ESSO

SACEP

National meeting on
Enhancing Regional Cooperation Mechanisms on Marine Pollution Preparedness and Response in SACEP region

दक्षिण एशिया सहकारी पर्यावरण कार्यक्रम (सेकअप) क्षेत्र में समुद्री प्रदूषण प्रतिक्रिया और तैयारियों पर क्षेत्रीय सहयोग के तंत्र को बढ़ाने के लिए भारत की राष्ट्रीय तैयारी बैठक

India / भारत

Venue : NIOT, Chennai
स्थल: रा.स.प्रौ.सं.चेन्नई

Date : 2-3, February 2015
दिनांक: 2-3 फरवरी 2015

Prepared by

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Brief Summary of National Preparatory Meeting organized by ICMAM-PD on "Enhancing Regional Cooperation Mechanism on Marine Pollution Preparedness and Response in SACEP Region" for NORAD funded IMO-SACEP project on 3rd February, 2015

ESSO ICMAM on behalf of Ministry of earth Sciences, New Delhi has organised the National preparatory meeting on "Enhancing Regional Cooperation Mechanisms on Marine Pollution Preparedness and Response in SACEP region" under the IMO-NORAD-SACEP Project on 3rd Feb at NIOT Chennai. Mr.George James Franklin, International Consultant (IMO) and Mr.Pulakesh Mondal, regional consultant SACEP attended the meeting to discuss about the draft regional contingency plan being prepared under this project and regional cooperation with national stakeholders. 46 delegates representing 32 Organizations including Ministry of Earth Sciences, Ministry of Environment & Forests & Climate Change, Director General of Hydrocarbons, ESSO-ICMAM, National Institute of Oceanography, Ports, Oil Companies, State Pollution Control Boards and also private companies attended and participated in the deliberations. Meeting was started with address of Dr. M.A. Atmanand, PD-ICMAM and Director, NIOT by highlighting the objectives of meeting and importance of subject. Stakeholders were also appraised about MoES role in SACEP project as lead ministry and Indian Coast Guard as competent authority in India for dealing with marine oil spill disasters . DIG AA Hebbar, Director (Environment), Indian Coast Guard presented the national oil spill disaster contingency and support being rendered by ICG to other SACEP countries. In general, it was opined that Indian nation plan for oil spill management is well documented comprising all the essential features and complemented the efforts taken by Indian Coast Guard. Mr. Pulakesh, SACEP informed that other four countries has signed the MoU and stressed about signing of MoU by India for enabling the proposed regional plan. It was informed that the signing of MoU is under active consideration.

This regional initiative will enable to share the expertise and facility available in the South Asian Countries; it is emphasized to maximize the capacities by combining the resources available in each country. It was also informed that National Disaster Management Authority NDMA is adequately prepared to face consequences of natural and man-made disasters and has established presence in different parts of India for immediate response in case of any emergency. Further country has systematic Central / State / District level coordinating agencies and also conducts mock trials for activities like tsunami. Mr. George explained about their regional missions in other four countries and proposed the regional plan for SACEP region under this project. The following points emerged from the meeting to incorporate the regional plan being prepared by IMO-SACEP under this NORAD project

1) Circulation of the revised original contingency plan to all the stakeholders.
2) Sharing of expertise and resources among the south Asian countries
3) Preparation of Risk mapping of the sites along the Indian Coast
4) Safeguarding the legal issues of the respective country
5) Scientifically stated SOPs to be prepared with the models of risk analysis
6) SWOT diagram could be evolved involving different activities.
7) India has established facility for finger printing of oil spills by NIO Goa and could be made useful for other countries
8) Expertise on preparation of Oil pollution trajectory maps is available and could be utilized.

National meeting on
Enhancing Regional Cooperation Mechanisms on Marine Pollution Preparedness and Response in SACEP region
INDIA

Venue: Rajendra Chola Hall, NIOT, Chennai

SCHEDULE OF ACTIVITIES

2nd February 2015

10.30 hrs	Meeting with Dr R Venkatesan
1045 hrs	Meeting with Dr. R. S. Kankara ICMAM-PD
11.00 hrs	Review of documents available for "Enhancing Regional Cooperation Mechanisms on Marine Pollution (oil spill) Preparedness and Response in SACEP region"
11.30 hrs	Discussion with Mr.George James Franklin, International Consultant on points to be discussed
13.00 hrs	Lunch
14.00 hrs	Visit to facilities tentatively scheduled to meet Indian Coast Guard officials to discuss on Regional contingency plan
	Preparatory work for the meeting

National meeting on
Enhancing Regional Cooperation Mechanisms on Marine Pollution Preparedness and Response in SACEP region
INDIA

Venue: Rajendra Chola Hall, NIOT, Chennai

SCHEDULE OF ACTIVITIES

3rd February 2015

09.50 hrs	Registration of Participants
10.00 hrs	Welcome address by Dr.M.A.Atmanand, Project Director ICMAM-PD & Director NIOT
10.10 hrs	Introduction of attendees
10.20 hrs	Role of Ministry of Earth Sciences by Dr. R. S. Kankara, Head - Coastal Processes & Shoreline Management
10.30 hrs	SACEP Project overviews and expected outcome – Mr.Pulakesh Mondal, Senior Programme Officer, SACEP
10.50 hrs	Photo Session
11.05 hrs	SACEP Project update, objectives and review of the progress on decisions taken during meeting of the national authorities in Colombo, 26 – 28 February 2014 by Mr.George James Franklin, International Consultant
11.40 hrs	An overview of "India's National Oil Spill Contingency Plan" followed by discussion on areas for improvement and development by Dy Inspector General AA Hebbar, Directorate of Fisheries & Environment, Coast Guard Headquarters, Delhi and Dr.R.Venkatesan, National Consultant
12.10 hrs	Present status and overview of "Regional Oil / Chemical Spill Contingency Plan"followed by discussion to harmonize the National and draft Regional Plans by Mr.George James Franklin, International Consultant / Mr.Pulakesh Mondal, Senior Programme Officer, SACEP
12.45 hrs	Lunch
13.45 hrs	Technical and regulatory developments in HNS spill response by Mr.George James Franklin, International Consultant
14.30 hrs	National / Regional Plan integration opportunities for improvement - Group discussion among all participants
15.00 hrs	Areas that need updating / improvement in draft Regional Contingency Plan / by DIG A.A Hebbar, Director (Fisheries & Environment), Coast Guard Headquarters, Delhi and Dr.R.Venkatesan, National Consultant Regional Exercise – Objectives, time-frame and expected country support / input / participation
15.30 hrs	Development of action plan and time frame for implementation of steps identified for improvement – All participants
16.00 hrs	Vote of thanks

LIST OF INSTITUTES PARTICIPATED

1. Ministry of Earth Science, MoES, New Delhi
2. Integrated Coastal Marine Area Management (ICMAM) PD Chennai
3. National Institute of Ocean Technology, Chennai
4. Ministry of Environment & Forests & Climate Change, New Delhi
5. Indian Coast Guard - New Delhi & Mumbai
6. Department of Science & Technology, Pondicherry
7. Director General of Hydrocarbons, New Delhi
8. Mercantile Marine Department, Director General of Shipping, Chennai
9. National Centre for Sustainable Coastal Management NCSCM, Chennai
10. National Institute of Oceanography Goa
11. Gujarat Pollution Control Board Gujarat
12. Tamil Nadu Maritime Board, Chennai
13. Maharashtra Maritime Board
14. Cochin Port Trust Kochi
15. Mumbai Port Trust Mumbai
16. Adani Ports & SEZ Ltd., Gujarat
17. JSW Jaigarh Port Ltd., Maharashtra
18. Visakhapatnam Port Trust
19. Chennai Port Trust Chennai
20. New Mangalore Port Trust, Mangalore
21. Ennore Tank Terminals Private Limited Ennore Chennai
22. Krishnapatnam Port Co.Ltd.;Krishnapatinam AP
23. L&T Shipbuilding Limited, Chennai
24. ONGC New Delhi & Mumbai
25. Hindustan Petroleum Corporation Ltd Chennai
26. Reliance Industries Ltd, Jamnagar
27. Cairn India Limited Mumbai
28. PPN Power Generating Co. Pvt Tamilnadu
29. Mangalore Refinery & Petrochemicals Ltd Mangalore
30. Elektronik Lab Chennai
31. Spilcare Environmental Technologies Pvt Ltd Chennai
32. Chemplast Sanmar Ltd., Karaikal

Minutes of the National meeting on "Enhancing Regional Cooperation Mechanisms on Marine Pollution Preparedness and Response in SACEP region" held at Integrated Coastal Marine Area Management (ICMAM) Project Directorate, NIOT Campus Chennai during 2 – 3 February 2015

The 2 day National meeting was organized by Ministry of earth Science (Govt. of India) to discuss and assess the preparedness and response in SACEP regions as a part NORAD funded project on "Enhancing Regional Cooperation Mechanisms on Marine Pollution Preparedness and Response in SACEP region" being implemented by SACEP and IMO. The proceedings of 2 days meeting are as:

2nd February 2015

A working group meeting was held at the National Consultant Dr.R.Venkatesan, IMO-NORAD-SACEP project office and attended by, Dr. R.S.Kankara, National Focal point, Head – Coastal Processes & Shoreline Management Ministry of Earth Sciences for this project, Mr.George James Franklin, International Consultant, IMO-NORAD-SACEP Project and Mr.Pulakesh Mondal, SACEP. During the meeting, status of preparedness and regional contingency plan was discussed in length. They were also appraised about India's national oil spill contingency plan prepared by Indian Coast Guard. Mr.George briefed about their missions in other four SAS countries. Mr.Pulakesh also enquired about signing of MoU by India.

