution emergency plan and Article 4(2) on reporting requirements make specific reference to analogous requirements under MARPOL. This ensures consistency between the two instruments, albeit they have a different focus, prevention in the case of MARPOL and preparedness for the OPRC Convention.

Go to chapter 11 for information on the international regime for compensation relating to ship-source pollution.

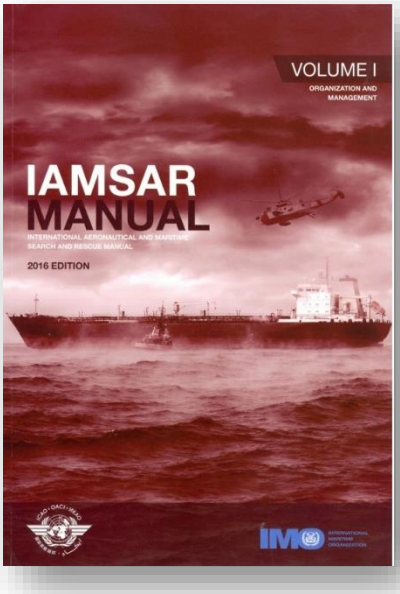
The OPRC Convention takes into account the importance of the IMO's liability and compensation instruments for ship-source marine pollution. The Convention encourages Parties to give the instruments due consideration and to co-operate when settling compensation claims. The IMO

[3] See http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Safety-of-Life-at-Sea-%28SOLAS%29%2c-1974.aspx.
[4] See http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-%28MARPOL%29.aspx.

compensation regime forms an integral part of a preparedness and response regime (Chapter 11).

There are regional, multilateral and bilateral co-operation agreements developed or amended to align with the requirements of the OPRC Convention and OPRC-HNS Protocol. These agreements aim to ensure a consistent and integrated co-operation framework between national, regional and international levels. National laws and regulations need to consider any commitments made under these various agreements that go beyond the requirements of the Convention and Protocol.

Go to chapter 8 for more information on regional co-operation.



The International Convention on Maritime Search and Rescue (SAR) has developed an international SAR plan so that, no matter where an accident occurs, the rescue of persons in distress at sea will be co-ordinated by a SAR organization and, when necessary, by co-operation between neighbouring SAR organizations. The network and communications under the SAR arrangements (i.e. Maritime Rescue Coordination Centres) can be utilized for reporting and coordination of pollution incidents, as they have extant 24/7 operational capability. Conversely, it is accepted that maritime assets, including personnel and logistical resources, may be prioritised for SAR operations in the case of incidents that include combined elements of persons in distress and pollution response.

2.7. Places of Refuge

The issue of "places of refuge" relates to stricken vessels which may pose a threat to the marine ecology and socio-economic activities in an area. IMO Resolution A.949(23) 'Guidelines on places of refuge for ships in need of assistance' are intended for use when a ship is in need of assistance but the safety of life is not involved. Where the safety of life is involved, the provisions of the SAR Convention should continue to be followed.

The guidelines recognize that, when a ship has suffered an incident, the best way of preventing damage or pollution from its progressive deterioration is to transfer its cargo and bunkers, and to repair the casualty. Such an operation is best carried out in a place of refuge. However, to bring such a ship into a place of refuge near a coast may endanger the coastal State, both economically and environmentally, and local authorities and populations may strongly object to the operation.

Granting access to a place of refuge could involve a political decision which can only be taken on a case-by-case basis. In so doing, the IMO Guidelines should be taken into account and consideration would need to be given to balancing the interests of the affected ship with those of the environment.

It is recommended that coastal States designate places of refuge for use when confronted with situations involving ships (laden tankers, in particular)

in need of assistance off their coasts and, accordingly, draw up relevant emergency plans. Being unprepared to face such situations increases the risk of the wrong decision being made by improvising or, in the heat of the moment, acting under pressure from groups representing various interests.

2.8. Summary

Recommended steps for establishing a sound legislative basis for implementing the OPRC Convention and OPRC-HNS Protocol entail:

- educating appropriate national entities on the importance of implementation to garner needed political will for implementation;
- including ministries and authorities responsible for legal, environmental, disaster preparedness, contingency planning, port and maritime operations, and enforcement;
- establishing budgetary requirements and timelines for implementation with associated deadlines;
- establishing the government authority for spill preparedness and response and task with developing draft laws and regulations to address the six conditions for implementation (see Chapter 1.3);
- identifying legal counsel to work with the drafting authority;
- defining in law concepts of polluter pays principle and requirements for contingency planning, including national authority(ies) for preparedness and response;
- establishing requirements for notification and reporting of spill incidents or imminent threat of release;
- establishing regulatory language for funding mechanisms, enforcement, and sustained response capacity;
- establishing regulatory language requiring oil and shipping operators to secure a minimum level of spill response equipment;
- establishing a training and exercise programme along with requirements to review and update national contingency plan; and
- developing a strategic plan for implementation with assignments, funding requirements and associated deadlines.

3. COORDINATE WITHIN GOVERNMENT

Chapter 3 emphasizes the importance of a coordinated approach to oil and HNS spills that involves government agencies, the private sector and public participation.

- Marine pollution preparedness and response requires a multidisciplinary programme that encompasses a wide range of agencies, administrative and regulatory bodies, environmental and economic issues, integration with the private sector, and communication with the public (Chapter 3.1).
- A national forum can provide a first step to introduce the concept and to discuss potential intra-governmental and private sector coordination options (Chapter 3.2).
- The international shipping and oil industry may be a valuable resource for a developing preparedness and response programme. These maritime industries have created cooperative organizations that provide technical support and, in some cases, a response capacity, to their members (Chapter 3.3).

3.1. Marine Pollution Preparedness and Response as a Multi-Disciplinary Issue

Marine pollution and actions to combat it can impact ecological resources, disrupt local economic activities, and disturb cultural sites or features. The effort to plan for and respond to such pollution invariably involves a range of government Ministries, Departments and Agencies. Beyond the potential impacts to environmental and economic resources, the response can raise significant challenges concerning:

- maintaining safety of the community and responders;
- managing personnel;
- coordinating support from within and possibly beyond a country's shores;
- integrating or overseeing private sector capability; and
- maintaining public information systems.

The potential internal administrative and regulatory cross-sectoral, multi-disciplinary, and transboundary features of dealing with major marine pollution incidents need to be recognized. Identifying and addressing these issues is fundamental to effective implementation of the OPRC Convention and OPRC-HNS Protocol. It is therefore important that multiagency awareness be conducted to emphasize the risks of being unprepared, along with the benefits of implementation.

There may be a variety of governmental entities with legitimate roles in preparedness, response and co-operation or possibly all three. These entities may not, in their normal business, be either familiar with each other or used to working together. There may be overlapping responsibilities bringing potential confusion and inefficient response.

Recommendation

To avoid confusion, actions to implement the OPRC Convention and the HNS Protocol should be discussed and agreed through some form of national intra-governmental forum.

See chapter 4 for more information on roles and responsibilities.

3.2. National Pollution Preparedness and Response Forum

A national intra-governmental forum that is appropriate for discussion of OPRC Convention and OPRC-HNS Protocol implementation may already exist. This may be a committee or group charged with overall responsibility for disaster or emergency management. Alternatively, a state may have an established civil protection framework under which implementation can be discussed. Whilst such groups or frameworks may be available to place implementation within their remit, it is possible that their maritime expertise and marine awareness is underdeveloped. In many cases the responsibility of preparedness, response and cooperation falls to different agencies, which can bring complications and emphasizes the need for intra-governmental discussions.

A national forum for pollution preparedness and response should have its terms of reference endorsed from the highest political level (for example a Prime Ministerial or Presidential Office). Box A provides an example of how the forum may be organized.

Box A: Organizing a national forum

Participants

Membership should integrate governmental representatives from key interests, supplemented by additional representatives able to address health and safety, regional co-operation and transboundary issues, finances and logistics as needed. Typical participants include:

- Ministry of Transport (e.g. Maritime Administration, Coastguard)
- Ministry of Environment (e.g. Nature Conservation, Fisheries)
- Ministry of Public Works
- Ministry of Defence
- Ministry of Finance
- Ministry of Foreign Affairs
- Ministry of Energy
- Ministry of Internal Affairs
- Civil Protection interests
- Private Sector (as contributing observers, e.g. oil and shipping industries)

Remit

To discuss and propose or agree required legislative changes; designated responsibilities and duties required by the OPRC Convention or OPRC-HNS Protocol; and each entity's role in the implementation process

Meeting frequency

At least biannually, with delegated tasks and deadlines set to ensure progress between meetings. In addition, technical workshops may be organized to help development or review of the national contingency plan.

Poor coordination between key organizations is one of most frequent causes of delays in implementation.

Recommendation

Representatives from key organizations should be of sufficient seniority to make substantive contributions to the dialogue, endorse decisions, and approve a work programme.

The agenda and work programme for the forum can be based on the steps described within this guidance (for example, Chapter 1.3).

3.3. Engagement with Private Sector

The OPRC Convention emphasizes the important responsibilities that the oil and shipping industries have in effective preparation for combating oil pollution incidents. These responsibilities include prescriptive requirements for emergency planning (Article 3) and pollution reporting (Article 4), and a reference to co-operation in ensuring suitable response, exercise, training, communication, and coordination capabilities are established (Article 6).

These maritime industries are likely to have expertise in the fate and behaviour of spilled oil, health and safety issues, environmental impacts of oil pollution and technical knowledge relating to response methods. Therefore, engagement with the oil and shipping industries at an early stage of OPRC Convention planning and implementation is beneficial, can save time, and is encouraged.

Where there is an established or developing offshore oil industry, there may be individual companies or national/regional associations which may be willing to support and contribute to the process. This effort can include channelling international support, sharing of experiences, and promoting good practices. Oil companies may be able to mobilize significant logistical and operational response through their corporate structures. The oil industry also owns various not-for-profit oil spill response co-operatives. These co-operatives often have knowledge- and equipment-sharing and outreach programmes, along with holding a substantial in-house response capability that is maintained and operated by dedicated personnel.

Oil companies, through their various associations, actively co-operate to improve maritime safety, pollution prevention, preparedness, and response. International associations created by the oil industry[5] have active programmes and published resources to facilitate and encourage their members to engage with the development of national and regional response frameworks. IPIECA has participated in a joint 'Global Initiative' programme with IMO since 1996 with key objectives that include encouraging and supporting the ratification and implementation of the OPRC Convention.

The shipping industry also supports national and regional efforts to implement the OPRC Convention. Some States may have a national association able to represent shipping interests. From the international perspective, the International Tanker Owners Pollution Federation (ITOPF), a not-for-profit organisation funded by shipping insurance syndicates, has a breadth of marine oil and chemical spill response experience. ITOPF has

The private sector may have substantial expertise and capacity to support development of national preparedness and response.

Recommendation
Engaging the oil and shipping industries as observers within a national forum can be beneficial and facilitate expedited implementation.

[5] Primarily IPIECA (the global oil and gas industry association for environmental and social issues) and IOGP (the International Association of Oil & Gas Producers)

developed a wide range of technical services to promote effective response and to support their core role of responding to ship-source spills[6].

Depending on the circumstances, technical staff from ITOPF or other organizations may be available to support activities organized in conjunction with governments, including capacity building, training and contingency planning, as part of a programme to implement the OPRC Convention and OPRC-HNS Protocol.

