Marine Pollution Incident (MPI) Area VIII C

MPERSS STATUS – Republic of Mauritius Report

1. Introduction

The Mauritius Meteorological Services is the Area Meteorological and Oceanographic Coordinator (AMOC) for MPI Area VIII C in the South West Indian Ocean.

The National competent Authority responsible for oil pollution preparedness and Response is the Ministry of Environment and National Development Unit (MOE and NDU). The Institution is accredited by the Prime Minister's Office to act on behalf of the state to request or provide assistance as required. Part V of the Environment Protection Act (2002) addresses spill and environmental emergencies. In alliance with the National, Regional and International agencies, the MOE and NDU laid down a set of procedures for clean up and removal operations in the event of an oil spill.

The Republic of Mauritius has ratified the following four International Maritime Conventions in order to be able to combat the oil pollution with more precision and preparedness.

(a) International Convention on oil pollution preparedness, Response and Cooperation (1990), (OPRC 90);
(b) The 1992 International Convention on Civil Liability for Oil Pollution Damage (CLC 92);
(c) 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1992 Fund Convention);
(d) The International Convention for the prevention of pollution from ships (MARPOL 73/78).

2. Risk and Impacts

The Republic of Mauritius is predominately surrounded by coral reefs with trade winds blowing nearly all year round. Winds, waves and swells in the lagoon are usually slight to moderate, except during cyclones and other occasional adverse weather conditions. During cyclones, gusts may reach nearly 280 kmph, thus making oil spill response practically impossible.

The risk and impact of oil spills for the *Indian Ocean Islands Report* (IOC, September 1998), clearly highlights the potential risks of oil spill in the region. An estimated 30% of the world's petroleum production is transported through the Indian Ocean basin. The Impacts of an oil spill in the Mauritian waters could be simply deleterious on the environmental (i.e., coral reefs, seagrass, mangroves, shorelines, seabirds, etc.) and economic (i.e., hotels, port-water operations, water sports, Tourism amenities, etc.) factors.

Due to vulnerability of the Republic of Mauritius to an oil spill, a National Oil Spill Contingency Plan (NOSCP) has been developed under the chairperson of MOE and NDU. Its main goal is to build up a National Integrated Government/Industry Organizational Framework capable of providing effective and prompt response to oil pollution incidents in the territorial waters and the Exclusive Economic Zone of Mauritius. The objective of the NOSCP is to protect the natural and man-made environment from the adverse effects of oil pollution and to determine and minimize those effects.

3. Meteorological Inputs

A National Committee chaired by Permanent Secretary of MOE and NDU, comprising representatives of various Ministries/Institutions (including the Meteorological Department) has been put into place. The Meteorological Services is one of the key stakeholder in the committee and forms part of the Scientific Advisory Team (SAT).

The Mauritius Meteorological Services has the responsibility to prepare and provide the following to the operational centre of the NOSCP.

(a) Wind speed and direction (actual and forecast);
(b) Director, height and where available periodicity of sea waves and swell waves (actual and forecast);
(c) Provision of a Meteorologist on the scene of an oil spill for nowcasting;
(d) General weather conditions, including rainfall and visibility (actual and forecast);
(e) Sea-surface temperature;
(f) Monitoring of the oil slick trajectory;
(g) Tides and sea water level.

4. Supporting Services

Contacts with the Meteorological Services of the region, especially the Regional Specialized Meteorological Centers (RSMC) (Météo-France, Reunion), is extremely effective and has been maintained at all times. Contacts with other meteorological organization in the MPI Area have also been established especially to exchange views, data, information and ideas in the event of adverse weather conditions such as tropical cyclones, floods, tsunami and other disaster(s). The list of contacts is provided below:

AGENCY	TEL	FAX	EMAIL
Météo-France (Reunion)	020 262262921100 (Directeur) 020 262262921111 (Prevision)	020 262262921147 Directeur (M. Gerard Thierry) 020 262262921148 (Prevision)	gerard.thierry@meteo.fr dirred@meteo.fr
Météo-Madagascar	020 61202240775	020 26120224083 020 26120224058	Not Available
Météo-Seychelles	020 248322945	020 248384078	w.agricole@pps.gov.sc
Météo-Comores	020 269130447 Aliban	020 269730447	Not Available

5. Marine Pollution Incidents

A few minor marine pollution incidents showing tar balls in the beaches have been reported and these emergencies had been dealt with readily by the NOSCP Committee. One of the most significant emergencies occurred on 27 February 2005. A spillage was reported by the Commandant, National Coast Guard (NCG), off the South East Coast of the Republic of Mauritius, some 35 kilometres East of Sir Seewoosagur Ramgoolam Airport Meteorological Station. The rate of drift estimated by the NCG staff was west south westerly at about 0.75 kmph. The emergency crisis cell of the NOSCP was called promptly and observations from on-scene observers were monitored and analysed.

