



# OIL SPILLS:

How Caribbean disaster managers  
can prepare and respond.



Empowered lives.  
Resilient nations.



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## Acronyms and Abbreviations

1992 CLC	<i>International Convention on Civil Liability for Oil Pollution Damage</i>
1992 Fund Convention	<i>International Fund for Compensation for Oil Pollution Damage</i>
Cartagena Convention	<i>Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region</i>
EEZ	<i>Exclusive Economic Zone</i>
ESI map	<i>Environmental Sensitivity Index map</i>
EWS	<i>early warning system</i>
GIS	<i>geographical information system</i>
IMO	<i>International Maritime Organisation</i>
ITU	<i>International Telecommunication Union</i>
LBS Protocol	<i>Protocol Concerning Pollution from Land-Based Sources and Activities</i>
NGO	<i>non-governmental organisation</i>
NOSCP	<i>National Oil Spill Contingency Plan</i>
OCTs	<i>overseas countries and territories</i>
OECS	<i>Organisation of Eastern Caribbean States</i>
Oil Spill Protocol	<i>Protocol Concerning Cooperation in Combating Oil Spills</i>
OPEC	<i>Organisation of Petroleum Exporting Countries</i>
OPRC 1990	<i>International Convention on Oil Pollution Preparedness, Response and Cooperation</i>
R3I	<i>Regional Risk Reduction Initiative</i>
RAC REMPEITC Caribe	<i>Regional Activity Center - Regional Marine Pollution Emergency, Information and Training Center</i>
SPAW Protocol	<i>Protocol Concerning Specially Protected Areas and Wildlife</i>
UNDP	<i>United Nations Development Programme</i>
UNEP	<i>United Nations Environment Programme</i>
USCG	<i>United States Coast Guard</i>
WCR	<i>Wider Caribbean Region</i>

## Introduction

When mentioning the word “disaster”, the first thing that often comes to mind is natural hazards such as hurricane, earthquake or flood. Nevertheless, a major oil spill, whether it is caused by human actions or is a resultant of a natural hazard, can also have a considerable impact on a nation or even an entire region. It can result in significant human, environmental, material and economic losses and damages that exceed a nation’s capabilities to efficiently manage such an event using its own resources.

However, vulnerability to disaster varies. The Wider Caribbean Region (WCR) is considered to be a highly ecologically sensitive area and is classified as ‘high-risk’ due to a history of major oil spills and chemical spill incidents, partly correlated to the relatively high concentrations of oil refineries, offshore installations, and chemical plants, as well as numerous navigational hazards and a high volume of tanker traffic.

The Caribbean Sea is of tremendous economic significance to the population that relies on its resources. Therefore, the consequences could be dramatic if a major oil spill occurs. However, the level of preparedness for oil spills of countries, island states and territories of the region varies greatly. While some already have an elaborated structure in place, others are still in the process of producing national contingency plans, setting up organizations for counter pollution measures, ratifying and implementing international and regional conventions, conducting training and exercises, and enhancing cooperation.



In order to address these gaps, the International Maritime Organisation (IMO), the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP) provide assistance to the WCR to improve oil pollution preparedness, response and cooperation (OPRC); this task is regionally performed by the Regional Activity Center - Regional Marine Pollution Emergency, Information and Training Center (RAC-REMPEITC Caribe) based in Curacao.

## The Regional Risk Reduction Initiative

Like the other small island developing states (SIDS) in the region, the English and Dutch overseas countries and territories (OCTs) in the WCR are highly vulnerable to various natural hazards and climate change impacts, and have fragile ecosystems. Settlements are often concentrated in low-lying coastal areas and other hazard-prone locations.

