



World Bank/OECS Emergency Recovery and Disaster Management Project

Government of Saint Lucia

Oil Spill Contingency Plan

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Document of the Saint Lucia National Emergency Management Plan

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PART I - GENERAL INFORMATION

1.- Name of the Plan

The name of this plan is 'The Saint Lucia National Oil Spill Contingency Plan.'

The Saint Lucia National Oil Spill Contingency Plan (Short Title: The Oil Spill Plan) was prepared to relate at all levels to the Caribbean Island Oil Pollution Preparedness Response and Co-operation (OPRC) Plan - hereafter referred to as The Caribbean Plan.

In this document, the Saint Lucia National Oil Spill Contingency Plan will be referred to as 'The Oil Spill Plan', 'the Plan' or by its acronyms:

- ✓ SLU/NEMP/OSP
- ✓ OSP

The Saint Lucia National Oil Spill Contingency Plan is also subsection 04 of section 03 (Emergency Plans) of the Saint Lucia National Emergency Management Plan. [SLU/NEMP-03-04]

The Saint Lucia National Emergency Management Plan will be referred here to as 'the National Plan' or by its acronym SLU/NEMP

2.- Number and Date of Revision

The present version is the fifth version of the plan and it has been written in May 15th 2002.

All the versions of the plan have been prepared as follows:

First Version.	November 1998 (ODP/REMPEITC-Carib)
Second Version.	July 1999 (Saint Lucia Air & Seaports Authority. ODP, C/Guard & Ministry of Planning.)
Third Version.	June 14 th , 2000 (Saint Lucia Air & Seaports Authority, NEMO, Coast Guard Department of Fisheries.)
Fourth Version.	June 11 th , 2001 (Saint Lucia Air & Seaports Authority, NEMO, Saint Lucia Solid Waste Management Authority and the Ministry of Planning.)

The Fifth version presented in this document has been designed jointly by the Director of Maritime Affairs of the Saint Lucia Air and Seaports Authority and the Emergency Planning and Mitigation Advisor of the National Emergency Management Office of Saint Lucia; it was revised also by NEMO and the OPAC. Detailed and valuable comments were received from Mr. Christopher Corbin, Senior Sustainable Development and Environment Officer, Ministry of Planning.

3.- Acronyms/Abbreviations

Acronyms and abbreviations used in The Plan and its Emergency Procedures are the following:

CARICOM	The Caribbean Community
CCC	Clean Caribbean Co-operative
CDB	Caribbean Development Bank.
CDERA	Caribbean Disaster Emergency Response Agency
CDRU	CARICOM Disaster Relief Unit
CEHI	Caribbean Environmental Health Institute
C&W	Cable and Wireless.
CIDA	Canadian International Development Agency
CLC	International Convention on Civil Liability for Oil Pollution Damage 1969
DPRA	Disaster Preparedness and Response Act (Saint Lucia)
ECDG	Eastern Caribbean Donor Group
EEZ	Exclusive Economic Zone
EOC	Emergency Operations Centre
EU	European Union
FAHUM	Humanitarian Allied Forces Exercise
GIS	Geographical Information Systems
GIS	Government Information Service of Saint Lucia (Also SLU/GIS)
HAZMAT	Hazardous Materials
HOSLL	Hess Oil of Saint Lucia Limited
ICS	Incident Command System
IMO	International Maritime Organisation
IOPC	International Oil Pollution Compensation Fund
IPIECA	International Petroleum Industry Environmental Conservation Association
ITOPF	International Tanker Owners Pollution Federation
LUCELEC	Saint Lucia Electricity Services LTD.
MARPOL	International Convention for the Prevention of Pollution from Ships 73/78
MOH	Ministry of Health
MSRC	Marine Spill Response Corporation
NDMP	Saint Lucia National Disaster Management Plan (1996)
NEMO	National Emergency Management Office
NEMP	National Emergency Management Plan (2002)
ODP	Office of Disaster Preparedness (as of March. 20 th , 2000: NEMO)
OECS	Organisation of Eastern Caribbean States
OFDA	US Office of Foreign Disaster Assistance
OPAC	Oil Pollution Action Committee
OSC	On Scene Commander
OSP	The Saint Lucia National Oil Spill Plan (5 th Version, May 2002)
OSRL	Oil Spill Response Limited (UK)
PAHO	Pan American Health Organisation
PIO	Principal Information Officer (SLU-GIS)
REMPEITC	The Regional Marine Pollution Emergency Information and Training Centre Wider Caribbean. International Maritime Organisation.
RSS	Regional Security System
RSLPF	Royal Saint Lucia Police Force

SITREP	Situation Reports
SLASPA	Saint Lucia Air and Sea Ports Authority
SLSWMA	Saint Lucia Solid Waste Management Authority
SLU-GIS	Government Information Service (Saint Lucia)
SLU/NEMP	Saint Lucia National Emergency Plan
SOP	Standard Operation Procedures

4.- Definitions/Glossary of Terms

Caribbean Plan is The Caribbean Island Oil Pollution Preparedness, Response and Co-operation Plan prepared by IMO/REMPEITC-Carib and presented as Appendix 1 to this Plan and referred to as The Caribbean Plan. The Caribbean Plan provides a framework under which Island States and Territories may co-operate at the operational level in responding to oil incidents as required by Article 8 of the Protocol to the Cartagena Convention (The Convention for the Protection of the Marine Environment of the Wider Caribbean Region and the Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region [1983]).

EEZ - for the purpose of the Plan, the Exclusive Economic Zone of Saint Lucia extends to sea 200 miles, or to an equal division of territorial area between any two islands where the 200-mile zone would overlap.

Emergency Operations Centre (EOC). For Tier 2 and 3 responses the Emergency Operations Centre (EOC) shall be activated if necessary. The decision will always be made by NEMO and OPAC. The EOC is located at NEMO, Red Cross Building, Vigie, Castries, Saint Lucia. The alternate EOC will be located at Saint Lucia Air & Seaports Authority. The EOC will be staffed as appropriate and will provide the command and control facility and policy guidance for the entire oil spill operation.

Lead Agency - the agency designated in Island States' or Territories' Oil Spill Contingency Plans that initiates and receives oil spill information directly from other Agencies during times of an oil spill emergency.

In Saint Lucia, the Lead Agency is the National Emergency Management Office (NEMO) and the first responders are: marine, the Saint Lucia Marine Police Unit; terrestrial, the Saint Lucia Fire Service.

Oil Pollution Action Committee (OPAC). It is the established body, which is activated when there is a threat of pollution to Saint Lucia. This committee may include representatives from other organisations who may be co-opted as appropriate. Contact information for OPAC members and other relevant personnel can be found in the attachments of Emergency Procedure OSP 001 Notification.

Oil Spill Incident - a discharge or a significant threat of a discharge of oil, however caused, of a magnitude that requires emergency action or other immediate response for the purpose of minimizing its effects or eliminating the threat.

On-Scene Commander (or Coordinator) (OSC) - The official appointed and charged with coordination and direction of the national pollution control efforts at the scene of an oil spill incident. Pre-designated OSC (Sea & Land) are listed in this Plan.

At the operational level the On-Scene Commander (OSC) (Sea) is provided by the Marine Police and an On-Scene Commander (OSC) (Land) is provided by the Fire Service. Resources will be co-opted as necessary and the clean up will involve resources from the Ministry responsible for Works, Solid Waste Management Authority, and other relevant agencies and the private sector.

Related Interests - the interests of Saint Lucia directly affected or threatened including:

- .1 Maritime, coastal, port or estuarine activities;
- .2 The historical and tourist appeal of the areas in question, including water sports and recreation;
- .3 The health of the coastal population; and,
- .4 Fishing activities and the conservation of natural resources.

Response Agency - the organization that normally responds to an oil spill during times of emergency. In some States or Territories, the Lead Agency and the Response Agency will be the same agency. In Saint Lucia it is the OPAC.

Tiered Response. The response to an oil spill can have three levels depending on the characteristics and magnitude of the spill (see also Section 18.6 of this Plan):

- **Tier One** (1) is response by local resources on the spot including Industry. Arrangements are established at ports and oil handling facilities, which are designed to deal effectively with small operational spills.

- **Tier Two** (2) is support and assistance from within the region. Arrangements provide for the merging of government or privately owned resources at a local level or from the Wider Caribbean area to respond to an incident that may exceed, either in size, complexity or due to its remote location, the Tier 1 capability of a country.

- **Tier Three** (3) is reinforcement on a global scale. Arrangements provide for a combined national, regional or international response to a major oil spill that cannot be dealt with effectively under the Tier 2 arrangements.

These and other definitions can be found in paragraphs 1.5, 2.2, 2.4, 2.5, and 2.6 of 'The Caribbean Plan' in Appendix 1.

5.- Introduction

Response to accidental spillage of oil requires careful advance planning to ensure that the impact of the oil spill is minimized. We intend to accomplish this by means of a contingency plan and emergency procedures. Such a contingency plan will be defined as a predetermined communications and action sequence, which can be quickly initiated to cope with an event of possible but uncertain occurrence.

The Caribbean Plan is designed to enhance an individual territory's ability to respond to a spill which is beyond its own capability, and thereby establishes the principle of friendly neighbourliness and mutual assistance and to promote the involvement of the Industry.

The re-design of the Oil Spill Plan was based on the document 'Guidelines for the Revision of Emergency/Recovery Plans. November, 2001' designed by NEMO. These guidelines consider different sections that would make any emergency plan a complete plan by taking into consideration:

- ✓ The need for a specific plan for a specific hazard
- ✓ The need to have a written emergency plan
- ✓ The need to establish a permanent planning process
- ✓ The need to have, in reality and in good working condition, the resources mentioned in the written plan.

Few changes have been made to the 4th version of the Plan. It has been more a matter of relocating what had already been written into a different location within the plan itself.

Some changes, modifications and additions to the previous version of the Plan are based on the document 'Revision and Recommendations for the Saint Lucia Oil Spill Contingency Plan' prepared by NEMO's Emergency Planning and Mitigation Advisor.

The new structure of the plan, by being based on the above-mentioned guidelines, intends to be the same for other hazards within the NEMP itself and, also, a first step to homologate emergency plans not only within the country, but also at the Regional and International levels.

The plan consists of two big parts: the core section and the emergency procedures; each procedure corresponds to a specific emergency/response activity and its responsibility is assigned to one and only to one specific organisation to ensure, thus, that there are no gaps or overlapping in the responsibilities to be executed during an emergency or in the case of a disaster.

The emergency procedures of this plan have been written also according to guidelines designed by the Emergency Planning and Mitigation Advisor: "Writing Standard Operating Procedures (SOPs) Version 4, December 1st, 2001" developed by NEMO. This will ensure that procedures, as well as plans, will be similar in structure (components, sequence of the steps, etc.) as a very important factor to homologate emergency procedures in Saint Lucia and in the Region.

The emergency procedures have been assigned different numbers according to the specific emergency/recovery activity they are written for. This intends to make them easy to revise and to update.

The Plan and its procedures permit their updating to be an easy one. Every Section of the Plan and every Emergency Procedure of the Plan can be updated separately; that is, it is not necessary to change every single section and every single procedure in the plan at the same time; they have to be revised at least once a year, yes, but maybe not all of them would require changes.

In the case of simulation exercises that test only one or some procedures, these can be updated as well after evaluating the exercises, without necessarily updating the entire plan and the rest of the procedures.

In conclusion, the Oil Spill Plan intends to be a complete plan and an easy plan to be read, revised, tested, executed and updated.

6.- Purpose/Objectives

The purpose of the Saint Lucia Oil Spill Contingency Plan is to delineate responsibilities for the operational response to the spillage of oil into the environment.

The objectives of this Oil Spill Plan are to ensure a timely and effective response to/or threat of spillage of oil to marine and land based resources.

In the absence of a specialised plan, this Oil Spill Plan can be adapted as necessary for a response to other hazardous materials into the environment.

7.- Legal Framework

7.1.- International Conventions

- ✓ At the international level, the following multilateral instruments are applicable:
- ✓ International Convention on Civil Liability for Oil Pollution Damage, 1969 (1969 CLC) and its Protocols from 1992.
- ✓ The International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Fund Convention 1971) and its protocol from 1992.
- ✓ International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) and its Annexes.
- ✓ Convention for the Protection and Development of the Marine Environment in the Caribbean Region. Protocol concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region, 1983 and Protocol on Controlling Land Based Sources of Marine Pollution.
- ✓ International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990

7.2.- Conventions and Protocols.

Although Saint Lucia has signed all the multilateral conventions and protocols mentioned in point 7.1 above, some of them have not been formally acceded to:

Table 7.1.- International Conventions and Protocols Regarding Oil Spill.

Oil Spill Response		Prevention & Safety					Compensation	
OPRC 90	Cartagena	MARPOL & Annexes					CLC Protocol	FUND Protocol
		73/78	I/II	III	IV	V	1992	1992
Not yet	yes	yes	yes	yes	yes	Yes	Not yet	Not yet

Saint Lucia must accede to these conventions and protocols to ensure liability and accede to the Fund in the case of an oil spill. Efforts must be made immediately by Saint Lucia, with the support of the OPAC, to identify the steps that have to be taken to accede to the OPRC '90 and both the CLC and FUND '92 protocols.

7.3.- Disaster Preparedness and Response Act.

Section 8 [National Disaster Response Plan]

(1): The Director shall prepare annually for the approval of the Prime Minister, the National Disaster Response Plan, comprising the statement of the contingency arrangements under the co-ordination of the Director for responding to the threat or event and aftermath of a disaster in Saint Lucia whether or not the threat or the disaster is such as to prompt the declaration of a disaster emergency.

(2) The National Disaster Response Plan shall include:

- (a) Procedures for co-ordinating the national disaster preparedness and response of public officers, Ministries and Departments of Government, statutory bodies, local government units, and persons or organisations who volunteer or are required by law to perform functions related to the mitigation of, preparedness for, response to and recovery from emergencies and disasters in Saint Lucia.

7.4. Other Legislation.

Other applicable legislation in Saint Lucia is the following:

- i. Oil in Navigable Waters Ordinance (Chap. 91)
- ii. Maritime Areas Act 1984, No. 6
- iii. Fisheries Act, 1984, No. 10
- iv. Merchant Shipping Act, 1994, No. 11
- v. Merchant Shipping (Oil Pollution) Act, 1996, No. 11 (Not in Force).
- vi. Public Health Nuisance Regulations SI # 10 of 1978
- vii. Public Health (Water Quality Control) SI # 14 of 1978
- viii. Marine Pollution Act
- ix. Waste Management Act

Regular revision and updating of the existing Legislation is also recommended. New Legislation can be prepared and enacted as necessary and according to the Plan needs.

8.- Policies and Criteria for Oil Spill Response.

8.1.- Policy on Oil Spill/Hazardous Material Response:

Government of Saint Lucia Policy on Oil Spill/Hazard Material Response.

This Plan is the framework under which resources will be co-ordinated in Saint Lucia for the prevention and control of pollution caused by spills, in cases of emergency, and to protect life, property, and the environment from damage when discharges do occur.

Spills resulting from minor incidents (Tier One [1] Response) can be handled by local resources.

In the event of major oil spills (Tier Two [2] and Tier Three [3] Responses), local resources will be focused on near-shore protection of beach operations. Regional and International assistance will be required for handling offshore activities depending on the characteristics and magnitude of the spill.

An agreed sum of money shall be vested in the National Emergency Management Organisation for the sole purpose of combating oil spills. The sum shall be used for training and cleaning up.

Regional and International assistance may also be required for extensive coastal activities near shore protection of remote areas, and for the disposal of large quantities of oil contaminated waters.

Appropriate linkages will be made with oil spill contingency plans of neighbouring Caribbean countries and with the Regional Oil Spill Contingency Plan.

The plan is conceived in the spirit of co-operation fostered by the Regional Oil Spill Contingency Plan for the Island States and Territories of the Wider Caribbean Region in which Saint Lucia participates, as well as applicable Legislative Agreements including the following local legislation:

- i. Oil in Navigable Waters Ordinance (Chap. 91)
- ii. Maritime Areas Act 1984, No. 6
- iii. Fisheries Act, 1984, No. 10
- iv. Merchant Shipping Act, 1994, No. 11
- v. Marine Pollution Act
- vi. Waste Management Act

Threat

Approximately 6 million barrels per day of crude 23% of the world's sea-borne oil are transported within the Wider Caribbean Region. (ITOPF – October 1996)

- (i) REMPEITC-Carib is available to assist and advise the Government of Saint Lucia on request.

It should be noted that if the oil spillage were from a damaged tanker, all 'reasonable' costs incurred in the clean up would be reimbursed by the Civil Liability Convention (CLC Protocol of 1992) and the International Oil Pollution Compensation Fund (IOPC Fund protocol of 1992) (See paragraphs 8.5, 8.6, and 8.7 of the Caribbean Plan).

NOTE: THE PRECEDING CLAUSE CAN ONLY BE UTILIZED FOLLOWING ACCESION TO THE CLC AND FUND 1992 PROTOCOLS."

8.2.- Policy on the Use of Dispersants.

The criteria for the use of chemical dispersants in the Caribbean Region are established in the Caribbean Plan (paragraphs 10.2, 10.3, 10.4 and 10.5) that is attached to this Plan as Appendix 1. The Policy for the use of dispersants is described below.

In general terms the OPAC will approve the use of dispersants in Saint Lucian waters in accordance with the criteria agreed for the Region unless there are special overriding considerations at the time. It must be noted, however, that for chemical dispersants to be effective against fresh oil they must be applied speedily in order to maximise the limited window of opportunity.

It is further emphasised that only licensed and approved dispersants are permitted. This does not include commercial detergents, which must never be applied.

The Policy for the use of dispersants is outlined below:

General Dispersant Policy for Island States and Territories

i.- INTRODUCTION

i.1 The Caribbean Plan envisions that each Island State or Territory will develop its own policy pertaining to the use of dispersants in its Exclusive Economic Zone (EEZ). The dispersant policy adopted by the State or Territory will be part of its National Contingency Plan.

i.2 Scientific studies over the past several years have shown that the new generations of dispersants, in themselves, exhibit low toxicity even at application concentrations ten times those prescribed. Studies have also shown that the concentration of dispersed oil in the water column drops off significantly at depths below three meters and, given reasonable flushing, dispersed oil does not remain in the area of application for any significant length of time as it is distributed and diluted by the currents. More or less, aggressive use of dispersants may be warranted. Each Island State and Territory is encouraged to establish guidelines based on its own environmental considerations and circumstances within its own territorial seas.

i.3 It is the position of the Island States and Territories that use of dispersants using the following parameters will cause no significant environmental harm from such use. It is the policy of the Island States and Territories that when combating spilled oil within its

territorial seas, the OSC as authorised by the Lead Agency, may use dispersants without prior notifications to other Island States and Territories under the following parameters:-

The area of application is not less than one nautical mile from any shoreline, nor closer than three nautical miles up current from important marine fisheries or coral reef ecosystems which are less than 20 feet from the water's surface;

The water depth should exceed 30 feet in the area in which the dispersant will be applied;

The method of application is one recommended by the manufacturer;

The rate of application is as recommended by the manufacturer;

The dispersants, exhibiting low toxicity; and

The Lead Agency will notify potentially affected downstream Island States and/or Territories whenever dispersant use is contemplated beyond its territorial seas.

i.4 In the event the OSC determines that the use of dispersants is necessary and if it is apparent that downstream Island States and/or Territories may be affected, then concurrence for such use must be obtained from the potentially affected Island States and Territories outside the parameters of section 10.3.3.

i.5 Response operations, including the application of dispersants, will not be conducted in the EEZ of another Island State or Territory without prior concurrence of the Lead Agency of that Island State and/or Territory.

- During a dispersant operation, the OSC should determine the effectiveness of the dispersant application by on-scene observation and/or by laboratory testing. Application of dispersants should be discontinued if proven to be ineffective.

- To establish an updated list of dispersants stockpiled in the region, each Island State or Territory will submit to the Focal Point Agency (IMO Regional Consultant) the quantity, size of storage containers, brand name, type, and location of storage. (Example: 12-55 gal. plastic lined drums of Corexit 9527). The updated information will be submitted on an EQUIPMENT/DISPERSANT LOCATION page for insertion in Chapter 5 of the Caribbean Plan.

ii APPLICATION OF DISPERSANTS

ii.1 The best combination of dispersants and application method must be selected for the specific situation. On the open sea, they can be applied from surface vessels and from aircraft. It is very important to use proven equipment, which has been properly calibrated, and to follow the instructions of the suppliers of equipment and dispersants.

ii.2 Spraying operations should be started as soon as possible after it has been decided that dispersant use will form part of the response. Many oils will form stable water-in-oil emulsions (chocolate mousse) of which the viscosity will be higher than that of the original oil. The extent of emulsification and the stability of the emulsion will depend upon the type of oil, sea state and temperature. The viscosity also increases because of the evaporation of lower molecular weight hydrocarbons. Both processes may have taken place to a considerable extent within a couple of hours after the spill and thus dispersant effectiveness may be reduced if application is delayed. After oil has emulsified into mousse, it is very difficult to disperse. Treatment with dispersants should, therefore, start before the mousse formation or extensive weathering has taken place.

ii.3 Supplying an adequate quantity of dispersant to deal with a large spill can often be a problem. Spill response managers should include in their contingency plans an inventory of suitable dispersants and should be aware of how this supply can be augmented from additional resources. In the event that the supply is inadequate, spill response managers should prepare to use a combination of response techniques.

iii OPERATIONAL USE AND APPLICATION OF DISPERSANTS

iii.1 In general, dispersants are applied either by surface vessels equipped with dispersant spray booms and support equipment (pumps, hoses, dispersant drum/tank) or by aircraft (fixed-wing or helicopter) using specially designed spray equipment and systems. In general, dispersants are only minimally effective when applied by means of fire monitors. Proper use of dispersants requires the appropriate dosage in terms of amount of chemical per unit area, such as gallons per acre, litres per hectare, etc. The dosage is extremely variable and depends on the type of dispersant, type of oil, slick thickness, temperature, viscosity, and other characteristics of the spilled oil. The actual flow rates are a function of the vessel/aircraft speed, the pump capacity, the dilution rate, and the effective swath width covered.

iii.2 Surface Application

Most surface dispersant spray systems existing in response inventories utilise an education pump system that dilutes a dispersant concentrate with seawater before being sprayed on the surface through multiple-nozzle spray booms. Mounting spray booms ahead of the vessel's bow wave and wake assist in proper application of the dispersant to the oil. Vessel spray and pump system flow rates must be periodically calibrated to ensure the desired dosage. Despite improvements in vessel spraying equipment, the technique will always have some limitations, due to the low treatment rates and inherent difficulties of locating oil slicks from a vessel.

iii.3 Aerial Application

In contrast, aerial spraying offers the advantages of rapid response, good surveillance, high treatment rates, optimum use of dispersant and better evaluation of dispersant treatment.

8.3. Intervention.

Under the Laws of Saint Lucia, OPAC will monitor all actions by a damaged vessel, will carefully assess any salvage agreement between the master of the Vessel and any Salvage Company, and will be prepared at all times to intervene under the National Laws.

The OSC may be authorised under the Law by the relevant Agencies to use this power to act on the Agency's behalf when in his opinion: -

- (a) Oil from the vessel may cause pollution on a large scale to Saint Lucia or in the waters thereof;
- (b) Action is urgently required to prevent or reduce oil pollution or the risk of oil pollution.

Instructions shall be documented.

Further details on Intervention are in the Caribbean Plan (paragraphs 8.18.5 to 8.18.10 of Appendix 1).

8.4. Illegal Discharges.

If an illegal discharge takes place within Saint Lucia and its waters, the Government will consider whether prosecution action is appropriate under local laws and regulations and regional and International Conventions.

If a foreign ship discharges oil while passing through the territorial waters of Saint Lucia the Government will take the necessary action including the reporting of the incident to the Flag State of the vessel concerned.

In cases of discharges where the offender is not known, the OPAC would make recommendations to the relevant Ministry who will then take the appropriate action.

8.5. Compensation

All necessary actions should be taken to ensure the principle of "the polluter pays" applies. In this regard all relevant claims for compensation resulting from the pollution incident shall be based on national and international legislation/conventions.

The Merchant Shipping (Oil Pollution) Act No. 11 of 1996 (not yet in force) provides the basis under which compensation can be claimed for damages resulting from the spill. This Act requires a comprehensive review; work is already in progress.

An emergency fund should be established to be managed by NEMO and to be used by the OPAC for preparedness (training, equipment) and response to oil spills. A minimum of \$100,000.00 EC is suggested.

8.6 Public Relations

Effective public relations are an integral part of oil spill matters such as preparedness, prevention, response and clean-up operations. The public shall continuously be informed about the risks of oil spills and about their behaviour during an oil spill, particularly in terms of notifying the authorities: Fire Service, NEMO, etc. The emergency numbers to be used to report an incident will be disseminated by NEMO.