The Dornier (NCG) flight operated in the area, and photographs of the spillage were

taken. The NOSCP Centre became operational and the Meteorological Services provided the details (as required by the standing agreement in the NOSCP plan and procedures). Fortunately, the oil spill did not reach the coastal areas of Mauritius as anticipated.

Various desktop exercises and drills have been carried out since 2002.

Regional oil	Spill Drill exercise	22 to 23 November 2003
Regional oil	Spill Drill Exercise	20 December 2004
Regional oil	Spill Drill Exercise	31 October 2006

A chronology of events following the drill of October/November is annexed for ease of reference.

The lessons learnt have been as follows:

(a) Coordination was difficult, as stakeholders were not aware of their exact responsibilities;
(b) Supply of Meteorological and Oceanographic data did not reach their target, and sometimes current data was not available;
(c) Too many members of the SAT in the same room, waiting for directives to take appropriate action;
(d) No timely contacts with partners;
(e) Lack of appropriate charts for follow-up of the oil spill trajectory;
(f) Lack of training to run available oil spill model;
(g) Lack of parting areas for stakeholders reaching the centre for action.

Successful Drills and desktop exercises have helped considerably to solve the above-mentioned issues. The meteorological services have improved its capacity to acquire varied loads of products through the Synergie and Météosat Second Generation (MSG) workstations. The Global Telecommunication System has undergone upgrading by the World Meteorological Organization (WMO) within the Framework of the Indian Ocean Tsunami Program. The forecast office has been computerized, and now possess enough tools and trained personnel to manipulate and supply the products earmarked in the NOSCP in a timely manner.

6. Future needs and Requirements

1. The Mauritius Meteorological Services does not have an oil spill model of its own. It uses one provided by the MOE and NDU (which is available at no charge through the Internet);
2. Capacity building in running the model, to monitor and forecast the oil spill trajectory, as it is limited and needs refinement for better outputs;
3. An adapted Regional model based on existing global models would be a valuable product for efficiently combating oil spills in the region;
4. Attachments to specialized centres, to become familiar with the development of up-to-date technology;
5. Capacity building in space technology, for better interpretation of oil slick from satellite data;
6. Acquisition and manipulation of satellite data.

ANNEX 1

Ministry of Environment & NDU

REGIONAL OIL SPILL – October/November 2006

CHRONOLOGICAL EVENTS

DATE	TIME (Hrs)	EVENTS
31 Oct	9.30	Fax (FRA/FICTIF/1) received from Reunion Island informing: (i) POLWARN – "PARTIE 1 " (ii) Explosion of some "cuves" on board of vessel "FICTIF" (iii) Spill of fuel of type IFO 180 occurred (iv) Estimate oil spill is 2000 Tonnes (v) Coordinates: 22º05[1] South, 54º55[1] East at about 45 miles in the South/South West of Reunion Island
31 Oct	12.30	Reunion Island informed of proper reception of FRA/FICTIF/1 and: (i) Mauritius following the movement of the oil slick (ii) Meteorological Services contacted for info on wind speed and direction, currant direction and weather forecast for next 48 hrs.
31 Oct	13.21	Met Services submit meteorological info requested by fax: (i) Weather forecast around 22ºS, 54ºE (ii) Wind easterly 15-20 knots (iii) Height of waves = Sly 2.2 mts
31 Oct	13.23	DD Mr Kallee sent mail to Mr P. Delforge and Mr P. Piovano of Reunion Island icw spill "FICTIF"
31 Oct	13.30	NCG, Civil Aviation and Met Services informed of spill "FICTIF" (i) NCG requested to confirm spill info (ii) Civil Aviation requested to assist in localization of slick and movement of slick, coordinates of slick, time and altitude of the plane flying over the slick, etc. (iii) Met Services requested info on wind speed and direction, currant direction and weather forecast for next 48 hrs.
31 Oct	13.47	DD Mr Kallee sent mail Mr P. Piovano of Reunion Island icw spill "FICTIF"
31 Oct	16.55	Fax from NCG informing: (i) 22º04.5[1] South, 054º.5[1] East (ii) Extent of slick approximately 1 nm by 0.5nm (iii) Thick black mouse and silvery black sheen observed over slick (iv) Estimate slick drifting in north westerly direction at rate of 0.25 knot
1 Nov	10.46	Fax (FRA/FICTIF/2) received from Reunion Island informing: (i) POLINF – "PARTIE 2" (ii) Spill of fuel of type IFO 180 occurred (iii) Coordinates: 22º00[1] South, 54º56[1] East at about 40 miles in the South/South West of Reunion Island (iv) Oil slick 6 KM by 3 Km (v) Density of IFO 180 is 0.978 at 0ºC. Viscosity 12310cSt at 0ºC
1 Nov	11.05	Reunion Island informed of proper reception of FRA/FICTIF/2 and: (iv) Local authorities have been informed slick (v) Complementary info sought