The R3I is a 4-year project (2009-2012) funded by the European Commission (€4.932m) with the objective of developing the local capacities for disaster risk management of the beneficiary territories, namely Anguilla, Aruba, Bonaire, British Virgin Islands, Cayman Islands, Curaçao, Montserrat, Saba, St. Eustatius, St Maarten, and Turks and Caicos Islands by:

- Increasing capacity in hazard mapping and associated vulnerability assessments, to further be incorporated into spatial information systems to inform planning and development processes
- Developing a regional Early Warning Systems (EWS) pilot for the OCTs, based on the International Telecommunication Union (ITU) automated alert protocol for warnings
- Building capacities in response, rescue and recovery through the use of risk assessment and mitigation practice in order to shorten recovery periods
- Strengthening local disaster management structures and capacities in terms of tools and best practices to support comprehensive disaster risk management schemes
- Enhancing cooperation and coordination between the OCTs, with documentation and dissemination of best practices

Indeed, the R3I project, by emphasizing intra-regional learning and sharing of tools, knowledge and best practices has enhanced the territories' individual and collective capacities to predict and prepare for disasters, thus improving resilience and reducing risk and subsequent loss.

During 2011 and 2012, the UNDP sub-regional office for Barbados and the Organisation of Eastern Caribbean States (OECS) commissioned the REMPEITC to carry out OPRC workshops under the framework of the R3I.

The aim of this resource is to share the R3I experience on OPRC and the lessons learned throughout the processes that were conducted for the further benefit of other countries in the region seeking to strengthen their response capacities.

## RAC-REMPEITC Caribe

The Regional Marine Pollution Emergency, Information and Training Center was established in June 1995, within the framework of the IMO and the Caribbean Environmental Programme (UNEP-CAR/RCU). This Regional Activity Center is currently supported by the host government of Curacao and secondments from the U.S. (U. S. Coast Guard) and France (in cooperation with the French oil company, Total). Financial support for projects and activities are provided by the IMO, the UNEP-CAR/RCU and more recently by the UNDP under the R3I.

The Center is designed to promote and facilitate international cooperation and regional assistance to states for the development and maintenance of their full capability to

respond effectively to marine pollution incidents involving oil, hazardous and noxious substances, and other marine environmental threats from ships, and thus contribute to the sustainability of the marine environment in the WCR.

RAC/REMPEITC-Caribe operates within the Cartagena Convention area, which includes the following countries: Antigua and Barbuda, Bahamas, Barbados, Belize, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, France, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Kingdom of the Netherlands, Nicaragua, Panama, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, United Kingdom, United States of America and Venezuela.

## Regional and International Agreements

### **OPRC 1990**

The International Convention on Oil pollution Preparedness, Response and Cooperation (OPRC) was adopted in 1990 and entered into force in 1995.

The aim of the Convention is to provide a global framework for international cooperation and mutual assistance in combating major oil spill incidents. Parties to the Convention are required to take all appropriate measures to prepare for and respond to oil pollution incidents such as:

- The establishment of oil reporting procedures and arrangements for handling requests for assistance (provision is made for the reimbursement of any assistance provided)
- The development of a national contingency plan (including establishing the designated national authorities and focal points responsible for oil spill preparedness and response)
- Conducting oil spill combating exercises and training programmes for relevant personnel. As required under the Convention, the IMO has developed a comprehensive training programme in the field of oil pollution preparedness and response.
- The establishment of stockpiles of oil spill combating equipment



The Convention also concerns ships, offshore units, ports and oil terminals which are under the jurisdiction of the party or flying its flag; they are required to have an oil

pollution emergency plan.

In 2000, a Protocol to the OPRC 1990 was adopted to encompass hazardous and noxious substances (OPRC-HNS Protocol). It entered into force in 2007.

## The Oil Spill Protocol Under the Cartagena Convention

The Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention) was adopted on 24 March 1983 and entered into force on 11 October 1986 as the legal instrument for the implementation of the Caribbean Action Programme. The Convention is the only legally binding environmental treaty for the WCR. It is supplemented by three protocols:

- Protocol Concerning Cooperation in Combating Oil Spills (adopted in 1983 and entered into force in 1986);
- Protocol Concerning Specially Protected Areas and Wildlife (SPA) (adopted in 1990 and entered into force in 2000);
- Protocol Concerning Pollution from Land-Based Sources and Activities (adopted in 1999 and entered into force in 2010).

The Convention and its three Protocols constitute a legal commitment by the participating governments to protect, develop and manage their common waters individually and jointly. The Convention is a framework agreement setting out the political and legal foundations for actions to be developed nationally and regionally.