In the event of spillage, the Principal Information Officer (Government Information Service) will be informed about the situation. The PIO, under the approval of NEMO, will make arrangements for the dissemination of pertinent information to the public and the Media to ensure that those who need to know have a full and timely appreciation of the incident and of the actions taken and progress made during the response.

9.- Organisations Involved in the Plan

9.1.- National Emergency Management Office (NEMO)

The National Emergency Management Organisation (NEMO) in Saint Lucia is responsible for having the Nation in a state of preparedness in case of an emergency. Also, NEMO is responsible for responding to the needs of the Nation after a disaster and for co-ordinating the response at local, regional and international levels.

NEMO is responsible for the national co-ordination of all response activities before, during and after the impact of a hazard. This is done from NEMO headquarters and, if it is activated, from the EOC.

In the case of an oil spill in Saint Lucia and according to the tiered response described in this plan, a command post will be installed at the scene of an oil spill, and, depending on the magnitude of the oil spill, the EOC would be activated or not.

During an event NEMO is part of a larger network that comes into existence to respond to a disaster. The NEMO comprises several Governmental Organisations responsible for response and recovery activities; these are shown in figure 9.1. below:

NATIONAL EMERGENCY MANAGEMENT ORGANISATION

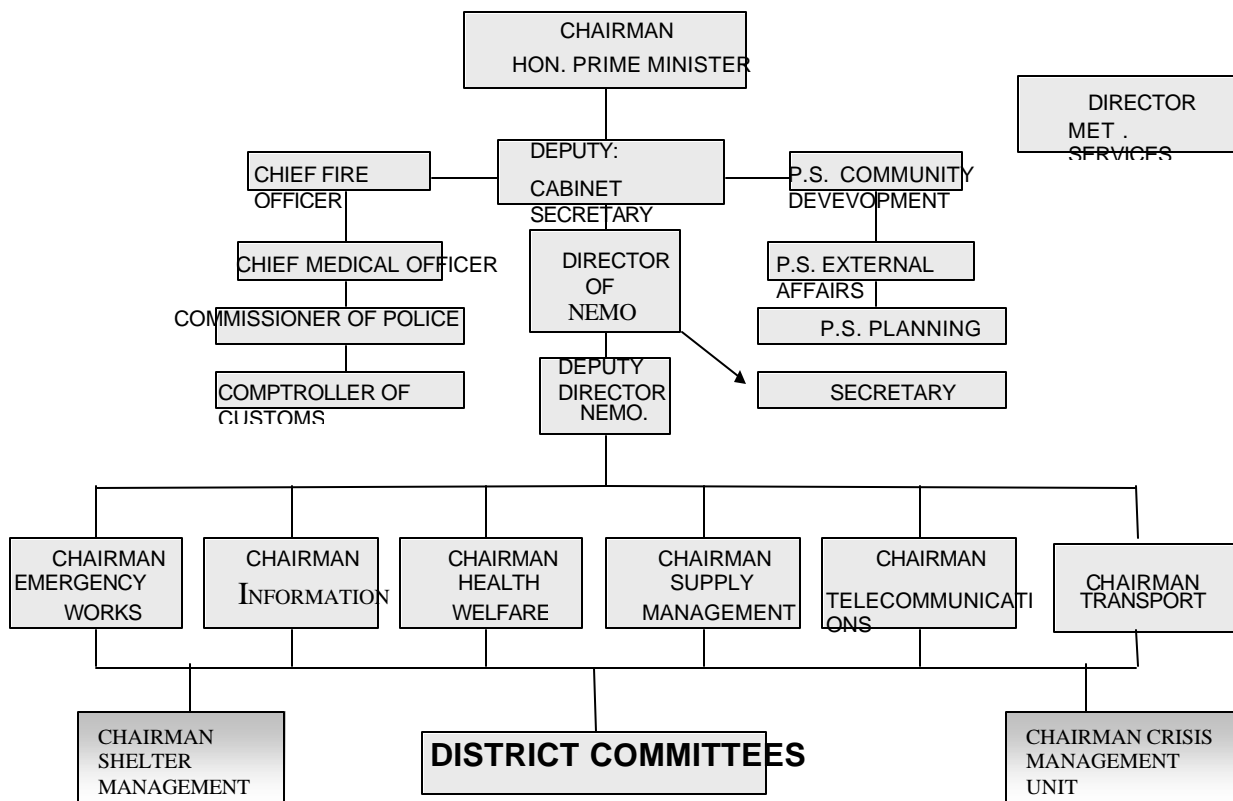


Figure 9.1. NEMO Organisational Chart.

9.2.- Members.

The OPAC has the following members:

Oil Pollution Action Committee Members:

Membership of the Committee comprises of but is not limited to:

1. Saint Lucia Air and Seaports Authority – *Chair*
2. Sustainable Development and Environment Section – *Deputy Chair*
3. Royal Saint Lucia Police Force
4. Saint Lucia Marine Police Unit (OSC – Marine)
5. Fire Service (OSC - Land)
6. Fisheries Department
7. Saint Lucia Solid Waste Management Authority
8. Shell Antilles & Guiana's LTD Bulk Station
9. Texaco Bulk Station
10. HESS Oil (Saint Lucia LTD)
11. Ministry of External Affairs
12. Caribbean Environmental Health Institute (CEHI)
13. Pesticides Control Board
14. Saint Lucia Bureau of Standards

Ex Officio

15. Secretariat - National Emergency Management Organisation

Oil Spill Action Committee Structure.

The structure of the OPAC is presented in the following figure:

NATIONAL EMERGENCY MANAGEMENT ORGANISATION/OPAC OIL SPILLS

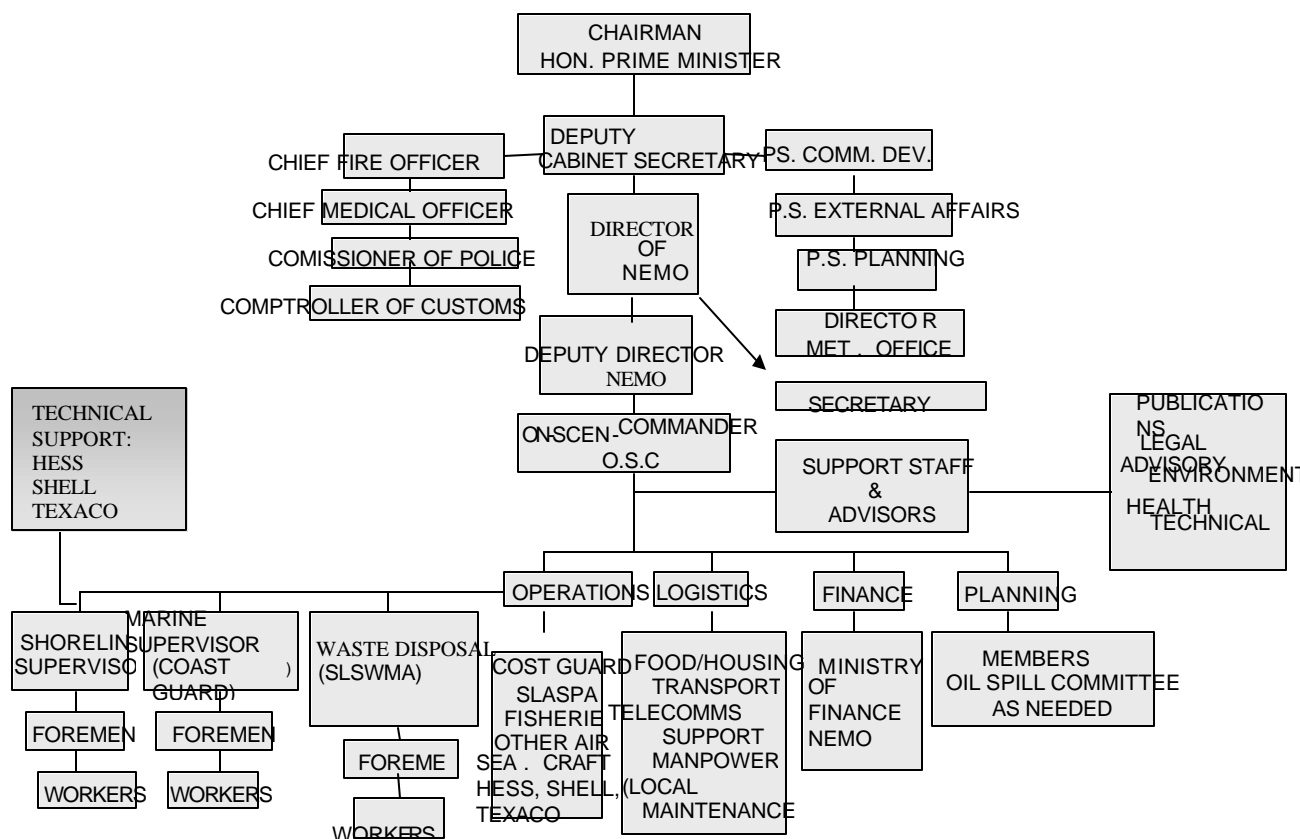


Figure 9.2. Oil Spill Committee Structure

Co-ordination and Response

Director, NEMO

Chairman, Oil Pollution Action Committee (SLASPA. Director of Maritime Affairs.)

Deputy Chairman (Sustainable Development and Environment Department, Ministry of Planning)

On Scene Commander (OSC), Marine Police Commander for spills at sea and Chief Fire Officer for land spills.

The Committee shall be supported by the following units that shall be activated depending on the magnitude of the oil spill (tiers 2 and 3): Planning, Operations, Logistics and Finance:

Planning

- i. Disposal Supervisor (Saint Lucia Solid Waste Management Authority)
- ii. Fisheries Department

- iii. Saint Lucia Air & Seaports Authority
- iv. Marine Police Unit
- v. Air & Sea Craft Operators
- vi. CEHI

Operations

- i. Shoreline Supervisor (Fire Service)
- ii. Marine Supervisor (Marine Police Unit)
- iii. Disposal Supervisor (Saint Lucia Solid Waste Management Authority)
- iv. Fisheries Department
- v. Saint Lucia Air & Seaports Authority
- vi. Air & Sea Craft Operators
- vii. Hess Oil
- viii. Shell Oil
- ix. Texaco

Logistics

- i. NEMO and National Disaster Committees
- ii. Customs & Excise
- iii. Immigration Department

Finance

- i. Ministry of Finance\
- ii. NEMO

9.3. Emergency Operations Centre (EOC)

The National Emergency Operations Centre (EOC) is located in the Red Cross Building in Vigie, Castries. It would be activated in Tier 2 or Tier 3 depending on the magnitude of the spill and under decision of the NEMO and under advice of the OPAC.

All the personnel (Disaster Committees' Chairpersons and others) considered in the plan to be in the EOC have to go there after being notified and from there will co-ordinate the execution of the response/relief activities they are responsible for in order to face the oil spill effects.

Two teams are considered to be in the EOC; Team # 1 that must arrive once the EOC is activated, and Team # 2 that arrives 12 hours later to substitute for Team # 1. Team # 1 is rotated on a 12-hour shift until EOC is deactivated.

The teams are the following:

Team # 1 :	Team # 2: After 12 hours Team 2 should be in the EOC.
PS in the Prime Minister's Office National Disaster Coordinator Chairperson OPAC Permanent Secretary, External Affairs Chief Medical Officer Police Commissioner Chief Fire Officer The Principal Information Officer The Permanent Secretary, Ministry of Tourism Volunteer Radio Operators Chairpersons of all the Disaster Committees Red Cross Representative SLASPA Representative Stenographer/typist	Permanent Secretary, Planning Deputy National Disaster Coordinator Deputy Chairperson OPAC Deputy Permanent Secretary, External Affairs Medical Officer Health Deputy Police Commissioner Deputy Chief Fire Officer Representative GIS Representative Ministry of Tourism Volunteer Radio Operators Deputy Chairpersons of National Disaster Committees Red Cross Representative SLASPA Representative Stenographer/Typist

Table 9.1 Teams in the EOC.

10.- Organisation/Structure of the Response

The Oil Spill Response Chart presented in figure 10.1. below. A discussion on specific response activities is made in Section 18 of this Plan (Emergency Response and Recovery Activities).

It is important to mention that not all the members and organisations shown in the chart will be responding to every spill; it depends on the magnitude of the oil spill itself: tier 1, 2 or 3.

NATIONAL EMERGENCY MANAGEMENT OIL SPILLS RESPONSE

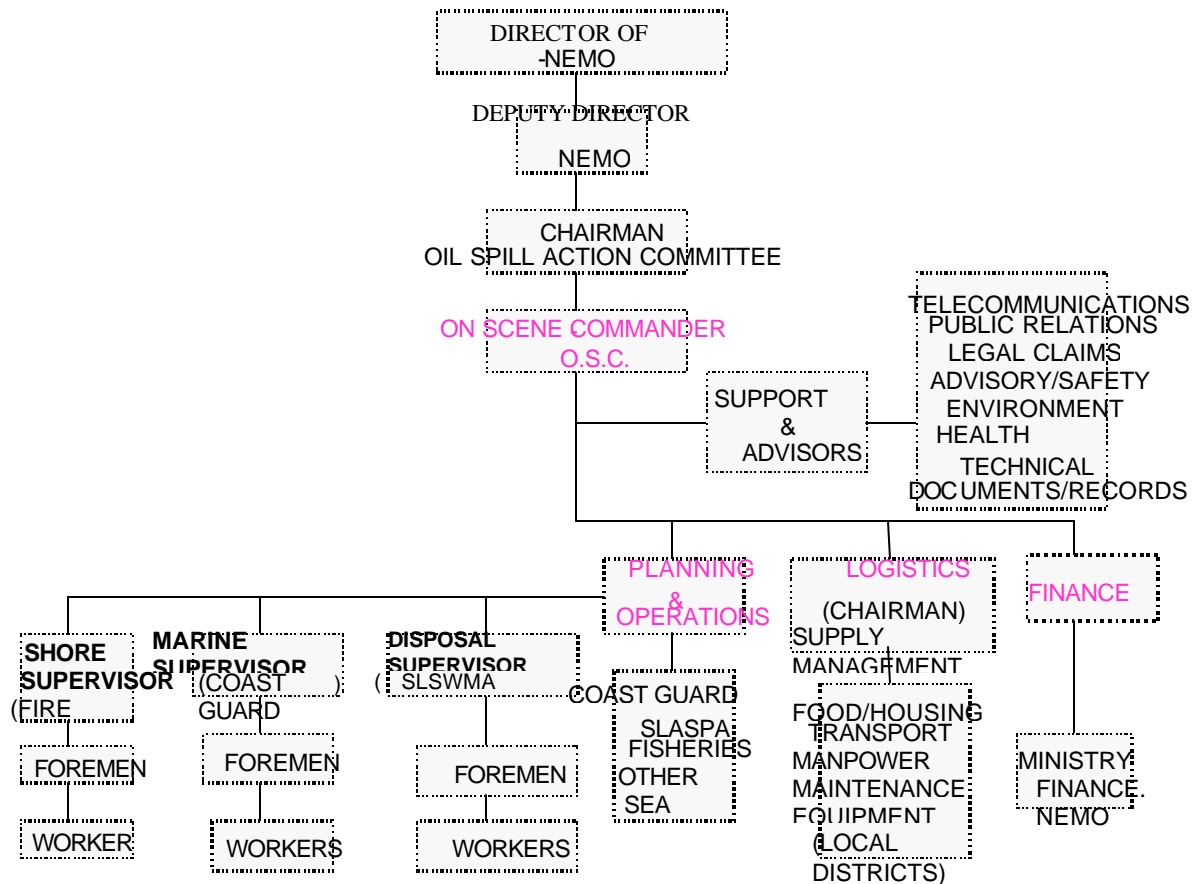


Figure 10.1 Oil Spill Action Committee Chart

11. – General Role of the Response Organisations.

Responsibilities for the government officials are stated in the Legislation and are the same activities they will have to execute during ‘peace time’; *e.g.*, Ministry of Health (MOH) has to take care of the health of the population before and after disasters, MOH has to take care of public health issues before and after disasters; Ministry of Works has to take care of communications, damage of infrastructure and clearing roads before and after disasters. Police is in charge of security before and after disasters. In general, government officers have to execute the same activities but under different circumstances (peace and disaster times). So, for the governmental organisations, the activities written in this plan do not represent additional

responsibilities, but the same that they have to do permanently; what is different is that they are done in emergency or disaster times occasioned by an oil spill.

The purpose, then, of emergency planning is to assign specific responsibilities for specific activities and establish co-ordination mechanisms in case of an emergency caused by an oil spill.

In the case of the organisations that are potential sources of oil spills on land and/or at sea, their responsibility encompasses several activities, such as to ensure that the oil is managed safely at all times (transport, storage, distribution, etc.) in order to prevent an oil spill. Should an oil spill occur, preparedness plays a very important role through the training of personnel, the procurement, storage and maintenance of equipment and materials for the response. Imperative is adequate emergency planning including both the internal and initial response and the response given in co-ordination with the governmental response organisations. Liability and compensation by the polluter (s) depend on National Legislation and International Conventions and their protocols.

It is very important to highlight here that the private sector has contingency plans in case of an oil spill and that the private sector has always worked very closely with the governmental authorities and the OPAC Chairman and members.

Assistance can be requested to neighbouring countries. At the Regional level, the Caribbean Disaster Emergency Response Agency (CDERA) co-ordinates the Regional Response Mechanism in the case one or several CARICOM countries are affected by a disaster. Also, the Eastern Caribbean Donor Group (ECDG) plays an important role in case of disasters in Eastern Caribbean countries: UNDP, PAHO, OFDA, CIDA, EU and CDB amongst several other donors meet before and after disasters in order to assess needs and provide support for the response, relief, rehabilitation and recovery.

REMPETEIC-Carib, according to the Caribbean Plan, will not play an operational role in the response during an oil spill; the IMO Regional Consultants can assist in facilitating the co-operation of foreign government agencies by offering to a requesting State or Territory the name of the cognizant agency in a foreign government from whom assistance can be requested.

Assistance can be requested to commercial response teams as the Caribbean Plan mentions; such as Marine Spill Response Corporation (MSRC), Clean Caribbean Co-operative (CCC) and/or Oil Spill Response Limited (OSRL), amongst others, that can provide assistance before and/or after an oil spill. The importance to accede the CLC and FUND 1992 Protocols is critical in this regard since response from commercial entities can be highly costly.

12.- Relation with other Plans.

12.1.- National Plans.

The Oil Spill Plan is part of the Saint Lucia National Emergency Management Plan; as such, it is inserted within the national disaster management process of revision, testing, updating and dissemination of emergency plans; particularly it is inserted within the national emergency planning process that is co-ordinated at the national level by NEMO and conducted by the OPAC.

Any existing Oil Spill Response Plans from the private sector in Saint Lucia should be part of the National Oil Spill Plan since the response in the case of an oil spill must be a co-ordinated response. All potential polluters must have contingency response plans in place; these plans must be compatible and in accordance with the National Oil Spill Plan.

The private sector has designed contingency plans in the event of an oil spill, and has resources to respond. Oil Spill Contingency Plans written by the private sector are presented as appendices to this plan.

12.2.- Regional and International Plans.

The Oil Spill Plan is congruent with the Caribbean Plan and is one of many Oil Spill Plans that have to be written and implemented in the Caribbean countries

Plans from neighbouring countries should be known by NEMO and the OPAC and, conversely, the Saint Lucia National Oil Spill Plan should be disseminated between neighbouring countries. Resources and emergency procedures must be known beforehand if an emergency caused by an oil spill is likely to affect several Caribbean countries (at least St. Vincent and the Grenadines, Barbados and Martinique).

The Lead Agency, by definition, should send its own plan and request those from neighbouring countries.

The plan has to be sent also to REMPEITC and to CDERA/ECDG.

PART II - DISASTER SCENARIOS

13.- Hazard Description

13.1. The Threat

Marine traffic, especially Oil Tankers and cruise vessels which are in transit through coastal waters in the Atlantic Ocean and Caribbean Sea present the risk of Marine Oil Pollution from collisions, groundings, sinkings, oil cargo and bunker transfer and other marine incidents. Such pollution can threaten recreational areas, sea birds, marine life, coastal installations and fisheries. Similarly, cruise ships and pleasure yachts using Ports in the Caribbean Sea coupled with Oil Tankers en route to Oil Terminals pose serious threat to the entire Saint Lucian coast.

In addition the environment is at risk from terrestrial activities, which would include the transportation, storage and use of hydrocarbons and other hazardous materials. Potential pollution sources would include garages, workshops and service stations, and industrial installations. Many of these lack suitable protocols or facilities, which result in the uncontrolled discharge into the environment.

The Caribbean is one of the two regions in the world that face the greatest risk to its marine environment from major oil spills. Approximately 6 million barrels a day of crude oil (23% of the world's sea-borne oil) is transported in the Wider Caribbean Region (ITOPF, October 1996).

In Saint Lucia, Hess Oil Co. has a storage facility (capacity 9.2 million barrels) located on a 677-acre facility to the south of Castries. The Saint Lucia facility has a full deep water access for the largest oil tankers.

13.2. Potential Sources of Pollution.

The possible sources that can cause an oil spill in Saint Lucia (land and sea) have to be identified. Information that has to be gathered is the following:

- Description (and location when applicable) of potential sources of an oil spill.
 - Oil Tankers
 - Cruise Vessels
 - Storage and transportation in land
 - Hess Oil
 - Shell Oil
 - Service stations
 - Garage workshops
- Description of the routes of ships or terrestrial transport
- Description of the causes of the Oil Spill
 - Collisions
 - Groundings
 - Sinking

- Oil Cargo and Bunker Transfer
 - Vessel Discharge
 - Other Marine Incidents
 - Accidents in land
- Description of the amount (volume) of the spill per potential source
 - Storage/capacity
 - Extent of the spill in sea and land (area)
- Description of the type and toxicity and effects to the environment of each substance involved.

This information would be very helpful for risk assessment, preparedness and, particularly, for emergency response planning.

14.- Vulnerability

14.1.- General

Damage can be direct and indirect and wholly affect the environment and society: water, underground water, soil and subsoil affecting living organisms and their habitat. Flora and fauna can be enormously affected and the food chain can be altered with adverse consequences too. Social and economic effects by the oil spill can be enormous due to large spills that could affect the environment, fisheries and society. Therefore, vulnerable elements and areas have to be identified in order to strengthen preventive/protective measures and to focus emergency planning on the protection of those specific vulnerable elements and ensure their rehabilitation and restoration if damage occurs. Economic impact has to be evaluated and economic restitution and social reconstruction have to be ensured as well.

14.2. Environmentally Sensitive Areas

The environmentally sensitive areas should be identified as part of a permanent process conducted by the Ministry of Planning and other Ministries and organisations involved. The use of the GIS is recommended. A map resulting from these works should be included in the Oil Spill Plan and updated at least once a year. The Environmentally Sensitive Areas Map should be part of this section or an Appendix to the Oil Spill Plan. Below we present the information about the environmentally sensitive areas OPAC has so far:

Sensitive coastal/marine areas of importance to fisheries.

While the following is not a comprehensive list of sensitive coastal/marine areas of the importance to near-shore fisheries in Saint Lucia, it provides an indication of some of the more sensitive regions:

- **Mankote Mangrove** – This mangrove is important for the harvesting of wood for charcoal production. At present the ‘Aupicon Charcoal Producers’ is the only group authorised to exploit this area for this purpose. Their method of harvesting is carried in a sustainable manner. Recently, they have also set up a bird watching tower in the area to provide additional income for the group by conducting eco-tours. This mangrove is the

largest mangal system on the island and plays an important role in filtering silt and other runoff from the land thus protecting the near-shore habitats, which include substantial areas of sea-grass and reef. It also provides a nursery and breeding ground for a variety of marine species.

- **Savannes Bay** – Apart from providing the natural services that a fringing mangrove provides to the coast (such as shore-line stability, silt retention, nutrient exportation, and as a bird nesting and resting site), this mangal system forms an extremely important habitat for adult lobsters and is probably the most critical nursery area for juvenile lobsters.
- **Praslin Bay** – This area comprises large sea grass beds that are home to the White Sea urchin and a variety of other marine species. The surrounding fringing mangrove also makes the area an excellent habitat for juvenile fish, including lobsters, and spawning ground for adults.
- **Sea grass beds and reefs within Anse De Sable on the south east coast** – These areas provides an excellent Habitat for a variety of reef fish and other marine organisms. However, the area is particularly important as a habitat for the White Sea Urchin. These organisms were once highly exploited, but today their abundance is very low and, in fact, the White Sea Urchin is considered threatened in Saint Lucia's waters. Any additional stress to these creatures could result in the loss of this species from our waters.
- **Cannaries/Anse La Raye Marine Management Area (CAMMA) and the Soufriere Marine Management Area (SMMA)** – These zoned areas are particularly important to fisheries along the west coast, as well as the tourism industry at large, since they contain the most diverse and healthiest reef system on the island. The marine reserves are vital to the perpetuation of the CAMMA and the SMMA. These reserves include:
 - Reefs extending around Petit Piton and Gros Piton
 - Anse Chastanet Reef, including Turtle Reef located in the middle of the bay
 - Reefs between Grand Caille and Rachette Point
 - Reefs from Anse Galet to Anse Cochan.
- **Esperance Harbour**, including the mangrove – The sea grass of beds of Esperance Harbour and the adjacent areas support large numbers of adult and juvenile Queen Conch. The adults of this species are heavily exploited from this area. The mangrove plays an important role in filtering and other runoff from the land thus protecting the conch habitat. In addition to other natural services provided by mangroves, this mangal system provides important nursery grounds for fish species, including lobsters.