3.4. Summary

Steps for undertaking spill response preparedness and planning coordination within a country include:

- identify government and industry entities with established responsibilities within emergency spill response;
- formalize participating and contributing members of a national pollution preparedness and response forum (through legislation or intra-governmental agreements);
- how the State will handle spill risks that do not have a responsible entity or adequate means to respond, including development of mutual aid agreements, participation in bi-lateral or multi-lateral agreements, retainers with commercial service providers or the establishment of State-owned response capability; and
- consider contributions or membership to the national forum from other private interests, non-governmental organisations (NGOs), and stakeholders.

[6] See ITOPF technical documents at: http://www.itopf.com/knowledge-resources/documents-guides/technical-information-papers/

4. CLARIFY ROLES AND RESPONSIBILITIES

Chapter 4 explains the critical organizational and responsibility framework to establish the capacity to effectively plan for, implement, and manage an oil or HNS pollution incident at sea. Key aspects of the chapter include:

- The importance of establishing a competent national authority or authorities for oil and HNS pollution. The competent national authority or authorities is a point of contact for all administrative and operational activities (Chapter 4.1).
- The operational component of a response to an oil or HNS spill may reside with a competent national authority or this role may be assigned to a different agency, such as a maritime administration, Navy, Coast Guard or an environmental agency (Chapter 4.2).
- Well-defined roles and responsibilities, and having a single decision-making authority, in a response to a spill that reaches a shoreline as frequently there are overlapping authorities or environmental and economic interests (Chapter 4.3).
- Roles and responsibilities are defined in a spill management plan. A common and internationally-accepted approach to organizing and managing major emergencies follows the Incident Management System (IMS). This concept can be adapted to fit an existing national organizational structure and system for disaster management or civil protection (Chapter 4.4).

The extent to which a response is successful can often be attributed to the effectiveness of the incident management system and how well it is implemented. Clear assignment of roles and responsibilities of personnel and organizations is important for all planning and response levels, from the national framework to a specific facility or site. Alignment of emergency management organization and roles across planning levels (local-regional-national and reflected in Tiers 1, 2 & 3; see chapter 7.3.2) is recommended. Consistency of expectations, terminology, and familiarity across these levels facilitates integration and co-ordinated response actions between organizations.

It is a requirement that key roles and responsibilities are defined. They may already be defined in legislation; this should be clarified.

Go to chapter 2 for more information on national legislation.

Small and/or developing States may experience difficulty in finding sufficient and suitable personnel to fill key roles in a response organization. In these cases, the response structure may need to be reduced in size and individuals or teams may need to be prepared to be involved in more than one type of emergency response, having roles in one or more of oil spill response, fire, civil defence, etc.

This chapter addresses the following key requirements for the OPRC Convention Article 6(1)(a) and OPRC-HNS Protocol Article 4(1)(a) implementation, which includes designation of the following:

- the competent national authority, or authorities, and operational contact points for oil and HNS pollution preparedness and response (including alert and notification);
- the authority entitled to act on behalf of the State to request assistance or to decide to render assistance requested;
- the authority to lead the National Contingency Plan development;
- the authority assigned as the spill emergency operational lead; and
- the roles and responsibilities of authorities, industry, and others in planning and operational response.

4.1. Responsibilities for Preparedness

Government, industry and other stakeholders have a mutual interest in having integrated and comprehensive spill contingency plans and associated response capabilities and preparedness. One of the most substantial challenges in developing and implementing a preparedness programme is to have identified an authority and even specific individuals tasked to lead the effort. The same authority (and individuals) must be provided with the management and financial support to undertake their responsibility.

A wide variety of local to national government entities and other stakeholders can be expected to contribute to the national planning and preparedness effort. The **competent national authority** is the authority, or authorities, designated under the OPRC Convention and OPRC-HNS Protocol as having responsibility for preparedness and response to oil or HNS pollution incidents. The competent national authority or authorities makes and implements decisions to mitigate the threat of such incidents.

The competent national authority, or authorities, is typically delegated as the lead for national contingency plan development, review, revision and updates as the plan custodian. This may or may not be the national authority in charge of operational aspects of implementing the national preparedness and response programme. A national pollution preparedness and response forum is recommended as a mechanism to bring together all the key organizations. This forum should support the national contingency plan and its development. Within the forum's participants, identification should be made of those authorities able to contribute technical knowledge and outreach in:

- emergency management and pollution response;
- contingency plan development;
- legal provisioning / legal counsel;
- financial support (e.g. Ministry of Finance);
- natural resources (biota, sensitive and protected areas, cultural sensitivities);
- environmental regulations and enforcement;

A national preparedness and response forum should support the competent national authority in the development of the national contingency plan.

Go to chapter 3.2 for more information on a national forum.

Assignment of political appointees often does not provide an appropriate expertise for the competent national authority.

Recommendation

Assign duty to an agency and personnel with expertise in:

- *oil and HNS response methods*
- *environmental protection*
- *marine salvage*
- *maritime operations*
- *leadership skills*

- logistical support (e.g. Ministry of Public Works)
- vessel and port operations entailing movement and transfers of oil and HNS cargo;
- vessel salvage and firefighting operations;
- offshore and shore side oil development, production and storage;
- customs and immigration rules and procedures;
- public health and safety; and
- waste management.

4.2. Responsibilities for Operational Response

The operational lead for response to oil or HNS pollution incidents may be the same competent national authority tasked with national planning, or may be different assigned authority. The success of the response to a spill event hinges on the capability of the authority designated to lead operational response. As such, the operational lead for response should:

- be clearly identified in legislation and national contingency planning;
- have a capacity for directing operations at sea, along coastlines, and in air;
- be recognized and supported by government and industry responders; and
- identify capable, trained personnel to fulfil the emergency leadership role and provided those individuals with full authority to make decisions and to incur costs for response.

A competent national authority oversees communication between public institutions and the private sector. This authority often is typically a maritime administration, Navy, Coast Guard, Harbourmaster or an environmental agency. The authority provides qualified staff to direct the response effort in conjunction with the polluter or independently (if there is no identified polluter or if the response is considered by the competent national authority to be inadequate).

The OPRC Convention and OPRC-HNS Protocol (and the MARPOL Convention) also require the designation of the **national operational contact point** or points, responsible for receipt and transmission of pollution reports. The contact points should be available 24 hours with staff aware of the onwards notification cascade and related procedures. The national operational contact point may be the same or a different entity as the competent national authority.

Corroborate that appropriate expertise is available within the assigned authorities to undertake their duties (obtain training if needed).

The OPRC Convention and OPRC-HNS Protocol stipulate the designation of an authority entitled to act on behalf of the State to request assistance or to decide to render assistance requested. It is important that this entity is aware of the operational priorities during incidents (see chapter 8.2). The assisting entities should work closely with both the competent national authority and

the national operational contact point to ensure timely and efficient communications and decision-making in relation to regional and international support mechanisms.

Response operations are generally less complicated when the same agency is responsible for both oil and HNS spill response. This not only facilitates a consistent approach to maritime emergency response but is also relevant in the context of spills incidents involving both oil and HNS, especially in the case of incidents involving container ships.

Usually no single competent national authority possesses the skills necessary to address all aspects of the response to a major pollution incident. It is essential that the designated competent national authority has the authority and ability to coordinate the efforts and input from various supporting agencies that possess the supplemental skill sets. It is also essential that the competent national authority has jurisdiction and the ultimate decision-making authority for oil spill and/or HNS preparedness and response and that the supporting agencies do not have overlapping or duplicative remits. This can lead to inefficient preparedness and response, including contradictory and confusing directives to industry.

Confusion can arise if there are different organizational structures and responsibilities for dealing with on-water and shoreline pollution preparedness and response.

It is imperative that a national contingency plan address this issue and clarifies the procedures and structures for integrated response.

4.3. On-water and Shoreline Preparedness and Response

The potential division of responsibilities between preparing for and dealing with pollution on the water, compared to pollution which has stranded on a shoreline, commonly raises challenges.

In an on-water incident, the identification of a competent national authority or the operational response lead agency may be straightforward as this entity may be part of a maritime administration or sit within a Ministry/Department of Transport or Ministry/Department of Environment.

When pollution affects a shoreline, the number of entities with legitimate interests increases, with local government or civil protection frameworks potentially mandating roles for multiple organizations. As this situation typically involves overlapping authorities or interests, it is vital that a national contingency plan clarifies:

- the competent national authority, or authorities, in relation to both on-water and shoreline pollution;
- the coordination mechanisms to ensure an integrated response to an incident that simultaneously has pollution on-water and either stranded on or threatening shorelines; and
- all agencies that may be involved and their potential roles.

Review existing civil protection or other national emergency frameworks for organizational alignment with best practices (Incident Management Systems).

4.4. Incident Management Systems

The response management organization should define a response structure that addresses the needs for coordination and communication between

government, industry, other participants, and the public. A commonly used and internationally accepted approach to organizing and managing major emergencies is the Incident Management System (IMS). In some cases, a country may utilize an existing national organizational structure and system for disaster management or civil protection.

A well-defined system, with clear roles and responsibilities and that is regularly exercised, helps to ensure that all stakeholders understand and, as appropriate, can support the adopted IMS system. The IMS structure should have a clear hierarchy, provide for management by objectives, and have an organizational structure that can address the key functions of command, operations, planning, logistics and finance and their subordinate groups. The IMS structure should be flexible and adaptable to the scale, nature, and extent of the incident to be managed. Organizational structures should be defined for each planning level or Tier.

4.5. Summary

Steps for undertaking clear definition of roles and responsibilities in context of spill emergency preparedness include:

- define the specific government entity (agency/staff) assigned as the competent national authority for spill response preparedness;
- if, and as needed, identify the operational response lead agency(ies) for spills within the marine environment and, if other, to shorelines;
- establish clear spill emergency response management organization such as the incident management system or one adopted for national emergencies; and
- identify agency leads assigned to key functions within the spill emergency management structure.

TOOLS AND REFERENCES

IMO Guidance on the Implementation of an Incident Management System (IMS), 2012

IPIECA-IOGP Incident Management System for the Oil and Gas Industry, 2014. http://www.ipieca.org/resources/good-practice/incident-management-system-ims/

IMO List of National Contact Points for Pollution Reporting from Ships- http://www.imo.org/en/OurWork/Circulars/Documents/MSC-MEPC.6-Circ.15%20Annex%20(SOPEP)%20-%2031%20March%202017.pdf

5. DEVELOP CAPACITY

Capacity building for oil and HNS pollution preparedness and response involves:

- establishing step-wise goals and targets (Chapter 5.1) for a wide range of activities, such as:
  - enacting legislation,
  - identifying environmental risks,
  - creating a well-maintained pool of response equipment,
  - management and operational training and exercises, and
  - assessing response preparedness;
- identifying potential internal and external sources of guidance and support (Chapter 5.2).

An important step for implementing the OPRC Convention and OPRC-HNS Protocol is awareness and understanding of the challenges and issues in pollution preparedness and response through capacity building. Capacity building may be accomplished either in-country or externally by providing the fundamental knowledge and skills to allow assigned personnel to undertake their duties. Initial 'buy-in' and discussion amongst the key players is critical for further implementation steps; this cannot be over-stated. A national pollution preparedness and response forum provides the mechanism for on-going feedback and clarifications throughout the implementation process. The forum can also coordinate or solicit potential financial or technical support for the implementation process from international organizations and programmes (e.g. the IMO-IPIECA Global Initiative, international financial institutions, and donor agencies).