The Protocol Concerning Cooperation in Combating Oil Spill establishes a mechanism to respond to discharges or threats of discharges that could endanger the marine environment and coastal interests of the countries. Similar to the OPRC 1990, it requests the contracting parties to establish and maintain, within their capabilities, the means of



responding to oil spill incidents by the preparation of contingency plans, the designation of an authority responsible for the implementation of this Protocol and the identification and development of the capability to respond to an oil spill incident. It also outlines an oil reporting procedures and calls for cooperation and mutual assistance. The Contracting Parties to the Convention extended the Oil Spill Protocol

to include hazardous or toxic substances by means of an Annex. RAC/REMPEITC-Caribe is the Regional Activity Centre established under this Protocol.



The Cartagena Convention (1983/1986) is supplemented by three protocols, namely:

- Oil Spill Protocol (1983/1986)
- SPAW Protocol (1990/2000)
- LBS Protocol (1999/2010)

## Oil Spill Compensation

In order to ensure that adequate compensation is available to persons affected by spills of persistent oil from tankers, a 3-layer compensation system was developed under the auspices of the IMO.

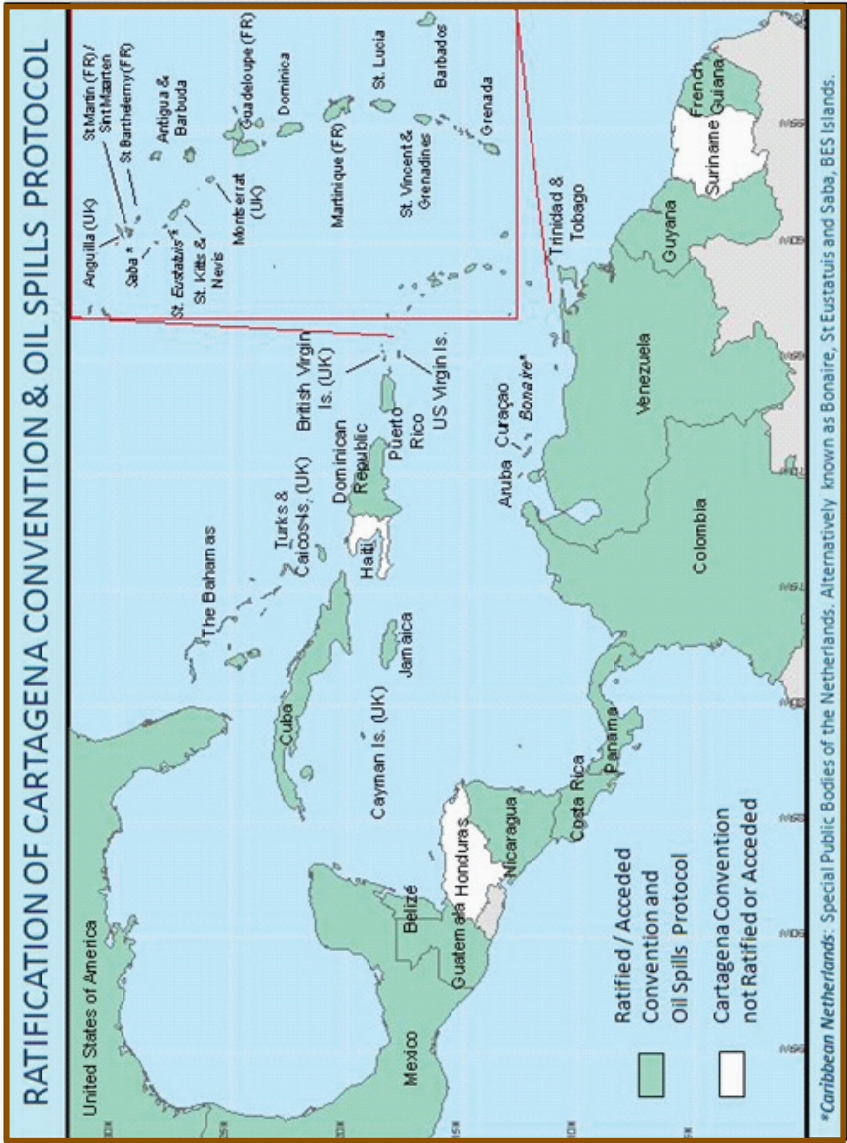
The primary layer is the International Convention on Civil Liability for Oil Pollution Damage (Civil Liability Convention, CLC). First adopted in 1969, then amended in