15.- Risk Assessment

15.1.- Recent Oil Spills in Saint Lucia.

Descriptions of the recent oil spills that have occurred in Saint Lucia are presented in Attachment 3. The Attachment includes a table and copies of the after action reports.

15.2.- Probability of the Occurrence of an Oil Spill.

Risk can be assessed in terms of the probability of the occurrence of a specific event (type and magnitude). For the case of an oil spill, risk assessment studies should be conducted in the future, taking into consideration the information mentioned in point 13 of this Plan (Hazards.)

16.- Disaster Scenarios

16.1.- Oil Spill Scenarios.

Studies concerning disaster scenarios have to be designed to foresee what is likely to happen (event, damage, location, response and resources needed, etc.) if an oil spill occurs in Saint Lucia caused in/by the different sources that can cause it (land and sea.)

The description, in the oil spill scenarios, of the causes, magnitude, effects and other hazard and vulnerability characteristics, would be enormously helpful for:

- ✓ The identification of specific preventive, mitigation, preparedness, response and recovery measures within the emergency planning process;
- ✓ To improve co-operation between governmental agencies, responders and potential polluters;
- ✓ To increase public awareness, and
- ✓ For the design and implementation of *ad-hoc* public awareness campaigns.
- ✓ For review and updating of Oil Spill Plan.

Information mentioned in sections 13, 14 and 15 of this Plan has to be considered. So, we could have different scenarios for different types of facilities/ vessels and different locations.

Some scenarios for the Hess Oil Plant can be seen in the Hess Oil Plan in Appendix 2.

PART III - EMERGENCY RESPONSE AND RECOVERY

17.- Emergency Response and Recovery Activities.

Emergency/Response and relief activities are not the product of coincidence; they respond directly to the specific damage that can be caused by a specific phenomenon of specific characteristics: if a hazard impact is predictable, then we have warning, notification and evacuation; if we have to evacuate, we need shelters and shelter management; if the hazard is likely to produce deaths and injured people, then we have and plan for medical attention and disposal of the dead, etc.

Emergency response and relief activities are known before the impact of a hazard. This is what gives emergency planning an opportunity to be accurate in terms of defining the activities that have to be executed before, during and after a specific hazard's impact. We have, also, the opportunity to assign responsibilities, to train personnel and to test our resources.

In the case of an oil spill we know that we would have to implement specific activities/functions such as notification, spill assessment, incident command system, clean up, storage and final disposal of removed oil, and compensation and restoration of the environment. These functions will be discussed in the next section.

18.- Emergency Functions and Responsibilities.

18.1 Notification.

Upon notification of an Oil Spill/Hazardous Materials Incident the agency notified shall immediately inform the Marine Police and/or the Saint Lucia Fire Service. They in turn shall inform the Chairman of OPAC who will then notify the Director NEMO. Director NEMO will alert relevant support agencies.

The format for an initial Oil Spill Notification Report and the format for the subsequent more detailed follow-up report are found as an attachment to the Notification Emergency Procedure

If the seriousness of the spill is of Tier 2 or 3, the Director will activate the EOC depending on the assessment and prognosis of the situation. The Director, also in the case of a tier 2 or 3 and according to the situation, will inform the International Maritime Organisation (IMO) Regional Technical Advisors REMPEITC-Carib, Curaçao and the Coastguard Commanders of neighbouring States in accordance with the Caribbean Plan (paragraphs 2.2.1 and 2.2.2). In these tier 2 and 3 cases, CEHI should also be notified since they are the main local laboratory which has the facilities to conduct detailed chemical analyses and possible petroleum typing.

18.2. Meteorological Information.

It is important to mention that once the Meteorological Service is notified by NEMO that an oil spill has occurred, it will issue meteorological reports every three hours until notification by NEMO that it is no longer needed.

The Meteorological reports will be faxed every three hours to NEMO and to the Chairman of the OPAC in order to be forwarded to the OSC. Every effort shall be made for the OSC to receive this information. The reports will include information about wind, precipitation and state of the sea and tides and expected conditions.

18.3. Spill Assessment/Surveillance

Initial confirmation will be made by the Marine Police Unit/Saint Lucia Fire Service using information gained from observation by the available aircraft and surface vessel and an assessment as to the threat to Saint Lucia will be made by the On-Scene-Commander (OSC).

Based on the initial assessment made by the OSC a more detailed analysis shall be commissioned if necessary.

If the assessment shows that another Neighbouring State is likely to be threatened, the Government of Saint Lucia will inform that State in accordance with the Caribbean Plan.

For routine surveillance all pilots of aircraft and masters of vessels should be instructed by the Saint Lucia Air & Seaports Authority respectively to report any sightings of oil in the sea or coastal areas for immediate onward transmission to the Marine Police.

For terrestrial and/or coastal areas surveillance, the public must report to the Saint Lucia Fire Service any sightings of Oil Spill/Hazardous Material Spill.

For a tier 2 or tier 3 response and under the request of the chairperson of the OPAC, NEMO could provide, through the transportation Disaster Committee, aerial transportation (helicopter) for an aerial assessment of the oil spill.

18.4. Processing of External Resources.

Whenever external resources of personnel and equipment are required, NEMO will make the necessary arrangements.

Key issues for consideration may include the following: -

- (a) Aircraft usage at the Airports.
- (b) Availability and deployment of marine crafts;
- (c) Seaport docking and cargo handling facilities;
- (d) Immigration, Health and Customs arrangements, and

- (e) Food, accommodation, medical and public health services.

For these purposes and depending on the assistance needed, NEMO would request assistance from the National Disaster Committees: communications, transportation, supply management, etc.

The National Disaster Committees would be contacted directly by NEMO or, if the situation has demanded the activation of the EOC, NEMO would co-ordinate the request and distribution of resources through the EOC.

18.5. Telecommunications.

In the event of an oil spill, and depending on its magnitude, the Incident Command Post and/or the EOC will be the Co-ordination Centre. Each On Site Supervisor (OSS) (Shoreline, Marine, and Disposal) will be responsible for co-ordinating information to be fed to the OSC.

The national telecommunication plan will be activated and modified as necessary to make provisions for this plan. The notification to the members of the OPAC that an oil spill has occurred is the responsibility of the NEMO.

For spills at sea, however all Ship-to-shore communications via VHF will be co-ordinated via the Moule a Chique and Vigie Signal Stations and Marine Police Unit as appropriate. For shoreline or coastal response, a field site would be set up to feed information into the control centre.

All government departments with fixed and mobile radio equipment should have the capability of being linked into the EOC through the established Emergency Co-ordination Frequency.

Agencies with communication networks

- Emergency Operations Centre
- Saint Lucia Fire Service
- Marine Police Unit
- Saint Lucia Air & Seaports Authority
- Royal Saint Lucia Police Force
- Fisheries Department
- LUCELEC
- Cable and Wireless
- Hess Oil.

18.6.- Tiered Response

Throughout, the principle of Tiered Response is established whereby -

- **Tier One** (1) is response by local resources on the spot including Industry. Arrangements are established at ports and oil handling facilities, which are designed to deal effectively with small operational spills.

- **Tier Two** (2) is support and assistance from within the region. Arrangements provide for the merging of government or privately owned resources at a local level or from the Wider Caribbean area to respond to an incident that may exceed, either in size, complexity or due to its remote location, the Tier 1 capability of a country.

- **Tier Three** (3) is reinforcement on a global scale. Arrangements provide for a combined national, regional or international response to a major oil spill that cannot be dealt with effectively under the Tier 2 arrangements.

To avoid unnecessary duplication in the Oil Spill Plan, reference to the appropriate sections of The Caribbean Plan is made wherever appropriate. However, where important information would be immediately required in an emergency, such information is deliberately repeated in the Oil Spill Plan.

The plan does not in any way relieve authorities and agencies of their day-to-day operational and environmental responsibilities within the areas of their jurisdiction.

The plan, where applicable, will be adopted to respond to oil spills, and pollution by hazardous substances other than oil.

18.7. Technical Advice and International Assistance.

In the event of a spill being judged as Tier 2 and 3 and beyond the resources of Saint Lucia, and recognising the need for speedy deployment of reinforcements, the following reporting procedures are to followed:

- (a) NEMO will report details directly to of Regional Marine Pollution Emergency, Information and Training Centre Wider Caribbean (REMPEITC-Carib), Curaçao and CEHI.

- b) NEMO/ Marine Police will inform the Maritime Rescue Co-ordination Centre in Fort de France, Martinique about the incident for information purposes.

- (c) REMPEITC-Carib will then inform neighbouring Island States and Territories and relevant International Organisations – IMO – ITOPI – CCC – IPIECA – IOPC, who could take pre-arrangements in case of any request, by the Government of Saint Lucia or other parties involved (owner of the vessel – insurance – etc.);

- (d) Upon request from the Government of Saint Lucia REMPEITC-Carib shall assist and advise.

18.8. Clean Up Response

The clean-up strategy shall be determined by the OSC in relation to the assessment of the risk of the spill as determined by the Oil Pollution Action the Committee and to the defence of agreed priorities for protection. Elements of the strategy shall include but not be restricted to the following:

- a. The prevailing weather conditions and Oil/Hazard Material types, which shall determine the suitable equipment to be used.
- b. Shoreline type.
- c. Amenity value, accessibility for heavy equipment and ability of the area to support such equipment shall be considerations in selecting the clean-up technique.
- d. Knowledge of the location of the equipment and personnel.

Manpower

Manpower requirements to deploy the equipment and undertake clean-up shall be estimated by the OSC. The source of these requirements will depend upon availability, the techniques involved and the amount of specialized equipment to be deployed. Back up labour from private contractors and government departments shall be identified and co-ordinated by NEMO.

To assist in making these decisions, Section 14 of this Plan shows environmentally sensitive areas. Locally available resources are presented as attachment to the Clean-up Emergency Procedure. It is expected that Oil Companies equipment will be made available. Other information such as external sources of specialist equipment, sources from which expert advice might be obtained on response options and details of oil spill counter measures as well as the waste management and clean-up strategy can also be seen in the Emergency Procedures in Section 27 of this Plan.

18.9. Disposal of Recovered Oil/Hazardous Material.

The Saint Lucia Solid Waste Management Authority in consultation with the Ministry of Health and the Department of Environment and the Physical Planning Division will determine the most appropriate disposal option.

Workers mobilised through NEMO will carry out the clean-up. Details of clean-up and disposal arrangements are described in the Disposal Of Recovered Oil Emergency Procedure.

18.10. Record Keeping and Preparation of Claims.

In order that financial claims may be processed with minimum delay, it is essential that accurate records are maintained for each clean-up location and include detail of all actions taken; the reason for such action; personnel and equipment deployed; and consumable material used.

The Oil Pollution Action Committee (OPAC) together with the On Scene Commander (OSC) will be responsible for ensuring that records are maintained.

The OPAC together with the OSC will be responsible for vetting claims for a specific period of years following the pollution incident as specified in legislation.

In the event that, according to the Legislation in Saint Lucia, the polluter has to be fined, the OPAC will estimate the amount of the fine. NEMO, OPAC and any other Ministry involved, will ensure that the legal process is conducted until the final fining of the polluter.

18.11. Public Information.

All requests from the Press should be referred to the Principal Information Officer (PIO) of Government Information Service (SLU-GIS).

The Public Information Procedure (OSP-500) will be activated.

The OSC in consultation with the Director NEMO and the Principal Information Officer will prepare briefs and updates for dissemination, however it should be recognised that the official source for dissemination of information provided by the NEMO and the OPAC, is the SLU-GIS.

18.12. Restoration of Affected Areas

Once clean up operations are completed, it may be necessary to restore affected areas.

The degree of restoration will be determined by the OPAC in consultation with support agencies using “reasonable methods to reinstate the contaminated environment”

All measures shall be taken to restore the affected site to its pre-spill status.

In areas identified as having high environmental sensitivity, consideration will be given to establishing a monitoring programme post spill to determine the medium and long-term effects on human health, and flora and fauna.

19.- Emergency Procedures.

The following procedures have been identified as part of this Plan.

Table 19.1 below presents these procedures, their number and the organisation responsible for each one of them:

Table 19.1 Emergency Procedures and Organisations Responsible for them.

Procedure Number	Name	Responsible.
OSP 001	Notification.	NEMO
OSP 050	Meteorological Information.	Meteorological Office.
OSP 100	Spill Assessment/Surveillance.	OSC. (Fire Service, Land; Police, Sea)
OSP 150	Processing of External Resources.	NEMO.
OSP 200	Communications.	NEMO.
OSP 250	Clean Up Response (tiered response).	OSC.
OSP 300	Technical Advice and International Assistance.	NEMO.
OSP 350	Disposal of Recovered Oil/Hazardous Material.	SLSWMA.
OSP 400	Record Keeping and Preparation of Claims.	NEMO.
OSP 450	Emergency Operations Centre (National EOC for Oil Spills).	NEMO.
OSP 500	Public Information.	SLU-GIS.
OSP 550	District Committee General Procedure (Oil Spills).	District Committees.
OSP 600	Co ordination of the OPAC.	OPAC
OSP 650	Overall Co- ordination NEMO	NEMO

These procedures are presented at the end of this plan; they are part of it and they have to be revised, tested, disseminated and executed by the organisations responsible for them as stated in the plan and in the procedures themselves.

PART IV - THE PLANNING PROCESS

20.- Revision and Updating of the Plan

20.1 The Planning Process.

Planning is a process not a product.

A written plan does not necessarily reflect the state of preparedness of an organisation or a country against specific hazards. This is especially the case if the plan is out of date either because it has not undergone recent revision and or does not include updated information. This information should include among other things, the existing likely hazards and resources required to respond to these and other emergencies, and disastrous situations. In the ideal world, it could be said that a plan needs to be updated the minute after it has been written.

The plan must change to reflect changes in resources including available personnel, equipment and vehicles. The plan must also be updated to reflect changes in the policy, institutional and legislative frameworks. If plans are not regularly updated they will be useless since they will not be reflective of the real situation on the ground. There is no definitive time period over which such changes take place and therefore agencies have a responsibility to provide updates when such major changes take place outside of the regular revision period established.

Moreover, the possibilities of interaction and changes between the hazard characteristics, the vulnerable elements that can be affected by the hazards, and the response capability of the disaster management organisations are almost infinite. This is why we should permanently try to identify problems and changes in our resources to improve our future response in case of an event.

So, emergency planning within the OSP:

- must be a continuous activity. This will allow to identify and to solve problems before any hazard strikes.
- must involve those in charge of giving the emergency response. All personnel and organisations that have to participate in the response in the case of a threat and/or impact of a hazard, must be involved in the planning process. They are the ones who will respond and they are the ones who know what resources they have to do it.
- must reflect reality. The OSP must be based on the real characteristics of:
 - a. Hazards
 - b. Vulnerable elements
 - c. Existing resources to respond
 - d. Expected damage
 - e. The real and adequate response and recovery activities that have to be done in case of the hazard threat or impact according to the possible damage that can occur.

So, the planning process within the OSP must be done considering:

- a specific revision period. The period in which the written plan or its activities have to be revised and updated has to be defined: monthly, bimonthly, quarterly, yearly, or any other as needed; at least once a year for the OSP.
- the participation of all the organisations involved in the response. Plans and procedures must be revised by ALL the organisations involved. If this does not happen, or if this happens partially, we will have a useless plan or an incomplete plan that could be useless as well. This includes the planning and response organisations from all sectors and at all levels (government, private, social and national, local and, if needed, regional or international).
- the resources that can be used in the response. Only those resources that exist and/or that are in good working condition should be considered in the written plan. Lists of personnel that do not exist and/or lists of equipment and vehicles that do not work should not be considered in the written plan. They will not be working or be used in a real response. The OPAC must ensure that the equipment and materials are revised and checked at least yearly; lists, directories and inventories have to be revised and improved.
- the time and the sequence in which the activities have to be done. The plan and procedures must establish what activities have to be done and when; those that go first and those that have to be implemented after the previous ones. In other words, emergency activities (plans and procedures) are not just *a list* of activities but the description of *a sequence* of activities (through time).
- the definition of clear parameters whose occurrence involve (determine) the consequence of specific response/recovery activities. Quantitative parameters should be developed and clearly established in the plans in order to clearly determine when and under what conditions response/recovery actions have to be taken. Quantitative parameters and indicators have to be designed and developed to trigger the plan, initiate response, to initiate evacuation, to activate and deactivate shelters, to activate and deactivate EOCs, to start a mass casualty event response, to give the all clear message, etc. These are actions based on facts, numbers and other conditions and not based on subjectivity or political decisions. In the case of the OSP, attention has to be paid to the conditions that determine the tiered response (Tiers 1, 2 and 3.)
- the need for testing and evaluating the plans. Emergency planning must be tested through simulation exercises. The evaluation of simulation exercises and the evaluation of real events should result in an immediate revision of the plan and the information included in it.

20.2. Organisations Responsible for Revising the Plan

The general responsibility falls on the OPAC and its members. However, all the organisations considered in this plan are responsible for the yearly revision and updating of the procedures they are responsible for and for the revision and updating of the whole plan itself.

20.3. Revision of the Plan and its Procedures.

It is important to define what is to be understood by revising a plan. So here are the elements that have to be considered in the OSP:

A.- General information that justifies the plan:

- Characteristics of the hazard the plan is for (origin, cause, predictability, magnitude, controllability, scope of impact, duration, destructive potential, etc.).
- Characteristics of the vulnerable elements (number, type and location of people at risk, facilities, equipment, information, crops, livestock, natural resources, infrastructure and services).
- Disaster scenario: What is likely to happen if an oil spill occurs and affects a specific vulnerable area (Number, type and location of: casualties, evacuees, homeless, houses, infrastructure and services affected, information lost, environmental impact, etc)
- Functions needed (according to the type of hazard and vulnerable elements): notification, meteorological information, clean up response, etc.)
- Identification of organisations and assignment of responsibilities: OSC, NEMO, OPAC Chairperson, etc.
- Writing down the activities to be implemented: writing the plan and procedures: See point B below.

B.- The written plan and its contents:

- General information about hazards and response needed (point A above).
- General information about aim, purpose, objectives, legal framework and organisations involved in the plan.
- Conditions (quantitative) that trigger the plan (if applicable [predictable hazards])
- Conditions that activate the response (non-predictable plans).
- Written description of activities (procedures: main responsibilities, activities through time per responsible per function).
- List of resources to be used in an emergency (see point D below).
- Other information (Maps, charts, etc.)
- Training programme.
- Simulation exercise programme.

C.- The planning process:

- Date of revision and number of version.
- Organisations involved in the response/recovery.
- Organisation(s) responsible for revising and updating the plan.
- Organisation(s) that revised and updated the plan
- Involvement in the writing of the plan and procedures of all the organisations involved in the response/recovery.
- Evaluation of the training programme

- Results and evaluation of simulation exercises
- Evaluation of real events

D.- Resources.

- Checking the existence (visual/physical/tangible/operational), availability, veracity, level of preparedness, training, and/or working conditions of:
- Personnel and their training (knowledge of activities and emergency procedures, use of equipment, etc)
- Lists of personnel.
- Directories.
- Inventories
 - Equipment (communications, personal protection, heavy equipment, clean up, storage, others)
 - Transportation (vehicles, boats, planes, etc)
 - Materials (clean-up, medicines, etc.)
- Maps.
- Information

As can be seen, revising an emergency response plan does not only involve reading the document. It has to be done according to a specific model and by a specific approach in order to avoid subjectivity of the plan reviewer(s). This approach will be used in the further revisions of the OSP.

20.4. Responsibilities of the Planning Organisations (OPAC.)

- 1.- Revise the plan and its procedures according to the previous points.
- 2.- Meet at least once a year
- 3.- Revise and update the plan and its procedures at least once a year and every time after a simulation exercise and after real events.
- 4.- Update directories, inventories and other information at least once a year.

21.- Dissemination of the Plan

The plan and its procedures have to be disseminated.

The plan has to be distributed to:

- 1.- All the organisations involved in the planning process and in the response.
 - Governmental
 - Private
 - Social
- 2.- Neighbouring States: St. Vincent and the Grenadines, Barbados, Martinique.
- 3.- Regional and international disaster management organisations: CDERA, REMPEITC, ECDG, etc.
- 4.- The Media

Besides the technical version of the plan other versions can be prepared:

- 1.- Version for the Media and for Public Information
- 2.- Internet Version

The dissemination of the plan must be done by NEMO and the Chairperson of the OPAC. Records of all the copies and their possessors must be kept by the OPAC.

22.- Training

It has to be ensured that every training course delivered pertaining to this plan considers the following aspects:

- 1.- The need for the training course. (The training course trains personnel considered in this plan and in functions (emergency procedures considered in this plan)
- 2.- The adequate objectives that justify the training course delivery.
- 3.- The adequate participants (target audience): personnel/organisations that have to be trained in a specific activity.
- 4.- The adequate number of participants: all personnel involved in a specific disaster management activity must be trained.
- 5.- The adequate trainers: trainers with knowledge on the subject and with training skills.
- 6.- The adequate contents of the training course: participants must be trained to conduct efficiently the disaster management activity they are responsible for; the course must be adapted to a specific hazard and to the specific country's characteristics (geography, topography, population, vulnerability, economic, social, cultural and religious aspects). Training courses have to be evaluated, improved and updated.
- 7.- The adequate duration of the training course, depending on the disaster management activity and the course contents. Short and concise training courses are preferred.
- 8.- The adequate number of courses: depending on the number of personnel that has to be trained.
- 9.- The adequate frequency/timing of the training courses: this is the right number of times in a specific period that the training course has to be delivered and the right specific time of year when it has to be delivered.
- 10.-The adequate outcome: that is, what do we want to have after the training course: i.e., not just trained personnel, but a revised plan, training OSCs, to establish an organisation/team or an ICS or EOC, the writing of a specific procedure, using specific equipment, etc.
- 11.-The adequate evaluation and follow-up: training courses must be evaluated and improved permanently. A close follow-up of the outcome must be given: changes in personnel/organisations, revision of procedures and contact information of personnel, etc.

In this section, then, all the information about training concerning this plan has to be recorded. The following information has to be included in Attachment 1:

- 1.- National OSP Training Programme
- 2.- Per training course delivered
 - Objectives
 - Date and venue
 - List of participants

Trainer(s) and qualifications
Contents of the training course (agenda)
Manuals
Description of Outcome achieved with the training course
Evaluation of the participants
Evaluation of the course by the participants
Follow-up information
Checking personnel, plans, training needs, etc.

The main responsible for training is the OPAC in co-ordination with NEMO as the coordinating organisation of the whole disaster management process; however, each organisation responsible for each function is responsible to have their personnel adequately trained to efficiently execute their own tasks as stated in the Plan and its Procedures.

23.- Simulation Exercises

Simulation exercises are exercises by which the organisations, institutions, personnel and equipment involved in a specific emergency response plan and/or emergency procedures are tested under the imaginary impact of a hazard.

Simulation exercises are one of the last steps of the disaster management process; *i.e.*, they can only be executed after having done all the previous disaster management activities: risk assessment, scenario design, planning, training, etc.

Simulation exercises consist of:

- An emergency plan and procedures for a specific hazard that are to be tested.
- Personnel of the institutions involved in response whose performance is going to be tested.
- Equipment and materials whose availability and working conditions are to be tested
- A particular disaster scenario. That is, what is supposedly happening.
- Logistics. All equipment and personnel needed for the adequate execution of the exercise must be in the right place at the right time in the right order for the right purposes.
- A theatre of operations. The place where the exercise is going to be executed (the place that is supposedly affected by the hypothetical hazard)
- Personnel to conduct and evaluate the exercise: Observers, controllers and evaluators.
- A Directive. A simulation exercise directive is a document with the following information: The objectives of the exercise
 - o Place and time of the exercise
 - o The hypothetical disaster scenario
 - o The emergency plan and/or procedures that are to be tested
 - o The equipment that is going to be used
 - o The task forces/response personnel involved
 - o Names of controllers, observers and evaluators
- Simulation exercise memoir. A simulation exercise memoir is a document that contains:
 - o The simulation exercise directive
 - o The exercise evaluation. A simulation exercise is useless without an evaluation. Plan, procedures, personnel, vehicles and equipment performance must be

evaluated comparing the ideal response (planning) to the one given in the exercise. Recommendations must be given in order to improve the plan and procedures, identify required personnel, and recommend the need for further training for task forces and to acquire or improve equipment.