The discussions continued on the preparatory work, schedule of activities to be executed on the next day and the way forward. After detailed discussion Mr.George and Mr.Pulakesh visited the meeting venue conference facilities and satisfied with the preparatory work and arrangement made at NIOT Chennai for the meeting. Few participants arrived and were apprised on the meeting. It was informed that the signing of MoU is under active consideration.

3rd February 2015

After the preliminary informal introduction, the meeting started. It is to be noted that the call for the meeting by the national consultant was well received by the participating institutions, considering the importance of the cooperative mechanism on marine pollution preparedness and response. About 46 participants from 32 Organizations including Ministry such as Ministry of Earth Sciences, Ministry of Environment & Forests & Climate Change, Director

General of Hydrocarbons, Council of Scientific & Industrial Research, Dept. of Science & Technlology, Ports, Oil Companies, Pollution Control Boards and also private companies were represented. The detailed participant list and their Institutes are annexed herewith.

The meeting was inaugurated by Dr.M.A.Atmanand, Project Director, Integrated Coastal Marine Area Management (ICMAM) Project Directorate and welcomed the august gathering for the national meeting. He thanked Ministry of Earth Sciences for undertaking this unique exercise of uniting all the relevant Ministries / Departments and organizations to come together to work on the marine pollution especially on oil spill. Pollution in marine environment does not have any national or regional boundary and demands better preparedness. He urged the importance of precautionary measures and prevention of avoiding oil pollution and the need for strict application of existing international instruments to protect our marine environment. He informed that about the present working mechanism in disaster management and the field level successful execution was clearly demonstrated during the Phailin and Hudhud Cyclones. There was a good coordination among scientific institutions, ministries and decision making authorities, volunteers and people. Hence, the same would be shown for any such marine pollution related activity. He has also informed that India has National Oil Spill Disaster Contingency Plan (NOSDCP), prepared by Indian Coast Guard to deal with any oil spill in our waters. He is confident that India is equipped enough to face such eventuality considering the preparedness of Indian Coast Guard. He requested the participants to involve in the deliberations to have a successful outcome at the end of the day. He thanked all the participants and Institutions for this involvement in this activity undertaken by MoES.

After preliminary introduction by National Consultant, Mr.George, International Consultant addressed the gathering by initiating the self introduction of attendees. This has given an opportunity for the participants to understand the other participant's role.

Subsequently, detailed presentation on the role of Ministry of Earth Sciences and R&D activities undertaken by ICMAM-PD, MoES given by Dr.R.S.Kankara. He informed that MoES has developed an oil spill trajectory modeling system and sensitivity mapping for oil spill impact assessment to provide support to Indian Coast Guard during any Oil Spill in India He also informed that these results and data sets are available through Indian National Centre for Ocean Information Services (INCOIS), for the users.

Mr.Pulakesh Mondal, SACEP briefed about South Asia Co-operative Environment Programme activity and outcome. He also informed about the successful coordination among the South Asian countries. He mentioned that signing of MoU by India is paramount important for the completion of this project.

Mr.George presented about the SACEP Project update and his experience in this region. He also emphasized the objectives and review of the progress on the review undertaken. He also mentioned about the review of the regional oil spill contingency plan.

DIG AA Hebbar TM, Director of Fisheries & Environment, Indian Coast Guard elucidated on the systematic efforts undertaken by Indian Coast Guard on updating and also equipping for the preparedness on National Oil Spill Disaster Contingency Plan (NOSDCP). He gave detailed presentation with overall view and the systematic efforts and system in place. He recalled the actions where India helped Maldives during the course of recent shortage of water besides elucidating Indian Coast Guard's regular oil spill response training assistance to Bangladesh, Maldives, and Sri Lanka, and their participation in National level pollution response exercises and bilateral/ multilateral exercises conducted by the Indian Coast Guard in India and in these countries. India is also assisting Sri Lanka and Maldives in preparation of national oil spill contingency plan and could extend similar assistance to other SACEP countries if requested. The committee is of the view that oil spill / marine pollution does not have boundaries and should share the information / data within the neighboring countries. For this, this project will be of immense useful.

It was also pointed out that the Regional plan largely deals with Oil pollution. It was responded that many management aspects are common for both oil and chemical pollution. However, there is a gap in almost all regional plans on combating chemical pollution arising from operations of ships especially the spillage of chemicals during handling at ports and also during accidents/grounding etc. in the sea. Adequate preventive measures like transporting chemicals in well insulated containers and water resistant package for individual chemicals are already being taken. Generally, incidents of chemical accidents are too few compared to oil pollution. However a brief chapter has been included in the revised NOSDCP to deal with HNS.

Subsequently, Mr.George gave a detailed presentation on "Regional Oil / Chemical Spill Contingency Plan". Discussion also continued on the Chemical Spill Contingency Plan. For that, Indian Coast Guard replied that presently HNS touched upon in the NOSCP 2014 draft, but the country is in the process of finalizing the responsibilities of the Ministry to have the regional contingency plan on chemicals to be in place. The meeting also noted that India is yet to be a signatory of OPRC-HNS.

Mr.Jindal, MoEF reiterated the liability clause in the regional contingency plan and also to safeguard interest of the country and the existing legal entities in place. He also informed that MoEF has prepared such a plan for terrestrial activity.

Further, detailed deliberation with involvement of participants of the members on areas that need updating and improvement on the regional plan and feedback for this project was conducted.

In general, it was opined that NOS-DCP prepared by Indian Coast Guard is well documented incorporating all the essential features and complemented the efforts taken by Indian Coast Guard. This regional initiative will enable to share the expertise and facility available in the South Asian countries; it is emphasized to maximize the capacities by combining the resources available in each country. It was also informed that National Disaster Management Authority NDMA is adequately prepared to face consequences of natural and man-made disasters and has established presence in different parts of India for immediate response in case of any emergency. Further, India has systematic Central / State / District level coordinating agencies and also conducts mock drills for oil spill response . The oil companies have got their own preparedness. The following points emerged:

1) Circulation of the revised original contingency plan to all the stakeholders.
2) Sharing of expertise and resources among the south Asian countries
3) Preparation of Risk mapping of the sites along the Indian Coast
4) Safeguarding the legal issues of the respective country
5) Scientifically stated SOPs to be prepared with the models of risk analysis
6) SWOT diagram could be evolved involving different activities.
7) India has established facility for finger printing of oil spills by NIO Goa and could be made useful for other countries
8) Expertise on preparation of Oil pollution trajectory maps is available and could be utilized.

The meeting ended with vote of thanks delivered by Dr.Venkatesan to the Chair, all the delegates and participating Institutions for their involvement for making meeting successful.

Presentation by Dr.R.S.Kankara, ICMAM-PD

RoleofMinistryofEarthSciencesin OilSpillManagementinIndia

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Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

MINISTRYOFEARTHSCIENCES (PRITHVIVIGYANMANTRALAYA)

- The Ministry of Earth Sciences (MoES) is mandated to provide the nation with best possible services in forecasting the monsoons and other weather/climate parameters, ocean state, earthquakes, tsunamis and other phenomena related to earth systems through well integrated programmes.
- The Ministry also deals with science and technology for exploration and exploitation of ocean resources (living and non-living), and
- play nodal role for Antarctic/Arctic and Southern Ocean research

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

MINISTRYOFEARTHSCIENCES (PRITHVIVIGYANMANTRALAYA)

1. Earth Commission and all matters relating thereto.
2. (a) (i) Matters of policy, coordination, and schemes relating to the Ocean, meteorology, seismology, marine environment, atmosphere and earth sciences, not specifically allocated to any other Department or Ministry;
   (ii) research (including fundamental research) and the development of uses relatable thereto;
   (iii) technology development ;
   (iv) surveys to map, locate and assess living & non-living resources;
   (v) preservation, conservation and protection of marine resources;
   (vi) development of appropriate skills and manpower;
   (vii) international collaboration and cooperation;
   (b) laws and regulatory measures relating to the above.
3. Marine environment on the high seas.

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Oil spill Management Programme of Government

Oil spill management programmes initiated in 1980s

Reviewed in 2005

Min of Home Affairs /Defense - Nodal Management/Crisis

Min of Shipping - Legal aspects

Indian Coast Guard & - Central coordinating agency

.....