1992, it is now commonly referred to as 1992 CLC. This Convention introduces the concept of strict liability for tanker owners, which means that even in the absence of fault, the owner is accounted liable to pay for clean-up costs and pollution damage within the Exclusive Economic Zone (EEZ) of an affected state. There are some exceptions (act of war, intent to cause damage by a third party, etc) but the burden of proof lies with the owner in each case. Moreover, ships carrying more than 2,000 tonnes of oil are required to maintain insurance in respect of oil pollution damage and compensation limits are set according to the tonnage of the tanker causing the pollution.

The secondary layer is the 1971 International Fund for Compensation for Oil Pollution Damage, which was also amended in 1992 and is now referred to as the 1992 Fund Convention. This Fund was created in order to cover the claims that exceeded the limit of liability of the tanker owners under the 1992 CLC. The maximum amount payable by the 1992 Fund, including the sum paid by the tanker owner, is US\$312.4 million (rate on 1 November, 2012). The 1992 Fund is financed by contributions levied on any person who has received in a calendar year more than 150,000 tonnes of crude oil or heavy fuel oil after sea transport in a 1992 Fund Member State .

The third layer is the 2003 Supplementary Fund. States that have ratified the 1992 CLC, the 1992 Fund Convention and are a member of the Supplementary Fund are entitled to a total compensation amount of up to US\$1,154.2 million (rate on 1 November, 2012) for an incident. This Fund is financed in a similar way to the 1992 Fund<sup>1</sup>.

<sup>1</sup>IOPC, 2012. Conversion of Special Drawing Rights (SDR); Rates on 1 November 2012 (as defined by the International Monetary Fund). Available online at <http://www.iopcfund.org/SDR.htm>.



# OPRC Capacity Building Process

## Objectives

The REMPEITC organized national workshops in Aruba (November 2011), Anguilla (February 2012), Sint Maarten (February 2012) and Turks and Caicos Islands (October 2012) in order to assist those governments to develop and maintain their full capability to respond effectively to an oil spill. The main objectives were to:

- Provide training on the steps of an oil spill response
- Develop an action plan for the writing of the National Oil Spill Contingency Plan (NOSCP) or review the existing Plan and identify the status/ responsibilities regarding oil spill preparedness and response
- Develop a local oil spill response strategy on the most probable case spill scenario
- Develop and support agency cooperation at the local level and improve links between stakeholders, industry, NGOs and government

## Programme Implementation

The participants originated from various government agencies and companies. Often, a great proportion of the participants had little knowledge or experience with oil spills and response, so in order to ensure a common knowledge base, a series of lectures about OPRC was given by highly knowledgeable experts, covering topics such as: oil spill properties, fate and effects; health and safety; command control and communications response strategies (monitoring, in-situ burning, dispersants, containment and recovery); shoreline clean-up; storage and disposal of recovered oil and waste; claims and compensation; media management and awareness. This corresponds to the IMO introductory level course on oil pollution preparedness and response.



The remainder was dedicated to group discussions and activities on specific aspects of response awareness and decision-making using plausible significant spill scenarios. The main activities were:

- Oil Trajectory, Fate, and Surveillance. Participants gained basic knowledge in the evaluation of an oil trajectory and fate, and the resources needed for the surveillance.

- Resources at Risk. Multiple sources of information are needed and available for the identification of resources at risk (RARs). Participants prepared lists of RARs, key ecological habitats and species, and protection priorities.
- Response Objectives and Strategies. Setting response objectives and strategies are typically command level decisions. Participants were asked to identify the persons expected to comprise the decision-making body of a response management team (command staff).
- Response Tactics. Participants listed the resources (equipment and personnel) needed to perform a specific response countermeasure.