Capacity building may involve a varied combination of seminars, training, workshops, study tours, conferences, and other means.

A national preparedness and response forum provides the mechanism for capacity building discussions.

Provision of technical co-operation is a tenet of the OPRC Convention (Article 9) and OPRC-HNS Protocol (Article 7), which state:

(1) Parties undertake directly or through the Organization [IMO] and other international bodies, as appropriate, in respect of preparedness for and response to pollution incidents, to provide support for those Parties which request technical assistance:

a) to train personnel;

b) to ensure the availability of relevant technology, equipment and facilities;

c) to facilitate other measures and arrangements to prepare for and respond to pollution incidents; and

d) to initiate joint research and development programmes.

(2) Parties undertake to co-operate actively, subject to their national laws, regulations and policies, in the transfer of technology in respect of preparedness for and response to pollution incidents.

IMO has developed a wide array of tools, including model training courses, manuals and guidance documents[7], to assist countries in developing capacity for oil and HNS pollution preparedness and response. States may also request assistance from IMO, through its Integrated Technical Co-operation Programme, in meeting these obligations.

Go to chapter 9 for more information on Model training courses.

Throughout much of the developing world, capacity building efforts may be delivered without implementing guidelines. States may accept offers and/or expend their own funds for training, technical assistance and resource procurements without sound long-term plans of how to effectively capitalize on the efforts and truly build sustainable preparedness and response capacity. The scope of various international, governmental and nongovernmental capacity building programmes available to countries in need is extensive, but all too often these programmes are neither properly integrated nor designed to optimally build upon each other in a successive manner that moves the State(s) towards a more robust response preparedness posture. The following sections identify how to address these challenges.

5.1. Scoping Project Proposals

An important step in capacity building is to clearly identify a path forward with well-defined step-wise targets and specific focused goals for participating personnel. Model OPRC and HNS training courses provide a foundation for operational to managerial-level capacity building. Other scoping projects or proposals can and should focus on specific areas or topics for concerted expertise and capacity building. Examples of specific scoping projects include, but are not limited to:

- Developing legislation
- Development or review of existing national contingency plan
- Risk assessment
- Sensitivity mapping
- Identifying appropriate types and amounts of response equipment
- Technical aspects for specific HNS pollution incidents

States may be challenged to have the capacity for assessing or developing an appropriate national response system and capability.

Recommendation
Prepare project-specific Terms of Reference for capacity building training and workshop programmes and solicit interest from IMO, Regional Seas programmes, donor agencies, national development programmes, neighbouring countries, industry and NGOs.

Several mechanisms provide opportunities for capacity development, either nationally or in context of regional programmes. For example, a workshop approach successfully implemented in the Caribbean was designed around a five-step process:

1) Improve understanding of the oil spill contingency planning process;
2) Develop familiarization with, and provide tools for, implementing national oil spill preparedness and response drills and exercise programmes;

[7] See IMO Publications: http://www.imo.org/en/Publications/Pages/Home.aspx

3) Preliminary assessment of national oil spill preparedness and response programmes, national response systems and national contingency plans of the Wider Caribbean Region using simple table top exercises;
4) Further assessment of national oil spill preparedness and response programmes, national response systems and national contingency plans of the Wider Caribbean Region using RETOS™; and
5) Depart the workshop with a strategic plan framework that can be directly used to build capacity and make needed changes to national oil spill preparedness and response programmes, national response systems, and national contingency plans.

5.2. Sources of Guidance and Support

Through the OPRC Convention and OPRC-HNS Protocol, governments agree to provide support for countries requesting technical assistance with respect to oil pollution preparedness and response and to cooperate actively in the transfer of technology, either bilaterally or multilaterally, through IMO and other international bodies. Within the framework of the International Technical Cooperation Programme (ITCP), IMO provides assistance to Member States through activities aimed at implementing thematic priorities relating to the protection of the marine environment. Examples include, but are not limited to, assisting countries in implementing the OPRC Convention and the OPRC-HNS Protocol and enhancing regional cooperation in marine pollution preparedness, response and cooperation. This support extends to addressing aspects of the implementation of relevant international regimes on liability and compensation for oil and HNS pollution damage.

Marine pollution preparedness and response projects are an important part of IMO's Programme on Technical Co-operation for the Protection of the Marine Environment and an important means by which the strategy for implementing the OPRC Convention is realized.

IMO has been successful in integrating OPRC-related issues into regional action plans and projects supported by the United Nations Environment Programme (UN Environment), the United Nations Development Programme (UNDP), and the Global Environment Facility (GEF), as well as mobilizing funding support from multiple interested governments through their donor agencies or national development programmes.

Regional and/or joint government and industry initiatives such as the Global Initiative provide a forum and structure whereby experts in areas of spill response preparedness are available to train and assist personnel tasked with, or contributing to, the development of national, regional, and international response capability. The Global Initiative (GI)[8] is defined as an umbrella for various mechanisms by which the IMO and industry, primarily through IPIECA, co-operate to support national and regional implementation of the OPRC Convention and to enhance oil spill preparedness and response capacity through the mobilisation of external assistance and industry support

GI WACAF has been providing a targeted and coordinated programme of oil spill preparedness activities in West and Central Africa since 2006 – see http://www.giwacaf.net/en/ for details.

[8] See information on the IMO GI at: http://www.imo.org/en/OurWork/Environment/MajorProjects/Pages/GIProjects.aspx

at the national level. The overall aim of the GI is to improve and sustain the capability of developing countries to protect their marine and coastal resources at risk from an oil spill incident from any source through the implementation of the OPRC Convention. Assistance to developing countries takes the form of training, workshops and technical missions. The GI brings together a broad network of expertise including IMO, IPIECA, ITOPF, IOPC Funds, NGOs and the local oil industry.

5.3. Summary

Steps for developing capacity in country include:

- identify key topics and areas in need of capacity building within the national pollution preparedness and response forum;
- development or review of existing national contingency plan;
- develop a step-wise approach to deliver training and obtain experience and expertise;
- enlist international, national, and/or industry assistance and expertise to conduct training workshops (e.g., IMO, regional initiatives such as the Global Initiative, Regional Seas);
- consider national funding mechanisms with contributions from international partnerships and initiatives; and
- ensure personnel that are developing capacity remain engaged in the national spill preparedness effort or forum.

6. REVIEW AND ASSESS STATUS OF NATIONAL PREPAREDNESS

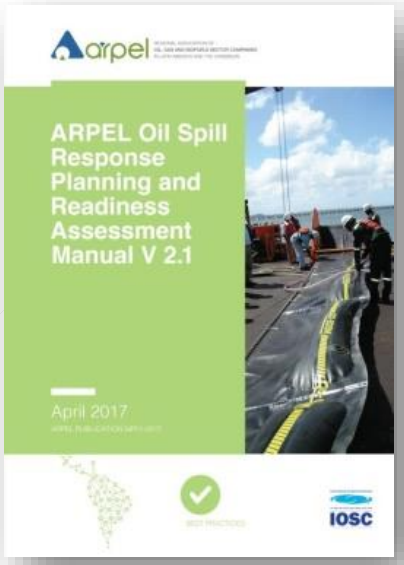
Chapter 6 provides guidelines to evaluate oil planning and preparedness in terms of:

- adequacy,
- response competency,
- preparedness gaps,
- opportunities for improvement, and
- sustained readiness.

A fundamental step in the implementation process is to identify and assess the status of oil and HNS pollution preparedness and response in country and what gaps need to be addressed through the national preparedness and response forum or other mechanisms. The ARPEL Readiness Evaluation Tool for Oil Spills (RETOS™) application and manual provide a checklist approach that guides the assessment process for the scope of national spill response programmes (as well as for other scopes).

Some of the benefits of utilizing a common, internationally accepted mechanism for preparedness assessment, such as RETOS™, and particularly on a regional basis include:

- Benchmarking – assessment results can be used for prioritizing funding and for differentiating regional and specific action plans, thereby minimizing costs and increasing effectiveness.
- Cooperation and exchange of information - good practices may be identified regionally whereby leading nations can assist those in need of support.
- Regional, multilateral and bilateral initiatives - use results for prioritizing regional funding and plans. Areas where common and challenging concerns for participating States are identified would likely benefit from a shared initiative approach (i.e., to address technically challenging aspects of pollution preparedness).



The ARPEL "Readiness Evaluation Tool for Oil Spills (RETOS™)" and its accompanying Manual were developed to assist governments and companies to assess the level of oil spill response planning and readiness management and bridge the gaps identified

6.1 Assessment

The lead authority charged with developing the national contingency plan, or a designated competent alternate, should have collected information relevant to oil and HNS preparedness and response, whether in draft plans or as available from technical members of the national preparedness and response forum. Using a tool such as RETOS™ guides the assessment and gap analysis process through a checklist approach addressing ten fundamental preparedness categories:

A. Legislation, Regulations & Agreements
B. Oil Spill Contingency Planning

C. Response Coordination
D. Health, Safety & Security
E. Operational Response
F. Tracking, Assessment, and Information Management
G. Logistics
H. Financial and Administrative Considerations
I. Training & Exercises
J. Sustainability & Improvement

Several key aspects for the gap assessment include:

- Risk Assessment (history of spills, locations of key oil and HNS movement and transfers, volumes and materials handled, spill trajectories, and sensitive resources)
- Planning (existing oil and HNS plans at local, port, and industry locations)
- Response (locations of spill response assets, trained personnel, and logistical support infrastructure such as communications and transportation)
- Prioritizing improvement actions – RETOS™ results include the "Global Improvement Program", which provides a prioritized listing of gaps and references to where additional information sources may be found (most online). Completion of the Global Improvement Program requires identifying:
    - person(s) tasked to address specific gaps,
    - the resources they may need (including possible budget) to close the gap, and
    - timeline for delivery.

TOOLS AND REFERENCES

ARPEL RETOS™ and Manual - https://arpel.org/library/publication/341/
IMO Oil Spill Risk Evaluation and Assessment of Response Preparedness - http://www.imo.org/en/OurWork/Environment/PollutionResponse/Inventory%20of%20information/Pages/Risk-Assessment-and-Response-Preparedness.aspx
IOSC 2008 A Proposed International Guide for Oil Spill Response Planning and Readiness Assessment- https://arpel.org/library/publication/341/

6.2 Competency for Reviews and Evaluation

The successful review and evaluation of spill response preparedness is dependent on the qualifications of those conducting the review and their experience in spill response programmes, audits, field implementation, and

the complexity of the programme being assessed. Some of the qualification criteria recommended for personnel undertaking reviews of a national programme include:

- Actual oil spill response experience;
- Knowledge of spill contingency plan development and current response practices;
- Current, up-to-date knowledge of applicable international practices, best practices and guidelines, and regulations;
- Knowledge of oil and HNS spill response strategies, tactics, and techniques;
- Understanding of best practices for type of operations to be addressed in a national spill readiness programme;
- Familiarity and access to appropriate manuals and reference materials; and
- Trained in purpose and use of evaluation tool(s) to be used for review and assessment.