Coastal States - Beach clean up

Min of Earth Sciences:– To provide scientific support to ICG in effective oil spill management

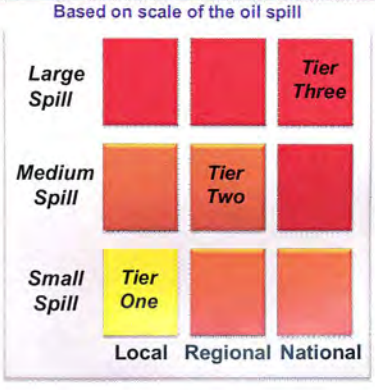
Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Allocation of Responsibility to MoES and ICMAM in revised NOSDCP 2014

- Responsible for preservation and conservation of marine environment in India
- Mapping of ecological sensitive area in the coastal and offshore regions in consultation with MoEF
- Review of sensitivity mapping listed by other agencies
- To Provide scientific support through COMAPS in investigation of oil pollution during spill
- To organize the research on impact of pollution on marine life based upon of oil spill incidents
- Identify the high risk areas
- Promulgate the sensitive mapping and area of priority

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Oil Spill management: a generalized approach Used by MoES in Modelling and mapping

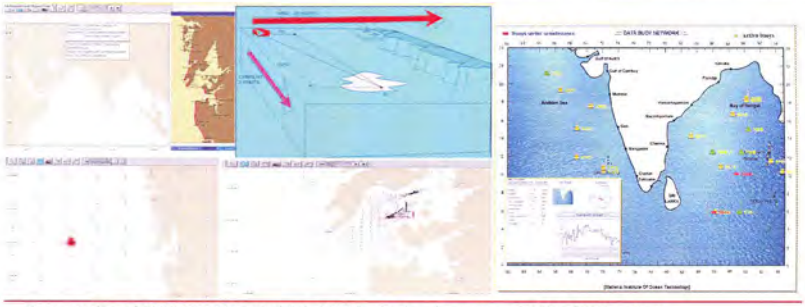


Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

GIS and Modelling : An useful tool for oil spill sensitivity mapping, risk assessment

Data from MoES operational and observational programs

- Impact assessment: Water Quality Monitoring programme (COMAPS)



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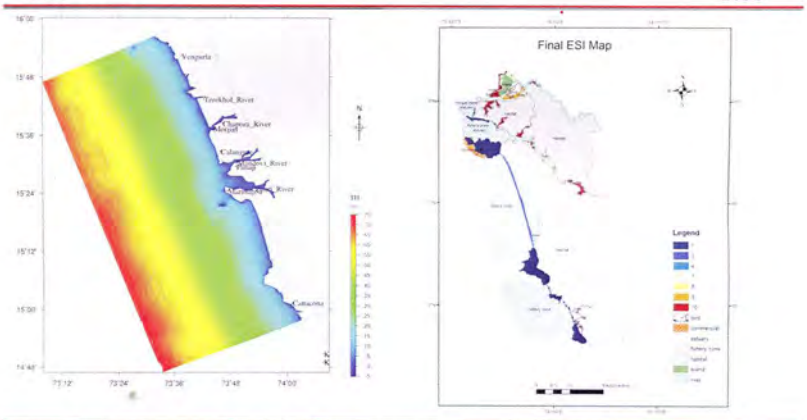
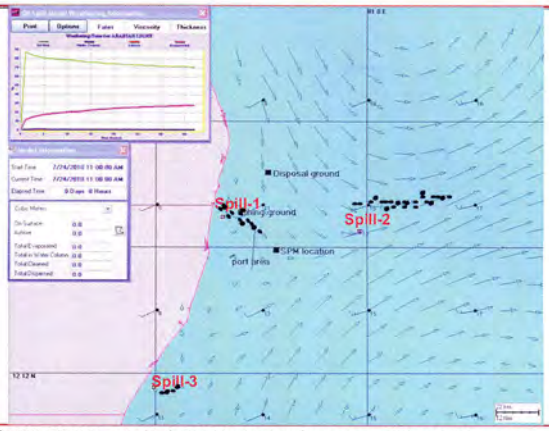
Risk assessment & Strategic mapping of ecosystems at National Level

Tactical map (Regional level): an example of Goa



Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Local Scale Sensitivity Mapping: GIS and Oil Spill Modeling for Chennai

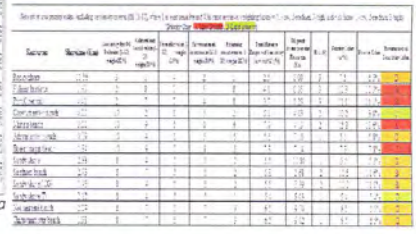


Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

SEASONAL SCENARIO	
Scenario	: 100 m³ Instantaneous Oil Spill
Location	: 4.5 Km distance at off Chennai Port
Oil Type	: Medium Crude Oil
Season	: SW Monsoon (June)
Hydrodynamic	: Tide, Current and Waves
wind	: 4.5 m/s SE
Model simulation	: 24 hours

STATUS OF BIOLOGICAL RESOURCES AT OIL AFFECTED AREA

Detail	Parameter	HIGH SENSITIVE (Nos)	MEDIUM SENSITIVE (Nos)	SENSITIVE (Nos)	POPULATION (Nos)	ENVIRONMENTAL SENSITIVITY (Nos)
Resources affected						
Resources affected						



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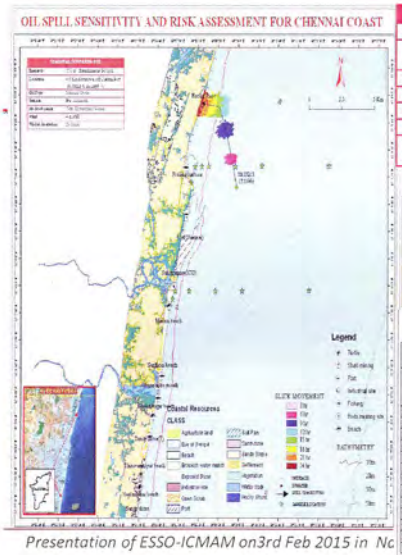
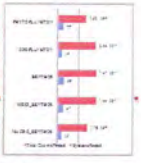


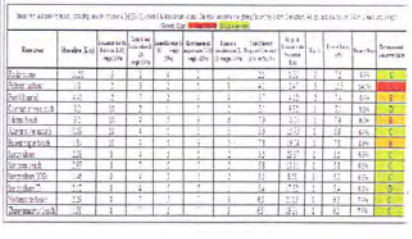
SEASONAL SCENARIO	
Scenario	: 100 m³ Instantaneous Oil Spill
Location	: 4.5 Km distance at off Chennai Port
Oil Type	: Medium Crude Oil
Season	: Pre-Monsoon (March)
Hydrodynamic	: Tide, Current and Waves
wind	: 4 m/s SE
Model simulation	: 24 hours



STATUS OF BIOLOGICAL RESOURCES AT OIL AFFECTED AREA

Detail	Parameter	HIGH SENSITIVE (Nos)	MEDIUM SENSITIVE (Nos)	SENSITIVE (Nos)	POPULATION (Nos)	ENVIRONMENTAL SENSITIVITY (Nos)
Resources affected						
Resources affected						

SENSITIVITY AND PRIORITY INDEX



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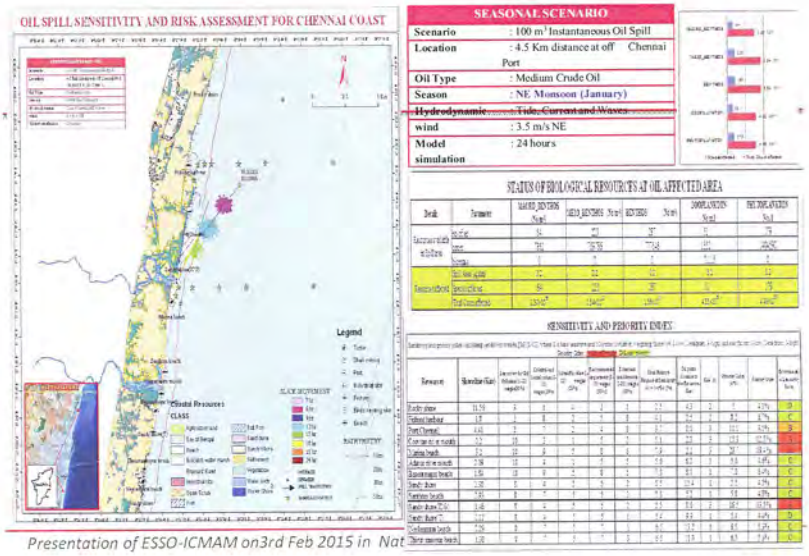


Presentation of ESSO-ICMAM on3rd Feb 2015 in Nat

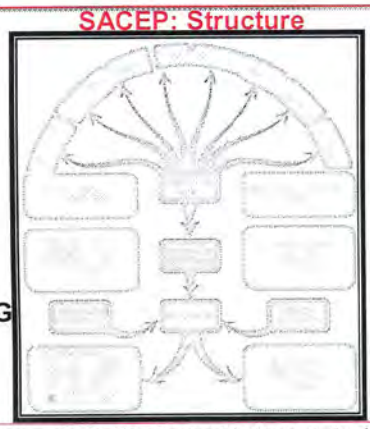
Maps and Information

- **Strategic sensitivity maps (National Scale): Decision makers**
  - The strategic maps is primary level of map in small scale which help the planners and decision makers in devising the general response strategy
  - In identifying the most sensitive sites to define priority actions
  - considers technical feasibility, potential limitations of various response operations
- **Tactical sensitivity maps (Regional Scale)- for Planners & OSC**
  - provides information about the various types of environment that may be affected by a spill (sand beaches, rocky coast, marshes, etc.).
  - takes into account operational constraints (limited access, hazardous areas, etc.) that the planner should consider when developing the response strategy.
- **Operation sensitivity maps(Local Scale) – Executers & Operators**
  - the operational map with risk analysis, combined with an oil spill drift study based on the prevailing winds and currents, should be prepared.
  - Identifies the location of High Risk Areas with on large scale maps

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

MoES-SACEP:RegionalCooperation WithSACEPonOilSpillManagement

SACEP: Structure



- **SACEP and IMO took a joint funded project to assist in developing a South Asian Regional Oil Spill Contingency Plan in 1989**