Attention was drawn to the issue of waste management during and after the response.

Most of these activities were modified from the USCG Model Ecological Risk Assessment for Oil Spill Response<sup>2</sup>.



The workshops concluded with a discussion regarding the next steps in order to keep moving forward, identifying responsibilities for plan writing and development and capitalization on observations made during the workshop.

## Lessons Learned and Recommendations

Taking into consideration the potential occurrence of a spill, its consequences and their level of preparation, the programme was perceived by many as very timely to initiate the update or writing of the NOSCP.

Participants gained a solid understanding of the decision-making process typically required for a coordinated response. The benefits, limitations, and trade-offs of response techniques were discussed and evaluated specifically to the environmental and economic setting of their country.

<sup>2</sup> for unmodified approach, see Aurand, D., L. Walko, R. Pond. 2000. Developing Consensus Ecological Risk Assessments: Environmental Protection. In Oil Spill Response Planning, A Guidebook. United States Coast Guard. Washington, D.C. 148p



The learning approach was highly appreciated by the participants, giving the opportunity to put into practice the course material tackled during the lectures, thus improving learning by reinforcement as well as fostering communication between the various stakeholders. This communication process was essential as it enabled the participants to better understand

the work of each party with its various constraints and responsibilities, and therefore providing a broader perspective and initiating a solid base for cooperation.

The scenario-based exercises were particularly valuable. Indeed, in most cases, the many participants were not familiar with their NOSCP and consequently, many did not know their role in case of an oil spill. Thus, the exercises enabled familiarization with the plan, to assess it and to clearly point out a number of gaps that needed to be addressed. Some of the gaps/issues identified are outlined below.

### **Organizational structure for command and control**

Parties in charge of the response were unaware of their responsibilities or no longer existed as the structure of the government changed (suppression of positions, mergers of agencies etc.). Most islands decided to use the Incident Command System (ISC) to clarify the organization in charge of the response. The list of Key contact points needs to be regularly updated and each stakeholder identified to be part of the command system must be solicited first and informed of its role and responsibilities. A NOSCP is a living document, it has to be updated whenever changes occur and include lessons learned from a previous oil spill.

### **Lack of information**

Sensitive environmental and economic resources had not been identified and there were no Environmental Sensitivity Index (ESI) Maps and oil spill response equipment. This information is essential in order to define response strategies and priorities for protection and clean-up.

Governments were also advised to document the island's environmental status so that in case of an oil spill they have a reference study and are able to assess the extent of the impact and. The list and

#### **Gaps and issues in implementing a National Oil Spill Contingency Plan (NOSCP):**

- Organizational structure for command and control
  - Lack of information
- Lack of specialized knowledge
  - Lack of equipment and cooperation
- Governance

location of equipment available (public and private sector) as well as information about waste management were sometimes also missing (temporary storage and final disposal options).

### **Lack of specialized knowledge**

There is a lack of specialized personnel for oil spill response. Some participants did not have the general knowledge about OPRC and training is necessary. Participants were not aware of the Conventions that the Government has ratified and were unfamiliar with the oil spill compensation mechanism. There is a need for both theoretical and practical training.

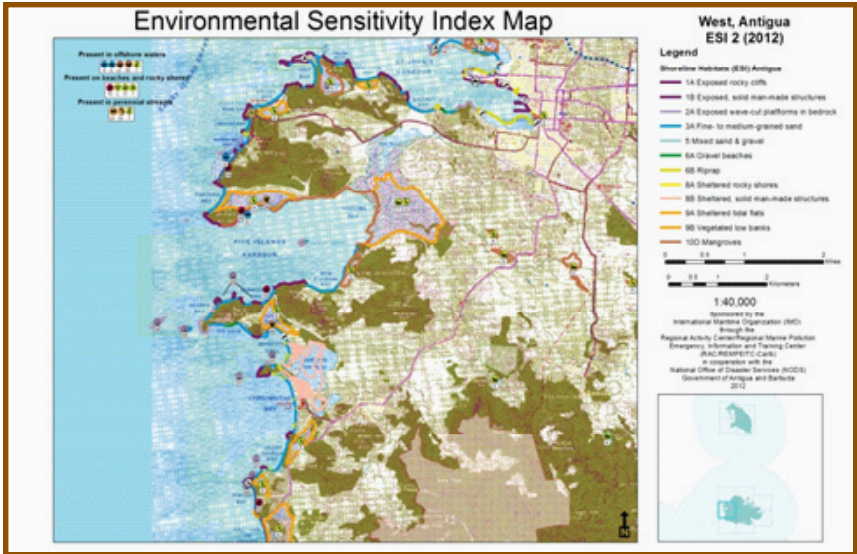
### **Lack of equipment and cooperation**