- The recommendations given (lessons learned) and agencies responsible for their implementation.
- The description of the modifications/additions/improvement of planning and resources.

The simulation exercise memoir must be kept by the OPAC and NEMO as a document to be studied and used for further exercises and as a historic resemblance of all simulation exercises performed and their results.

Simulation exercises can be planned and organised through time according to priorities in a National Simulation Exercise Programme that includes all the planned simulation exercises needed in a specific period.

In Attachment 2 all the information about simulation exercises concerning this plan has to be recorded. The National OSP Simulation Exercise Programme and all OSP simulation exercise memoirs must be kept there.

The main responsible for the co-ordination and evaluation of simulation exercises is the OPAC in co-ordination with NEMO as the co-ordinating organisation of the whole disaster management process; however, each organisation responsible for each function is responsible for testing their own personnel, equipment, vehicles, materials and planning according to the Plan and its Procedures; i.e., All organisations responsible for specific response and relief activities considered in this plan have to test their own personnel, emergency procedures, material resources and vehicles through simulation exercises they have to plan and execute.

24.- Record of Real Events.

The true test of an emergency plan is a real event. Personnel, other resources and planning are tested under real emergency and disaster circumstances; we can verify the suitability of the plan and the quantity and appropriateness of the resources including the level of training of personnel required to effectively implement the plan. Therefore, all real events have to be evaluated to see what happened and what went right and what wrong. This is done with the purpose of improving the plan and its resources, so in the next real oil spill events the response would continuously improve. If we do not improve our planning after every real event, our planning is useless and any lessons learned become only a list of errors that will almost certainly occur repeatedly in every real event.

In Attachment 3 the information about real oil spill events has to be recorded. At least the following information has to be included:

- Hazard characteristics
- Effects/damage/consequences
- Response given
- Evaluation of the response

- Recommendations
- Amendments to the plan/improvement of resources.

The main responsibility for keeping the records of these events is the OPAC in co-ordination with NEMO as the coordinating organisation of the whole disaster management process; however, each organisation responsible for each function is responsible for keeping their own records about real events in Saint Lucia, response given, results and lessons learned in order to improve their own procedures and the Plan.

PART V - EMERGENCY PROCEDURES

25.- Emergency Procedures.

The Emergency Procedures of this Plan are the following:

Procedure:

- OSP- 001 Notification
- OSP- 050 Meteorological Information
- OSP- 100 Oil Spill Assessment
- OSP- 150 Processing of External Resources (National)
- OSP- 200 Telecommunications
- OSP- 250 Clean Up Response
- OSP- 300 Technical Advice and International Assistance
- OSP- 350 Disposal of Recovered Oil/Hazardous Material
- OSP- 400 Record Keeping and Preparation of Claims
- OSP- 450 Emergency Operations Centre (National EOC for Oil Spills)
- OSP- 500 Public Information.
- OSP- 550 District Disaster Committee General Procedure (Oil Spills)
- OSP- 600 Co-ordination of the OPAC
- OSP- 650 Overall Co-ordination. NEMO

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP-001- Notification

Version

Version 1. August 6th, 2002.

Objectives

To notify to the members of the OPAC involved in the Oil Spill Plan about the threat and/or presence of an oil spill on land/and or sea and about its magnitude so the adequate tiered response envisaged in the OSP can be immediately implemented.

Responsible for the Procedure:

Main:

Director of the National Emergency Management Office (NEMO).

Secondary:

Deputy Director of the National Emergency Management Office (NEMO)

Steps of the Procedure.

The Director of NEMO shall:

Permanent:

- 1.- Participate in the OPAC meetings and inform the members about this procedure and its modifications.
- 2.- Keep an updated directory of the OPAC members that have to be notified immediately after receiving notice that a possible oil spill has occurred.
- 3.- Keep a copy of this procedure at NEMO and at home with the updated directory of the OPAC members.
- 4.- Discuss permanently with the OPAC chairperson about the improvement and updating of this procedure and its attachments.
- 5.- Participate in simulation exercises to test and update this procedure.

6.- Promote, jointly with GIS and OPAC, awareness campaigns for the public about oil spills and their immediate notification to the authorities (NEMO, Police, Fire Service, Coast Guard.)

7.- Be assisted and, in his/her absence, be substituted by the Deputy Director of NEMO at all times in all the steps of this procedure.

In the case of receiving notification that an oil spill has occurred

8.- When receiving a phone call from the public or from any governmental and/or private organisation, ask information about:

- a) Name, address and contact information of the person that notifies.
- b) Time when oil spill/pollution was observed
- c) If it hasn't occurred, when is it likely to occur
- d) Location
- e) Type of oil/substance, if known, and extent of pollution
- f) Characteristics of pollution: colour of substance, spilled on land or sea.
- g) Cause and sources of pollution, if known.

See Attachment 1: Notification Form.

9.- Contact the members of OPAC as follows:

- a) Chairperson of OPAC
- b) Police Commissioner/ Marine Unit (OSC Sea)
- c) Fire Chief (OSC land)
- d) Chief Fisheries Officer

See Directory in Attachment 2.

10.- Inform them about the spill and give them the information from point 8.

11.- Ask them to go to the site and to assess the spill and inform NEMO about the situation.

12.- Receive information from the OPAC Chairperson or from the OSC about the oil spill

Tier 1

13.- If the Oil Spill is controllable and will be controlled in the next few hours or days, request to be updated when it has been controlled or earlier if necessary.

14.- If the Chairperson of the OPAC and the OSC determine so, because of the characteristics of the spill, notify immediately to :

- a) Meteorological Office
- b) Sustainable Development and Environment Department.
- c) Caribbean Environmental Health Institute (CEHI)
- d) Saint Lucia Solid Waste Management Authority

- e) Any other as per request by OPAC-OSC

See Directory in Attachment 2.

15.- If there is need to go to the spill site, go immediately.

16.- If there is need to inform the public, do it in co-ordination with OPAC Chairperson and OSC and through SLU-GIS. Call SLU-GIS and agree on how the information will be provided.

17.- If the Oil Spill has been controlled go to END OF PROCEDURE

Tier 2

18.- If the Oil Spill, according to the OPAC Chairperson and the OSC reaches or is Tier 2 level, then notify:

- a) Those members of the OPAC that have to be notified for Tier 1 (points 9 and 14) in order to report to the incident site.
- b) REMPEITC (See attachment 3)
- c) Lead Agencies in Neighbouring countries that could be affected or from whom assistance can be needed. (See attachment 3)
- d) CDERA
- e) Other key organisations needed for the response as per request of the OPAC Chairperson and the OSC to NEMO.

19.- Evaluate, jointly with the OPAC Chairperson and the OSC, the need of activating the EOC.

20.- If it is necessary, activate the EOC and notify the following organisations:

Team # 1 :	Team # 2
PS in the Prime Minister's Office National Disaster Coordinator Permanent Secretary, External Affairs Chief Medical Officer Police Commissioner Chief Fire Officer The Principal Information Officer The Permanent Secretary, Ministry of Tourism Amateur Radio and Citizen Band Chairpersons of all the Disaster Committees Red Cross Representative SLASPA Representative Stenographer/typist	Permanent Secretary, Planning Deputy National Disaster Coordinator Deputy Permanent Secretary, External Affairs Medical Officer Health Deputy Police Commissioner Deputy Chief Fire Officer Representative GIS Representative Ministry of Tourism Amateur Radio and Citizen Band Deputy Chairpersons of National Disaster Committees Red Cross Representative SLASPA Representative Stenographer/Typist

21.- Once the Oil Spill is controlled, deactivate the EOC if activated, and go to END OF PROCEDURE

Tier 3

22.- If the Oil Spill, according to the OPAC Chairperson and the OSC, reaches the Tier 3 level, then notify:

- a) All those that have to be notified in tier 2 (Point 18 of this procedure)
- b) International Sources of Expert Advice
- c) International Sources of Specialist Equipment and Manpower
- d) Other key organisations needed for the response as per request of the OPAC Chairperson and the OSC.

23.- If the EOC has not been activated, evaluate, jointly with the OPAC Chairperson and the OSC, the need for activating it.

24.- If it is necessary, activate the EOC.

25.- Once the Oil Spill is under control, deactivate the EOC and go to END OF PROCEDURE.

Attachments

1.- Format for the receipt of information about an oil spill

2.- Directory of persons and organisations to be notified during Tiers 1, 2 and 3 and to activate the EOC.

3.- Message Routing Procedure (CARIBOLREP).

OSP – 001 – Notification:

Attachment 1: Format for the initial receipt of information about an oil spill.

(To be updated and sent by NEMO to Members of OPAC: Fire Service, Marine Police Unit, Coastguard, Lighthouse, Port Authorities and Saint Lucia Maritime Terminal Ltd.)

1.- Date:_____ 2.- Hour_____

3.- Name of person that receives the information_____

4.- Name, address and contact information of the person that notifies

5.- Time when oil spill/pollution was observed _____

6.- If it hasn't occurred, when is it likely to occur _____

7.- Location _____

8.- Type of oil/substance, if known, and extent of pollution _____

9.- Characteristics of pollution: colour of substance, spilled on land or sea._____

10.- Cause and sources of pollution, if known_____

11.- Measures taken by polluter/community/others_____

12.- Signature of Receiver_____

OSP 001.- Notification.

Attachment 2. Directory of personnel to be notified in the case of an oil spill.

This Directory is responsibility of NEMO. It has to be updated regularly; at least once a year and whenever deemed necessary by the Director of NEMO or the OPAC.

1.- After initial notification that an oil spill has occurred (See phone numbers at the end of this attachment:

- Chairperson of the OPAC
- OSC.- Fire Service
- OSC.- Marine Unit
- Chief Fisheries Officer.

2.- After the initial oil spill assessment, if needed see phone numbers at the end of this attachment:

- Meteorological Office
- Sustainable Development and Environment Department.
- Caribbean Environmental Health Institute (CEHI)
- Saint Lucia Solid Waste Management Authority

3.- If the EOC needs to be activated (See phone numbers at the end of this attachment):

Team # 1 :	Team # 2: After 12 hours Team 2 should be in the EOC.
PS in the Prime Minister's Office National Disaster Coordinator Chairperson OPAC Permanent Secretary, External Affairs Chief Medical Officer Police Commissioner Chief Fire Officer The Principal Information Officer The Permanent Secretary, Ministry of Tourism Amateur Radio and Citizen Band Chairpersons of all the Disaster Committees Red Cross Representative SLASPA Representative Stenographer/typist	Permanent Secretary, Planning Deputy National Disaster Coordinator Deputy Chairperson OPAC Deputy Permanent Secretary, External Affairs Medical Officer Health Deputy Police Commissioner Deputy Chief Fire Officer Representative GIS Representative Ministry of Tourism Amateur Radio and Citizen Band Deputy Chairpersons of National Disaster Committees Red Cross Representative SLASPA Representative Stenographer/Typist

3.- Regional Organisations that have to be contacted if necessary:

CDERA

REMPEITC

Lead Agency in St. Vincent and the Grenadines

Lead Agency in Barbados

Lead Agency in Martinique

OSP-001- Notification.
Attachment 3.- Message Routing Procedure (CARIBPOLREP)

After receipt of the initial report of an oil spill incident, the Lead Agency may require confirmation of the spill sighting. After the spill has been confirmed the Lead Agency, utilising the Caribbean Oil and Hazardous Material Spill Alerting Mechanism will prepare a CARIBPOLREP message to notify neighbouring Island States and Territories that may be affected by the spill.

The CARIBPOLREP message will be sent directly to neighbouring islands or/and to REMPEITC-Carib, Curaçao (Tel: + 5999.461.4012 / 461.4409, fax: + 5999.461.1996 / 461.2964) requesting that the Centre CARIBPOLREP messages to member Island States or Territories alerting them of the spill and the possibility that assistance may be needed as defined in the Caribbean Plan.

Once the initial CARIBPOLREP message has been sent, subsequent messages will be routed through the established routing network until the spill emergency has been concluded.

ASSISTANCE REQUESTED

1. Source of assistance
2. Estimated cost
3. Pre-arrangement for delivery
4. Assistance to where and how
5. Other states requested
6. Names and passport numbers of persons
7. Description of equipment
8. ETA and arrival information
9. Place of embarkation
10. Place of disembarkation

If the CARIBPOLREP is used in exercises, the text is to be introduced with the word EXERCISE and finished with this word three times. Each of the subsequent reports, which deal with the exercise, is to be introduced and finished with the word EXERCISE as well.

CARIBPOLREP EXPLANATION

HEADING

REMARKS

1. Date Time Group: The day of the month as well as the time of day of the message
2. From: Lead Agency of the Island State or Territory that is initiating the message.
3. To: REMPEITC-Carib, Curaçao, requesting to pass the message to other Island States or Territories. Lead Agencies may pass information directly to other Island States or Territories that may be affected by the Spill.
4. Subject: CARIBPOLREP, sequential number of the report and the name of the vessel or facility involved in the spill incident.

SITUATION

1. Date and Time: Date and time of the incident
2. Position: Position of vessel or vessels involved in the incident. If source of spill is unknown, location by latitude and longitude in degrees and minutes may, in addition, give the bearings of and the distance from a location known by the receiver.
3. Incident: The nature of the incident should be stated here, such as BLOWOUT, TANKER GROUNDING, TANKER COLLISION, OIL SLICK, etc.
4. Outflow: The nature of the pollution, such as CRUDE OIL, CHLORINE, DINITROL, PHENOL, etc., as well as the total quantity in tonnes of the outflow and/or the flow rate, as well as the risk of further outflow. If there is no pollution but a pollution threat, the words NOT YET followed by the substance, for example, NOT YET FUEL OIL, should be stated.
5. Characteristics of Pollution: Gives type of pollution, e.g., type of oil with viscosity and pour point, packaged or bulk chemicals, give proper name or United Nations number, if known. For all, give also appearance, e.g. liquid, floating solid, liquid oil, semi-liquid sludge, tarry lumps, weathered oil, discoloration of sea, visible vapour. Any markings on drums, containers, etc., should be given.
6. Source and Cause of Pollution: e.g., from vessel or other undertaking. If from vessel, say whether as a result of a deliberate discharge or casualty. If the latter give brief description, where possible, give name, type, size, call sign, nationality and port of

registration of polluting vessel. If vessel is proceeding on its way, give course, speed and destination.

7. Wind Direction and Speed: Indicates wind direction and speed in degrees and MPH. The directions always indicate from where the wind is blowing.
8. Current of Tide: Indicates current direction and speed in degrees and knots and tenths of knots. The direction always indicates the direction in which the current is flowing.
9. Sea State and Visibility: Sea state indicated as wave height in meters. Visibility is in nautical miles.
10. Drift of Pollution: Indicates drift course and speed of pollution in degrees and knots and tenths of knots. In case of air pollution, (gas cloud), drift speed is indicated in m/s.
11. Forecast: e.g., arrival on beach with estimated timing. Results of mathematical models, or computer trajectory modelling.
12. Identity of Observer and Ship on Scene: Indicates who has reported the incident. If a ship, name, homeport, flag and call sign must be given. Ships on scene can also be indicated under this item by name, homeport, flag and call sign, especially if the polluter cannot be identified and the spill is considered to be of recent origin.

ACTION TAKEN

1. Implementation of National Contingency Plan: Indicate if National Contingency Plan has been activated. If appropriate, give name of Response Agency and On-Scene-Commander.
2. Incident Surveillance: Indicate type of spill surveillance such as aerial or vessel. Number of over flights per day, etc.
3. Photographs or Samples: Indicates if photographs or samples from the pollution have been taken. Fax or Telex number of the sampling authority should be given.
4. Names of Other States Informed: Lead agency initiating message concerning the spill incident should name the other Island States that have been notified directly. This is important if the control of communications is being passed to REMPEITC-Carib.
5. Assistance to Where and How: Information concerning the delivery of the assistance e.g., rendezvous at sea with information on frequencies to be used, call sign and name of on-scene commander of the requesting Island State or Territory or land-based authorities with telephone number, fax, or telex number and contact person.

6. Other States Requested: Only used if not covered by 4.4.5.1 if further assistance is later needed by other Island States or Territories.
7. Personnel Names, Passport Nationality and Number: Names of persons responding from an assisting Island State including their passport numbers. This information is necessary to facilitate rapid entry into the requesting Island State or Territory.
8. Description of Equipment: A brief description of the equipment including serial and model numbers. Also included a list of any component parts that are being shipped with the equipment.
9. ETA and Arrival Information: Time and place of arrival of equipment and of personnel should be given to accommodate clearance with customs and immigration officials in the requesting Island State or Territory.
10. Place of Embarkation: The responding Island State should give the airport or seaport where responding personnel will be arriving at in the requesting country.
11. Spare: Any relevant information pertaining to the spill should be included such as results of field inspections or surveys; statements of ships personnel.; vessel and cargo owners and if the owners are members of a co-operative association, etc.

CARIBPOLREP FORMAT

The following is a summarised list of the composition of the CARIBPOLREP message.

HEADING

1. Date time group:
2. From:
3. To:
4. Subject:

SITUATION

1. Date and Time
2. Position
3. Incident
4. Outflow
5. Characteristics of Pollution
6. Source and Cause of Pollution
7. Wind direction and speed
7. Current or tide
8. Sea state and visibility
9. Drift of pollution
10. Forecast
11. Identity of observer and ships on scene

ACTION TAKEN

1. Implementation of National Contingency Plan
2. Incident surveillance
3. Photographs and samples
4. Names of other states informed

FUTURE PLANS

Various types of information such as anticipated changes of command; reducing information exchange to encompass only relevant, affected parties, etc.

CARIBPOLREP REPORT

Date: _____ **Time:** _____ **Location:** _____
D/m/Yr 24 hour clock Lat/Lon coordinates and Location Relative to Land

Reported by: _____
Vessel or Aircraft name / reporting person name

Oil Slick Size: _____ **Colour:** _____ **Description** _____

Source of Spill: _____ **Type of Oil:** _____

Ships In the Vicinity: _____
Name / Description / Heading / Time of Sighting

Wind Speed: _____ **Wind Direction:** _____ **Sea State:** _____

Direction Of Spill's Travel: _____ **Speed of Travel:** _____

Other Comments:

Oil Response Team Member Contacted _____ **Time:** _____

Signed: _____
Name / Post

Action Taken _____

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP- 050- Meteorological Information

Version

Version 1. August 6th, 2002.

Objectives

To provide meteorological information useful for NEMO, OPAC response team and, mainly, for the OSC, to better respond in the case of an oil spill by knowing the possible evolvement of the oil spill due to meteorological conditions.

Responsible for the Procedure:

Main:

Director Meteorological Services.

Secondary

NEMO

Chairperson OPAC

Steps of the Procedure.

A.- The Director of Meteorological Services shall:

Permanent:

- 1.- Participate in the OPAC meetings when necessary and inform the members about this procedure and its modifications.
- 2.- Keep an updated directory of the OPAC Chairperson and NEMO's Director.
- 3.- Discuss, when necessary, with the OPAC chairperson and NEMO's director about the improvement and updating of this procedure.
- 4.- Participate in simulation exercises to test and update this procedure.

In the case of receiving notification that an oil spill has occurred and that meteorological information is needed.

5.- When receiving a phone call from NEMO Director requesting meteorological information immediately inform Hewanorra Met Office.

6.- Ensure that Met Office faxes every three hours, or other agreed interval, meteorological information both to the OPAC Chairperson and to NEMO Director about wind, precipitation and state of the sea and tides and expected conditions to be forwarded to the OSC.

7.- Ensure that Met Office sends by fax the information every three hours or other agreed interval.

8.- Once a communication by NEMO has been received saying that there is no longer need for the meteorological information, inform Met Office.

9.- Revise and update this procedure.

B.- The Director of NEMO shall:

1.- Ensure that the information received from Met Office is available at all times for the OPAC and OSC during the response and sent to the OSC whenever needed.

C.- The Chairperson of the OPAC shall:

2.- Provide the information to the OSC whenever needed and when it cannot be provided by NEMO.

Attachments:

Attachment 1. Fax and telephone numbers of OPAC Chairperson and NEMO Director.

Attachment 2. Meteorological information format.

OSP.- 050.- Meteorological Information.
Attachment 2. Format for the Meteorological Reports Issued in the case of an Oil Spill.

METEOROLOGICAL SERVICES, (M. C. W. T. & P. U.) ST. LUCIA

HEWANORRA METEOROLOGICAL OFFICE, VIEUX FORT ST.LUCIA

HOTLINE...4543452...WEBSITE...<http://www.slumet.gov.lc>.

e- mail... info@slumet.gov.lc ... forecast@slumet.gov.lc

1:00 PM..DATE..AUGUST 25, 2008...FORECASTER...GLEN ALBERT.

PRESENT WEATHER AT HEWANORRA....PARTLY CLOUDY.

AT GEORGE CHARLES.....PARTLY CLOUDY.

PRESENT TEMPERATURE AT HEWANORRA.....31 C OR 88 F

LAST NIGHT'S MINIMUM TEMPERATURE AT HEWANORRA..25 C OR 77 F.

WIND AT HEWANORRA IS EAST SOUTHEASTERLY AT 16 MPH.

24 HOUR RAINFALL ENDED AT 8:00 AM AT HEWANORRA..12.6 MM.

SUNSET TODAY...6:20 PM...SUNRISE TOMORROW...5:54 AM.

FORECAST FOR ST. LUCIA VALID FOR THE NEXT 24 HOURS

WINDS....EAST SOUTHEASTERLY TO EAST NORTHEASTERLY NEAR 14 MPH, BECOMING LIGHTER AT TIMES.

WEATHER..PARTLY CLOUDY SKIES, BECOMING CLOUDY AT TIMES WITH WIDELY SCATTERED SHOWERS AND A CHANCE OF ISOLATED THUNDERSTORMS.

MARINE OUTLOOK

TIDES FOR CASTRIES HARBOUR...LOW AT 2:32 PM..HIGH AT 9:49 PM.

TIDES FOR VIEUX FORT BAY.....LOW AT 3:59 PM..HIGH AT 10:56 PM.

SEAS....MODERATE WITH WAVES NEAR 4 TO 5 FEET.

OUTLOOK FOR THE LESSER ANTILLES

PARTLY CLOUDY SKIES, BECOMING CLOUDY AT TIMES WITH WIDELY SCATTERED SHOWERS AND A CHANCE OF ISOLATED THUNDERSTORMS.

TROPICAL WEATHER OUTLOOK

...TROPICAL DEPRESSION FORMS OVER THE CENTRAL CARIBBEAN... AT 11:00 AM TODAY THE CENTER OF TROPICAL DEPRESSION SEVEN WAS LOCATED NEAR LATITUDE 15.5

NORTH...LONGITUDE 70.1 WEST OR ABOUT 620 MILES WEST OF ST. LUCIA. THE DEPRESSION IS MOVING TOWARD THE WEST NEAR 15 MPH. MAXIMUM SUSTAINED WINDS ARE NEAR 35 MPH WITH HIGHER GUSTS. STRENGTHENING IS FORECAST AND THE DEPRESSION COULD BECOME A TROPICAL STORM LATER TODAY. THIS SYSTEM POSES NO THREAT TO ST.LUCIA.

DISORGANIZED CLOUDINESS LOCATED A FEW HUNDRED MILES NORTH EAST OF THE LEEWARD ISLANDS IS ASSOCIATED WITH A TROPICAL WAVE. UPPER LEVEL WINDS ARE NOT FAVORABLE, AND DEVELOPMENT IF ANY, IS EXPECTED TO BE SLOW TO OCCUR.

TWO OTHER TROPICAL WAVES LOCATED OVER THE CENTRAL AND EASTERN

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP-100-Oil Spill Assessment

Version

Version 1. August 6th , 2002.

Objectives

To evaluate the extent and magnitude of an oil spill in order to give an adequate response that involves all the organisations and resources needed.

Responsible for the Procedure:

Main:

On Scene Commander
Fire Service (Land)
Marine Unit (Sea)

Secondary

Chairperson OPAC
Chief Fisheries Officer
Caribbean Environmental Health Institute
Saint Lucia Solid Waste Management Authority
Sustainable Development and Environment Department

Steps of the Procedure.

A.- The On Scene Commander shall:

Permanent:

- 1.- Participate in the OPAC meetings and inform the members about this procedure and its modifications and updating.
- 2.- Receive training on his responsibilities
- 3.- Participate in simulation exercises to test and update this procedure.