India, Bangladesh, Pakistan, Maldives, Sri Lanka

ICG **ICMAM-MoES**

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

RegionalOilandChemicalPollutionContingency PlanforSouthAsia

- A draft Regional plan oil spill Contingency plan was drafted and reviewed by Senior Officials of Govt (member countries) during Dec 1999 in Colombo
- The regional plan and MoU were circulated to member countries in year 2000
- In 2006, Govt of Pakistan requested for certain amendments. These amendments were made available to other 4 members states seeking their agreement. Govt of Bangladesh, Maldives & Sril Lanka have informed that they have no objection to these amendments.
- 4th IMM meeting held in Jaipur(India) during May 2008 requested SACEP to finalise the regional plan and MoU. SACEP mission had meeting with Pakistan and India in May &July 2009 to finalise plan & MoU
- Govt of Maldives has signed the MoU in Oct 2009
- Govt of Pakistan has signed the MoU in July 2010
- Govt of Bangladesh has signed the MoU in Sept 2010
- Govt of Sri Lanka has signed the MoU in 17th Dec 2014
- Govt of India is actively considering to sign the MoU

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

IInd phase(2014):NORADfundedproject toupdatetheplanandadoptit

- The first meeting was held from 26 to 28 February 2014 to intiate the project follow up of First Regional Meeting of the National Authorities Responsible for Oil Spill Preparedness and Response, which was attended by India, Bangladesh, Pakistan, Maladies and Sri Lanka
  - India was represented by MoES, ICG and DG shipping
  - Focal Point- MoES and Implementing agency-ICG
  - To have 5 national preparatory meetings at member states
  - To conduct a regional exercise
  - Follow up with Sri Lanka and India to sign MoU

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Objectivesofthemeeting:

- To raise awareness of the IMO-Norad-SACEP project on "Enhancing regional cooperation mechanisms on marine pollution preparedness and response in the SACEP region" among relevant national stakeholders and its main goals.
- Obtain a comprehensive understanding of the current status and capacity for preparedness and response in country and identify the main areas for improvement, based on feedback and discussion with national experts.
- in consultation with national experts, to determine how the national plan may harmonize with the draft regional plan, and also to ascertain the extent of revision of the draft regional contingency plan sought, with a view to agree on an action plan for its revision
- To discuss and plan the implementation of a regional exercise, and the countries participation in this exercise.
- To identify potential obstacles for the further development and implementation on the regional plan and MoU on regional cooperation.

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Presentation by Dr.R.S.Kankara, ICMAM-PD

RoleofMinistryofEarthSciencesin OilSpillManagementinIndia

Dr. R. S. Kankara
Scientist F & Head, Coastal Processes & Shoreline Management
Govt. of India, Ministry of Earth Sciences,
ESSO-ICMAM, Chennai
kankara@icmam.gov.in

MINISTRYOFEARTHSCIENCES (PRITHVIVIGYANMANTRALAYA)

- The Ministry of Earth Sciences (MoES) is mandated to provide the nation with best possible services in forecasting the monsoons and other weather/climate parameters, ocean state, earthquakes, tsunamis and other phenomena related to earth systems through well integrated programmes.
- The Ministry also deals with science and technology for exploration and exploitation of ocean resources (living and non-living), and
- play nodal role for Antarctic/Arctic and Southern Ocean research

MINISTRYOFEARTHSCIENCES (PRITHVIVIGYANMANTRALAYA)

1. Earth Commission and all matters relating thereto.
2. (a) (i) Matters of policy, coordination, and schemes relating to the Ocean, meteorology, seismology, marine environment, atmosphere and earth sciences, not specifically allocated to any other Department or Ministry;
   (ii) research (including fundamental research) and the development of uses relatable thereto;
   (iii) technology development ;
   (iv) surveys to map, locate and assess living & non-living resources;
   (v) preservation, conservation and protection of marine resources;
   (vi) development of appropriate skills and manpower;
   (vii) international collaboration and cooperation;
   (b) laws and regulatory measures relating to the above.
3. Marine environment on the high seas.

Oil spill Management Programme of Government

Oil spill management programmes initiated in 1980s

Reviewed in 2005

Min of Home Affairs /Defense - Nodal Management/Crisis

Min of Shipping - Legal aspects

Indian Coast Guard & - Central coordinating agency

.....

Coastal States - Beach clean up

Min of Earth Sciences:– To provide scientific support to ICG in effective oil spill management

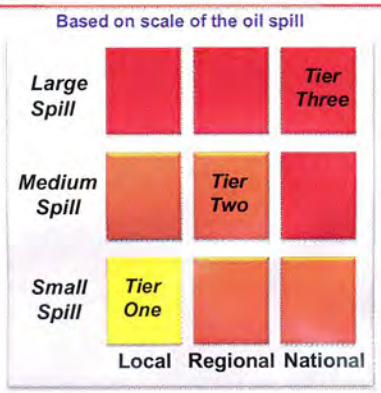
Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Allocation of Responsibility to MoES and ICMAM in revised NOSDCP 2014

- Responsible for preservation and conservation of marine environment in India
- Mapping of ecological sensitive area in the coastal and offshore regions in consultation with MoEF
- Review of sensitivity mapping listed by other agencies
- To Provide scientific support through COMAPS in investigation of oil pollution during spill
- To organize the research on impact of pollution on marine life based upon of oil spill incidents
- Identify the high risk areas
- Promulgate the sensitive mapping and area of priority

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Oil Spill management: a generalized approach Used by MoES in Modelling and mapping

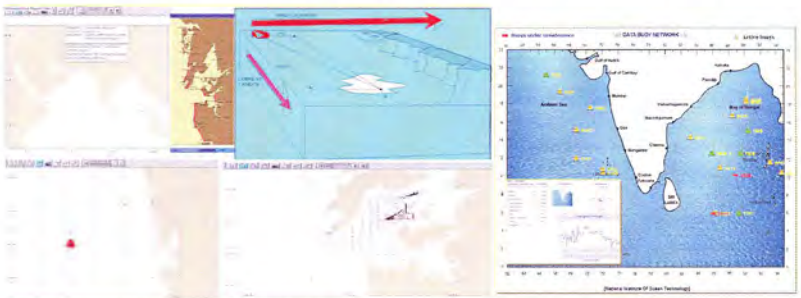


Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

GIS and Modelling : An useful tool for oil spill sensitivity mapping, risk assessment

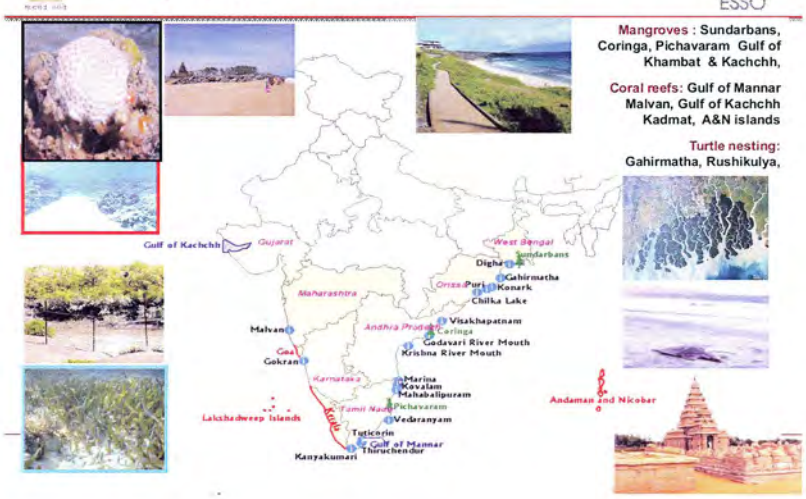
Data from MoES operational and observational programs

- Impact assessment: Water Quality Monitoring programme (COMAPS)

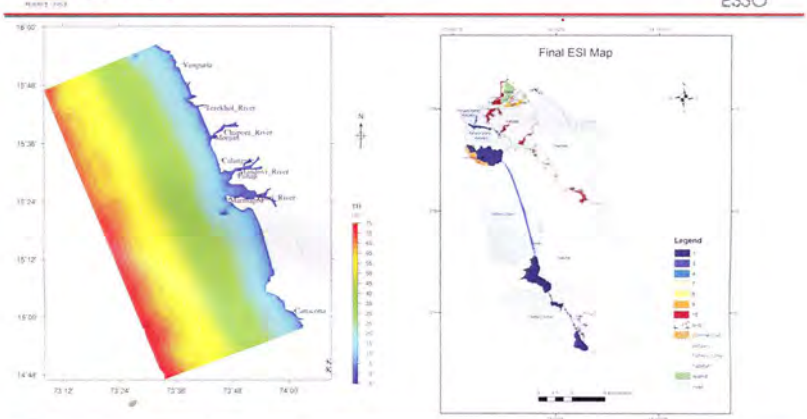


Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Risk assessment & Strategic mapping of ecosystems at National Level