Governments mentioned that they did not have oil spill equipment. However, oil companies do possess equipment for Tier 1 spills at their facilities. Cooperation with the private sector (tourism industry, oil companies, etc) is essential and formal written agreement must be established. Tabletop exercises and deployment exercises could be organized regularly, with industry and government cooperation. The frequency of these exercises should be determined in the NOSCP.

It is also important to remember that even though governments may not have specific response equipment such as skimmers or booms, they still have some very useful resources. For instance, they usually possess helicopters or small aircraft which can be used for aerial assessment and monitoring of the spill. Regional agreements with neighboring islands should also be developed. However, governments should not mainly rely on assistance from neighboring countries as those countries may also have very limited resources and it will take some time before regional assistance arrives.

### **Governance**

In general, little funding is allocated to oil spill preparedness as it may not be the priority of the decision makers. Often, while the civil servants understood the risks posed by the absence of proper planning, their political counterparts either did not share the same knowledge or the same interest or enthusiasm to support the establishment of a national system for responding promptly and effectively to oil spills. It is important to develop outreach to the Ministers and Permanent Secretaries as to the responsibilities and actions that a government must take when it is a party to the OPRC Convention and the Oil Spill Protocol under the Cartagena Convention.



## Actions for Follow-up and Continuity

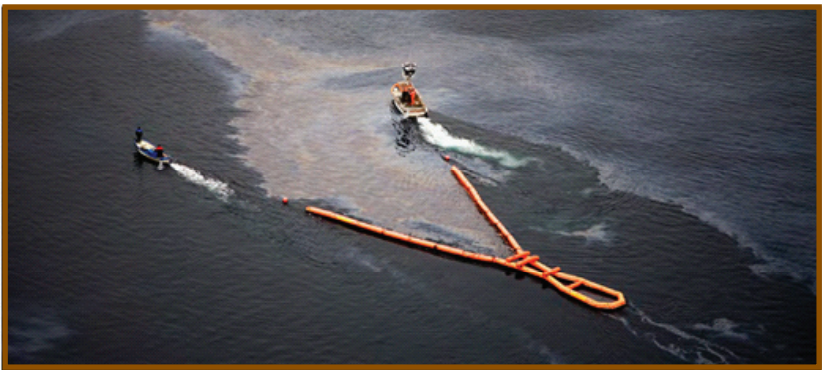
The participants showed remarkable motivation and participation during those workshops and additional assistance was requested for further training (table top exercise, OPRC courses etc.). However, it is essential that the action plan outlined at the end of the workshop be completed first. Oftentimes the stark reality is that as long as there is no incident, not much attention will be paid to the NOSCP. It is only when a spill occurs that the community realizes that no one is prepared to properly respond to such a situation. Following the spill, some work is generally done to address those issues, however as time passes, the memory of the incident and its impact tend to diminish, other priorities override the required prevention measures and the work is not completed until another spill occurs and then the same process starts again. Thus, it is crucial to adopt proactive behavior towards prevention.

Governments must show commitment to the development of a national response strategy. It is essential that governments keep in mind the tremendous impact that a major oil spill can have. It will disturb the fragile marine ecosystem and consequently affect the fisheries, the tourism industry, coastal infrastructure and equipment (ports, marinas, boats, etc) and any other industries that rely on seawater for their normal operation (desalination plant, power plant, etc). The impacts are both economic and environmental. Poor planning and preparation will lead to confusion. Disorganized response worsens the accident and often results in costly mistakes and greater impact to the environment. It also negatively impacts on public confidence in the government's ability to effectively respond to and manage crisis situations. Proper planning will reduce response time and leads to prompt and effective response. It will also reassure the public and media and instill confidence.