A team approach is encouraged given the diversity of response preparedness consideration and required skill sets to properly review and assess where gaps and opportunities for readiness improvements are needed, as well as their priorities.

6.3 Summary

Steps for undertaking the review and assessment of the status of national preparedness include:

- identify qualified personnel to conduct assessment (in country and/or supplemented with international expertise);
- compile and review information available (plans, regulations);
- conduct interviews with key response authorities;
- inspect and assess spill response equipment and logistical support assets;
- complete review and identify gaps; and
- prioritize steps to address gaps and identify personnel/groups responsible, resources needed, and timelines.

7. DEVELOP NATIONAL PREPAREDNESS

Chapter 7 describes the key elements of national planning and preparedness in terms of:

- the scope and contents of a National Contingency Plan (Chapter 7.1)
- steps involved in the planning process (Chapter 7.2)
  - reporting and notification to a "national contact point" following an oil or HNS pollution incident (Chapter 7.3.1)
  - the "tiered" approach for planning and response that reflects the scale of the response to an incident (Chapter 7.3.2)
  - an evaluation of the effects of the response options, in the context of a Net Environmental Benefit Analysis (NEBA), also known as a Spill Impact Mitigation Analysis (SIMA) (Chapter 7.3.3)
- ship, port or facility oil/pollution spill contingency plans (Chapter 7.4)
- response equipment selection and procurement within a tiered approach (Chapter 7.5)

The two key planning aspects for implementation of the OPRC Convention and OPRC-HNS Protocol requirements are:

- *a national contingency plan; and*
- *pollution emergency plans co-ordinated through a national system and aligned to the national contingency plan for:*
  - *ships flying the State flag;*
  - *operators of offshore units under its jurisdiction (OPRC Convention only); and*
  - *and authorities or operators in charge of sea ports and oil- or HNS-handling facilities.*

Contingency planning is an exercise in preparing response strategies and tactics to minimize the adverse impacts of a pollution incident. Oil spill response planning is an exercise in bringing together numerous aspects of spill operations, environmental policy, and regulatory compliance. Effective guidance for on-scene initial emergency response and transition into a project-managed response is fundamental to the success of a spill response plan.

7.1 National Contingency Plan

The development of national preparedness for an oil or HNS spill response requires a solid foundation established in a national contingency plan (NCP). Numerous guides and examples are available for the content of a NCP, including a "fill-in-the-blanks" template (see Tools and References).

The content of national plans should reflect:

- Response policy development, incorporating risk assessment, net environmental benefit analysis (NEBA) and the tiered preparedness and response approach
- Required notifications and mobilization procedures
- Definition of the incident management system and related organization / procedures
- Operational/action planning and decision-making processes
- Prescribed facility, vessel and ports' planning requirements and their integration with a NCP
- Provisions for response equipment and logistical support
- Requirements for training, drills and exercises and post-spill review and revision

The IMO Manual on Oil Pollution Section II on Contingency Planning lists the following basic content for a NOSCP:

- Competent National Authority or Lead Agency, supporting agencies, and responsibilities;
- relevant national and international legislation;
- risk assessment of an oil spill;
- assessment and/or identification of places of refuge;
- notification and reporting procedures;
- oil spill assessment;
- oil spill response management system;
- response resources;
- sensitivity maps, vulnerability atlases or environmental sensitivity indices;
- response strategies;
- national policy for use of dispersants and other non-mechanical response technologies;
- waste management;
- decontamination;
- demobilization and termination of response;
- training, exercises, and plan update requirements; and
- cost recovery.

Each topic is further described and explored in the IMO Manual. The overall process for contingency planning is illustrated in Figure 7.1 (from the 2015 IPIECA-OGP "Guideline for contingency planning for oil spills to water").

TOOLS AND REFERENCES

ARPEL How to Develop a National Contingency Plan (2005) – https://arpel.org/library/publication/195/

IMO Manual on Oil Pollution Section II – Contingency Planning, 4th Edition (2016) - http://cep.unep.org/racrempeitc/activities/steering-committee-reports/2016-8th-ordinary-steering-committee/OSC%208-10-2%20Section%20II%20of%20IMO%20Manaul%20on%20Oil%20Pollution.pdf

IMO Manual on Oil Pollution Section IV – Combating Oil Spills, 2nd Edition (2005).

Guidelines for the Development of Shipboard Marine Pollution Emergency Plans, 2010 Edition.

IOSC 2008 A Proposed International Guide for Oil Spill Response Planning and Readiness Assessment- https://arpel.org/library/publication/341/

IPIECA-IOGP Contingency planning for oil spills on water (2015)- http://www.ipieca.org/resources/good-practice/contingency-planning-for-oil-spills-on-water/

IPIECA-IOGP-API (2017) Guidelines on implementing spill impact mitigation assessment (SIMA)- http://www.ipieca.org/resources/awareness-briefing/guidelines-on-implementing-spill-impact-mitigation-assessment-sima/

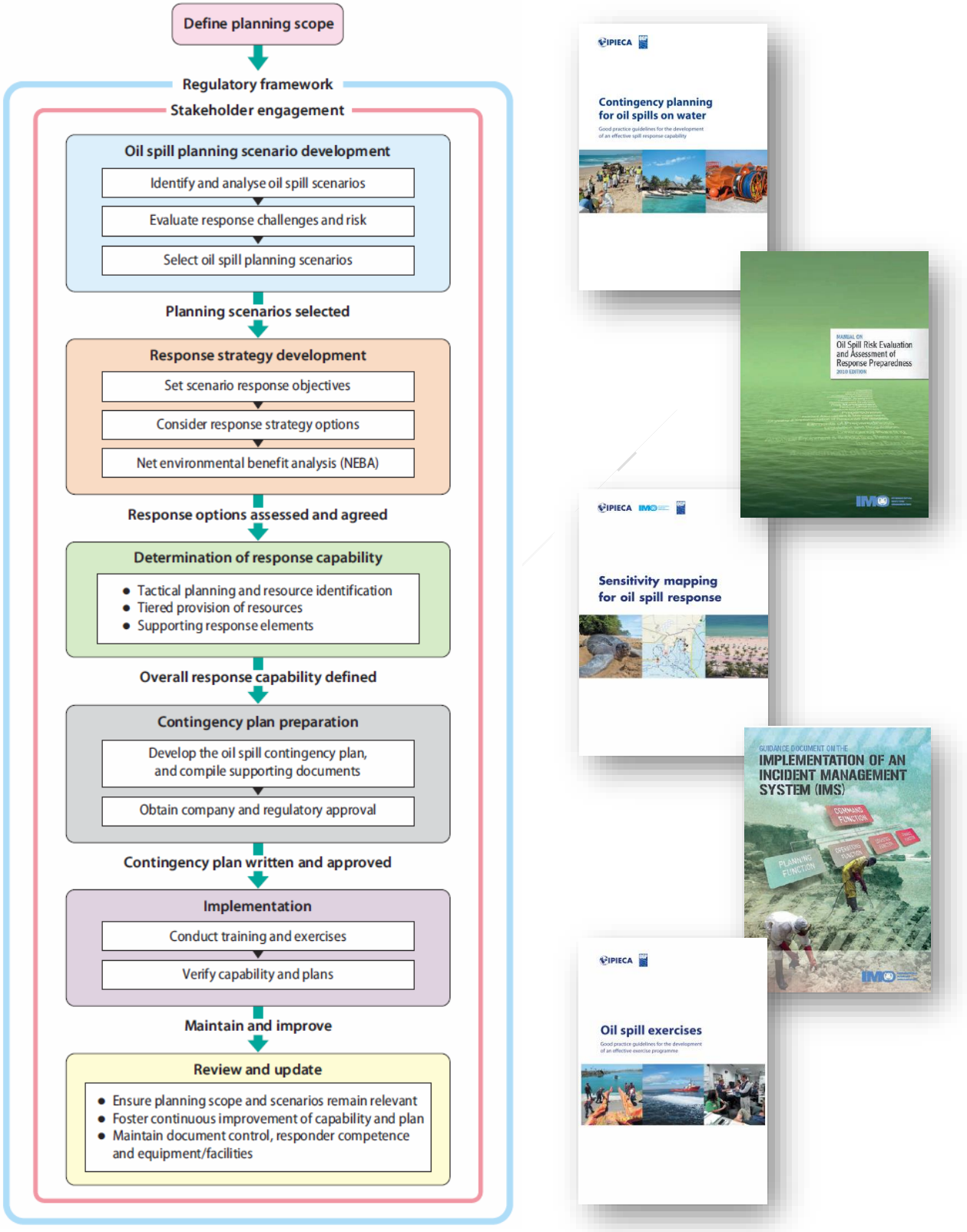


Figure 7-1 – *The overall process for industry contingency planning (from IPIECA-IOGP 2015)*

7.2 Core Concepts in Planning

7.2.1 Reporting and notification

The OPRC Convention (*Article 4 – Oil pollution reporting procedures*) and the OPRC-HNS Protocol (*Article 3 - Emergency plans and reporting*) stipulate strict reporting requirements for reporting marine pollution discharge or probable discharge without delay. The MARPOL convention imposes analogous requirements. In addition, the OPRC Convention (*Article 5 – Action on receiving an oil pollution report*) and the OPRC-HNS Protocol (*Article 3*) require onwards notification to all States whose interests are affected or are likely to be affected by the pollution.

To facilitate the reporting process, the OPRC Convention [Article 6(1)(a)(ii)] and the OPRC-HNS Protocol [Article 4(1)(a)(ii)] require the designation of the national operational contact point or points, responsible for the receipt and transmission of reports. The notification to neighbouring states, as appropriate, must be done through a similarly defined process.

A centralized national contact point for oil and HNS incidents can ensure that appropriate operational and management personnel are activated depending on the scale of the incident (i.e. the appropriate Tier). Countries may choose to use a common all-emergencies point of notification or a specific maritime emergencies contact. The notification process must be defined such that local notifications or observations of pollution, or threat of pollution, can be reported from areas such as ports to a national centre and hence to the competent national authority. Legislation should specify the minimum reporting standards, as well as penalties, for failure to report oil or HNS pollution as prescribed in the national standards.

IMO maintains and publishes a list of national operational contact points responsible for the receipt, transmission and processing of urgent reports on incidents involving harmful substances, including oil and HNS releases from ships to Coastal States. The list is regularly updated and included with all shipboard pollution plans.

7.2.2 Tiered preparedness and response

A fundamental concept for emergency planning is the use of a Tiered response system that has the flexibility to expand in an organized and consistent fashion to address local to country -wide emergencies. A Tiered approach facilitates the rapid and orderly expansion of emergency response from on-site, local responders and resources to area-wide and even national to regional and international response. Three standard Tiers are used to describe the scale of a pollution response. Some countries have historically adopted a simplistic approach to defining the Tiers, based

A system for reporting pollution without delay is required, enabling timely notification to the appropriate authorities and facilitating efficient response.