Tactical map (Regional level): an example of Goa



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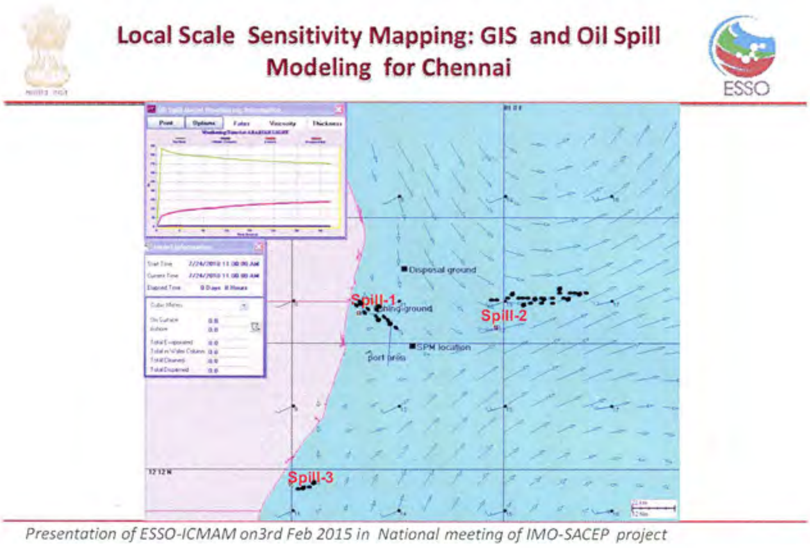
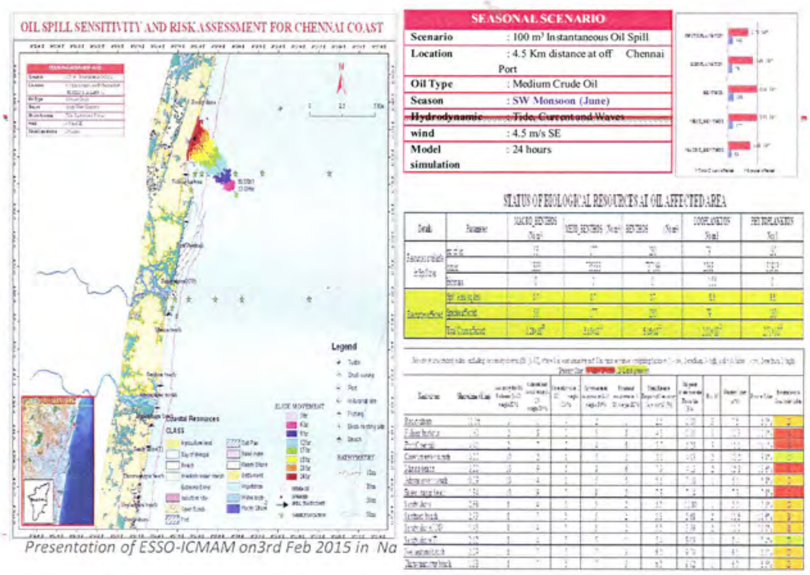
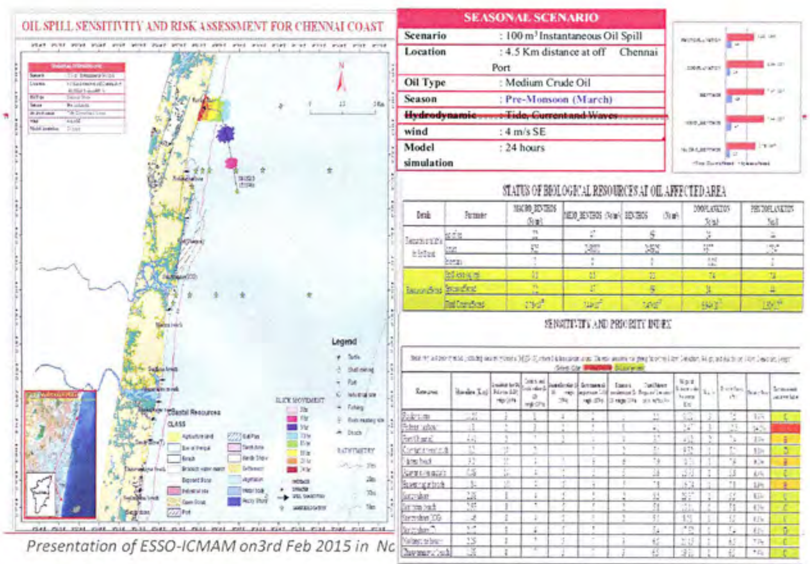
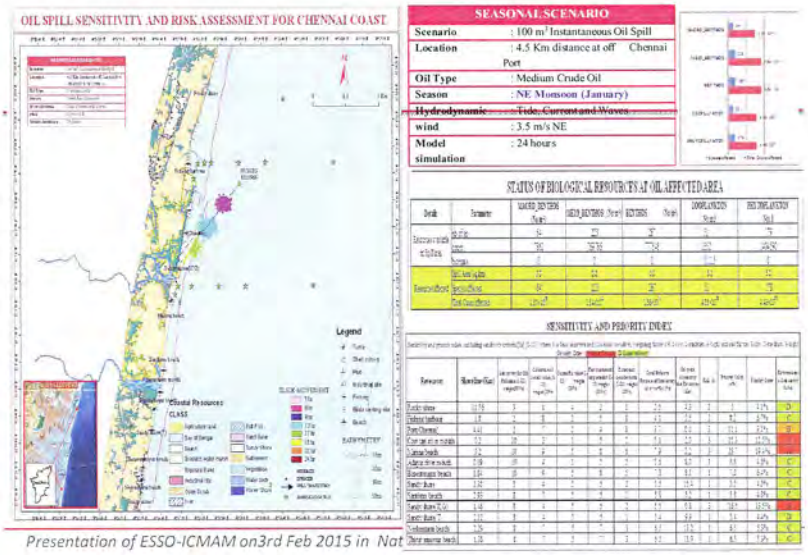

Local Scale Sensitivity Mapping: GIS and Oil Spill Modeling for Chennai
ESSO
Disposal ground
Spill-1
Spill-2
SPM location
port limits
Spill-3
Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project


OIL SPILL SENSITIVITY AND RISK ASSESSMENT FOR CHENNAI COAST
Legend
Coastal Resources
SEASONAL SCENARIO
Scenario : 100 m³ Instantaneous Oil Spill
Location : 4.5 Km distance at off Chennai Port
Oil Type : Medium Crude Oil
Season : SW Monsoon (June)
Hydrodynamic : Tide, Current and Waves
wind : 4.5 m/s SE
Model simulation : 24 hours
STATUS OF BIOLOGICAL RESOURCES AT OIL AFFECTED AREA
Presentation of ESSO-ICMAM on3rd Feb 2015 in Na


OIL SPILL SENSITIVITY AND RISK ASSESSMENT FOR CHENNAI COAST
Legend
Coastal Resources
SEASONAL SCENARIO
Scenario : 100 m³ Instantaneous Oil Spill
Location : 4.5 Km distance at off Chennai Port
Oil Type : Medium Crude Oil
Season : Pre-Monsoon (March)
Hydrodynamic : Tide, Current and Waves
wind : 4 m/s SE
Model simulation : 24 hours
STATUS OF BIOLOGICAL RESOURCES AT OIL AFFECTED AREA
SENSITIVITY AND PRIORITY INDEX
Presentation of ESSO-ICMAM on3rd Feb 2015 in Nc



Presentation of ESSO-ICMAM on3rd Feb 2015 in Nat

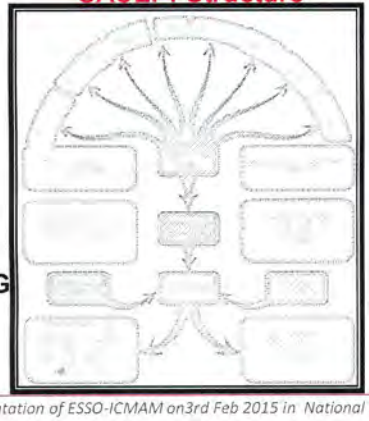
Maps and Information

- **Strategic sensitivity maps (National Scale): Decision makers**
  - The strategic maps is primary level of map in small scale which help the planners and decision makers in devising the general response strategy
  - In identifying the most sensitive sites to define priority actions
  - considers technical feasibility, potential limitations of various response operations
- **Tactical sensitivity maps (Regional Scale)- for Planners & OSC**
  - provides information about the various types of environment that may be affected by a spill (sand beaches, rocky coast, marshes, etc.).
  - takes into account operational constraints (limited access, hazardous areas, etc.) that the planner should consider when developing the response strategy.
- **Operation sensitivity maps(Local Scale) – Executers & Operators**
  - the operational map with risk analysis, combined with an oil spill drift study based on the prevailing winds and currents, should be prepared.
  - Identifies the location of High Risk Areas with on large scale maps

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

MoES-SACEP:RegionalCooperation WithSACEPonOilSpillManagement

SACEP: Structure



- **SACEP and IMO took a joint funded project to assist in developing a South Asian Regional Oil Spill Contingency Plan in 1989**

India, Bangladesh, Pakistan, Maldives, Sri Lanka

ICG **ICMAM-MoES**

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

RegionalOilandChemicalPollutionContingency PlanforSouthAsia

- A draft Regional plan oil spill Contingency plan was drafted and reviewed by Senior Officials of Govt (member countries) during Dec 1999 in Colombo
- The regional plan and MoU were circulated to member countries in year 2000
- In 2006, Govt of Pakistan requested for certain amendments. These amendments were made available to other 4 members states seeking their agreement. Govt of Bangladesh, Maldives & Sril Lanka have informed that they have no objection to these amendments.
- 4th IMM meeting held in Jaipur(India) during May 2008 requested SACEP to finalise the regional plan and MoU. SACEP mission had meeting with Pakistan and India in May &July 2009 to finalise plan & MoU
- Govt of Maldives has signed the MoU in Oct 2009
- Govt of Pakistan has signed the MoU in July 2010
- Govt of Bangladesh has signed the MoU in Sept 2010
- Govt of Sri Lanka has signed the MoU in 17th Dec 2014
- Govt of India is actively considering to sign the MoU

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

IInd phase(2014):NORADfundedproject toupdatetheplanandadoptit

- **The first meeting was held from 26 to 28 February 2014 to intiate the project follow up of First Regional Meeting of the National Authorities Responsible for Oil Spill Preparedness and Response, which was attended by India, Bangladesh, Pakistan, Maladies and Sri Lanka**
  - India was represented by MoES, ICG and DG shipping
  - Focal Point- MoES and Implementing agency-ICG
  - To have 5 national preparatory meetings at member states
  - To conduct a regional exercise
  - Follow up with Sri Lanka and India to sign MoU

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Objectivesofthemeeting:

- To raise awareness of the IMO-Norad-SACEP project on "Enhancing regional cooperation mechanisms on marine pollution preparedness and response in the SACEP region" among relevant national stakeholders and its main goals.
- Obtain a comprehensive understanding of the current status and capacity for preparedness and response in country and identify the main areas for improvement, based on feedback and discussion with national experts.
- in consultation with national experts, to determine how the national plan may harmonize with the draft regional plan, and also to ascertain the extent of revision of the draft regional contingency plan sought, with a view to agree on an action plan for its revision
- To discuss and plan the implementation of a regional exercise, and the countries participation in this exercise.
- To identify potential obstacles for the further development and implementation on the regional plan and MoU on regional cooperation.