The REMPEITC will follow up with the countries to track their progress, and has offered assistance to review the new version of the NOSCP. The REMPEITC will also conduct a final workshop under the R3I in cooperation with the Rijkswaterstaat (the executive body of the Dutch Ministry of Infrastructure and Environment) at the end of 2012. This workshop will include operations-based training and exercises. It will be held in Saba with participation of delegates from Anguilla, Aruba, Bonaire, Montserrat, Saba, Sint Eustatius, Sint Maarten and Turks and Caicos Islands.

During this workshop the participants will have the opportunity to get practical training on the deployment of a Current Buster®, which is a high speed oil containment system. This patented technology, developed by NOFI, is different from other boom containment systems. It has the unique capability to efficiently collect the oil at high towing speeds (up to 4 knots) or in current exposed waters while conventional boom starts to lose oil when towed at 0.6 to 0.9 knots. This system was used for instance during the Gulf of Mexico oil spill response in 2010.

By receiving hands-on training on the use of oil spill equipment in realistic conditions, the participants will gain responder skills essential to efficient oil spill response strategies.



## Annex 1: Maritime Traffic in the WCR - Risk assessment tool

The Wider Caribbean Region has one of the greatest volumes of maritime traffic in the world. It has high concentrations of oil refineries, offshore installations, and chemical plants, as well as numerous navigational hazards and a high volume of tanker traffic. The transport of oil is an important part of that traffic. In 2011, the WCR produced on average 12.7 million barrels per day which represent 18.1% of daily world production (OPEC, 2012). The major oil producers in the WCR are the United States, Venezuela, Mexico, Colombia, Ecuador and Trinidad and Tobago.

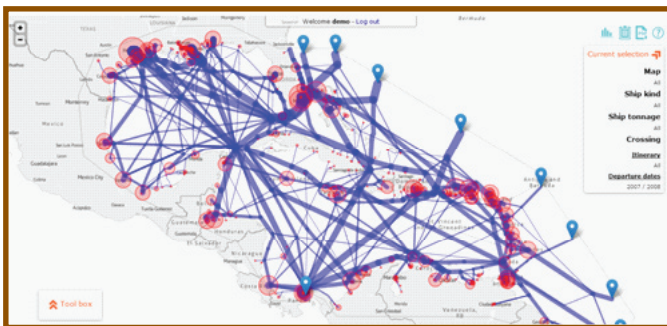


World crude oil production by country (1,000 b/d)						
	2007	2008	2009	2010	2011	% change 11/10
<b>North America</b>	<b>6,452.6</b>	<b>6,299.2</b>	<b>6,577.5</b>	<b>6,708.1</b>	<b>6,916.8</b>	<b>3.1</b>
Canada	1,388.4	1,348.7	1,216.9	1,227.1	1,258.2	2.5
United States	5,064.2	4,950.4	5,360.6	5,481.0	5,658.6	3.2
<b>Latin America</b>	<b>9,835.9</b>	<b>9,635.2</b>	<b>9,506.8</b>	<b>9,664.4</b>	<b>9,823.1</b>	<b>1.6</b>
Argentina	641.5	641.6	623.1	608.8	572.6	-5.9
Brazil	1,748.0	1,812.1	1,950.4	2,054.7	2,105.4	2.5
Chile	2.0	2.0	2.8	3.0	4.2	41.5
Colombia	529.5	587.8	670.2	784.8	913.6	16.4
Ecuador	511.4	501.4	464.7	476.4	500.3	5.0
Mexico	3,081.7	2,798.5	2,601.4	2,575.9	2,550.0	-1.0
Peru	77.0	76.6	71.8	72.6	69.6	-4.2
Trinidad & Tobago	120.5	114.3	107.2	98.2	92.0	-6.3
Venezuela	2,981.9	2,957.5	2,878.1	2,853.6	2,880.9	1.0
Others	142.3	143.5	137.1	136.3	134.3	-1.5

Source: OPEC. 2012. Annual Statistical Bulletin.