In the case of receiving notification that an oil spill has occurred:

- 1.- If not received by NEMO, inform NEMO immediately so the rest of the organisations can be notified as stated in Emergency Procedure OSP- 001- Notification.
- 2.- Go to the site where the oil spill is reported to be.
- 3.- Once on the site, take over the operations from any other response organisation (s) that might have arrived earlier.
- 4.- Request and receive information about the spill from any other organisations that might have arrived earlier.
- 5.- Identify a location for the establishment of a command post and start operations from there.
- 6.- Determine the source of the spill and identify the polluter.
- 7.- Establish contact with the polluter in order to determine the cause of the oil spill and to ensure that the spill, if it is still ongoing, is, if possible, stopped.
- 8.- Estimate the extent and magnitude of the spill.
- 9.- Estimate the initial damage and the potential immediate consequences.
- 10.- Request meteorological information from NEMO for a better appraisal of the situation and possible evolution (space and time) of the spill.
- 11.- If the extent and magnitude of the spill is such that more resources are needed for the assessment of the situation notify NEMO so CEHI and SLSWMA would go to the site.
- 12.- Ensure that, if necessary, the area is evacuated and cordoned.
- 13.- Request assistance from NEMO and the Police for securing the area affected and any other that is likely to be affected by the oil spill.
- 14.- Ensure that NEMO is informed at all times about the situation:
 - Nature/Source of the spill
 - Name and location of the polluter
 - Extent and magnitude of the oil spill
 - Probable movement, direction and speed of the spill
 - Areas likely to be impacted
 - Response organisations in the site
 - Resources utilised and resources needed
 - Samples and photographs taken
- 15.- Prepare reports about the situation as needed with the assessment and send them to NEMO for subsequent report, depending on the situation, to other national, regional and/or international organisations.

16.- If the assessment indicates that a Neighbouring State is likely to be threatened, the Government of Saint Lucia will inform that State in accordance to the Caribbean Plan. (See attachment 3 Message Routing Procedure (CARIBOLREP.)

17.- Identify and initiate the measures for the containment of the oil spill.

B.- The Chairperson of the OPAC shall:

1.- Advise the OSC at all times about measures to be taken regarding oil spill assessment.

2.- Assist the OSC at all times with his/her activities.

3.- Based on the situation, inform NEMO that the situation is a Tier 1 –one and/or advice NEMO to declare Tier 2 or Tier 3.

4.- Request from NEMO aerial transportation for an aerial oil spill assessment, if needed, during a Tier 2 or Tier 3 response.

5.- Contact NEMO, when needed, for information purposes and for the request of additional resources as needed by the OSC.

6.- Take note of the initial assessment in order to include this information in the final report along with response taken, results and recommendations.

7.- If considered necessary, ensure that photographs and samples are taken for future fining of the polluter.

C.- The Chief Fisheries Officer shall:

1.- After notification, go to the spill location.

2.- Advise and assist the OSC and the OPAC Chairperson on any matters regarding the protection of fisheries.

3.- Evaluate damage regarding fisheries and inform the OSC and the OPAC Chairperson.

4.- Take, when applicable, any information needed for fining the polluter and inform and advise the OSC and the OPAC chairperson on these matters.

D.- The Caribbean Environmental Health Institute, in co-ordination with the MOH, shall:

1.- Go to the oil spill site when notified by NEMO and report to the OSC.

2.- Advise and assist the OSC and the OPAC Chairperson on any environmental health matters.

3.- Assist in the assessment of damage and/or risk to health and the environment and inform the OSC and the OPAC Chairperson.

4.- Recommend actions, depending on the situation, and organisations to be contacted for the protection of the health and the environment.

E.- The Saint Lucia Solid Waste Management Authority shall:

- 1.- Go to the oil spill site when notified by NEMO.
- 2.- Advise and assist the OSC and the OPAC Chairperson on any waste management matters.
- 3.- Make an assessment of the implications for solid waste management occasioned and/or that will be occasioned by the oil spill and inform the OSC and the OPAC Chairperson.

Attachments:

- 1.- Initial Oil Spill Notification Report
- 2.- CARIBOLREP Report.

OSP-100-Oil Spill Assessment. Attachment 1.- Initial Oil Spill Report.

Format for Initial Oil Spill Notification Report

- (a) Classification of Report
 - doubtful
 - probable
 - confirmed
- (b) Date and time pollution observed/reported and by whom
- (c) Position and extent of Pollution
- (d) Tide, wind speed and direction
- (e) Weather conditions and sea state
- (f) Characteristics of pollution (e.g. type of oil, if known, or colour)
- (g) Source and cause of pollution (if known e.g. name of vessel, and whether deliberate or accidental)
- (h) Details of any vessel in the area (to be given if polluter cannot be identified)
- (i) Whether photographs or samples have been taken: forecast of likely effect of pollution (e.g. estimated time and extent of beaching)

OIL POLLUTION REPORT

Date: _____ **Time:** _____ **Location:** _____
D/m/Yr 24 hour clock Lat/Lon coordinates and Location elative to Land

Reported by: _____
Vessel or Aircraft name / reporting person name

Oil Slick Size: _____ **Colour:** _____ **Description** _____

Source of Spill: _____ **Type of Oil:** _____

Ships In the Vicinity: _____
Name / Description / Heading / Time of Sighting

Wind Speed: _____ **Wind Direction:** _____ **Sea State:** _____

Direction Of Spill's Travel: _____ **Speed of Travel:** _____

Other Comments:

Estimated Time of Impact: _____

Beaching: _____

Oil Response Team Member Contacted _____ **Time:** _____

Photographs: _____

Sample Taken: _____

Signed: _____
Name / Post

OSP-100- Oil Spill Assessment.
Attachment2.- Message Routing Procedure (CARIBPOLREP)

After receipt of the initial report of an oil spill incident, the Lead Agency may require confirmation of the spill sighting. After the spill has been confirmed the Lead Agency, utilising the Caribbean Oil and Hazardous Material Spill Alerting Mechanism will prepare a CARIBPOLREP message to notify neighbouring Island States and Territories that may be affected by the spill.

The CARIBPOLREP message will be sent directly to neighbouring islands or/and to REMPEITC-Carib, Curaçao (Tel: + 5999.461.4012 / 461.4409, fax: + 5999.461.1996 / 461.2964) requesting that the Centre CARIBPOLREP messages to member Island States or Territories alerting them of the spill and the possibility that assistance may be needed as defined in the Caribbean Plan.

Once the initial CARIBPOLREP message has been sent subsequent messages will be routed through the established routing network until the spill emergency has been concluded.

ASSISTANCE REQUESTED

1. Source of assistance
2. Estimated cost
3. Pre-arrangement for delivery
4. Assistance to where and how
5. Other states requested
6. Names and passport numbers of persons
7. Description of equipment
8. ETA and arrival information
9. Place of embarkation
10. Place of disembarkation

If the CARIBPOLREP is used in exercises, the text is to be introduced with the word EXERCISE and finished with this word three times. Each of the subsequent reports, which deal with the exercise, is to be introduced and finished with the word EXERCISE as well.

CARIBPOLREP EXPLANATION

HEADING

REMARKS

1. Date Time Group: The day of the month as well as the time of day of the message
2. From: Lead Agency of the Island State or Territory that is initiating the message.
3. To: REMPEITC-Carib, Curaçao, requesting to pass the message to other Island States or Territories. Lead Agencies may pass information directly to other Island States or Territories that may be affected by the Spill.
4. Subject: CARIBPOLREP, sequential number of the report and the name of the vessel or facility involved in the spill incident.

SITUATION

1. Date and Time: Date and time of the incident
2. Position: Position of vessel or vessels involved in the incident. If source of spill is unknown location by latitude and longitude in degrees and minutes may, in addition, give the bearings of and the distance from a location known by the receiver.
3. Incident: The nature of the incident should be stated here, such as BLOWOUT, TANKER GROUNDING, TANKER COLLISION, OIL SLICK, etc.
4. Outflow: The nature of the pollution, such as CRUDE OIL, CHLORINE, DINITROL, PHENOL, etc., as well as the total quantity in tonnes of the outflow and/or the flow rate, as well as the risk of further outflow. If there is no pollution but a pollution threat, the words NOT YET followed by the substance, for example, NOT YET FUEL OIL, should be stated.
5. Characteristics of Pollution: Gives type of pollution, e.g., type of oil with viscosity and pour point, packaged or bulk chemicals, give proper name or United Nations number, if known. For all, give also appearance, e.g. liquid, floating solid, liquid oil, semi-liquid sludge, tarry lumps, weathered oil, discoloration of sea, visible vapour. Any markings on drums, containers, etc., should be given.
6. Source and Cause of Pollution: e.g., from vessel or other undertaking. If from vessel, say whether as a result of a deliberate discharge or casualty. If the latter give brief description, where possible, give name, type, size, call sign, nationality and port of

registration of polluting vessel. If vessel is proceeding on its way, give course, speed and destination.

7. Wind Direction and Speed: Indicates wind direction and speed in degrees and MPH. The directions always indicate from where the wind is blowing.
8. Current of Tide: Indicates current direction and speed in degrees and knots and tenths of knots. The direction always indicates the direction in which the current is flowing.
9. Sea State and Visibility: Sea state indicated as wave height in meters. Visibility is in nautical miles.
10. Drift of Pollution: Indicates drift course and speed of pollution in degrees and knots and tenths of knots. In case of air pollution, (gas cloud), drift speed is indicated in m/s.
11. Forecast: e.g., arrival on beach with estimated timing. Results of mathematical models, or computer trajectory modelling.
12. Identity of Observer and Ship
On Scene: Indicates who has reported the incident. If a ship, name, homeport, flag and call sign must be given. Ships on scene can also be indicated under this item by name, homeport, flag and call sign, especially if the polluter cannot be identified and the spill is considered to be of recent origin.

ACTION TAKEN

1. Implementation of National Contingency Plan: Indicate if National Contingency Plan has been activated. If appropriate, give name of Response Agency and On-Scene-Commander.
2. Incident Surveillance: Indicate type of spill surveillance such as aerial or vessel. Number of over flights per day, etc.
3. Photographs or Samples: Indicates if photographs or samples from the pollution have been taken. Fax or Telex number of the sampling authority should be given.
4. Names of Other States Informed: Lead agency initiating message concerning the spill incident should name the other Island States that have been notified directly. This is important if the control of communications is being passed to REMPEITC-Carib.
5. Assistance to Where and How: Information concerning the delivery of the assistance e.g., rendezvous at sea with information on frequencies to be used, call sign and name of on-scene commander of the requesting Island State or Territory or land-based authorities with telephone number, fax, or telex number and contact person.

6. Other States Requested: Only used if not covered by 4.4.5.1 if further assistance is later needed by other Island States or Territories.
7. Personnel Names, Passport Nationality and Number: Names of persons responding from an assisting Island State including their passport numbers. This information is necessary to facilitate rapid entry into the requesting Island State or Territory.
8. Description of Equipment: A brief description of the equipment including serial and model numbers. Also included a list of any component parts that are being shipped with the equipment.
9. ETA and Arrival Information: Time and place of arrival of equipment and of personnel should be given to accommodate clearance with customs and immigration officials in the requesting Island State or Territory.
10. Place of Embarkation: The responding Island State should give the airport or seaport where responding personnel will be arriving at in the requesting country.
11. Spare: Any relevant information pertaining to the spill should be included such as results of field inspections or surveys; statements of ships personnel; vessel and cargo owners and if the owners are members of a co-operative association, etc.

CARIBPOLREP FORMAT

The following is a summarised list of the composition of the CARIBPOLREP message.

HEADING

1. Date time group:
2. From:
3. To:
4. Subject:

SITUATION

1. Date and Time
2. Position
3. Incident
4. Outflow
5. Characteristics of Pollution
6. Source and Cause of Pollution
7. Wind direction and speed
7. Current or tide
8. Sea state and visibility
9. Drift of pollution
10. Forecast
11. Identity of observer and ships on scene

ACTION TAKEN

1. Implementation of National Contingency Plan
2. Incident surveillance
3. Photographs and samples
4. Names of other states informed

FUTURE PLANS

Various types of information such as anticipated changes of command; reducing information exchange to encompass only relevant, affected parties, etc.

CARIBPOLREP REPORT

Date: _____ **Time:** _____ **Location:** _____
D/m/Yr 24 hour clock Lat/Lon coordinates and Location Relative to Land

Reported by: _____
Vessel or Aircraft name / reporting person name

Oil Slick Size: _____ **Colour:** _____ **Description** _____

Source of Spill: _____ **Type of Oil:** _____

Ships In the Vicinity: _____
Name / Description / Heading / Time of Sighting

Wind Speed: _____ **Wind Direction:** _____ **Sea State:** _____

Direction Of Spill's Travel: _____ **Speed of Travel:** _____

Other Comments:

Oil Response Team Member Contacted _____ **Time:** _____

Signed: _____
Name / Post

Action Taken _____

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP-150-Processing of External Resources (National)

Version

Version 1. August 6th, 2002.

Objectives

To provide the OSC and responders additional national resources for the response in the case of an oil spill so the response can be adequate to the magnitude and extent of the oil spill.

Responsible for the Procedure:

Main:

NEMO Director.

Secondary

Chairpersons of National and District Committees

Steps of the Procedure.

A.- The Director of NEMO shall:

Permanent:

- 1.- Participate in the OPAC meetings and inform the members about this procedure and its modifications and updating.
- 2.- Participate in the National and District Committees meetings
- 3.- Participate in simulation exercises to test and update this procedure
- 4.- Identify, jointly with National and District Committees' Chairpersons, resources that could be used in the case of an oil spill in Saint Lucia, particularly tiers 2 and 3, and the co-ordination mechanisms to provide them.

In the case of receiving notification that an oil spill has occurred:

- 5.- Stay on 'stand by' for information about the spill.
- 6.- Receive information from the OSC about the evaluation about the oil spill:

- Nature/Source of the spill
- Name and location of the polluter
- Extent and magnitude of the oil spill
- Probable movement, direction and speed of the spill
- Areas likely to be impacted
- Response organisations in the site
- Resources utilised and resources needed
- Samples and photographs taken

7.- When additional resources are needed, contact the National and District Disaster Committees directly during Tier 1 and Tier 2 responses.

8.- If the EOC has been activated during tiers 2 or 3, request of additional resources will be discussed in the EOC itself.

9.- NEMO will receive the request from the OSC and request resources from the Committees. Key resources are the following:

- Aircraft usage at the airports
- Availability and deployment of marine crafts
- Seaport docking and cargo handling facilities
- Immigration, Health and Customs arrangements
- Food, accommodation, medical and public health services.

10.- The additional resources, if available, will be provided directly by the National, or District if it is the case, Committees to the OSC.

B.- The Chairpersons of the National and District Committees shall:

- 1.- Keep updated inventories of their resources.
- 2.- Receive from the Director of NEMO the request of resources needed to respond to an oil spill
- 3.- Provide the resources if available directly to the OSC
- 4.- Inform NEMO about the resources provided, and prepare a report to NEMO.

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP –200 Telecommunications

Version

Version 1, August 6th, 2002.

Objectives

To ensure that telecommunications are provided to the OSC in the Command Post in the case of an oil spill.

Responsible for the Procedure:

Main:

Chairperson of the Telecommunications Committee.

Secondary:

Steps of the Procedure.

A.- The Chairperson of the Telecommunications Committee shall:

Permanent:

- 1.- Chair the National Disaster Telecommunications Committee and its members in order to identify needs and available resources regarding telecommunications during an oil spill.
- 2.- Develop a telecommunications plan to ensure that an adequate communications system is in place to serve the communications needs for the NEMO and the OPAC in the case of an oil spill.
- 3.- Advise NEMO and OPAC on communications matters.
- 4.- Advise on the purchases of emergency telecommunications equipment for the island and advise on the improvement, maintenance and upgrading of this equipment.
- 5.- Develop and implement a radio operator-training programme in association with the radio operator-training officer through the facilities of NEMO.
- 6.- Make annual review and revision of the radio operator-training programme.
- 7.- Develop and conduct a simulation exercise to test equipment on an annual basis under the coordination of NEMO.

8.- Assist, regarding oil spill matters, in preparing, participating in and assessing joint annual exercises regarding oil spills.

9.- Maintain a list of human and material resources regarding telecommunications that could assist the OSC and OPAC in the case of an oil spill.

Once an oil spill has occurred

10.- When requested by NEMO, provide or suggest solutions, regarding telecommunications equipment and other telecommunications resources where needed according to existing resources in the different agencies in Saint Lucia and according to the telecommunications plan.

11.- Provide telecommunications resources to the OSC under the request of NEMO.

After the Oil Spill is under control

12.- Update and improve the National Telecommunications Plan in order to improve communications during an oil spill response.

B.- The Director of NEMO shall:

1.- Participate in the Telecommunications National Disaster Committee and ensure that the Telecommunications Plan includes telecommunication resources in case of an oil spill.

2.- During an oil spill, and under the request of the OSC and/or the OPAC Chairperson, contact the Telecommunications Committee Chairperson in order to provide telecommunication resources for the oil spill contingency response.

3.- After the event, jointly with the Telecommunication Committee Chairperson, the OPAC Chairperson and the OSCs, evaluate the response of the telecommunication resources, so the Telecommunications Committee Chairperson would update the National Telecommunications Plan.

END OF PROCEDURE

Attachment:

1.- Telecommunications Plan. (To be provided by the Telecommunications Committee)

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP-250 Clean Up Response.

Version

Version 1. August 6th, 2002.

Objectives

To co-ordinate the clean up response and resources after an oil spill has occurred.

Responsible for the Procedure:

Main:

On Scene Commander
Fire Service (Land)
Marine Unit (Sea)

Secondary:

NEMO Director
OPAC Chairperson
SLSWMA

Steps of the Procedure.

A.- The On Scene Commander shall:

Permanent:

- 1.- Participate in the OPAC meetings and inform the members about this procedure and its modifications and updating.
- 2.- Receive training on his/her responsibilities
- 3.- Participate in simulation exercises to test and update this procedure.
- 4.- Identify organisations and resources for the clean up after an oil spill.
- 5.- Determine, under the co-ordination of the OPAC, the most adequate methods and equipment for clean up in the case of an oil spill.

6.- Ensure, under the co-ordination of the OPAC and its Chairperson, that potential polluters have trained personnel and adequate resources to be used in case they cause an oil spill.

7.- Ensure, under the co-ordination of the OPAC and its Chairperson, that potential polluters have updated plans and procedures to respond to oil spills.

8.- Establish, under the co-ordination of the OPAC and its Chairperson, adequate co-ordination mechanisms with potential polluters to agree on assistance with personnel and equipment for the clean up response in cases when an oil spill occurs outside their facilities and they are not responsible for the oil spill in any way.

After an oil spill has occurred and after the oil spill assessment has been done:

9.- Co-ordinate the overall response including clean up activities.

10.- Depending on the tiered response needed, ensure that the adequate method, personnel and equipment are to be used in the clean up response by governmental and private organisations, particularly by the polluter.

11.- If the polluter has personnel and equipment to respond, give all the assistance needed for the clean up response.

12.- Ensure that the 'general policy for island states and territories' is followed at all times. (Attachment 1 to this procedure.)

13.- Follow the document 'Oil Spill Countermeasures: Need and possibilities for responding to an oil pollution incident in the Caribbean Area. (Attachment 2 to this procedure.)

14.- Be advised at all times by the OPAC Chairperson about any response and clean up issues that may arise.

15.- Be advised at all times by the Saint Lucia Solid Waste Management Authority on collection, temporary storage, transportation and final disposal of oily waste.

16.- Determine, jointly with the rest of the responders, if assistance from the NEMO is needed and what kind of assistance and additional resources are required in order to inform NEMO.

17.- Determine, jointly with the rest of the responders, if international assistance is needed and what kind of assistance and resources are required in order to inform NEMO.

18.- Co-ordinate the joint operations of national and international personnel.

19.- Determine, jointly with the rest of the responders, when clean up operations are to be declared finished and inform NEMO.

20.- Determine, jointly with the rest of the responders, what follow up activities have to be taken after clean up operations have finished and inform NEMO.

21.- Prepare a report and present it to the OPAC Chairperson and to NEMO.

B.- The Director of NEMO shall:

- 1.- Be informed about the clean up activities at all times.
- 2.- Be informed if additional assistance is required in order to request resources from the National and District Disaster Committees.
- 3.- Be informed if additional international assistance is required in order to request resources from regional and international organisations and companies.
- 4.- Be informed and consulted about when the clean up operations are to be declared finished.
- 5.- Be informed about what follow up activities have to be implemented after the clean up operations have finished.
- 6.- Receive a report from the OSC about the clean up operations and their results.

C.- The Chairperson of the OPAC shall:

- 1.- Advise the OSC and NEMO about the clean up activities at all times.
- 2.- Advise the OSC and NEMO about additional assistance required in order to request resources from the National and District Disaster Committees.
- 3.- Advise the OSC and NEMO about additional international assistance required in order to request resources from regional and international organisations and companies.
- 4.- Advise the OSC and NEMO about the time when the clean up operations are to be declared finished.
- 5.- Advise the OSC and NEMO about any follow up activities that have to be implemented after the clean up operations have finished.
- 6.- Receive the OSC report on the clean up operations and its results in order to prepare the final report to NEMO.

D.- The Saint Lucia Solid Waste Management Authority shall:

- 1.- Advise the OSC, OPAC and NEMO about the collection, temporary storage, transportation and disposal of oily waste.
- 2.- In Consultation with the Department of Environment, Department of Fisheries and Ministry of Tourism, advise the OSC on priorities for cleaning considering tourist areas and coastal areas of high ecological value.

Attachments:

- 1.- General Dispersant Policy for Island States and Territories
- 2.- Oil Spill Countermeasures: Need and possibilities for responding to an oil pollution incident in the Caribbean Area.
- 3.- List of Locally Available Resources
- 4.- External Sources of Expert Advice
- 5.- External Sources of Specialist Equipment and Manpower
- 6.- Formats for recording activities

OSP – 250.- Clean Up Response

Attachment 1: “GENERAL DISPERSANT POLICY FOR ISLAND STATES AND TERRITORIES

1.- INTRODUCTION

1.1 The Caribbean Plan envisions that each Island State or Territory will develop its own policy pertaining to the use of dispersants in its Exclusive Economic Zone (EEZ). The dispersant policy adopted by the State or Territory will be part of its National Contingency Plan.

1.2 Scientific studies over the past several years have shown that the new generations of dispersants, in themselves, exhibit low toxicity even at application concentrations ten times those prescribed. Studies have also shown that the concentration of dispersed oil in the water column drops off significantly at depths below three meters and, given reasonable flushing, dispersed oil does not remain in the area of application for any significant length of time as it is distributed and diluted by the currents. More or less, aggressive use of dispersants may be warranted. Each Island State and Territory is encouraged to establish guidelines based on its own environmental considerations and circumstances within its own territorial seas.

1.3 It is the position of the Island States and Territories that use of dispersants using the following parameters will cause no significant environmental harm from such use. It is the policy of the Island States and Territories that when combating spilled oil within its territorial seas, the OSC as authorised by the Lead Agency, may use dispersants without prior notifications to other Island States and Territories under the following parameters:-

The area of application is not less than one nautical mile from any shoreline, nor closer than three nautical miles up current from important marine fisheries or coral reef ecosystems which are less than 20 feet from the water's surface;

The water depth should exceed 30 feet in the area in which the dispersant will be applied;

The method of application is one recommended by the manufacturer;

The rate of application is as recommended by the manufacturer;

The dispersants, exhibiting low toxicity; and

The Lead Agency will notify potentially affected downstream Island States and/or Territories whenever dispersant use is intended beyond its territorial seas.

1.4 In the event the OSC determines that the use of dispersants is necessary and if it is apparent that downstream Island States and/or Territories may be affected, then concurrence for such use must be obtained from the potentially affected Island States and Territories outside the parameters of section 10.3.3.

1.5 Response operations, including the application of dispersants, will not be conducted in the EEZ of another Island State or Territory without prior concurrence of the Lead Agency of that Island State and/or Territory.

- During a dispersant operation, the OSC should determine the effectiveness of the dispersant application by on-scene observation and/or by laboratory testing. Application of dispersants should be discontinued if proven to be ineffective.

- To establish an updated list of dispersants stockpiled in the region, each Island State or Territory will submit to the Focal Point Agency (IMO Regional Consultant) the quantity, size of storage containers, brand name, type, and location of storage. (Example: 12-55 gal. plastic lined drums of Corexit 9527). The updated information will be submitted on an EQUIPMENT/DISPERSANT LOCATION page for insertion in Chapter 5 of the Caribbean Plan.

2.0 APPLICATION OF DISPERSANTS

2.1 The best combination of dispersants and application method must be selected for the specific situation. On the open sea, they can be applied from surface vessels and from aircraft. It is very important to use proven equipment, which has been properly calibrated, and to follow the instructions of the suppliers of equipment and dispersants.