Presentation of ESSO-ICMAM on3rd Feb 2015 in National meeting of IMO-SACEP project

Presentation by Mr.Pulakesh Mondal, SACEP

BACKGROUND OF OIL SPILL CONTINGENCY PLAN IN THE SOUTH ASIAN SEAS REGION

Pulakesh Mondal, Senior Programme Officer (Regional)

South Asia Cooperative Environment Programme (SACEP)

Our goal is to never have an oil spill and the ship, industry take extensive precautions to prevent spill from occurring

CONTENTS

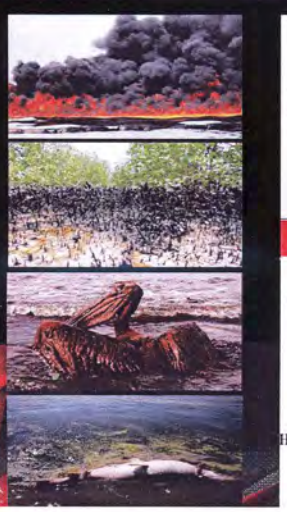
- ❑Risk profile for oil and chemical spills
- ❑Consequences of Oil and Chemical spills
- ❑Background of Contingency Plan and MoU
- ❑Present status of the signing of the MoU
- ❑Role of SACEP
- ❑Regional workshop to update national and Regional contingency plan
- ❑Training and Exercises
- ❑Cooperation mechanism

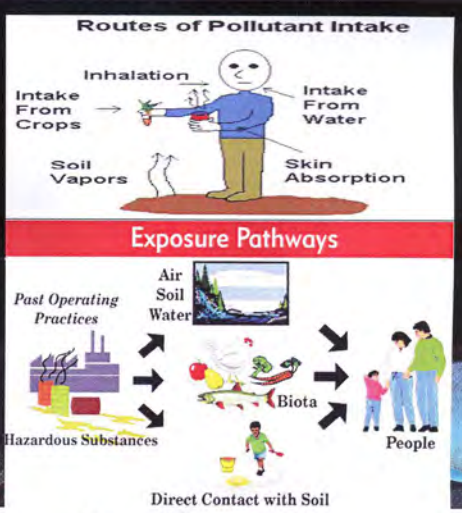
RISK PROFILE FOR OIL AND CHEMICAL SPILLS

- South Asia lies close to the main shipping route from the Middle East to the Far East Asia
- About 25% of total world movement of crude oil by sea pass through this area.
- Dominated by trade routes linking Karachi, Mumbai, Chittagong and Colombo with East African and South African Ports.
- The region imports much of its oil for consumption
- presently India is undertaking oil exploration activities, while Sri Lanka and Bangladesh is looking at the possibilities
- Maritime oil spill risks arise from
  - non-tanker shipping
  - carriage of refined products
  - offshore exploration and production operations
  - Transfer of oil cargoes at sea
  - Routine shipping operations at ports – bunkering
  - Ship recycling
  - Illegal discharges from the large volume of shipping within the region

Oil Spill in Sundarbans, 9th December 2014

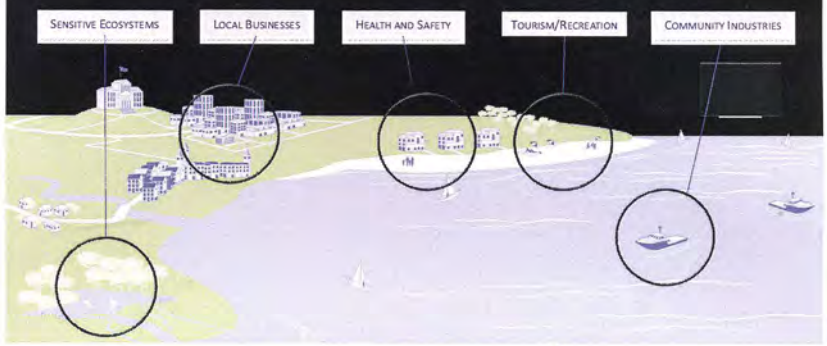
CONSEQUENCES OF OIL SPILL





PROTECTING OUR SHARED VALUES

Through a robust oil spill preparedness and response framework, together we can achieve a more effective oil spill response to protect our shared values



OIL AND CHEMICAL SPILLS

Major tanker spills of over 5000 tonnes in the South Asian Seas Region since 1974

Vessel Name	Quantity spilled (tonnes)	Quantity spilled (Type)	Country	Year	Cause
TASMAN SPIRIT	30,000	CRUDE	PAKISTAN	2003	GROUNDING
CRETAN STAR	29,000	CRUDE	INDIA	1976	HULL FAILURE
CHERRY VINSTRA	16,000	CRUDE	INDIA	1974	HULL DEFECT
AVILES	11,000	WHITE PRODUCT	INDIA	1979	FIRE/EXPLOSION
TRANSHURON	5,200	CRUDE	INDIA, LACCADIVES	1974	GROUNDING

Source: ITOPF, 2003

Other spills recorded

- **M V Meliksha Incident – Sri Lanka - 1999**
  The ship was reported to be carrying 16 500mt fertilizer and about 200 mt of heavy fuel oil.
- **Marina Sedna – Sri Lanka 2007** - 176mt of fuel oil was contained the ship.
- **M/T Granba Chemical tanker Accident – Sri Lanka -2009** - Carried 6250 mt of sulfuric acid
- MSC Chitra – India – 2010 – heavy oil and diesel

STATUS OF RATIFICATION/ACCESSION TO THE RELATED IMO CONVENTIONS

	MARPOL 73/78 (Annex I/II)	MARPOL 73/78 (Annex III)	MARPOL 73/78 (Annex IV)	MARPOL 73/78 (Annex V)	MARPOL Protocol 97 (Annex VI)	INTERVENTION Convention 69	INTERVENTION Protocol 73	CLC Convention 69	CLC Protocol 76	CLC Protocol 92	FUND Convention 71	FUND Protocol 76	FUND Protocol 92	FUND Protocol 2003	SUA Convention 88	SALVAGE Convention 89	OPRC Convention 90	HNS Convention 96	OPRC-HNS 2000	BUNKERS Convention 01
Bangladesh	x	x	x	x	x	x									x		x			
India	x	x	x	x	x	x		d	x	x	d	x	x		x	x	x			
Maldives	x			x				x	x	x	x		x		x					
Sri Lanka	x	x	x	x		x		d		x	d		x		x					

Present status of the OPRC Convention and HNS Protocol (as of 17th Oct 2014)

	No. of Contacting Parties	% of World Tonnage
OPRC 1990	107	71.46
OPRC- HNS Protocol 200	33	47.97

OPRC-Oil Pollution Response and Co-operation
X- contracting State
D-denunciation
HNS-Hazardous and Noxious Substances

COOPERATING FOR EFFECTIVE RESPONSE

FOR SUCCESSFUL OIL SPILL RESPONSE, WE NEED PROACTIVE COOPERATION WITH GOVERNMENTS AND LOCAL COMMUNITIES, WHICH CONSISTS OF:

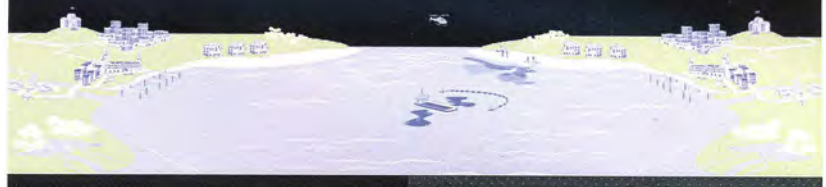
- OPEN LINES OF COMMUNICATION
- TRANSPARENT DECISION-MAKING
- CLEAR POLICIES REGARDING RESPONSE TECHNIQUES
- REALISTIC EXPECTATIONS OF THE RESPONSE

GUIDING PRINCIPLES FOR OIL SPILL PREPAREDNESS AND RESPONSE

We follow a set of guiding principles that allows the response community to achieve a rapid, well-managed and unified response effort

- Protect the safety and health of the people
- Stop the source of a spill as quickly as possible
- Minimize environmental and community impact
- Minimize oil getting to shore in offshore scenarios
- Minimize oil getting into water in onshore scenarios

STAKEHOLDER ENGAGEMENT WITH GOVERNMENTS, COMMUNITIES, AND INDUSTRY



BACKGROUND OF THE CONTINGENCY PLAN AND MOU

- **In 1989 a draft** South Asian Marine Pollution Emergency Action Plan was prepared by the IMO/UNEP/UNDP. The plan reflected-
  - essentially the threats of oil pollution in the South Asian Seas Region
  - The Marine Pollution Emergency Action Plan was not finalize
  - But it was recognized that there was an urgent need to develop a new regional oil spill contingency plan for the region
- **In 1995 SACEP identified** "Development and Implementation of National and Regional Oil and Chemical Spill Contingency Planning" under South Asian Seas Action Plan.
- **The first Inter-Ministerial Meeting** held in Pakistan in 1999 recommended the updating and finalizing of the South Asian Seas Oil Spill Contingency Plan
- **In July 1999 SACEP secured funding** support from UNEP for the Updating and Finalizing of the South Asian Seas Oil Spill Contingency Plan.
- This funding was pooled together with funding previously secured by the International Maritime Organization (IMO) for this activity to undertake a joint IMO -SACEP project aimed at preparing a South Asian Regional Oil Spill Contingency Plan.
- **In November 1999 IMO consultant undertook a mission to the region**
  - To assess the current status of preparedness and response in the region
  - Tor prepare a Draft Regional Oil and Chemical Pollution Contingency Plan for SACEP countries.