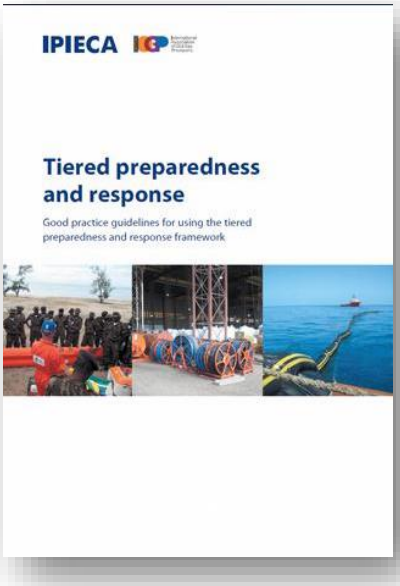
Recommendations
Establish a centralized system for receiving and disseminating pollution reports and notifications.

Specify preferred spill report forms and checklists to be used:

- *Shipboard Oil Pollution Emergency Plan (SOPEP) example - see Chapter 7.3*
- *Recommended IMO Pollution Report (POLREP) – see Chapter 8.2*

National points of contact are maintained and published by the IMO.

Recommendation
Define or confirm the appropriate contact listed in MSC-MEPC.6-Circ.15



primarily on volumes in relation to oil pollution. The international oil industry associations, IPIECA and IOGP, promote a more detailed and sophisticated approach. This breaks down the planned response capability into up to 15 elements and encourages the Tiered approach to be assessed for each relevant element. The assessment is based on a risk and provides a direct link to provisioning pollution combatting resources within the Tiers (i.e. equipment types, stockpile sizes and locations, logistical requirement and trained personnel).

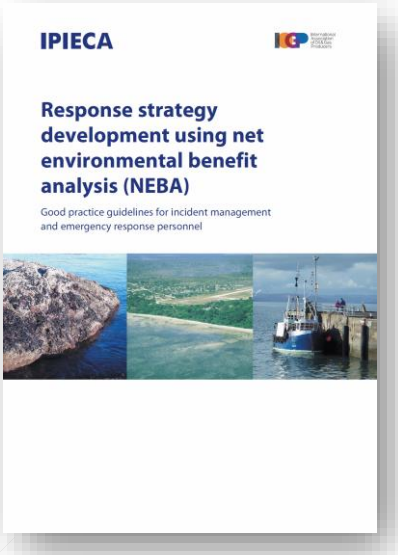
7.2.3 NEBA or SIMA

NEBA (Net Environmental Benefit Analysis) - also promoted as Spill Impact Mitigation Analysis (SIMA) by the international oil industry associations – is a process to evaluate the benefits and drawbacks or limitations of available response options (including natural recovery) and then selects the response options that have the greatest net environmental benefit i.e. results in the least overall impact. As part of response planning, consideration should be given to the full suite of pollution countermeasures including regulated use of oil spill dispersants, controlled burning, and use of chemical and biological agents. A national plan should define if and under what conditions certain response options may require approval. A clear, expedited decision process is fundamental for practical implementation of some countermeasures within an applicable window-of-opportunity.

A NEBA should form part of the contingency planning process, though the same approach can also be expedited during an incident. There are typically four stages to the NEBA process:

1. Compile and evaluate data for relevant oil spill scenarios including fate and trajectory modelling, identification of resources at risk and determination of feasible response options.
2. Predict outcomes/impacts for the 'no intervention' (or 'natural attenuation/recovery') option as well as the effectiveness (i.e. relative mitigation potential) of the feasible response options for each scenario.
3. Balance trade-offs by weighing and comparing the range of benefits and drawbacks associated with each feasible response option, including no intervention, for each scenario.
4. Select the best response option(s) to form the strategy for each scenario, based on the combination of techniques that could minimize the overall ecological, socio-economic and cultural impacts and promote rapid recovery.

The IMO Manual on Oil Pollution Section IV – Combating Oil Spill, 2nd Edition (2005) provides information on the fate and effects of spilled oil and technical aspects of the response options. There are also specific IMO In-Situ



Appropriate implementation of NEBA concepts provides an open and transparent methodology to address potential preconceptions commonly attributed to some pollution response options. The challenge to those developing a contingency plan is to communicate:

- *the need to set clear response priorities and objectives; and*
- *the trade-offs that are a direct consequence of their decisions.*

Burning Guidelines and IMO Guidelines for the Use of Dispersant for Combating Oil Pollution at Sea.

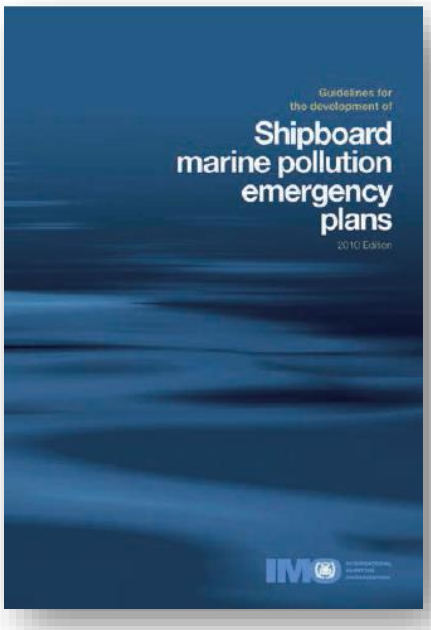
7.3 Shipboard, Port, and HNS or Oil-Handling Facility Plans

Oil pollution emergency plans (OPRC Convention Article 3) or pollution incident emergency plans (OPRC-HNS Article 3) – commonly referred to as oil/pollution spill contingency plans - are required for:

- ships that fly the flag of a Party (i.e. a State that has ratified the Convention or Protocol);
- operators of offshore units (including exploration and production installations) under the jurisdiction of the Party; and
- authorities or operators of sea ports and oil or HNS handling facilities (including oil terminals and pipelines) under the jurisdiction of the Party.

These contingency plans primarily are developed by industry (as the main operators of ships and facilities, though port authorities may also be required to develop plans). The plans should align and integrate with the national contingency plan and address the procedures to escalate response through the Tiers of response.

The IMO has produced *Guidelines for the Development of Shipboard Marine Pollution Emergency Plans* to help Administrations and ship owners meet requirements for shipboard plans under the OPRC Convention, OPRC-HNS Protocol and MARPOL. This document includes Guidelines for the development of Shipboard Oil Pollution Emergency Plans (SOPEP) (resolution MEPC.54(32), as amended by resolution MEPC.86(44) and Guidelines for the development of Shipboard Marine Pollution Emergency Plans of Oil and/or Noxious Liquid Substances (Resolution MEPC.85(44), as amended by resolution MEPC.137(53)).



Expectations for shipboard, port, offshore unit and marine terminal contingency plans should be specified in a regulation and/or in the national contingency plan. A mechanism could be developed for plans to be submitted for review, appropriate consultation and approval. The IMO Contingency Plan guidelines recommend that an appendix to the national contingency plan may be used to specify the minimum expected content for these plans and even a plan structure, which in turn facilitates the review process and contributes towards consistency between plan holders.

7.4 Equipment Stockpiles

The pre-identification of pollution combating equipment available to respond within a country or region is essential to facilitate rapid and effective response. This is a critical element of the contingency planning process. OPRC Convention Article 6(2)(a) and OPRC-HNS Protocol Article 4(2)(a) require that

"*a minimum level of pre-positioned equipment for responding to pollution incidents commensurate with the risk involved, and programmes for its use*" be established "*within its capabilities either individually, through bilateral or mutual lateral co-operation and, as appropriate, in cooperation with the oil and shipping industries, port authorities and other relevant entities*".

The minimum equipment to stockpile at ports and transfer points is challenging to define.

Recommendation
Consider sufficient containment (boom or other) to encircle the largest vessel calling (3 x vessel length) and to protect critical sensitive resources. Pumps, skimmers, sorbents or other similar systems should provide means to recover a realistic volume of spilled material within a defined timeframe.

The appropriate response equipment should be determined through the risk assessment process and subsequent strategic policy. It is a good practice for the competent national authority or authorities to develop and enforce regulations that establish minimum response equipment inventories for oil handling operations. These requirements may be based upon various planning criteria, including individual operator's risk, NEBA, national legislation, and economic considerations.

The fixed costs associated with the procurement and maintenance of stockpiles needed for facilities creating oil spill risks (e.g. offshore units, pipelines, oil handling facilities and ports) should be borne by the operators. In the case of national stockpiles maintained by government or authorities (e.g. for passing ship scenarios or mystery/orphan spills), the funding mechanisms can be challenging (see Chapter 2.4). Where authorities encounter difficulties acquiring a budget for equipment procurement, it may be possible to approach donor agencies or development programmes for support (see Chapter 5.2). In these cases, the on-going costs of maintaining equipment and operational needs should be considered. This maintenance is to ensure that any equipment provided is kept functional and that suitable means of deployment and the training of personnel are sustainable.

The minimum stockpile requirements should be scalable. The equipment required to mount an effective response to a Tier I (a relatively small pollution incident effectively managed by the polluter on site) should be maintained on-hand, whereas response equipment required for a Tier 2 or Tier 3 response may take time to be mobilized and deployed. The Tier 1 equipment specified should be appropriate and designed for the predominant oil types and/or HNS products and met-ocean conditions prevalent at ports and transfer locations. A key consideration is to develop or specify planning standards, not performance standards, for response. These standards can be developed in terms of equipment (e.g. length and size of containment boom, oil recovery systems, storage capacity and volume of dispersant) and response timeframes for deployment (e.g. 2 hours, 6 hours, 24 hours etc.). Timeframes must consider the logistics for and time required for transporting equipment from their locations to a specific site.

Planning often focusses on Tier 2 as Tier 1 addresses relatively minor pollution and the availability of a global network of oil industry spill response co-operatives provides a Tier 3 capability for many companies. Tier 2 capacity may be addressed through local co-operation or mutual aid agreements

between operators or facilities. The extent of Tier 2 provision is dependent not only on the risk assessment but also on the proximity of Tier 3 capability and other factors. The adoption of the international oil industry's approach to Tiered preparedness and response, with its individual consideration of elements of response capability, provides a detailed method to determine the appropriate levels of response needs at each Tier.

7.5 Summary

Recommended steps for development of a national contingency plan include:

- select a table of contents for a combined oil and HNS contingency plan or for separate plans, and list appendices to plan(s) (see examples in ARPEL, IMO, and neighbouring/regional countries);
- identify the threats related to HNS and oil at the national level (locations, products and volumes handled) as well as records of spills;
- conduct at a minimum a qualitative risk assessment, including prevention and minimization measures, to identify potential impacts and priority areas through use of technically sound trajectory modelling for key spill scenarios;
- establish an inventory of response resources (nationally, regionally and internationally; or Tier 1, 2 and 3), including equipment, manpower, and technical expertise appropriate to the spill hazards and ranges of environmental operating conditions;
- prepare a draft plan using information gathered from risk assessment and assessment of preparedness (Chapter 6) through National Planning Committee efforts;
- utilize flow-diagrams for required notifications, callout procedures, and decision diagrams; and
- minimize text to the extent realistic and provide linkages to external supporting documents and tools.

Information collected and assessed during the review of national preparedness (Chapter 6) provides content and considerations for a national plan.