2.2 Spraying operations should be started as soon as possible after it has been decided that dispersant use will form part of the response. Many oils will form stable water-in-oil emulsions (chocolate mousse) of which the viscosity will be higher than that of the original oil. The extent of emulsification and the stability of the emulsion will depend upon the type of oil, sea state and temperature. The viscosity also increases because of the evaporation of lower molecular weight hydrocarbons. Both processes may have taken place to a considerable extent within a couple of hours after the spill and thus dispersant effectiveness may be reduced if application is delayed. After oil has emulsified into mousse, it is very difficult to disperse. Treatment with dispersants should, therefore, start before the mousse formation or extensive weathering has taken place.

2.3 Supplying an adequate quantity of dispersant to deal with a large spill can often be a problem. Spill response managers should include in their contingency plans an inventory of suitable dispersants and should be aware of how this supply can be augmented from additional resources. In the event that the supply is inadequate, spill response managers should prepare to use a combination of response techniques.

3.0 OPERATIONAL USE AND APPLICATION OF DISPERSANTS

3.1 In general, dispersants are applied either by surface vessels equipped with dispersant spray booms and support equipment (pumps, hoses, dispersant drum/tank) or by aircraft (fixed-wing or helicopter) using specially designed spray equipment and systems. In general, dispersants are only minimally effective when applied by means of fire monitors. Proper use of dispersants requires the appropriate dosage in terms of amount of chemical per unit area, such as gallons per acre, litres per hectare, etc. The dosage is extremely variable and depends on the type of dispersant, type of oil, slick thickness, temperature, viscosity, and other characteristics of

the spilled oil. The actual flow rates are a function of the vessel/aircraft speed, the pump capacity, the dilution rate, and the effective swath width covered.

3.2 Surface Application

Most surface dispersant spray systems existing in response inventories utilise an education pump system that dilutes a dispersant concentrate with seawater before being sprayed on the surface through multiple-nozzle spray booms. Mounting spray booms ahead of the vessel's bow wave and wake assist in proper application of the dispersant to the oil. Vessel spray and pump system flow rates must be periodically calibrated to ensure the desired dosage. Despite improvements in vessel spraying equipment, the technique will always have some limitations, due to the low treatment rates and inherent difficulties of location oil slicks from a vessel.

3.3 Aerial Application

In contrast, aerial spraying offers the advantages of rapid response, good surveillance, high treatment rates, optimum use of dispersant and better evaluation of dispersant treatment.

8.3. Intervention.

Under the Laws of Saint Lucia, OPAC will monitor all actions by a damaged vessel, will carefully assess any salvage agreement between the master of the Vessel and any Salvage Company, and will be prepared at all times to intervene under the National Laws.

The OSC may be authorised under the Law by the relevant Agencies to use this power to act on the Agency's behalf when in his opinion: -

- (a) Oil from the vessel may cause pollution on a large scale to Saint Lucia or in the waters thereof;
- (b) Action is urgently required to prevent or reduce oil pollution or the risk of oil pollution.

Instructions shall be documented.

Further details on Intervention are in the Caribbean Plan (paragraphs 8.18.5 to 8.18.10).

OSP 250 Clean Up Response.

Attachment 2: Oil Spill Counter Measures

NEED AND POSSIBILITIES FOR RESPONDING TO AN OIL POLLUTION INCIDENT IN THE CARRIBEAN AREA

Prevention

Producing and refining oil, and the transport, transshipment and tankage of oil products are subject internationally to conditions and rules. Conditions may also be set locally on the grounds of international conventions, based on national legislation.

Some countries did not ratify the various international conventions or did not implement these conventions in national law. This may result in sub-standard ships sailing the Caribbean, as a result of stringent legislation and enforcement which took place in the U.S.A. and the Western European countries.

Early ratification of these conventions by the Caribbean Island States and Territories is strongly recommended. Effective inspection of ships is also recommended.

Basic principles in oil pollution response

Oil is a natural product, which means that, in time, organisms in seawater are able to break it down. However, before the oil has fully degraded, the damage may already have been wrought. The speed with which oil degrades in seawater is namely dependent on the type, quantity and weather conditions such as temperature and wind speeds.

In the majority of cases, an oil pollution response will still be necessary, especially if large quantities are concerned, and then preferably at the source (to minimise the spreading).

Despite the various available methods of responding to an oil pollution incident, not all such incidents can be responded to (weather conditions, distance to the coast).

In certain cases the oil is washed up onto the coast, posing a threat to vulnerable areas, beaches and water inlets for the production of drinking water or cooling water.

It then becomes necessary to respond to the incident near or along the coast.

Depending on coastal conditions, the interests, vulnerable areas and installations, the type and quantity of oil concerned, protective measures will be taken such as, for example, diverting the oil away from the coast with the help of booms or shielding certain objects. If the oil has reached the coast, personnel may be called in to remove this manually or machinery may be used to clean this up.

Aerial surveillance

In the Caribbean area the US Coast Guard carries out aerial surveillance flights on a regular basis. No Caribbean countries have the disposal of surveillance aircraft equipped with so called remote sensing equipment.

The Royal Dutch Navy and the Coast Guard for the Netherlands Antilles and Aruba expressed their willingness to pay special attention to oil pollution during their routine flight missions.

To avoid high quantities of oil reaching the coasts of Island States and Territories a more systematic approach is required.

This will enable authorities to get an impression of the average presence of oil pollution and to respond to oil pollution incidents in due time.

REMPEITC-Carib on request of UNEP-Car/RCU, Jamaica – AMEP Programme will investigate the ability to use Satellite Surveillance for this purpose.

Oil pollution response methods

The following methods are available for responding to an oil pollution incident at sea:

- a. do nothing (any response)
- b. mechanical response
- c. combating with detergents (chemicals)
- d. treatment with bacteria
- e. burning of the oil at sea.

re a.: Do nothing (natural dispersion)

In certain cases, e.g. in the case of minor oil pollution incidents, or cases where there is no possibility of prompt action, nor any threat to a country or nature reserve, where sufficient wind and wave energy is present, the option of simply 'doing nothing' may be the one to choose. In such cases, the monitoring of the pollution incident remains necessary.

re b.: Mechanical oil pollution response

This method will virtually always be the method preferred. Pumping-skimming systems suction the oil from the surface of the sea and out of the marine environment.

The largest degree of effectiveness is achieved with the use of mechanical oil pollution response methods if the action is undertaken near the source of the pollution (concentrated quantity). In combating oil pollution with mechanical means and to prevent the slick from spreading, the oil can be concentrated with the help of oil slick booms and subsequently suctioned off.

re c.: Use of detergents (chemicals)

Another pollution response method consists of spraying the oil with internationally approved detergents. The entire oil slick can be sprayed with these somewhat toxic solvents from ships and aircraft equipped with spray systems (spray arms)

The detergent causes the oil to disintegrate into tiny droplets. The oil then can mix more rapidly with the seawater and thus degrade more quickly.

The disadvantage to this method is that the oil remains in the environment, is no longer visible and that additional hazardous substances are introduced into the environment. Detergents may not be used for all types of oil nor under all weather conditions.

The use of detergents in shallow waters (<20 metres) and within 12 miles of the coastline is not recommended (due to the limited effectiveness, the chance of harming flora and fauna).

re d.: Treatment with bacteria (biological response)

This method gained impetus in particular after the disaster with the Exxon Valdez. Bacteria are released, which then accelerate the oil degradation process. Studies into the environmental impact hereof remain to be completed. Opinions vary widely on the use of these bacteria.

re e.: Burning the oil

Special oil slick booms are used to sweep the oil together, after which this is burned under careful control. Burning the oil disposes of it for a large part. Degradable

residues remain behind. The method is generally not recommended, as there are major disadvantages to its use (difficult to control, air pollution, uncertainty).

Oil pollution combating at sea

The average wind speed in the Caribbean area is 11 knots (wind force 5 or 6).

Wave energy is available due to the constant wind, which in combination with a rather high average temperature disperse oil at sea in a natural way.

Combating of the oil pollution is not always necessary; this depends on the quantity of the oil pollution and the distance to the coast.

In those cases when an island or land is threatened it should be considered:

- a. to clear the oil with mechanical equipment
- b. to combat the oil with chemicals (detergents)

Mechanical clearing is only possible with equipment, which is suitable to be used at the existing sea conditions. Ocean type oil booms, robust skimmer systems (e.g. sweeping arms) and suitable adjusted ships (coasters or supply boats). The crews of these ships have to be trained for the response actions.

The use of detergents at sea has to meet the international accepted standards. Unqualified use will result in negative results and effects. Spraying with aircraft (a large area in a short time) requires suitable experience.

Shore clean-up operations

In general clean-up operations at sea, if possible, are preferred to shore clean-up actions.

The clean-up techniques of an oil-spill on the shore depend on the type of coast.

A distinction can be made between:

- a. Cliffs and rock surfaces.
- b. Pebble or shingle beaches.
- c. Muddy coasts or mangroves.
- d. Sandy beaches.

re a. Cliffs and rock surfaces.

The accessibility of the coast is important in case of a coast consisting of cliffs and scattered rocks. Will mobile units be able to reach the polluted area?

Mechanical methods for cleaning may be used (pumps, booms skimmers etc.), depending on the distance between the sea and the place of action and of the sea-conditions.

The most effective way of cleaning is to disperse oil from cliffs or rocks by high or low-pressure hydraulic waterjets, after which the oil is collected by booms.

After sucking and pumping the recovered oil to a storage facility, the recovery operation will be completed.

When the location is difficult to reach and the sea-conditions are unfavourable, the clean-up actions will have to be done manually, such as raking, scraping and using sucking materials.

re b. Pebble or shingle beaches.

A pebble or shingle beach is very difficult to clean, because the oil may penetrate deeply into the bottom-layers. The use of high pressure hydraulic cleaning is one of the possibilities. There will however always be a chance that the dispersed oil penetrates deeper into the pebble beach.

If the beach is accessible for lorries and the pollution is relatively small, the top layer of the pebble beach can be removed and washed or stored elsewhere.

Another method is the so-called natural weathering of the oil on the pebble beach ("leave alone"-action). The oil will be allowed to degrade on a long term, due to meteorological conditions, tides and waves.

Varieties to the "leave alone" actions and natural degrading are:

- Covering the polluted part of the beach with clean pebbles of higher level areas.
- Shovelling polluted pebbles into the sea, which will result in washing out by the tides and waves.

re c. Muddy coasts or mangroves.

From practice it is known that cleaning-up the oil in these areas will do more harm to the environment than the oil itself.

- For muddy coasts with vegetation it may be essential to remove the oil in order to protect the higher level areas. This can be done by dispersing the oil to the sea by low pressure hydraulic cleaning, followed by collecting and sucking the oil.

- In mangrove areas, which are densely covered by vegetation, paths may be cut, allowing the oil to disperse with the tide to the open sea. After that removing and collecting the oil may be possible.

re d. Sandy beaches.

Possibilities for cleaning sandy beaches depend on the type of oil and the accessibility of the shore. These factors also determine the choice for manual removing or for mechanical cleaning operations by using road works equipment or the so-called beach cleaners.

A combating-strategy must be set up when removing oil from sandy beaches in order to prevent cleaned beaches from being recontaminated by oil due to wind, currents and tide.

The efficiency of the operation must also be taken into account. The capacity of one person who is picking up oil by hand will be 1,5 m³ per day (5-10% oil). Using mechanical equipment this figure will be 150 m³ per day (1-2% oil).

It is advisable to sieve the oil-sand mixture before transport to a temporary storage depending on the method of disposal to be used.

When burning the oily-sand-mixture certain conditions will be required as to the minimum quantity of sand in the oil.

Refining the oil collected

The oil remaining after cleaning the sea can still be, if not too heavily polluted, processed by a refinery. Oil collected from coastal cleaning operations is more difficult to refine. This oil is generally mixed with sand and waste such as plastic, sea weed, rope and wood.

The only way to process oil so contaminated is to deliver this to a waste incinerator (a very expensive alternative). In certain cases it may be possible to recycle the oil collected from coastal cleaning operations after this has been stripped of waste products for use in, e.g. liquid asphalt or asphaltic concrete.

OSP 250 Clean Up Response.

**Attachment 3.- List of Locally Available Resources
(to be updated by the OPAC)**

POLLUTION RESPONSE EQUIPMENT (As presented in the OSP 4th version):

A.- Governmental:

SAINT LUCIA MARINE POLICE

- (a) 7 - Patrol Boats,
1 - Portable Fire Pump
50ft Harbour Boom

SAINT LUCIA FIRE SERVICE

- (a) - Portable Fire Pumps

SAINT LUCIA AIR & SEA PORTS AUTHORITY

- (a) - Pilot Launch
- (b) Private: 2 - Steel tugboat, 900 hp
2 - Steel dumb pontoon barges, 500 DWT
4 - Steel self-propelled cargo barges,
2 - Portable fire pump
2 - Underwater and Atmospheric welding burning
and cutting equipment
- Dives (Scuba etc.) (several)
2 - Underwater Photographers
5 - Compressors for Dive Tanks

Other Equipment (Example)

	PUBLIC	PRIVATE
TRUCKS	7 (PWD)	12
BACKHOE	4 (PWD)	20
BULLDOZER	1 (PWD)	2
LOW BED	1 (PWD)	2
CRANE (MOBILE)	-	4
GRADER	3	-
EXCAVATOR	-	4
COMPRESSOR (HEAVY)	-	2
FORKLIFT TRUCK	5 (PORTS)	4
TOW TRUCK (FOR CONTAINED CHASSIS ETC.)	2 (PORTS)	4

B.- Hess Oil Saint Lucia Limited.

As mentioned in Hess Oil Saint Lucia Limited Spill Contingency Plan and Procedures. 2001:
From Appendix 1 of the Hess Oil Saint Lucia Limited Contingency Plan and Procedures.
 (information dated on 12/01/01)

HOSLL Oil Spill Equipment

Equipment	Quantity	Location
16" oil fence boom	2,000 feet	West station
	3,000 feet	East station
14" oil log boom	1,200 feet	East station
Vacuum truck	1	Vac. Truck stall
28' Inboard drive boat. (HOSLL 2)	1	Dock 2
16' V-Hul Boat. (HOSLL 4)	1	Compound
16' Flat bottom boat. (HOSLL 5)	1	Compound
3M-126 Sorbent sweeps	250 (25,000 feet)	Trailer
3M-156 Sorbent pad bales (100 per bale)	100 bales	Trailer
Large roll sorbent pads	3	Trailer
Oil recovery drums	7	Trailer
Sea wash	4 drums	Trailer
Life Vests	35	Trailer
Boom bridles	5	Trailer
Skim Pak-Large	1	Trailer
Skim Pak-Small	1	Trailer
1-1/2" Vacuum hose	150 feet	Trailer
2" Vacuum hose	100 feet	Trailer
1-1/2" X 6' Hose extensions	3	Trailer
2" Vacuum hose (No fittings)	100 feet	Trailer
Vacuum hose reducers. Various sizes	7	Trailer
3/4 Air hose	400 feet	Trailer
1" X 25' Rope slings	5	Trailer
VAC-U-MAX (55 Gallon)	2	Trailer
Life Rings	9	Trailer
Oil Spill Hooks	2	Trailer
3/8" Rope	1,200 feet	Trailer
1/2" Rope	200 feet	Trailer
5/8" Rope	200 feet	Trailer
9-Lb. Anchors rigged with 100' 3/8" rope and 10' chain	4	Trailer
15-Lb. Anchors rigged with 100' 3/8" and 10' chain	4	Trailer
12" Buoy-Styrofoam	5	Trailer
12" Buoy- Rubber	2	Trailer
15-Lb. Anchor	6	Trailer
Large shackles	5	Trailer
TYVEX Coveralls	9 boxes	Trailer

From Appendix 2 of the HOSLL Spill Contingency Plan:

Equipment	Quantity	Location
Vacuum Transfer Unit	2	Compound
FMT Diesel power pack	1	Compound
Vikoma Fasflo Weir Skimmer	1	Compound
Kvichak support boat	1	Compound
Portable barges	2	Compound
40' Flat bed trailers (Nos. 330, 331, 309, 311, 334)	5	Compound
Boat trailer for Kvichak support boat	1	Compound
Inflatable boat with outboard motor	1	Compound
200 Ft. 21" Boom	1	Compound
Bladders @ 1000 Gallons each	4	Compound
Floating suction weir (GT 260)	1	Compound
Weir head skimmer with VTUs	2	Compound

OSP 250 Clean Up Response.

Attachment 4. External Sources of Expert Advice

Regional Marine Pollution Emergency Information and Training Centre Wider Caribbean
REMPEITC-Carib
IMO Regional Technical Advisors
Curaçao, Netherlands Antilles
Tel. 5999.461.4012 / 5999.461.4409
Fax 5999.461.1996 / 5999.461.2964

International Maritime Organization Marine Environment Division
London, England
Tel. 44.171.587.3247 / 44.171.587.3156
Fax 44.171.587.3210 / 44.171.587.3261 (Emergency)

International Oil Pollution Compensation Fund
London, England
Tel. 44.171.582.2606
Fax 44.171.735.0326

International Petroleum Industry Environmental Conservation Association
London, England
Tel. 44.171.221.2026
Fax 44.171.229.4948

The International Tanker Owners Pollution Federation Limited
London, England
Tel. 44.171.621.1255 / 44.142.691.4112 (out of office hours)
Fax 44.171.621.1783

CDERA/Eastern Caribbean Donor Group.
The Garrison. Saint Michael, Barbados West Indies.
Phone: (246) 436 9651/52
Fax: (246) 437 7649
Email: cdera@caribsurf.com

OSP 250 Clean Up Response.

Attachment 5.- External Sources of Specialist Equipment and Manpower

The International Tanker Owners Pollution Federation Limited
London, England
Tel. 44.171.621.1255 / 44.142.691.4112 (out of office hours)
Fax 44.171.621.1783

Marine Spill Response Corporation (MSRC)
Miami Florida, USA
Tel. 305 375 9279
Fax 305 577 8523

The Clean Caribbean Co-operation (CCC)
Fort Lauderdale
Florida, USA
Tel. 305 983 9880
Fax 305 987 3001

Oil Spill Service Centre (OSSC)
Southampton, England
Tel. (0703) 331551
Fax (0703) 331972

BMATT (British Military Advisory Training Team)
Camp Blizzard
Antigua

OSP- 250 – Clean up Response.

Attachment 6.- Formats for Recording Activities

Four Formats are included in this attachment:

- 1.- Format to draw a Map/Sketch of the incident site.
- 2.- Format for the Organisation of the Incident Command System.
- 3.- Format for the Summary of Current Actions.
- 4.- Format for the Summary of Resources: Resources needed, time ordered, resources identifier.

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP-300 Technical Advice and International Assistance.

Version

Version 1. August 6th, 2002.

Objectives

To request and receive international advice and assistance when needed during an oil spill.

Responsible for the Procedure:

Main:

NEMO Director

Secondary:

OPAC Chairperson
Ministry of External Affairs

Steps of the Procedure.

A.- The Director of NEMO shall:

Permanent:

- 1.- Participate in the OPAC meetings and inform the members about this procedure and its modifications and updating.
- 2.- Participate in simulation exercises to test and update this procedure.
- 3.- Be informed by the OPAC about regional and international organisations that provide advice and assistance in the case of an oil spill.
- 4.- Keep, with the assistance of the OPAC, updated directories of Regional and International Organisations that provide advice and assistance.
- 5.- With the assistance of the OPAC, establish contact with Regional and International Organisations that provide advice and assistance in order to establish channels of communication and mechanisms for co-ordination during an oil spill.

6.- Identify, jointly with the Ministry of External Affairs, the adequate mechanisms for the request and receipt of international advice and assistance.

After an oil spill has occurred and after the oil spill assessment has been done:

7.- Be informed by the OSC about the tier response the oil spill demands (1, 2 or 3).

8.- Be informed by the OSC that international advice and/or international assistance is needed.

9.- Be advised by the OPAC Chairperson who to contact and for what purposes (kind of advice and assistance needed).

10.- Contact the Ministry of External Affairs and inform them of the situation and the need for international advice and assistance.

11.- Request the advice and assistance needed to regional and/or international organisations/companies.

12.- Receive the international advice and assistance and ensure that it is provided to the OSC for the response to the oil spill.

B.- The OPAC Chairperson shall:

1.- Advise NEMO on international sources for advice and on international assistance regarding oil spills.

2.- Provide NEMO with information about existing and new organisations and companies that provide international advice and assistance, the mechanisms to access them, and telephones and addresses.

3.- Advise the OSC and NEMO on the need of international advice and assistance during an oil spill.

4.- Evaluate the international advice and assistance given and include the evaluation in the final report to be sent to NEMO.

C.- The Ministry of External Affairs shall:

1.- Establish, jointly with NEMO, the mechanisms for the request and receipt of international advice and assistance in the case of an oil spill.

2.- Participate in the request of international advice and assistance if the request has to go to other countries and international/regional response and relief organisations through diplomatic channels.

Attachments:

- 1.- External Sources of Expert Advice
- 2- External Sources of Specialist Equipment and Manpower

OSP- 300 Technical Advice and International Assistance
Attachment 1. External Sources of Expert Advice

Regional Marine Pollution Emergency Information and Training Centre Wider Caribbean
REMPEITC-Carib
IMO Regional Technical Advisors
Curaçao, Netherlands Antilles
Tel. 5999.461.4012 / 5999.461.4409
Fax 5999.461.1996 / 5999.461.2964

International Maritime Organization Marine Environment Division
London, England
Tel. 44.171.587.3247 / 44.171.587.3156
Fax 44.171.587.3210 / 44.171.587.3261 (Emergency)

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London, England
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Fax 44.171.735.0326

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London, England
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Fax 44.171.229.4948

The International Tanker Owners Pollution Federation Limited
London, England
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Fax 44.171.621.1783

CDERA/Eastern Caribbean Donor Group:
The Garrison, Saint Michael, Barbados, West Indies.
Phone: (246) 436 9651/52
Fax: (246) 437 7649
Email: cdera@caribsurf.com

OSP 250 Clean Up Response.

Attachment 5.- External Sources of Specialist Equipment and Manpower

The International Tanker Owners Pollution Federation Limited
London, England
Tel. 44.171.621.1255 / 44.142.691.4112 (out of office hours)
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Fax 305 987 3001

Oil Spill Service Centre (OSSC)
Southampton, England
Tel. (0703) 331551
Fax (0703) 331972

BMATT (British Military Advisory Training Team)
Camp Blizard
Antigua

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP-350- Disposal of Recovered Oil/Hazardous Material

Version

Version 1. August 6th , 2002.

Objectives

To ensure the adequate collection, temporary storage, transportation and final disposal of oily waste following an oil spill in Saint Lucia.

Responsible for the Procedure:

Main:

Saint Lucia Solid Waste Management Authority

Steps of the Procedure.

A.- The Saint Lucia Solid Waste Management Authority shall:

Permanent:

- 1.- Participate in the OPAC meetings and inform the members about this procedure and its modifications and updating.
- 2.- Receive training on its responsibilities
- 3.- Participate in simulation exercises to test and update this procedure.
- 4.- Revise and update regularly the “Oil Spill Response Waste Management Plan”.
- 5.- Ensure that Memoranda of Understanding are signed between parties involved: NEMO, SLSWMA, private companies and others in the event of:
 - The Discharge of the retrieved oil at Hess Oil
 - Use as a fuel feedstock at suitable outlets such as Saint Lucia Distillers and Ferrand Clay Products
 - Direct pumping at Vieux Fort disposal site or other disposal sites.
 - Use in construction of minor roads, and
 - Landfarming to encourage the oil’s decomposition through bacteria.

In the case of receiving notification that an oil spill has occurred:

- 6.- When notified by NEMO, go to the site of the oil spill and report to the OSC.
- 7.- Advise the OSC at all times on issues concerning the collection, temporary storage, transportation and disposal of oily waste.
- 8.- In consultation with the Department of the Environment, Department of Fisheries and Ministry of Tourism, advise the OSC on priorities for cleaning considering tourist areas and coastal areas of high ecological value.
- 9.- Advise the OSC on methods for the collection of oily waste and storage of spill material.
- 10.- Advise the OSC on the use of equipment for the collection of oily waste and spill material.
- 11.- Keep an accurate record of the workforce, equipment and quantities of waste material removed and inform the OSC and the OPAC Chairperson regularly.
- 12.- Advise the OSC on issues regarding the temporary storage and treatment of oily waste.
- 13.- Advise the OSC on the disposal of oil and debris.
- 14.- Supervise the works for the adequate temporary storage, transportation and final disposal of oily wastes.
- 15.- Revise this procedure and the 'Oil Spill Response Waste Management Plan' after each oil spill.

Attachments:

- 1.- Oil Spill Response Waste Management Plan.

OSP 350 Disposal of Recovered Oil/Hazardous Material.

Attachment 1: “ Oil Spill Waste Management Plan.”