HISTORICAL BACKGROUND CONT...

- **In 14-16 December 1999**, a Meeting of Senior Officials was held in Colombo, Sri Lanka:
  - to consider the Draft
  - to amend the draft and
  - Prepare a preliminary draft of MoU on response to Oil and Chemical Pollution.
- This amended Plan and MoU was circulated for further consideration
- In December 2000, a High Level meeting was convened:
  - to approve the draft of Regional Contingency Plan and
  - To approve the Memorandum of Understanding (MoU
- **In 2008, 4th Intergovernmental** meeting of Ministers (IMM) held in Jaipur, India. The meeting requested SACEP to finalize the Regional Plan and MoU as a matter of High Priority.
- Bangladesh, Maldives and Sri Lanka had no objection to the text of the draft Plan and MoU.
- SACEP undertook mission to Pakistan in May 2009 and to India in July 2009 to finalize the Regional Plan and MoU.

UPDATE STATUS OF THE SIGNING OF THE MOU

- 4 member countries have already signed the MoU.
  - Maldives – 13th October 2009
  - Pakistan – 22nd July 2010
  - Bangladesh –27th September 2010
  - Sri Lanka-last week of December, 2014
- India is in advanced status of adopting the MoU.
- MOU and the Regional Plan will enter into force 3 months after the Secretariat, i.e. the Secretariat of the South Asian Seas Programme (SASP), has been notified by all five countries of their acceptance of the MoU in accordance with their national legislations

Role of SACEP as Secretariat

- The Parties (Countries) given the authority to the SACEP by the MOU to
  - prepare meetings, circulate papers;
  - facilitate the exchange of information; and
  - carry out such other work as may be necessary
- SACEP will work under the guidance of the meeting of the Parties, to provide within the limits of its resources secretariat services.

Source of Resources

In August 2013, a MoU was concluded between SACEP and IMO for the implementation of a NORAD funded project titled "Enhancing regional co-operation mechanisms on marine pollution preparedness and response in the SACEP region". Objectives of the MOU was:

- Effective implementation of the OPRC Convention and the OPRC-HNS Protocol
- Enhance regional cooperation on marine pollution preparedness and response in the SACEP

SOUTH ASIAN SEAS PROGRAMME

- 1/5 of world population living along the coast
- Unique coral reef, mangroves, Sea grass ecosystem providing habitat for large number of species as well s providing livelihoods for millions of people-fishery and tourism
- Importance of impact coastal ecosystems as defense mechanisms –Tsunami
- Main threats
  - Climate Change
  - Cyclone, delayed monsoons and unusual raining, flash flood and sea level rising
  - Land based source pollution
  - Sea based pollution-60% the world oil Tanker traffic

SOUTH ASIAN SEAS PROGRAMME

- Action Plan for SASP was formally adopted at a Meeting of Plenipotentiaries of the concerned countries held in New Delhi, on March 24th 1995.
- The Plan focuses on
  - Integrated Coastal Zone Management (ICZM),
  - oil-spill contingency planning,
  - human resource development and
  - the environmental effects of land-based activities.
- Although there is no regional convention yet, SASAP follows existing global environmental and maritime conventions and considers Law of the Sea as its umbrella convention.

COOPERATION MECHANISM

- **The purpose of this Contingency Plan is to:**
  - Establish a mechanism for mutual assistance
  - Response to Marine pollution incidents
- **Responsibilities under the Action Plan is:**
  - Exchange of information
  - Designation of National Authorities and points of contact
  - Meetings of National Operational Authorities responsible for the implementation of the Plan
  - Joint training and exercises

DESIGNATED NATIONAL AUTHORITIES FOR OIL SPILL CONTINGENCY PLAN

Country	Contact Ministry	Focal Pint/Person
Bangladesh	Ministry of Environment and Forest	Bangladesh Navy
India	Ministry of Earth Science	Director, Integrated Coastal area Management.
Maldives	Ministry of Transport and Communication	DG, Transport Authority
Pakistan	Climate Change Division	DG, Maritime Security Agency
Sri Lanka	Ministry of Environment and Renewable Energy	Chairman, Marine Environment Protection Agency (MEPA)

OBJECTIVES OF NATIONAL WORKSHOP

- To raise awareness and improve NOSCOP
- Comprehensive understanding of current status and capacity of preparedness and response
- Identify the main areas of improvement
- How to national plan may harmonize with draft regional plan
- To identify the potential obstacle for further development
- Development of an action plan and time frame

ASSISTANCE FROM MEMBER COUNTRIES

- Following the activation of the Plan, the Party who has activated the Plan may request assistance from the other Parties.
- Assistance might be requested in the form of:
  - trained response personnel and, in particular, strike teams;
  - specialised pollution combating equipment;
  - pollution treatment products; and
  - other means, including, in particular, self-contained units such as vessels and aircraft, and/or any combination thereof.

ASSISTANCE FROM MEMBER COUNTRIES CONT....

Under this MoU, in cases of major marine pollution incidents:

- the Parties will cooperate in taking individually and jointly
- The Parties will use their best endeavors to maintain their ability to respond to pollution incidents. This would include:
  - ✓ Making a risk assessment regarding the traffic, offshore units, ports and oil handling facilities;
  - ✓ A minimum level of spill response equipment capable of making a first response proportionate to the risk involved;
  - ✓ Communication capabilities to notify without delay any pollution incidents; and
  - ✓ Programmes for training and exercises

STATUS AND HISTORICAL BACKGROUND OF OIL SPILL CONTINGENCY PLAN IN THE SOUTH ASIAN SEAS REGION

Pulakesh Mondal, Senior Programme Officer (Regional)
South Asia Cooperative Environment Programme

Our goal is to never have an oil spill and the ship, industry take extensive precautions to prevent spill from occurring

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  - offshore exploration and production operations
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  - Routine shipping operations at ports – bunkerin
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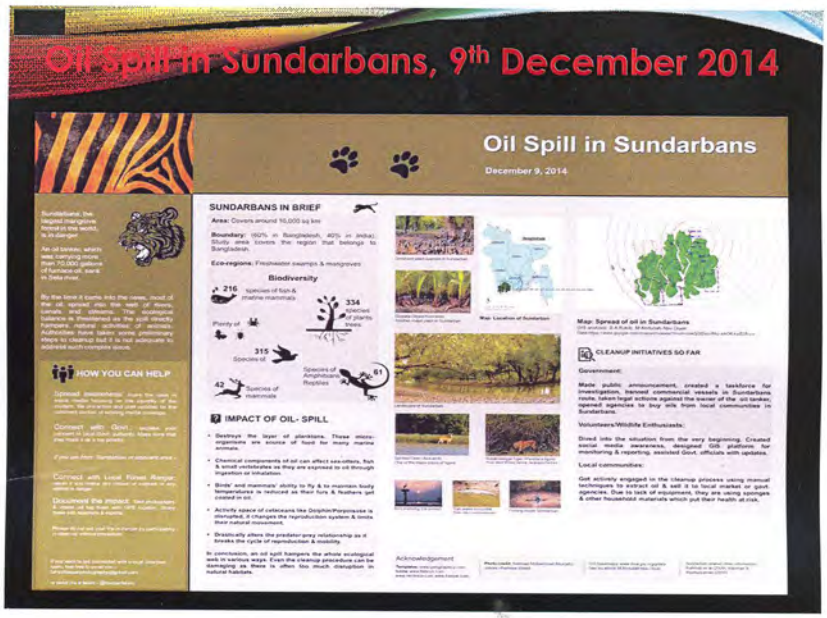
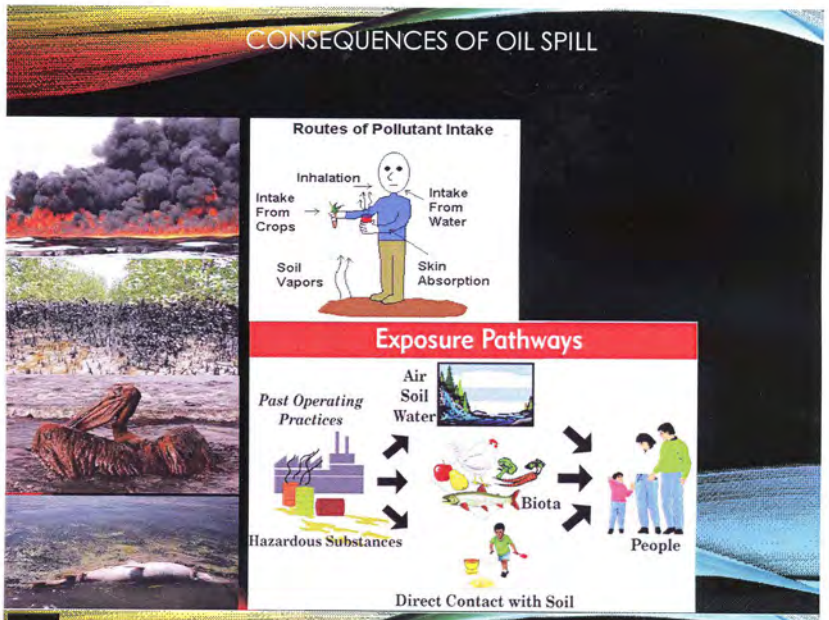
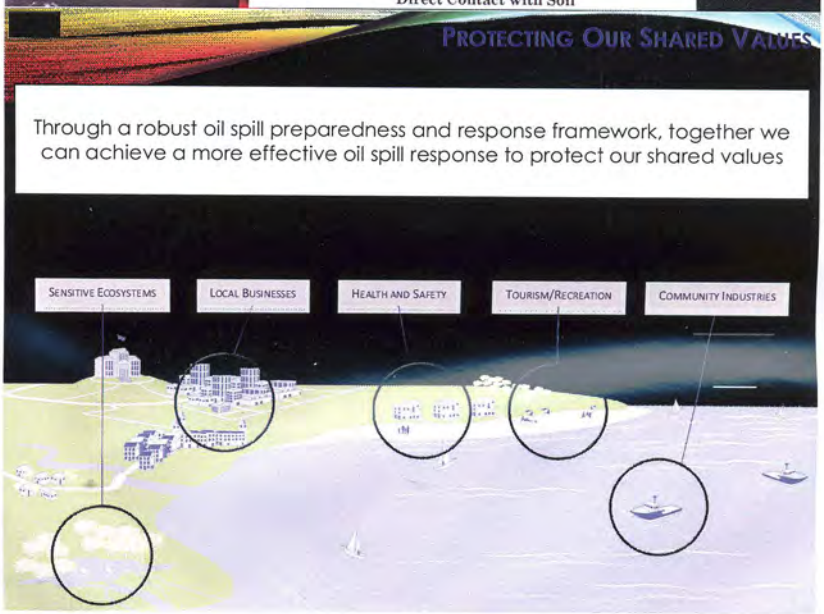
  - illegal discharges from the large volume of ship