8. REGIONAL AND INTERNATIONAL CO-OPERATION

The OPRC Convention and the OPRC-HNS Protocol are by their nature international. Chapter 8 addresses ways in which cooperation at regional and broader international levels can be organized and facilitated. The discussion describes:

- the UN Environment Regional Seas Programme (Chapter 8.1)
- mechanisms to enable operational cooperation, including the IMO POLREP system (Chapter 8.2)
- sub-regional bilateral or multi-lateral mutual aid or cooperation arrangements (Chapter 8.3)
- the International Offers of Assistance (IOA) Guidelines (Chapter 8.4)

Various Articles of the OPRC Convention and the OPRC-HNS Protocol directly address and encourage co-operation, including but not limited to:

- *OPRC Art. 6 and OPRC-HNS Protocol Art. 4 (National and regional systems for preparedness and response);*
- *OPRC Art. 7 and OPRC-HNS Protocol Art. 5 (International co-operation in pollution response); and*
- *OPRC Art. 10 and OPRC-HNS Protocol Art. 8 (Promotion of bilateral and multilateral co-operation in preparedness and response).*

Co-operation is a fundamental tenet of both the OPRC Convention and the OPRC-HNS Protocol. This is emphasized in the OPRC Convention's preamble which:

- recognizes the importance of mutual assistance and international co-operation relating to matters including the exchange of information respecting capabilities, preparation of oil pollution contingency plans, exchange of reports of incidents and research and development in the field of combating oil pollution;
- takes account of the importance of bilateral and multilateral agreements and arrangements including regional conventions and agreements; and
- is aware of the need to promote international co-operation and enhance existing national, regional and global capabilities concerning oil pollution preparedness and response.

In 2005, the IMO adopted Resolution A.983(24) concerning *Guidelines for Facilitation of Response to a Pollution Incident*. These guidelines encourage the development of administrative procedures with respect to requests for assistance by one Party to either the OPRC Convention or OPRC-HNS Protocol and the rendering of such assistance, where feasible, by another Party. This Resolution was aimed primarily at the stipulations of OPRC Article 7 and

TOOLS AND REFERENCES

IMO Resolution A.983(24) concerning Guidelines for Facilitation of Response to a Pollution Incident http://www.imo.org/blast/blastDataHelper.asp?data_id=27250&filename=A983(24).pdf.

IMO Guidelines on International Offers of Assistance in Response to a Marine Oil Pollution Incident (2016 Edition).

Mediterranean Guide on Cooperation and Mutual Assistance in Responding to Marine Pollution Incidents (in draft, 2018).

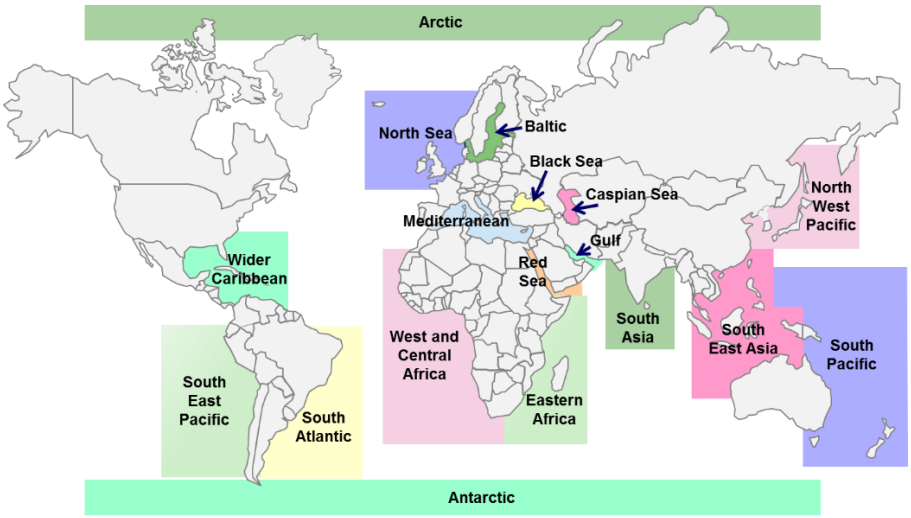
OPRC-HNS Protocol Article 5. The agreements described in this chapter have largely considered the requirements of this Resolution and embedded suitable provisions within their co-operation procedures to address them.

8.1 Regional Co-operation

The OPRC Convention was developed and entered into force against a background of broader regional co-operation in the field of marine environmental protection, already established under the UN Environment Regional Seas Programme. The Regional Seas Programme, launched in 1974, aims to address the accelerating degradation of the world's oceans and coastal areas through a "shared seas" approach – namely, by engaging neighbouring countries in comprehensive and specific actions to protect their common marine environment. In most cases, a legal framework in the form of a regional convention and associated Protocols on specific problems is being developed or has been implemented.

The Regional Seas Programme provided the basis for the initial development of regional co-operation mechanisms, now aligned to the OPRC Convention

Work on regional cooperation specifically addressing cases of major oil pollution began in 1969 in the North Sea (forerunner of the Bonn Agreement), followed by the Copenhagen Agreement in 1971 that covers parts of the Baltic Sea. Arrangements have been developed subsequently in many regions under the Regional Seas Programme in the form of Protocols to the relevant regional convention or as stand-alone memoranda. In many cases, these arrangements have been aligned to the requirements of the OPRC Convention. There are varying degrees of maturity, with some regions having a fully functional regional co-operation mechanism and others remaining in the development stage. The mechanisms typically comprise a legal or voluntary framework, under which there are operational plans and procedures that include exchange of information, training and exercising, requests for assistance, joint response operations, communications and financial matters. The IMO has channelled significant technical co-operation support through various regional mechanisms, to foster OPRC Convention alignment and build regional capacity.



The relevant regional seas arrangement provides a logical entry point for a country's initial discussions with its neighbours. This engagement may lead a country to have either more active involvement in a functional regional mechanism or provide additional impetus to the development and promotion of such a mechanism within the region.

Engaging with a regional mechanism also brings opportunities for capacity building. Other countries in the same region may have experiences and practices that they are willing to share through technical exchanges, training and exercising. Furthermore, it is possible that external funding may be accessed to support activities relating to the development and implementation of a regional mechanism.

Go to chapter 5 for more information on building capacity.

All regions have invariably focussed on the development of co-operation in cases of oil pollution and many have not yet developed parallel arrangements for HNS.

8.2 The Operational Imperative

Normal relations between sovereign States involve measured diplomacy and considered responses. In contrast, dealing with marine pollution requires rapid evaluation, decision-making, expedited requests for and offers of assistance, mobilization and deployment of personnel and equipment to combat the pollution. Therefore, co-operation mechanisms between countries are necessary to enable a prompt and effective response to pollution incidents, as addressed by Article 6(1)(a) of the OPRC Convention and Article 4(1)(a) of the OPRC-HNS Protocol. These Articles oblige Parties to identify three key entities, as discussed in Chapter 4:

Go to Chapter 4 for more information on roles and responsibilities.

- Competent national authority or authorities with responsibility for preparedness and response;
- National operational contact point or points, responsible for receipt and transmission of pollution reports; and

- An authority entitled to act on behalf of the State to request assistance or to decide to render assistance requested.

Relevant procedures in national contingency plans, and shared under a regional mechanism, should ensure that all entities involved are aware of 24-hour operational contact points and the authorities entitled to approve assistance requests and replies in a timely manner. The IMO has developed guidelines on pollution reporting systems (POLREP) to facilitate such communications.

The POLREP system has been adopted in many regions' plans, to facilitate communication.

Recommendation
Ensure that national reporting systems align with POLREP and that operational authorities are familiar with its use.

In some regions, the regional mechanism may be facilitated through a dedicated co-ordination centre or function. A designated coordination centre is valuable for ensuring the implementation of technical exchange, a focal point for training and exercising as part of preparedness, and plays a role to support timely communication during response to an incident.

A regional training and exercise programme is essential to ensure that the agreed co-operation procedures are familiar to key entities and their personnel.

Go to chapter 9 for more information on training and exercising.

8.3 Sub-regional Co-operation

Opportunities may exist to develop co-operation with neighbouring countries on a bilateral or multilateral basis. These opportunities could fall within arrangements under existing regional mechanisms or be an additional separate activity. Circumstances that could lead to a sub-regional agreement and cooperation include:

- neighbouring countries with close operational and logistical connections;
- where residual sea currents or a geographic feature, such as a large bay or gulf bordered by more than country, creates an obvious theatre of shared risk; and/or
- where a region is large and division into sub-regions brings operational and logistical efficiencies

Bilateral or multilateral agreements can support or help build regional co-operation

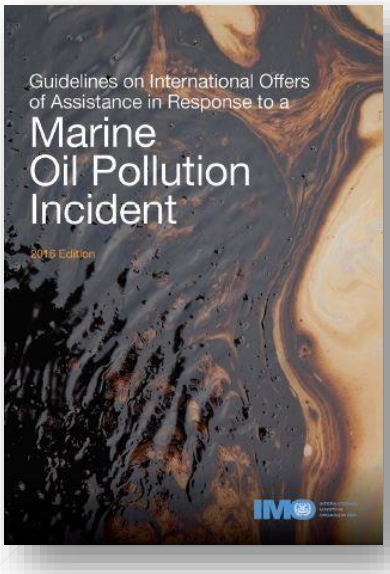
Recommendation
If regional mechanisms are not developed or fully functional, sub-regional agreements can provide a step towards wider co-operation.

Bilateral or multilateral arrangements are likely to mirror those at a regional level, in terms of co-operation aims and procedures. The detail may be greater where fewer countries are involved and the arrangements may include a specific programme of joint training and exercising and possibly harmonized approaches to some aspects of oil spill contingency planning e.g. sensitivity mapping or response policy (e.g. an aligned approach to dispersant product approval and authorization for use).

8.4 International Offers of Assistance (IOA)

The well blowout incident in the Gulf of Mexico in 2010 required an international response that far exceeded the response resources available within the United States. This complex response highlighted some significant

gaps in managing offers of assistance from international partners, as well as gaps in existing guidelines.



The IMO subsequently developed *Guidelines on International Offers of Assistance in Response to a Marine Oil Pollution Incident (2016 Edition)*, for use by any country but particularly Parties to the OPRC Convention. The International Offers of Assistance (IOA) guidelines present a systematic approach to assist in managing requests for spill response resources and offers of assistance from other countries and organizations when confronted with large, complex or significant oil spill incidents. The system proposed in the IOA guidelines is designed to be supplementary to processes already covered by existing national, regional, bilateral and multilateral arrangements.

8.5 Summary

Recommended steps for developing national participation in regional and international preparedness programmes include:

- enact outreach and liaison with neighbouring countries and counterparts on spill emergency preparedness and planning;
- nominate participating expertise (likely the Competent National Authority) to participate in bi-lateral and regional preparedness initiatives (i.e., Regional Seas); and
- develop procedures and protocols, including spill notification and reporting, to obtain and provide mutual assistance for spill emergency response and for managing International Offers of Assistance.

9. IMPLEMENT TRAINING AND EXERCISING

Training and exercises (or drills) are an essential element of preparedness, capacity building and sustained readiness at all levels, from national and international scales to individual vessels or facilities. Chapter 9 describes:

- a set of "OPRC Model Courses" developed by the IMO that provide four (4) levels of oil spill training: Awareness, First Responders, Supervisors, and Senior Managers (Chapter 9.1);
- a complementary set of "HNS Model Courses" developed by the IMO that provide two (2) levels of (non-responder) HNS training: Operational and Managerial (Chapter 9.2); and
- the type and frequency of exercise methods that can be considered for a contingency plan and for sustaining response capacity (Chapter 9.3).