**OIL SPILL RESPONSE
WASTE MANAGEMENT PLAN**

1.0 GENERAL

This document provides a brief overview of the specific issues relating to the collection, temporary storage, transportation and disposal of oily waste following an oil spill in St Lucia. It should be read in conjunction with the National Oil Spill Contingency Plan.

Substantial quantities of oil are shipped throughout the Caribbean on a daily basis and as a consequence oil spills pose a real threat within the region. It is therefore necessary to formulate a plan to deal with the combined issues of clean up after a spill and disposal of the resulting oily wastes.

Most oil spill clean-up operations, particularly those on shore, will result in the collection of substantial quantities of oil and oily waste. The consideration and selection of appropriate treatment and disposal methods for the various categories of oily waste will be crucial to the success of the exercise.

There are several potential disposal options available within St Lucia, and the method adopted at the time of a spill will depend upon a number of factors including:

- X The amount and nature of the oily waste;
- X The location of the spill and the local environmental considerations; and
- X The likely cost involved.

Due to their amenity and tourist value, beaches throughout St Lucia should be prioritised for cleaning following an oil spill event. In addition, coastal areas of high ecological value, such as Soufriere Marine Management Area, Maria Island Nature Reserve and Frigate Island Nature Reserve should also be prioritised for immediate remedial action.

2.0 TYPES OF OILY WASTE

2.1 Fluid Wastes

If the oil can be collected soon after being spilled, it is likely to be fluid and relatively free from contamination. However, in most cases collected oil will be viscous due to the effects of weathering and is likely to contain large amounts of water present as an emulsion.

2.2 Solid Waste

Oil which is collected from the shore is usually associated with a considerable quantity of solids and is often difficult to separate in a form suitable for recycling. There are three main categories of waste which may be collected from the beach:

- X Oil mixed with sand;
- X Oil mixed with sorbents; and
- X Tar balls.

3.0 COLLECTION OF OILY WASTE

3.1 Initial Collection Stage

3.1.1 Mechanical Recovery

On a large number of beaches within St Lucia, particularly those with high amenity and tourist value, collection vehicles should be able to reach close to the waters edge. This should facilitate, under calm conditions at sea, oil to be collected directly by suction tanker. However, due to unfavourable sea conditions this approach is unlikely to be feasible on the Atlantic coastline.

As far as is possible, free water collected with the oil should be allowed to settle and be drained off during temporary storage in lined trenches before the oil is taken away for re-use, treatment or final disposal.

3.1.2 Manual Recovery

Manual methods must be used under a number of circumstances, including:

- X Where vehicle access onto the beach is difficult;
- X Where there is no hard-standing at the top of the beach;
- X Where it is too far for suction hoses to reach the water's edge.

Under these circumstances the oil has to be manually collected using buckets, scoops or other suitable containers, such as heavy gauge plastic bags, and carried up the beach above the high water mark. Under these circumstances oil drums may be unsuitable to use as they are very difficult to manhandle once they are full.

The manual sieving of sand can be used for the small-scale separation of clean and dirty sand. Such an approach can be particularly effective for the removal of tar balls.

3.1.3 Sorbents

In the absence of synthetic materials such as polyurethane foam, naturally occurring local materials such as straw, palm fronds, coconut husks, and chicken feathers should be used to absorb the oily waste.

The oil/sorbent mixture can then be collected with forks and rakes and carried in heavy gauge plastic bags or small containers to the top of the beach for temporary storage prior to treatment and/or final disposal.

3.1.4 Graders and Front end loaders

The majority of beaches have fairly good vehicle access, are relatively flat and comprise relatively hard packed sand. Consequently, they should be able to support heavy vehicles such as graders and front-end loaders which can assist with the clean-up operation.

The grader's blade should be set to skim just below the surface of the sand, and the oil and sand drawn into lines parallel to the shoreline. The accumulated material can then be collected using front-end loaders.

This task can, if circumstances dictate, be solely undertaken by a front-end loader although the amount of sand removed will inevitably be far greater. In all cases, care must be taken to ensure that excessive removal of sand does not result in beach erosion or destruction of natural habitat.

Moderately contaminated beaches are best cleaned by teams of labourers working in conjunction with front-end loaders, the latter being used solely to transport the collected material to temporary storage at the top of the beach. Use of a manual method of this nature, as compared to the use of a grader, results in significantly less sand from being removed.

The clean-up teams should collect the oily sand into piles or alternatively fill oil drums placed at intervals along the beach which can then be collected by the front-end loader.

Where there is no possibility of getting vehicles onto the beach the collected oily sand shall be carried to the top of the beach using suitable containers such as thick gauge plastic bags. Those used for the storage of fertilizers are suitable.

3.1.5 Non Recovery

Some beaches and shorelines may be completely inaccessible and hence do not facilitate clean up via vehicles, plant or manual methods. Under such circumstances options are likely to be limited to a combination of the following:

- ! Protection of the area by deploying booms at sea;
- ! Treating the slick using chemical dispersants while it is still a suitable

distance from shore;

- ! Allowing natural processes such as wave action and the effects of sunlight to dissipate the slick once it has reached the coast.

3.2 Final Collection Stage

3.2.1 Final Beach Clean-up

3.2.2

After most of the contaminated sand has been removed, that remaining is likely to be greasy and discoloured, which will require a final stage to achieve results suitable for recreational beaches. This can be achieved in a number of ways, including:

- X The use of chemical dispersants (if available);
- X Hosing with sea water using suction tankers;
- X Periodically ploughing or harrowing to accelerate the natural weathering process.

The material remaining after the clean up of a sandy beach is usually in the form of small nodules of oily sand up to about 50mm in diameter. These and tar balls washed up along the high water mark should be manually picked up.

3.2.2 Importation of Sand

On certain beaches, especially those with high tourist and amenity value, it will be necessary to return the beach to its original condition in the shortest possible time. Clean sand can be brought in from elsewhere and spread over the lightly oiled sand.

If suitable sand is not readily available for this purpose, the use of alternative material, such as pumice, should be evaluated.

As far as is possible, the imported sand should have the same grain size as the natural material so that it does not alter the physical and biological characteristics of the beach.

3.2.3 Stockpiling of Sand

When sufficient notice is available before a spill reaches a beach, it may be appropriate to move some of the sand above the high water mark. This sand can then be replaced after the beach has been cleaned.

3.3 Clean-Up Organisation

3.3.1 Teams

The workforce should be divided into teams, the size of which will be determined by the size of the spill. Each team should be allocated a specific section of the beach to clean. For medium to large-scale spills, a team should comprise up to ten people, under the direction of a supervisor. This way each team has the satisfaction of completing a task at the end of each day and of seeing the progress they have made.

3.3.2 Control of Vehicles

Equipment working on the beach, such as graders and front-end loaders, should be organised to complement the work of the teams. Larger capacity vehicles such as lorries, used to transport the material to the storage location or final disposal site should, as far as is practicable, be kept off of the beach so that dirty and clean areas of the beach remain segregated. This also helps to reduce the amount of oil transferred directly on to the roads.

3.3.3 Traffic Control

Access to the beach will need to be controlled by the police to minimise damage to the beach, and to enable vehicles to manoeuvre safely and without hindrance. Further, the need to erect signs to warn the public of the potential health risks associated with bathing and the use of the beach should be evaluated.

In the interest of public safety, the police may also be required to close the beach and access road, particularly where heavy vehicles are being used.

3.3.4 Record Keeping

Daily records of the workforce, equipment and the quantities of waste material removed should be kept to assist with monitoring of the exercise.

3.4 Temporary Storage and Treatment

The amount of material to be transported to the final disposal sites should be reduced as far as is possible due to the high cost of transportation and disposal operations. Therefore, separation of oil from water and sand during temporary storage is to be encouraged. Further, storing of waste material, preferably at the back of the beach, above the high water mark, will provide time for the final disposal options to be evaluated.

To facilitate this process, liquid oil should, as far as is practicable, be stored separately from oily solids to enable different methods of treatment and disposal to be followed. Viscous oil can be stored in containers, skips or drums. In the absence of these facilities, the oil can be stored in pits lined with heavy gauge polyethylene sheeting, or other oil-proof material. The pits should be excavated at the top of the beach and for access, stability and ease of restoration should be approximately 2m wide and 1.5m deep.

Care should be taken to avoid over filling the pits with oil due to the risk of them overflowing in the event of heavy rainfall. The pits should be filled in after they have been emptied, and as far as is possible, the area restored to it's original condition.

Plastic bags should be regarded as a means of transporting oily waste rather than storing it since they tend to deteriorate rapidly under the effect of sunlight, thus releasing their contents.

4.0 DISPOSAL OF OILY WASTE AND DEBRIS

4.1 General

Within St Lucia there are potentially a number of disposal options. The one deemed most suitable will have to take into account a number of factors including:

- X The type of oily waste and debris;
- X the location of the spill and local environmental sensitivities and considerations; and
- X the likely costs involved.

A summary of the various treatment and disposal options available within St Lucia for the various waste types is provided in the table at the end of this report.

Local disposal options include, (subject to the necessary Memoranda of Understanding being completed) but are not necessarily limited to, the following:

- X Discharge of retrieved oil at the Hess terminal;
- X Use as a fuel feedstock at suitable outlets such as St Lucia Distillers and Ferrand Clay Products;
- X Direct dumping at either the Deglos or Vieux Fort disposal sites;
- X Use in the construction of minor roads; and
- X Land farming to encourage the oil's decomposition through bacteria;

4.2 Recovery of Oil From Water

Separation of oil from water can be achieved by gravity within suction tankers or storage tanks, with the water being run-off or pumped from the bottom. Under some circumstances the recovered oil may be suitable for mixing with fuel oils. Potential outlets for this product include:

- X Hess Oil;
- X St Lucia Distillers; and
- X Ferrands Clay Products.

However, the quality of the oil must be relatively high in that it should meet the following criteria:

- ! Be pumpable;
- ! Be low in solids;
- ! Have salt content of less than 0.5%.

Further, the potential users of the oil may have only limited storage capacity thus making the need for intermediate storage necessary.

4.3 Recovery of Oil From Emulsions

Extraction of water from water-in-oil emulsions (mousse) is more problematic, although the heat from the sun may at times be sufficient. However more stable emulsions may require the use of chemicals known as >breakers= or >demulsifiers=. Within the region there are a number of potential sources of these chemicals. The most accessible is likely to be via the Clean Caribbean Cooperative in Fort Lauderdale, Florida, USA. Other sources are available but would require Memoranda of Understanding or other inter-governmental agreements to be in place.

These chemicals are only active at an oil/water interface in the presence of agitation. Therefore, small concentrations of them on oily waste materials to be disposed of are unlikely to have any adverse effects at the selected disposal sites.

In the absence of these chemicals, emulsions may be partially broken by mixing thoroughly with sand in standard equipment such as a cement mixer.

4.4 Recovery of Oil From Sands & Sorbents

On occasion it may be possible to recover oil from contaminated sand. Water-washing using pipe borne water or sea water via low pressure hoses can be used to loosen and lift off oil from material contained within temporary storage pits. The resulting oil/water mixture can then be pumped away and gravity separated. Alternatively, readily available equipment such as cement mixers can be used for small-scale sand washing operations.

The cost of cleaning large amounts of oiled sand on site could compare favourably with the cost of transporting the material some distance for final disposal.

4.5 Disposal at the Landfill Sites

When recovery of oil is impractical, the most likely disposal route will be via the landfill sites. The co-disposal of oily waste and domestic waste is generally considered to be acceptable, although degradation of the oil is likely to be slow due to the absence of oxygen.

However, the oil should remain firmly absorbed in the domestic waste with little tendency to leach out. Both the Deglos and Vieux Fort sites have in excess of 5 meters thickness of waste which should be sufficient to retain and attenuate oily waste disposed of at these sites.

The oily waste should be discharged into pre-prepared trenches in compliance with the following considerations:

- X Trenches should be in the order of 1m width by 0.5m depth;
- X They should be located away from the main tipping face due to the heavy site traffic in this region, and away from the perimeter of the site to minimise the risk of lateral movement of the oil breaking out through the perimeter bund wall;
- X Once deposited, the oily waste should be covered by a minimum of 2m of domestic waste to prevent the emergence of oil at the surface when subjected to compression from site vehicles; and
- X Site staff should carefully log the location of the disposal trenches for future reference and to assist with future leachate and ground water monitoring exercises.

4.6 Beach Burial

In the case of beaches being lightly contaminated with oil or tar balls, the option of burying the collected material at the top of the beach above the high water mark should be evaluated. As long as the oil cannot be uncovered through normal beach erosion it should not pose significant environmental risk. If this course of action is pursued, a covering of at least one meter over the burial site should be sufficient.

4.7 Stabilisation

An inorganic substance such as quicklime (calcium oxide) can be used to bind oily sand. It is understood that a local source of this material may be available from Windward Island Gases Ltd. Application of the quicklime forms an inert product which prevents the oil from leaching out. This stabilised material can be landfilled, or used for road construction where high load-bearing properties are not needed. In the absence of quicklime, cement can be used as an alternative-binding agent.

The optimum amount of binding agent required is primarily dependent on the water content of the waste rather than the oil content, and is best determined through experimenting on site. Typically, for quicklime the amount required is between 5 and 20% by weight of the bulk material to be treated. In the absence of expensive equipment including a continuous drum mixer, smaller quantities can be treated using standard concrete mixers.

It is very important to note that when using quicklime, workers should wear protective clothing and facemasks to protect skin, lungs and eyes.

4.8 Biodegradation

Oily waste can be broken down using biological processes which occur at an oil-water interface. Therefore, the oily waste must be mixed within a moist substrate. The rate of degradation is dependant on a number of factors including:

- ! Temperature;
- ! The availability of water and nutrients;

! The salt content.

However, some components of oil, such as resins and asphaltenes, are resistant to these processes and even after prolonged periods up to 20% of the original material may be left unaffected.

To optimise the degradation process, the oily waste can be >land farmed= on suitable designated sites which should exhibit the following qualities:

- X Be of low value;
- X Located well away from surface water courses; and
- X Comprise soils having a low permeability;

Once suitable sites have been identified the >land farming= process involves the following steps:

- X Loosening the topsoil by ploughing to improve aeration;
- X Bonding the entire area to prevent any oily run-off;
- X Spreading the oily waste over the surface to a depth not exceeding 0.2m;
- X If available, applying fertilizers such as urea and ammonium phosphate to stimulate microbial activity;
- X Allowing the oily waste to weather until it is no longer sticky before being thoroughly ploughed into the soil.

However, within St Lucia this process is likely to have only a limited application as it requires a significant amount of land which has minimal potential impact upon ground and surface water.

OPTIONS FOR SEPARATION AND DISPOSAL OF OIL AND DEBRIS

Type of Material		Separation Method		Disposal Method	
LIQUIDS	Non-Emulsified Oils	X	Gravity separation of free water	X	Use as fuel feedstock at St Lucia Distillers or Clay Products Ltd.
	Emulsified Oil	X	Emulsion broken to release water by: X heat; X chemicals; X mixing with sand.	X X X	Use of recovered oil as fuel feedstock; Direct disposal at Vieux Fort disposal sites or other disposal sites; Land farming.
SOLIDS	Oil Mixed With Sand.	X	Mechanical collection of liquid oil from leaching during temporary storage in lined trenches at top of beach;	X	Use of recovered oil as fuel feedstock;
		X	Extraction of oil by flushing with water or solvent;	X	Stabilisation with inorganic material such as >quicklime=;
		X	Removal of solid oil by sieving.	X	Land farming.
	Oil Mixed With Sorbents.	X	Collection of oil leaching from debris during temporary storage in lined trenches at top of the beach;	X	Direct disposal at Vieux Fort disposal site or other disposal sites;
		X	Flushing of oil from debris using water.	X	Landfarming.
	Tar Balls.	X	Manual separation from sand using sieving.	X	Direct disposal to Vieux Fort disposal site or other disposal sites.

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP-400 Record Keeping and Preparation of Claims.

Version

Version 1. August 6th, 2002.

Objectives

To keep an accurate record of every item damaged and every cost, direct and indirect, caused by the oil spill, in order that financial claims be processed with minimum delay.

Responsible for the Procedure:

Main:

Ministry of Finance.

Secondary:

NEMO Director

On Scene Commander

Saint Lucia Solid Waste Management Authority

OPAC Chairperson

Steps of the Procedure.

A.- The Ministry of Finance shall:

1.- Co-ordinate the overall assessment of costs and liaise with the international organisations and agencies for compensation.

B.- The Director of NEMO shall:

Permanent:

1.- Identify with the collaboration and input of the OPAC Chairperson, OSCs, the Saint Lucia Solid Waste Management Authority and any other persons/organisations as the NEMO director thinks fit, the items and costs per item whose damage and cost would be recorded during an oil spill.

- 2.- To determine what items will be quantified by the OSC, which by the SLSAWMA and which, if any, by the OPAC Chairperson.
- 3.- To design, with the collaboration and input of the OPAC Chairperson, OSCs and the Saint Lucia Solid Waste Management Authority any formats needed for the purposes of point 1 above.
- 4.- To be advised by the OPAC Chairperson on the channels and mechanisms for the preparation and submittal of claims.
- 5.- To receive, after an oil spill, from the OSC, a final document including all the financial implications of the oil spill:

Response (assessment, containment, clean up and disposal):

- Labour
- Equipment
- Transportation
- Materials
- Administrative costs

Damage due to the oil spill:

- Damage to the population (loss of life, injuries, medical attention)
- Damage and cost to infrastructure
- Damage and cost to private property
- Damage and cost to businesses and services
- Damage and cost to the environment

- 6.- To make the claims to the competent authorities after an oil spill has occurred and to supervise its adequate payment.

C.- The On Scene Commander shall:

- 1.- Keep records of every damage, cost and expense made as well as the cost of labour and equipment and materials utilised in the response, clean up and disposal of oily waste.
- 2.- If necessary, and depending on the magnitude of the spill, designate a record keeping official (s) with the sole task of record keeping during the oil spill.
- 3.- Be assisted by the OPAC Chairman in the estimation of damage and cost.
- 4.- Include the input of the Saint Lucia Solid Waste Management Authority regarding expenses and costs for the collection, temporary storage, transportation and disposal of oily wastes.
- 5.- Prepare the final document with the final financial implications of the oil spill and send it to the OPAC Chairman and to NEMO Director for final approval.
- 6.- Revise this procedure after a real event.

D.- The Saint Lucia Solid Waste Management Authority shall:

- 1.- Keep an accurate record of the workforce, equipment and quantities of waste material removed and inform the OSC and the OPAC Chairperson regularly.
- 2.- Prepare a final report and submit it to the OSC, OPAC Chairperson and NEMO Director.

E.- The OPAC Chairperson shall:

- 1.- Advise and assist the SLSWMA, the OSC and NEMO Director in the keeping of records and claims.
- 2.- Revise the final report and the final claim.
- 3.- Advise and assist NEMO during the claim submittal and the payment of damage.
- 4.- Advise NEMO in the improving of claiming mechanisms.

Attachments (Not shown. To be prepared):

- 1.- Format 1 : General Record Keeping: Overall Response and Recovery (OSC)
- 2.- Format 2: Waste Management Record Keeping: Oily Wastes (SLSWMA)

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure HP-100 Emergency Operations Centre (National for Oil Spills)

Version:

Version 1, August 6th, 2002.

Objectives

To activate, operate and deactivate the National Emergency Operations Centre in the case of an oil spill in Saint Lucia whose magnitude demands the activation of the EOC in order to provide the OSC all the assistance needed for the response and the recovery.

Responsible for the Procedure:

Main:

Director of NEMO

Secondary:

- a.- Deputy Director of NEMO
- b.- Permanent Secretary Prime Minister Office
- c.- Members of the EOC
- d.- NEMO's Secretary
- e.- Message Receiver
- f.- Situation Reporter
- g.- Damage Assessment Logger

Steps of the Procedure.

A.- The Director of NEMO shall:

- 1.- Ensure the Emergency Operation Centre is in good shape and has all information needed at all times.
- 2.- Organise, plan, execute and evaluate simulation exercises for the activation and operation of the EOC.
- 3.- If the Oil Spill demands a tier 2 response, check:

Communications
Stationery
Maps
Situation report forms
Message forms
Emergency plan
Emergency procedures
Flip chart
Computers
Files
Directories
Food

- 4.- If it is determined, under the recommendation of the OPAC Chairman, that due to the magnitude of the oil spill (tier 2 or tier 3) the EOC has to be activated, inform the Prime Minister and proceed to activate the EOC.
- 5.- Proceed with the notification to the EOC members: Team # 1 and Team #2 as stated in Emergency Procedure OSP 001.- Notification.
- 6.- Set up the EOC with the assistance of the Police and the Radio Operator.
- 7.- Ensure that there is permanent and clear communication between the EOC and the OSC in the Command Post at the Oil Spill Site.
- 8- Receive and brief all EOC members at their arrival
- 9.- Ensure that EOC members finally set up the EOC.
- 10.- Co-ordinate all activities in the EOC. During his/her absence from the EOC, be substituted by the Deputy Director or by the Cabinet Secretary.
- 11.- Ensure, immediately after the EOC is activated, that the Transportation Committee provides aerial transportation for the oil spill assessment flight if needed.
- 12.- Participate in the initial damage assessment flight along with the Prime Minister of Saint Lucia, the Damage Assessment Committee and the Works/Rehabilitation/Reconstruction Committee Chairpersons.
- 13.- Brief, once in the EOC, the EOC members after the initial oil spill assessment flight.
- 14.- Start to receive incoming messages from the runner.
- 15.- Analyse and prioritise incoming messages. Always give priority to those that demand a response within a specific timeframe or to those that pose an immediate danger to life and property.

16.- Revise if the messages were given to the right persons by the runner, make corrections, if necessary, and demand action from other EOC members. Always contact and inform the main responsible member for the response.

17.- Read aloud all incoming messages when first read.

18.- Request information from EOC members responsible for action to be taken

19.- Be informed verbally by main responsible members of action taken for specific messages.

20.- Revise continuously the incoming messages to give an adequate follow up and updating of information about actions taken.

21.- After 12 hours of EOC operation, with the assistance of all EOC members and NEMO personnel, ensure that Team # 2 is notified and called to the EOC.

22.- After 12 hours of operation request a report from all members of the EOC once both EOC teams are present.

23.- After 12 hours of activation of the EOC hand responsibilities over the Deputy Director NEMO after briefing him.

24.- After 24 hours of EOC activation return to the EOC and be briefed by the Deputy Director.

25.- After 24 hours of EOC activation request a report from all members of the EOC once both EOC teams are present.

26.- After 24 hours, request reports from all EOC members every 12 hours with the presence of both two teams.

27.- Along with the rest of the EOC, considering the disaster situation and after consulting with the Cabinet Secretary and/or the Prime Minister, take the decision of deactivating the EOC.

28.- After the EOC deactivation, based on the disaster situation and after consulting with the rest of the EOC members, decide about the activation of a 'Task Force' based in the NEMO headquarters to conduct the rehabilitation and reconstruction issues that have to be conducted.

29.- Co-ordinate the works of the Task Force.

B.- The Deputy Director of NEMO shall:

1.- Be always prepared to assist the Director of NEMO in the case of a disaster and activation of the EOC

2.- Be trained to substitute for the Director of NEMO in the EOC during his/her absence.

- 3.- Participate in EOC simulation exercises in which his/her performance in the EOC is tested.
- 4.- In the case of an oil spill, maintain communication at all times with NEMO Director in order to know the situation due to the oil spill.
- 5.- Be informed by NEMO Director that the EOC has to be activated.
- 6.- Assist the Director in the activation and set up of the EOC.
- 7.- After 12 hours of activated the EOC, go to the EOC and substitute for the Director of NEMO as Co-ordinator of the EOC and its operations.
- 8.- Once arriving at the EOC, be briefed by NEMO's Director on the situation and pending issues.
- 9.- After 12 hours of being in the EOC, be substituted by NEMO Director in the EOC.
- 10.- Before leaving the EOC, brief NEMO's Director on the situation and pending issues.
- 11.- Repeat steps 6 to 10 until deactivation of EOC.
- 12.- Revise and update this procedure after every real event.

C.- The Cabinet Secretary shall:

- 1.- Know the Saint Lucia National Oil Spill Contingency Plan and its Emergency Procedures.
- 2.- Participate in simulation exercises that test the EOC and be informed of their evaluation.
- 3.- Be notified about the presence of a tier 2 situation due to the oil spill and about the possibility of activating the EOC.
- 4.- Inform the Prime Minister of Saint Lucia about the situation.
- 5.- Be informed by NEMO Director that, due to the magnitude of the spill, there is the need of activating the EOC (Tier 2 or Tier 3)
- 6.- Receive information from NEMO's Director about the situation.
- 7.- When arriving at the EOC, be briefed by the EOC Chairperson.
- 8.- Assist and advise the EOC chairperson in the co-ordination of the EOC.
- 9.- During NEMO Director's absence from the EOC, act as chairperson of the EOC and co-ordinate all activities therein.