In order to address the lack of relevant data on maritime traffic in the Wider Caribbean and the risks posed by it, RAC/REMPETC-Caribe developed a comprehensive GIS-based database of the maritime traffic in the WCR. This tool is designed to facilitate and strengthen national and regional prevention/preparedness in maritime environmental issues by compiling the information needed for a relevant risk analysis.

It provides a visualization of the aggregated routes and the traffic density, as well as ports activities and other data useful for oil spill risk assessment. It allows applying filters (type of vessels, ports of departure, etc.) and several display options are proposed. The user has the possibility to export the data and to generate reports.



The tool is available on-line at <http://www.caribbeanmaritimetraffic.org>. The access is secured, and it is necessary to request a username and a password by sending an email indicating name, organization, position, country and contact information to [rempeitc@cep.unep.org](mailto:rempeitc@cep.unep.org).

## Actions for Follow-up and Continuity

ORGANISATION	INFORMATION	LINKS
<b>IMO</b>	The International Maritime Organization has an extensive library comprising publications, guides, books etc. A book of particular interest is the: Manual on Oil Pollution, Section IV Combating Oil Spills, London 2005, 212p.	<a href="http://www.imo.org/Pages/home.aspx">http://www.imo.org/Pages/home.aspx</a>
<b>RAC/ REMPEITC</b>	The Regional Pollution Emergency, Information and Training Center website contains information about past and future workshops and maintains a database of country profiles as well as OPRC plans, ESI Maps etc.	<a href="http://cep.unep.org/racrempeitc">http://cep.unep.org/racrempeitc</a>
<b>CEP-UNEP</b>	The Caribbean Environment Programme is one of the UNEP-administered Regional Seas Programmes. Their website provides information about the Cartagena Convention and its protocols as well as the various activities organized in the region.	<a href="http://www.cep.unep.org/about-us">http://www.cep.unep.org/about-us</a>
<b>UNDP Barbados and the OECS</b>	UNDP Barbados and the OECS' website contains information about their work in the region including the R3I.	<a href="http://www.bb.undp.org/">http://www.bb.undp.org/</a>
<b>I TOPF</b>	The International Tanker Owners Pollution Federation (ITOPF) produces technical publications about the preparation and response to oil spills. Particularly useful documents are the Technical Information Papers (TIPs). Each paper is concise and illustrated with photographs and diagrams. It covers all aspects of OPRC (contingency planning, fate and effect of oil, leadership, command and control, aerial observation, booms, skimmers, dispersants, sorbent materials, shorelines clean-up, sampling and monitoring, waste management, claims and compensation etc.). The Federation also maintains a number of databases and an extensive library.	<a href="http://www.itopf.com/">http://www.itopf.com/</a> <a href="http://www.itopf.com/information-services/publications/documents/ITOPFTIPs.pdf">http://www.itopf.com/information-services/publications/documents/ITOPFTIPs.pdf</a>
<b>IPIECA</b>	The global oil and gas industry association for environmental and social issues produces a number of reports and publication (some are written in cooperation with ITOPF and the IMO). Documents of particular interest are: 1) Oil Spill Preparedness and Response, report series summary 2008; and 2) Oil Spill Compensation: A Guide to the International Conventions on Liability and Compensation for Oil Pollution Damage, a joint IPECA/ITOPF Publication February 2007. IPEICA maintains an extensive library, including in-depth reports series on oil spills.	<a href="http://www.ipecica.org/publications/Oil_Spill_-_Oil_Spill_Preparedness_and_Response_Report_Series_Summary.pdf">http://www.ipecica.org/publications/Oil_Spill_-_Oil_Spill_Preparedness_and_Response_Report_Series_Summary.pdf</a> <a href="http://www.ipecica.org/sites/default/files/publications/Compensation_1.pdf">http://www.ipecica.org/sites/default/files/publications/Compensation_1.pdf</a>