The development of capacity and national preparedness, addressed through earlier steps in this guidance (in particular, Chapters 4, 5 and 7), requires that participating personnel receive relevant information and are competent to consider and utilize that information. Building this capacity and preparedness involves a variety of training activities, including traditional training courses, workshops, seminars, conferences, and study tours.

Go to chapter 5 for more information on building capacity.

Go to chapter 7 for more information on developing national preparedness.

Once the national preparedness and response system is established, a wider programme of training and exercising is necessary to ensure each agency and every person involved understands their responsibilities and can perform their allocated duties. A training and exercise programme meets the obligations of OPRC Convention Article 6(2)(b) which states that:

"*…each Party, within its capabilities either individually or through bilateral or multilateral co-operation and, as appropriate, in co-operation with the oil and shipping industries, port authorities and other relevant entities, shall establish… a programme of exercises for oil pollution response organizations and training of relevant personnel*."

The OPRC-HNS Protocol Article 4(2)(b) has the same training and exercising obligation relating to hazardous and noxious substances. As highlighted in Chapter 2.5, a training programme for HNS is likely to focus on safety concerns and the complexities of dealing with HNS issues.

Initial assessment should be made of the training and exercising requirements already stipulated under:

- the oil pollution emergency plans, as developed by operators of offshore units, ports and oil- or HNS-handling facilities to meet the requirements of OPRC Convention Article 3 and OPRC-HNS Protocol Article 3;
- broader national emergency preparedness or civil protection structures; and

- any regional, multilateral or bilateral arrangements.

These existing activities or commitments may provide collaboration opportunities for personnel from the authorities involved in the national oil and HNS preparedness and response system. For example, where the private sector is organizing training and exercising activities for its own personnel, there may be a willingness to make places available for authority personnel. This not only assists in development of the authorities' personnel but has the mutual benefit of building relationships between government and industry representatives. The same personnel likely would be working together in the event of an incident.

TOOLS AND REFERENCES

IMO OPRC and HNS Model Courses

IPIECA-IOGP Oil spill training (2014).
http://www.oilspillresponseproject.org/wp-content/uploads/2017/01/Oil_spill_training_2016.pdf

IPIECA-IOGP Oil spill exercises (2014).
http://www.oilspillresponseproject.org/wp-content/uploads/2017/01/Oil_spill_exercises_2016.pdf

API Technical Report 1159 (2014). Guidelines for Oil Spill Response Training and Exercise Programs
http://www.oilspillprevention.org/~/media/oil-spill-prevention/spillprevention/r-and-d/spill-response-planning/api-training-exercise-guidelines-1159.pdf

ISO (2013). Societal security – Guidelines for exercises. ISO 22398:2013
https://www.iso.org/standard/50294.html

ISO (2010). Learning services for non-formal education and training -- Basic requirements for service providers. ISO 29990:2010
https://www.iso.org/standard/53392.html

EU MARINER project concerning preparedness and response to HNS spills:
http://mariner-project.eu/

9.1 OPRC Model Courses

The OPRC Convention called on the IMO to develop a comprehensive training programme in cooperation with interested governments and industry. The IMO has developed a range of training courses to address all aspects of oil spill planning, response and management. These are known as the OPRC Model Courses. The courses were designed and developed by an international group of experts from governments and industry. The

The IMO OPRC Model Courses provide a comprehensive suite of technical training materials.

comprehensive supporting materials include instructor's manuals, participant's manuals, and training aids in the form of presentations and additional guidance and tools.

The IMO Model Courses on oil pollution preparedness and response have been developed at four levels:

- Introductory - Raising Awareness
- First Responders (Operational)
- Supervisors and On-Scene Commanders (Tactical)
- Administrators and Senior Managers (Strategic)

Whilst available off-the-shelf, the courses should be adapted to meet the local context, environmental setting, and the relevant national and regional planning framework.

There is no international scheme for the accreditation of oil spill training courses. Schemes to approve or accredit oil spill training providers typically are the responsibility of the national competent authority. These national schemes may include courses adapted from the IMO Model Courses and be accredited as their equivalance.

9.2 OPRC-HNS Model Courses

The OPRC-HNS Protocol also called for the IMO to develop a comprehensive HNS training programme in cooperation with interested governments and industry. The IMO has developed two model training courses for preparedness and response to marine incidents involving hazardous and noxious substances.

The objective of these model courses is to provide practical training and guidance in preparing for HNS incidents. The courses are not designed to train response personnel. This activity is a separate and very specific subject due to the potential and real safety concerns and associated complexities of an HNS response.

The HNS courses are designed to complement the suite of existing IMO OPRC Model Courses for preparedness and response to marine oil spills and aim to support the efforts of countries in acceding to and implementing the OPRC Convention and the OPRC-HNS Protocol. The courses are aimed at two levels:

- Operational: First Responders, Supervisors, On-Scene Commanders
- Managerial: Administrators and Senior Managers

These courses, when properly linked to a country's national contingency plan, can be used to train staff responsible to manage the effective preparedness and response for HNS spills to the marine environment.

The European Union MARINER project has produced comprehensive resources to assist in the preparedness and response to HNS spills. These resources include tools that help to reinforce the training and exercising of responders.

9.3 Exercises

Exercising the procedures and capability described in contingency plans is the best way to ensure effective preparedness. A well-designed exercise programme can provide reassurance that an emergency response unfolds as planned. In addition, the exercise programme can identify areas for improvement, lead to amendments of plans, provide training opportunities for new personnel, and sustain and improve the capacity of those already familiar with their roles.

Exercises are the most effective way to provide a check and reassurance that preparedness measures can function as planned.

There are a variety of exercise methods, ranging from simple tests of notification mechanisms to full-scale exercises that incorporate the mobilization of incident management teams to undertake command and control, alongside the deployment of pollution combatting resources within the framework of a pre-designed spill scenario. The different exercise methods, their features and benefits within an overall programme are described in ISO 22398:2013. The IPIECA-IOGP publication concerning oil spill exercises provides further elaboration of exercise methods, scheduling and planning.

There are different exercise methods and an exercise programme should schedule a mix of them.

A schedule and frequency of exercises should be developed, matched to the pollution risks and taking into the account the time and resources commitment that each method typically entails. The approximate delivery times for the exercise methods described by ISO are:

Discussion-based activities:

- Seminar (1–4 hours)
- Workshop (2–8 hours)
- Table-top (2–4 hours)

Operations-based activities:

- Drill, including notification test (4–8 hours)
- Functional exercise (4–8 hours)
- Full-scale exercise (8–72 hours)

Consider use of announced and unannounced exercises as well as notification tests conducted outside of normal business hours.

These indicative times do not consider exercise design and development, which may be substantial for full-scale exercises (e.g. 6-12 months). The frequency for each method is likely to vary considerably and depends on the risk profile for an operator or country. Examples are notification drills occurring monthly or quarterly, table-tops annually, and full-scale exercises every 2-5 years.

IMO-IPIECA Guiding Principles for Exercises

- Ensure that senior management support and endorse the exercise activity.
- Set clear, realistic and measurable objectives for an exercise.
- Focus on improvement through exercising - the aim is not to impress.
- Keep exercises simple and more frequent for faster improvements initially.
- Do not tackle complex exercises until personnel are experienced and competent.
- Do not overcomplicate an exercise with too many activities, locations and participants.
- Ensure successful exercise evaluation - this being as important as conducting it successfully.
- Recognize that planning and conducting a successful exercise is a significant accomplishment.

9.4 Summary

Steps for establishing and maintaining effective spill emergencies training and exercise programmes include:

- undertake national training and exercise programme for capacity building (see Chapter 5);
- establish criteria for minimum training requirements applicable to initial oil spill and HNS responders and incident management team personnel;
- enlist international, regional, and industry expertise for delivering model OPRC and complementary training courses;
- define minimum requirements for spill response exercises to entail notifications, table-tops, and deployments relevant to each tier; and
- establish a mechanism to verify training and exercises meet compliance (see also Chapter 10).

10. SUSTAIN PREPAREDNESS

Chapter 10 outlines key elements of sustaining a preparedness capacity and response readiness that include:

- mechanisms that are in place to ensure that training and exercise programme goals are achieved, and
- a review/revision process to ensure that plans, training and exercises are appropriately updated.

Go to Chapter 9 for more information on training and exercises.

Oil and HNS pollution preparedness requires an ongoing process for sustainability and improvement. Externally requested audits or analyses can provide evaluations of preparedness and response capability (e.g., RETOS™, RAC REMPEITC programme on planning initiatives, ARPEL National Plans matrix, and IMO missions: Chapter 6.1). Frequently, national contingency plans are developed with associated exercise programmes but the mechanisms for ensuring that the programme targets are achieved may be lacking.

Oil spill contingency planning is a moving target and spill contingency plans should be evergreen documents. Sustained readiness necessitates active scrutiny of changes in response policies, capabilities, new technologies and methodologies over time. This review and revision process is an element of the national contingency plan (Chapter 7.1). Training and exercises, with evaluation and feedback, provide one means to sustain and/or reach higher levels of readiness.

The regulated requirements for oil pollution emergency plans provide a mechanism to mandate a schedule and frequency of training and exercise programmes. These can be linked to the national system and provide the basis for testing and reviewing preparedness.

Key elements in the approach to sustaining preparedness are:

- Establish a schedule for review and updates of the national contingency plan; this can be linked to national exercises with a review at least every three years, preferably annual.
- Mandate review and periodic resubmission of pollution emergency plans.
- Ensure key authorities participate in relevant exercises.
- Ensure exercise evaluation is used to develop and assign responsibilities for addressing key recommendations from post-event debriefs.
- Consider re-assessment of spill readiness programmes (national and industry) using a benchmarking tool (e.g. RETOS™ provides a quantitative score for each of three levels of programme maturity)
- Conduct audits (internal and external) of spill response programmes.

- Ensure that practical deployment exercises take place to test spill countermeasures throughout the range of operating conditions and for distinct scenarios.
- Undertake training programmes for new personnel and refresher and/or advanced level training for returning or established personnel.
- Promote testing and development of new response tools, technologies and alternative countermeasures.

OPRC Convention Art. 8 and OPRC-HNS Protocol Art. 6 promote co-operation between Parties, and through the IMO or regional organizations, relating to research and development programmes for pollution preparedness and response.

11. LIABILITY AND COMPENSATION

The IMO conventions that relate to liability and compensation for ship-source pollution are an important element of the pollution preparedness and response framework. Chapter 11 describes the key features of:

- the benefits of the international compensation scheme for states that ratify the OPRC Convention and the OPRC-HNS Protocol (Chapter 11.1).
- compensation for:
  - pollution damage from oil tankers (Chapter 11.2.1)
  - pollution damage from non-tankers (Chapter 11.2.2)
  - HNS pollution damage from ships (Chapter 11.2.3)

The mechanisms which may be adopted to address oil pollution from sources other than ships are addressed in Chapter 11.3.

There is an established interlocking scheme of IMO instruments that address liability and compensation relating to ship-source marine pollution. This scheme is supported and financed by the shipping and oil/chemical industries. Links to comprehensive information and guidance regarding liability and compensation may be found in the Tools and References.

The OPRC Convention takes into account the importance of these liability and compensation instruments and encourages Parties to give them due consideration and co-operate when considering the conclusion of compensation claims. Furthermore, it is common for regional, multilateral or bilateral arrangements to reference this international regime in their co-operation plans.