10.- Remain in the EOC and advise the Director of NEMO on any situation that demands his/her opinion/decision or the Prime Minister's.

11.- Contact and consult the Prime Minister as he/she thinks fit regarding any message and situation that demands the Prime Minister's decision.

D.- The Members of the EOC shall:

1.- Know the Saint Lucia National Oil Spill Contingency Plan and its procedures and participate in the planning process by revising and updating them regularly under NEMO Director's co-ordination and with the assistance of the OPAC Chairperson for the particular case of oil spills.

2.- Know their role in the EOC and determine their own needs regarding equipment, materials, stationery, information and others.

3.- Meet regularly with the Committee members in order to improve the plan and its procedures, identify roles and assign to the Committee members responsibilities regarding preparedness and response during oil spills.

4.- Jointly with the Committee members define mechanisms of co-ordination and communication in the case of an emergency or a disaster, particularly from the Chairperson in the EOC to all the members and in the case of oil spills.

5.- Once notified by NEMO Director that there's the possibility of activating the EOC due to the magnitude of an oil spill, ensure that everything they would need in the EOC is ready in the case of its activation:

- Information
- Plan and procedures
- Formats
- Forms
- Maps
- Stationery
- Communications equipment
- Directories
- Inventories

6.- Ensure that the organisations/persons they would have to contact from the EOC are on stand-by and have everything ready in the case the EOC is activated.

7.- Once they are notified that the EOC has to be activated, go to the EOC.

8.- Before going to the EOC notify the organisations/persons they would have to contact from the EOC to be in place and to wait for instructions from the EOC.

9.- Arrive at the EOC with everything that they would need for operation:

Information
Plan and procedures
Formats
Forms
Maps
Stationery
Communications equipment
Directories
Inventories

- 10.- Report to the Director of NEMO when arriving at the EOC
- 11.- Be briefed on the situation and pending issues
- 12.- Take the seat or place destined for him/her in the EOC
- 13.- Prepare dips (special, with boxes or with folders) for his/her incoming, pending and outgoing messages.
- 14.- Respond to every message that demands attention
- 15.- Communicate with other members in the EOC for joint actions that have to be taken or for gathering of information.
- 16.- Write down in the log sheet the action taken and return it to the chairperson only when the action is finished.
- 17.- Establish permanent communication with the members of their committee/ministry/organisation that are taking action in sectoral EOC's, in the Ministries, in the field or in their offices.
- 18.- Besides returning the messages with the written action taken, read the message and the action take aloud so the chairperson and the rest of the EOC would know about it.
- 19.- Present a status on the situation every 12 hours to the chairperson and to the whole EOC.
- 20.- In the case of a visit of the Prime Minister to the EOC, or whenever a report is requested by the Prime Minister or by the EOC chairperson, present a full situation report concerning the responsibilities of his/her committee /ministry/ organisation, including, damage assessment, actions taken and results, particularly the situation in the oil spill site as informed by the OSC and/or the OPAC Chairperson.
- 21.- Brief his/her substitute every time before leaving the EOC in the change of shifts.
- 22.- Be briefed every time arriving at the EOC.

- 23.- At all times, provide information and resources, as far as possible, to the EOC members.
- 24.- Provide information and opinion for the decision, when needed, about the deactivation of the EOC.
- 25.- After the deactivation of the EOC, notify the members of his/her organisation/ Ministry/ about it.
- 26.- Participate as a member of the 'Task Force' if it is needed.

E.- NEMO's Secretary shall:

- 1.- Assist the Director and the Deputy Director of NEMO to ensure that the EOC is kept in good shape.
- 2.- Assist the Director and the Deputy Director of NEMO to ensure that the EOC has all equipment, information and materials needed for its operations if it has to be activated (Tier 2 or Tier 3):
 - Communications
 - Stationery
 - Maps
 - Situation report forms
 - Message forms
 - Emergency plan
 - Emergency procedures
 - Flip chart
 - Computers
 - Files
 - Directories
 - Food
- 3.- Once the EOC is activated, go to the EOC.
- 4.- Report in the EOC to the Director of NEMO.
- 5.- Be in charge of the management of internal EOC supplies: food, stationery, photocopies, etc., and others needed by the EOC.
- 6.- Provide the EOC chairperson with information needed from NEMO for the operations of the EOC: directories, files, etc.
- 7.- Assist the Radio Operator with the receipt and record of messages in the log sheets.
- 8.- Assist the Runner with the copying and distribution of messages to the EOC members
- 9.- Assist the EOC members with turning over the log sheets to the EOC chairperson.

- 10.- Assist the Director and Deputy Director in any other need.
- 11.- Assist the Director and the Deputy Director in the deactivation of the EOC.
- 12.- After 12 hours leave EOC and return 12 hours later.

F.- The Message Receiver (Runner) shall:

- 1.- Revise and improve this procedure and the log sheet
- 2.- Once notified that the EOC is activated, go to the EOC.
- 3.- Ensure that enough copies of the log sheet are available.
- 4.- Once in the EOC report to the Director.
- 5.- Contact the Radio Operator
- 6.- Find out about any messages that have been received in the EOC and their status.
- 7.- Log the messages and turn them over if they have not, to the EOC members.
- 8.- Be informed about every message that is received in the EOC
- 9.- Log every message received in the EOC in the log sheet form
- 10.- Give copies of the log sheet for action to be taken to:
 - Chairperson
 - Members of the EOC
 - Main EOC member responsible for action
 - Secondary EOC members responsible for action
 - Other EOC members, for their information.
 - Situation Reporter (shares with damage assessment logger)
- 11.- If the message involves information about damage, always give a copy to the damage assessment chairperson and one to the damage logger.
- 12.- Shout: 'Incoming!' every time that he/she delivers a message to the EOC chairperson or to any EOC member.
- 13.- Assist the EOC chairperson to have a sequential record of all log sheets including incoming messages and action taken by EOC members.
- 14.- After the EOC is deactivated, revise the log sheets and deliver them to the chairperson.

F.- The Situation Reporter shall:

- 1.- Revise and improve the situation report sheets regularly.
- 2.- Once he has received the notification that the EOC is activated, go to the EOC.
- 3.- Once in the EOC report to the EOC chairperson.
- 4.- Assist in the EOC set up and ensure that the situation report sheets are hung on the wall so everybody can see them and follow the events and actions taken.
- 5.- Prepare dips (with boxes or with folders) for incoming, pending and outgoing (or logged) messages.
- 6.- Ask the EOC Chairperson or a specific member of the EOC about any doubts regarding any message and/or action taken.
- 7.- After 12 hours in the EOC leave after briefing the substitute.
- 8.- Return to the EOC twelve hours later.

G.- The Damage Assessment Logger shall:

- 1.- Revise and improve the situation report sheets regularly.
- 2.- Once he has received the notification that the EOC is activated, go to the EOC.
- 3.- Once in the EOC report to the EOC chairperson.
- 4.- Assist in the EOC set up and ensure that the situation report sheets are hung on the wall so everybody can see them and follow the events and actions taken.
- 5.- Prepare dips (with boxes or with folders) for incoming, pending and outgoing (or logged) messages.
- 6.- Work closely with the Situation Reporter and share logsheets.
- 7.- Ask the EOC Chairperson or a specific member of the EOC about any doubts about any message and/or action taken.
- 8.- After 12 hours in the EOC leave after briefing the substitute,
- 9.- Return to the EOC twelve hours later.

Attachments:

- 1.- Log Sheet Form (messages)
- 2.- Situation report formats (not shown)

OSP- 450 Emergency Operations Centre (Oil Spill) Attachment 1: Log Sheet.**LOG SHEET** _____ **NUMBER** _____**INCIDENT NO.** _____**SUMMARY OF INCIDENT:** _____

NORMAL _____ **URGENT** _____ **DEADLINE** _____**RESPONSE_GIVEN** _____

TIME RECEIVED (EOC) _____**TIME OF ACTION (EOC MEMBER)** _____**COMPLETION TIME (RETURNED TO EOC CHAIRPERSON)** _____**Distribution List**

EOC Member	Primary Action	Secondary Action	Only for Information	Other
Cabinet Secretary				
EOC Chairperson (NEMO)				
Situation Reporter				
Damage Assessment Logger				
NEMO Secretary				
Radio operator				
OPAC Chairperson				
Telecommunications Committee				
Transportation Committee				
Chief Medical Officer				
Welfare Committee				
Damage and Needs Assessment Committee				
Supply Management Committee				
Works and Rehabilitation Committee				
Shelter Management Committee				
Ministry of Tourism/CMU				
Ministry of External Affairs				
Royal Saint Lucia Police Force				
Saint Lucia Fire Service				
Government Information Systems GIS				
SLASPA				
Comptroller of Customs				

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP 500 Public Information (Oil Spill)

Version

Version 1. August 6th, 2002.

Objectives

To disseminate information, in English and/or Creole, for the people of Saint Lucia and, when needed, for the region and/or rest of the world, through the Media or through the PM or any other government official authorised to do so, to report about the impact of oil spills in Saint Lucia, damage caused, measures taken by the government and results, and measures to be taken by the population to protect their lives and property.

Responsible for the Procedure:

Main:

The Director of Information Services. The Government Information Committee.

Secondary:

NEMO Director
OPAC Chairperson
OSC

Steps of the Procedure.

A.- The Director of Information Services Shall:

- 1.- Revise and update this procedure and its attachments at least once a year and always after a simulation exercise and a real event.
- 2.- Be assisted at all times by the Principal Information Officer SLU-GIS in all the steps of this procedure.
- 3.- Design, with the assistance and input of NEMO and OPAC, produce, conduct and evaluate campaigns to increase the public awareness about oil spills in Saint Lucia and about the measures they have to take to protect their lives and property.

- 4.- Establish and improve, with NEMO, OPAC Chairperson and the Media, mechanisms for the dissemination of governmental information in the case of emergency and disasters due to Oil Spills.
- 5.- Be notified by NEMO that an oil spill has occurred and that information is available for the GIS.
- 6.- Be informed by NEMO, and only by NEMO about where the oil spill has occurred and about who is to be interviewed.
- 7.- Ensure that NEMO has already contacted the person who will be interviewed.
- 8.- Inform the person interviewed and inform NEMO about the time for the broadcasting of the interview and if any other written and/or oral information is needed.
- 9.- Be informed by NEMO if the EOC is activated due to the magnitude of the spill. Go to the EOC.
- 10.- Report to the EOC Chairperson.
- 11.- Assist in setting up the EOC.
- 12.- Ensure that there is communication between the EOC and the Media. Check the emergency broadcast system: check the emergency telephone hotlines.
- 13.- Immediately after the oil assessment, prepare an initial report to be sent to the Media including: hazard characteristics, damage assessment, initial response and results and recommendations for the population.
- 14.- If necessary and if recommended and approved by the EOC, send GIS personnel to the site of the oil spill. Always report to, and be under the command of, the OSC at the Command Post.
- 15.- With information from the EOC, prepare and update a report (Media release) every 6 hours after the initial report.
- 16.- Prepare the text of the Prime Minister's Address to the Nation when requested by the EOC.
- 17.- Maintain contact with the members of the Media. Request updated information from the EOC Chairperson, NEMO, OPAC Chairperson, OSC and/or the rest of the EOC members as needed and always under the approval of NEMO.
- 18.- Get the approval and consensus of the EOC before the broadcast of every six-hour report and before sending the PM's address to the Nation.
- 19.- Inform the EOC about any special request of information from the Media.

20.- After 12 hours in the EOC leave the EOC and be substituted by the Deputy Chairperson of the Information Committee.

21.- Return 12 hours later to the EOC and substitute for the Deputy Chairperson.

22.- Always brief and be briefed by the Deputy Chairperson when arriving or leaving the EOC in every 12-hour shift.

23.- After the EOC is deactivated, prepare a final report to be broadcast. Send a copy to NEMO to be included in the Plan.

24.- Revise and update this procedure.

B.- The Director of NEMO shall:

1.- Call SLU-GIS when it has been confirmed that an oil spill has occurred and indicate the location and characteristics.

2.- Indicate to SLU-GIS who is the authorised person to be interviewed on the oil spill site.

3.- Maintain contact with the OSC and the OPAC Chairperson and inform them that SLU-GIS will go to the site to gather information and to interview either, or both of them.

4.- If the EOC is activated, receive from SLU-GIS a media release every 6 hours, for discussion and approval by the EOC and release through the Media.

5.- Receive, revise along with the rest of the EOC members, and approve the initial report prepared by the SLU-GIS to be presented to the Prime Minister.

C.- The OPAC Chairperson shall:

1.- Receive notification from NEMO that SLU-GIS will go to the site.

2.- Agree with the OSC about who will be interviewed and about the information that is to be given to SLU-GIS to be released through the Media to the public.

3.- Ensure, along with the OSC, that no interview is given by unauthorised persons on the oil spill site.

4.- If the EOC is activated send information as needed and requested to the EOC for the preparation of Media releases.

D.- The OSC shall:

1.- Receive notification from NEMO or from the OPAC Chairperson that SLU-GIS will go to the site.

2.- Agree with the OPAC Chairperson about who will be interviewed and about the information that is to be given to SLU-GIS to be released through the Media to the public.

3.- Ensure, along with the OPAC Chairperson, that no interview is given by unauthorised persons on the oil spill site.

4.- If the EOC is activated send information as needed and requested to the EOC for the preparation of Media releases.

END OF PROCEDURE

Attachments

(None)

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP - 550 District Disaster Committee General Procedure (Oil Spill)

Version

Version 1. August 6th, 2002.

Objectives

To assist NEMO and the OPAC to identify vulnerability and risks and, in the case of an oil spill, assist the OSC in case the oil spill affects their District.

Responsible for the Procedure:

Main:

District Disaster Committee Chairperson.

Secondary:

NEMO
OSC

Steps of the Procedure.

A.- The District Disaster Committee Chairperson shall:

1.- Meet with the District Committee and revise and update this procedure at least once a year and always after a simulation exercise and a real event.

2.- Ensure that the District Disaster Committee has amongst its members:

- Principals of schools
- All service clubs
- Churches
- Red Cross
- Development Committee
- Fishermen's cooperative
- Radio amateurs/citizen band
- Farmer groups
- Youth organisations'
- Mothers and fathers groups
- Minibus, taxi associations

Markets/supermarkets/commerce
Police representative
Fire service representative
Representative of the District Health Team (Chairperson or nominee).
Private companies (vehicles, light and heavy equipment, materials, etc)
Potential Polluters (oil spill)

3.- Ensure that the District Committee is organised and working permanently; assign responsibilities and permanent tasks to committee members at least for:

Vulnerability assessment
Telecommunications
Transportation
Public information
Shelter management
Health and welfare
Supply management

4.- Identify the possible sources of an oil spill in the District and exchange information permanently with NEMO.

5.- Inform all Committee members about the location of the District EOC and discuss their functions during a disaster, particularly, for the purposes of this procedure, in the event of an oil spill.

6.-Identify means of communication between the District Committee HQ and the District Committee members.

7.- Inform NEMO permanently about risks of oil spills in the District.

If an oil spill occurs in the District:

8.- In the case of an oil spill in the District, inform and/or be informed by NEMO.

9.- Keep their radio communication equipment on and keep permanent contact with NEMO.

10.- Once the oil spill is confirmed and assessed, consult NEMO about the need to go to the oil spill site.

11.- Assist NEMO, the OSC and the OPAC Chairperson in any possible way the District Committee can with their available resources:

Personnel
Vehicles
Radios
Telephones
Heavy equipment
Supplies

12.- If necessary activate the District EOC in order to co-ordinate the District response and assist the OSC and NEMO during the response.

13.- Assist the OSC and the EOC in any matters possible for the better response during and after the oil spill.

14.- Revise and update this procedure after the event.

B.- The Director of NEMO shall:

1.- Inform the District Disaster Commissioner when an oil spill has occurred and its location and characteristics.

2.- If necessary, ask the District Disaster Committee to assist the OSC.

3.- If, due to the oil spill characteristics, the EOC is activated, inform the District Commissioner and ask him/her to activate the District EOC.

4.- Request and provide assistance and information, as needed, to, and from, the District Disaster Committee during the oil spill response.

C.- The OSC shall:

1.- Request information and resources from the District Disaster Committee as needed.

Attachments (Not shown)

1.- Directory of Committee members: names, responsibilities, address, phone numbers

2.- Inventory of possible sources of oil pollution in the District.

3.- Inventory of resources committed by the District Committee.

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP – 600 Co-ordination of the OPAC (Oil Spill)

Version

Version 1. August 6th, 2002.

Objectives

To co-ordinate all the activities of the Oil Pollution Action Committee.

Responsible for the Procedure:

Main:

OPAC Chairperson. Director of Maritime Affairs. Saint Lucia Air and Seaports Authority.

Steps of the Procedure.

OPAC Chairperson.

- 1.- Meet with the OPAC and revise and update this procedure at least once a year and always after a simulation exercise and a real event if necessary.
- 2.- Revise, jointly with NEMO and the members of the OPAC, the Saint Lucia National Oil Spill Contingency Plan and all its procedures at least once a year.
- 3.- Ensure that, within the OPAC, an adequate planning process is conducted in order to revise, update, test and improve the OSP and its resources permanently.
- 4.- Determine the structure, organisation and members of the OPAC.
- 5.- Have at least a yearly OPAC general meeting to revise the general state of preparedness of the OPAC and its members and resources.
- 6.- Maintain contact with NEMO in order to jointly revise the structure, organisation and operations of the OPAC and its state of preparedness in the case of oil spills.
- 7.- Identify, along with OPAC members and their information, the possible sources of pollution, the risk of an event and the possible scenarios of oil spills in Saint Lucia.

- 8.- Maintain contact with companies and organisations that handle large quantities of oil in order to identify and promote better preventive and response measures and to ensure that they have enough and adequate response resources and mechanisms in place.
- 9.- Determine, along with NEMO and the OPAC members, the training needs of the OPAC members.
- 10.- Ensure that the OPAC training needs are part of NEMO's national disaster management training programmes and that training courses are delivered successfully.
- 11.- Identify the need of specific simulation exercises and assist in their planning, organisation, execution and evaluation.
- 12.- Prepare an official report after every oil spill including, characteristics of the oil spill (type, magnitude, location, etc.), response measures, and recommendations to be circulated amongst OPAC members and to be a part of the OSP.
- 13.- Organise an OPAC meeting after every simulation exercise and every real event to discuss the event, the response and the report of the event.
- 14.- Ensure Saint Lucia accedes to international conventions and protocols and enacts laws and regulations as needed to improve the legal framework of the OPAC.
- 15.- Maintain contact with REMPEITC and IMO/HQ in order to maintain the OPAC works within Regional and International recommendations and standards of operation.
- 16.- Advise NEMO Director on any matters regarding the OPAC.

Attachments.

(None)

END OF PROCEDURE

Saint Lucia National Emergency Management Plan

Saint Lucia National Oil Spill Contingency Plan

Emergency Procedure OSP – 650 Overall Co-ordination NEMO (Oil Spill)

Version

Version 1, August 6th, 2002.

Objectives

To co-ordinate all the activities within the National Emergency Management Plan and NEMO's programmes tending to improve the OPAC works and its resources to maintain always a high level of preparedness in case of an oil spill in Saint Lucia.

Responsible for the Procedure:

Main:

NEMO Director

Steps of the Procedure.

A.- The Director of NEMO shall:

- 1.- Meet with the OPAC and revise and update this procedure at least once a year and always after a simulation exercise and a real event.
- 2.- Revise, jointly with the OPAC Chairperson the members of the OPAC, the Saint Lucia National Oil Spill Contingency Plan and all its procedures at least once a year.
- 3.- Assist the OPAC Chairperson to ensure that, within the OPAC, an adequate planning process is conducted in order to permanently revise, update, test and improve the OSP and its resources permanently.
- 4.- Assist the OPAC Chairperson to hold at least a yearly OPAC General Meeting to revise the general state of preparedness of the OPAC and its members and resources.
- 5.- Maintain permanent contact with NEMO in order to jointly revise the structure, organisation and operations of the OPAC and its state of preparedness in the case of oil spills.
- 6.- Assist the OPAC Chairperson to identify, along with OPAC members and their information, the possible sources of pollution, the risk of an event and the possible scenarios of oil spills in Saint Lucia.

7.- Receive from the Ministry of Planning an updated map of the environmentally sensitive areas to an oil spill in Saint Lucia.

8.- Ensure that the OPAC Chairperson maintains permanent contact with possible polluters in order to identify and promote better preventive and response measures and to ensure that they have enough and adequate response resources and mechanisms in place.

9.- Determine, along with the OPAC Chairperson and the OPAC members, the training needs of the OPAC members.

10.- Ensure that the OPAC training needs are part of NEMO's national disaster management training programmes and that training courses are delivered successfully.

11.- Identify, jointly with the OPAC Chairperson, the need for specific simulation exercises and assist in their planning, organisation, execution and evaluation.

12.- Submit and present for approval of the NEMAC and the Prime Minister of Saint Lucia, the newest version of the Saint Lucia National Oil Spill Plan every time it is revised.

13.- Assist the OPAC Chairperson to organise an OPAC meeting with key OPAC members after every simulation exercise and every real event.

14.- Receive from the OPAC Chairperson an official report after every oil spill including characteristics of the oil spill (type, magnitude, location, etc.), response measures, and recommendations to be circulated amongst OPAC members and to be a part of the OSP.

15.- Be informed by the OPAC Chairperson about the revision, identification and need to accede, ratify and/or enact international conventions, protocols and/or Laws and regulations as needed to improve the legal framework of the OPAC.

16.- Ensure that the OPAC Chairperson maintains permanent contact with REMPEITC and IMO HQ in order to maintain the OPAC works within Regional and International recommendations and standards of operation.

17.- Advise the OPAC Chairperson and the OPAC on any disaster management matters related to the OPAC.

END OF PROCEDURE

PART VI - ATTACHMENTS AND APPENDICES

Attachment 1: Real Events Reports.

Table A-3- Most Important and Recent Oil Spills Occurred in Saint Lucia.

DATE	EVENT	DAMAGE/ EFFECTS	ACTION TAKEN	COMMENTS
October 19 th , 1995.	Oil Spill. Hess Oil (MV Flanders)	Less than 100 barrels of crude oil.	Hess Oil, the polluter company and the Government of Saint Lucia worked towards clean up operation.	Well Responded. Measures were taken to avoid the occurrence of similar events in the future.
June 3 rd , 1999.	Saint Lucia Linen. Spill at Choc River.	Approximately 400 gallons of used oil accidentally discharged into Choc River.	Response by OPAC and containment of spill.	Quick action by trained personnel resulted in an effective response and clean up operation.
October 20 th , 1999.	AVIS Gas Station.	45 Gallons of waste oil discharge into La Clery River.	Department of Fisheries, Marine Police, Fire Service and SLASPA responded.	Recommendations were made on how to improve on waste oil management.
October 17 th , 2000.	Oil spill at Cul de Sac River. Saint Lucia Clay Products.	Unknown amount of oil spilled in the Cul de Sac river by a private company.	Response by OPAC and containment of spill	Problems with the quantification of the amount of oil spilled and with the legal process for fining polluter
February 8 th , 2002.	Oil Spill in Rodney Bay Marina.	Unknown amount of Diesel coming	Response by OPAC and containment of spill.	Problems with communications and notification identified that will be corrected in the plan.

The reports from the response to oil spills are presented in this Attachment. It is important to mention that all reports should include recommendations; these have to be implemented by the OPAC and NEMO. A follow-up has to be given to the recommendations to ensure they are implemented, that problems are solved and response and preparedness are improved.

Appendix 2: Caribbean Island Oil Pollution Preparedness and Co-operation Plan

The *Caribbean Island Oil Pollution Preparedness and Co-operation Plan (OPRC) of 1998* is a stand alone document [190 pages] and is a product of the Regional Marine Pollution Emergency Information and Training Centre. REMPEITC-Carib and available at http://www.rac-rempeitc.org/regional_program_Caribbean_Island.html

Geographic Area of the Caribbean Plan

The geographic area of the sub-regional contingency plan extends from latitude 30° N, 200 miles to the east into the Atlantic Ocean beyond the Caribbean Archipelago to the shore line of South America. To the west, the area extends into the Caribbean Sea and Gulf of Mexico following the Exclusive Economic Zone of the Island States and Territories.

The geographic area of the Caribbean Plan essentially is all the waters of the Exclusive Economic Zone (EEZ) of the sub-regional area of the Wider Caribbean applicable to Venezuela and the following Island States and Territories:

Anguilla, Antigua and Barbuda, Aruba Bahamas, Barbados, British Virgin Islands, Cayman Islands, Cuba, Commonwealth of Dominica, Dominican Republic, French Antilles, Grenada, Haiti, Jamaica, Montserrat, Netherlands Antilles, Puerto Rico, St. Christopher and Nevis, **Saint Lucia**, St. Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos, US Virgin Islands.