The scheme addresses so-called 'additional costs' which are those costs associated with actions taken to combat the pollution and those claims arising as a result of damage associated with a shipping incident. Claims are assessed based on established criteria and generally are associated with five types of pollution damage:

- property damage;
- costs of clean-up operations at sea and on shore;
- economic losses by fishermen or those engaged in mariculture;
- economic losses in the recreational sector; and
- costs for reinstatement of the environment .

Go to chapter 2 for more information on establishing the legislative basis.

If not already a signatory, a country may wish to consider signing and ratifying the various IMO liability and compensation instruments alongside process of OPRC ratification and implementation. Ratification allows any required legal amendments or new legislation to be considered as an overall package of improving marine environmental protection. Implementation of OPRC Convention also provides the opportunity to check any previous ratifications of the liability and compensation instruments to ensure that they have been correctly enacted in national law.

The scheme is not a method that funds the fixed costs of contingency planning and preparedness. It is only to be used to compensate legitimate claims arising after an incident has occurred and the cost or damage has been incurred. The scheme does not apply to non-ship releases, such as from offshore units or pipelines. For these risks, national legislation is required to ensure that operators of such facilities are liable and able to meet potential compensation claims. Some features from the international regime for ships may be incorporated into national legislation for other risks, to bring alignment between the sectors.

There is no international compensation scheme for non-shipping risks; national regulation is required.

TOOLS AND REFERENCES

A number of useful documents from the IOPC Funds relating to the compensation regime and claims are available at: http://www.iopcfunds.org/publications/iopc-funds-publications/.

IPIECA-IOGP Economic assessment and compensation for marine oil releases (2015). http://www.ipieca.org/resources/good-practice/economic-assessment-and-compensation-for-marine-oil-releases-good-practice-guidelines-for-incident-management-and-emergency-response-personnel/

ITOPF Technical Information Paper on the preparation of claims from oil pollution: http://www.itopf.com/knowledge-resources/documents-guides/document/tip-15-preparation-and-submission-of-claims-from-oil-pollution/

Full information on the HNS Convention and 2010 Protocol is available at: http://www.hnsconvention.org/

IMO/UNEP Guidance Manual on the Assessment and Restoration of Environmental Damage following Marine Oil Spills (2009 Edition).

A three-layer scheme for compensation from tankers' oil pollution is available through ratification of the relevant IMO instruments (Chapter 11.2).

Recommendation

To benefit from this well-established and proven scheme for prompt and fair compensation, countries should give serious consideration to ratifying:

- 1992 Civil Liability Convention

- 1992 Fund Convention

- Supplementary Fund Protocol

11.1 Benefits of the international compensation scheme

The three-layer international scheme for compensation from ships (Chapter 11.2) has several beneficial features which are summarized for oil pollution in Table 11-1.

Table 11-1 – *Benefits of the international compensation scheme for ships*

Benefit	***Comment***
Prompt and adequate payment of compensation	*Those conducting clean-up operations or suffering damage and economic loss due to pollution can receive*

	compensation for reasonable costs incurred
No cost to the State, unless they own ships transporting oil as cargo company or a company that receives oil transported by ship	*The scheme is financed through a combination of ship owners' insurance and a levy on those receiving oil*
Strict liability is placed on the ship-owner	*No need to prove fault of the ship owner in causing the pollution*
Avoidance of legal proceedings	*In most instances, there is no need to engage lawyers or to go to court*
Substantial sums are available to cover admissible claims	*The limits of the scheme have envisaged worst case scenarios*
An established and proven system	*Comprehensive guidance is available on admissibility and submission of claims, which can be integrated within contingency plans*

11.2 The IMO instruments

The compensation scheme has developed over several decades and may appear complex on first examination. The different IMO instruments have evolved to address different elements (oil tankers, non-tankers and HNS) and provide the framework of shared and balanced financing between the shipping and oil industries.

The following provides a brief description of the three instruments and their relevant features with respect to compensation.

11.2.1 Pollution from oil tankers

The International Convention on Civil Liability for Oil Pollution Damage, 1992 ("**1992 Civil Liability Convention"**) establishes a first layer of compensation:

- compensation for claims is paid by ship owners through compulsory insurance;
- the maximum liability is dependent on the ship's tonnage;
- the large majority of ship owners obtain their insurance through syndicates known as Protection and Indemnity (P&I) Clubs; and
- covers claims associated with the loss of persistent cargo or fuel oil even if the ship is unladen.

The International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992 ("**1992 Fund Convention"**) creates a second layer of compensation:

- this Fund is financed through levies on organizations (typically oil companies) receiving oil transported by tankers in all signatory States, pro rata on volumes received;
- is administered by the International Oil Pollution Compensation Funds (IOPC Funds); and
- provides a substantial maximum level of compensation, irrespective of ship's tonnage;

Under a voluntary contractually-binding agreement between the P&I Clubs and oil receivers, known as the Small Tanker Oil Pollution Indemnification Agreement (STOPIA), the liability under the 1992 Civil Liability Convention for smaller tankers is increased to a fixed maximum when the 1992 Fund Convention is in force.

The Protocol of 2003 to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992 ("**Supplementary Fund Protocol**") establishes a third layer:

- this layer is financed through levies on oil receivers;
- is administered by the IOPC Funds; and
- more than three times the compensation limit that is available under the second layer, i.e. the 1992 Fund Convention.

Under a voluntary contractually-binding agreement between the P&I Clubs and oil receivers, known as the Tanker Oil Pollution Indemnification Agreement (TOPIA), claims under the Supplementary Fund Protocol are equally shared by the ship owners' insurers.

The maximum limits of compensation for pollution from tankers in this three-level scheme are shown in Figure 11-1.

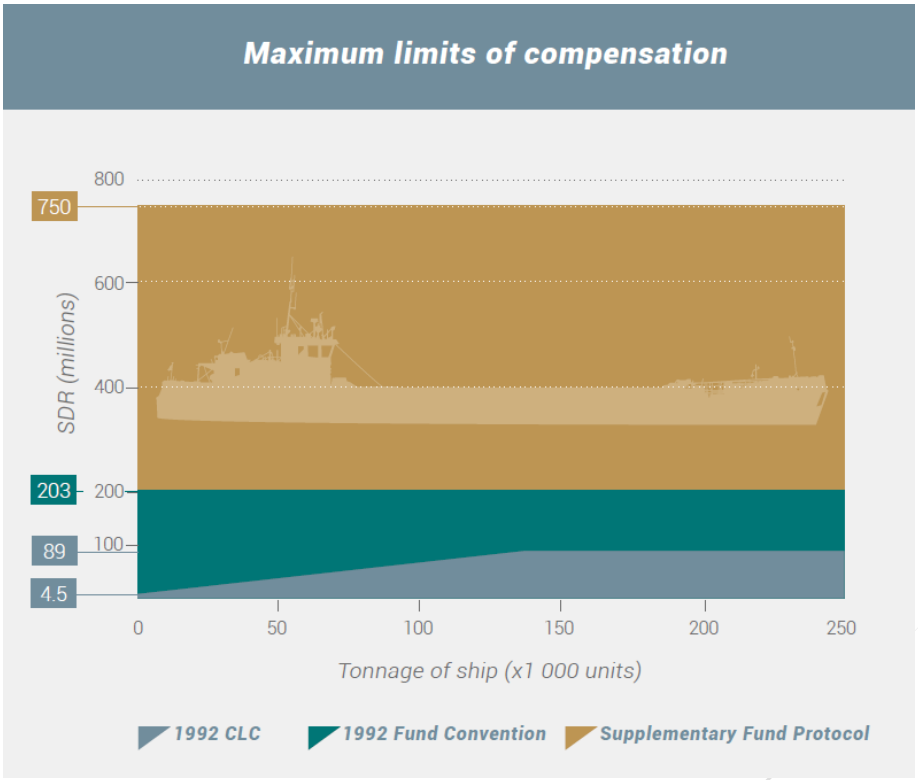


Figure 11-1 – *Maximum limits of compensation for pollution damage from oil tankers (source: IOPC Funds). SDR are 'Special Drawing Rights', representing a weighted average of various convertible currencies*

11.2.2 Pollution from non-tankers

The success of the 1992 Civil Liability and Fund Conventions led to the development of the International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 ("**Bunkers Convention**"). This fund:

- applies to fuel and lubricating oils used in a wide range of vessels, including fishing vessels, tugs, ferries, container ships, bulk carriers and non-oil tankers;
- is a single-tier compensation regime modelled on the 1992 Civil Liability Convention; and
- requires the registered owner of a vessel (over 1,000 gross tonnage) to maintain compulsory insurance to cover their liability;
- determines the limit of liability of the ship owner by separate applicable national legislation or the Convention on Limitation of Liability for Maritime Claims.

In assessing claims under the Bunkers Convention, vessel insurers usually refer to the IOPC Funds claims manual for guidance on admissibility criteria, on the basis that the signatory countries often are party to the 1992 Civil Liability Convention also and can seek consistency in claims, irrespective of the type of ship from which the oil has been released.

A single-layer scheme for compensation from non-tankers' oil pollution is available through ratification of the Bunkers Convention.

Recommendation
To benefit from this scheme for prompt and fair compensation, countries should give serious consideration to ratifying the Bunkers Convention and identifying suitable legislation on liability limits.

11.2.3 HNS pollution from ships

The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 2010 ("**HNS Convention**") aims to ensure adequate, prompt and effective compensation for damage to persons and property, costs of clean up and reinstatement measures and economic losses resulting from the maritime transport of hazardous and noxious substances.

When the 2010 HNS Protocol enters into force, a two-layer compensation scheme for HNS pollution would mirror the established scheme for oil pollution.

Under the Convention, HNS are defined differently compared to the OPRC-HNS Protocol. The Convention refers to lists of substances included in various IMO Conventions and Codes. These substances include:

- oils;
- other liquid substances defined as noxious or dangerous;
- liquefied gases;
- liquid substances with a flashpoint not exceeding 60°C;
- dangerous, hazardous and harmful materials and substances carried in packaged form; and
- solid bulk materials defined as possessing chemical hazards.

The Convention also covers residues left by the previous carriage of HNS, other than those carried in packaged form.

As with the original oil pollution compensation regime, the HNS Convention establishes a two-layer system for compensation to be paid in the event of accidents at sea, in this case, involving hazardous and noxious substances, such as chemicals.

The first layer is covered by compulsory insurance taken out by ship owners, who would be able to limit their liability. In those cases where the insurance does not cover an incident, or is insufficient to satisfy the claim, a second layer of compensation would be paid from a Fund, made up of contributions from the receivers of HNS.

At the time of publication, the 2010 HNS Convention had not entered into force due to an insufficient number of ratifications.

11.3 Pollution from sources other than ships

Compensation for response costs and damage due to oil pollution from an offshore unit, pipeline, or marine terminal is not governed by IMO conventions. Countries should therefore establish other legislation, either nationally or regionally, to address liability and compensation measures for these types of facilities. Many jurisdictions impose strict liability for the costs of a clean-up response and the effects of oil pollution arising from such facilities. Facility operators may purchase insurance to cover their oil pollution risks on the commercial market; however, many of the larger

operators are self-insured, in which case compensation is paid directly by the operator causing the pollution.