Oil Spill in Sundarbans, 9th December 2014
Oil Spill in Sundarbans
December 9, 2014
SUNDARBANS IN BRIEF
Biodiversity
HOW YOU CAN HELP
IMPACT OF OIL- SPILL
CLEANUP INITIATIVES SO FAR
Government:
Volunteers/Wildlife Enthusiasts:
Local communities:
Acknowledgment


CONSEQUENCES OF OIL SPILL
Routes of Pollutant Intake
Inhalation
Intake From Crops
Intake From Water
Soil Vapors
Skin Absorption
Exposure Pathways
Air
Soil
Water
Past Operating Practices
Biota
Hazardous Substances
People
Direct Contact with Soil


PROTECTING OUR SHARED VALUES
Through a robust oil spill preparedness and response framework, together we can achieve a more effective oil spill response to protect our shared values
SENSITIVE ECOSYSTEMS
LOCAL BUSINESSES
HEALTH AND SAFETY
TOURISM/RECREATION
COMMUNITY INDUSTRIES

OIL AND CHEMICAL SPILLS

Major tanker spills of over 5000 tonnes in the South Asian Seas Region since 1974

Vessel Name	Quantity spilled (tonnes)	Quantity spilled (Type)	Country	Year	Cause
TASMAN SPIRIT	30,000	CRUDE	PAKISTAN	2003	GROUNDING
CRETAN STAR	29,000	CRUDE	INDIA	1976	HULL FAILURE
CHERRY VINSTRA	16,000	CRUDE	INDIA	1974	HULL DEFECT
AVILES	11,000	WHITE PRODUCT	INDIA	1979	FIRE/EXPLOSION
TRANSHURON	5,200	CRUDE	INDIA, LACCADIVES	1974	GROUNDING

Source: ITOPF, 2003

Other spills recorded

- **M V Meliksha Incident – Sri Lanka - 1999**
  The ship was reported to be carrying 16 500mt fertilizer and about 200 mt of heavy fuel oil.
- **Marina Sedna – Sri Lanka 2007** - 176mt of fuel oil was contained the ship.
- **M/T Granba Chemical tanker Accident – Sri Lanka -2009** - Carried 6250 mt of sulfuric acid
- MSC Chitra – India – 2010 – heavy oil and diesel

STATUS OF RATIFICATION/ACCESSION TO THE RELATED IMO CONVENTIONS

	MARPOL 73/78 (Annex III)	MARPOL 73/78 (Annex III)	MARPOL 73/78 (Annex IV)	MARPOL 73/78 (Annex V)	MARPOL Protocol 97 (Annex VI)	INTERVENTION Convention 69	INTERVENTION Protocol 73	CLC Convention 69	CLC Protocol 76	CLC Protocol 92	FUND Convention 71	FUND Protocol 76	FUND Protocol 92	FUND Protocol 2003	SUA Convention 88	SALVAGE Convention 89	OPRC Convention 90	HNS Convention 96	OPRC/HNS 2000	BUNKERS Convention 01
																	x			
India	x	x	x	x	x	x		d	x	x	d	x	x		x	x	x			
Pakistan	x	x	x	x		x	x			x					x		x			

Present status of the OPRC Convention and HNS Protocol (as of 17th Oct 2014)

	No. of Contacting Parties	% of World Tonnage
OPRC 1990	107	71.46
OPRC- HNS Protocol 200	33	47.97

OPRC-Oil Pollution Response and Co-operation
X- contracting State
D-denunciation
HNS-Hazardous and Noxious Substances

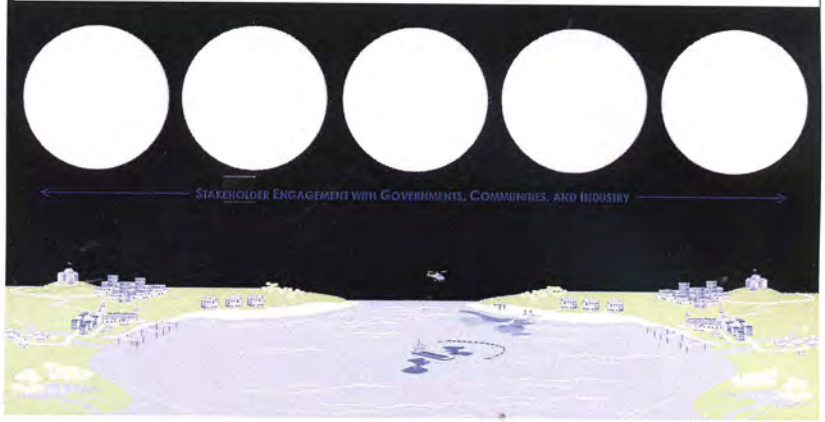
COOPERATING FOR EFFECTIVE RESPONSE

FOR SUCCESSFUL OIL SPILL RESPONSE, WE NEED PROACTIVE COOPERATION WITH GOVERNMENTS AND LOCAL COMMUNITIES, WHICH CONSISTS OF:

- OPEN LINES OF COMMUNICATION
- TRANSPARENT DECISION-MAKING
- CLEAR POLICIES REGARDING RESPONSE TECHNIQUES
- REALISTIC EXPECTATIONS OF THE RESPONSE

Guiding Principles for Oil Spill Preparedness and Response

We follow a set of guiding principles that allows the response community to achieve a rapid, well-managed and unified response effort



BACKGROUND OF THE CONTINGENCY PLAN AND MOU

- **In 1989 a draft** South Asian Marine Pollution Emergency [illegible] IMO/UNEP/UNDP. The plan reflected
  - essentially the threats of oil pollution in the South [illegible]
  - the Marine Pollution Emergency Action Plan wa[illegible]
  - But it was recognized that there was an urgent n[illegible] plan for the region
- **In 1995 SACEP identified** "Development and Implementation of National and Regional Oil and Chemical Spill Contingency Planning" under South Asian Seas Action Plan.
- **The first Inter-Ministerial Meeting** SASP held in Pakistan in 1999 recommended the updating and finalizing of the South Asian Seas Oil Spill Contingency Plan.
- **In July 1999 SACEP secured funding** support from UNEP for the updating and Finalizing of the South Asian Seas Oil Spill Contingency Plan.
- This funding was pooled together with funding pr[illegible] International Maritime Organization (IMO) for this activity to undertake a [illegible] South Asian Regional Oil Spill Contingency Plan.
- **In November 1999 IMO consultant undertook a mission to the region**
  - To assess the current status of preparedness and response in the [illegible]
  - To prepare a Draft Regional Oil and Chemical Pollution Contingency Plan for SACEP countries.

HISTORICAL BACKGROUND CONT…

- **In 14-16 December 1999**, a Meeting of Senior Officials was held in Colombo, Sri Lanka:
  - to consider the Draft
  - to amend the draft and
  - Prepare a preliminary draft of MoU on response to Oil and Chemical Pollution.
- This amended Plan and MoU was circulated for further consideration
- In December 2000, a High Level meeting was convened:
  - to approve the draft of Regional Contingency Plan and
  - To approve the Memorandum of Understanding (MoU
- **In 2008, 4th Intergovernmental** meeting of Ministers (IMM) held in Jaipur, India. The meeting requested SACEP to finalize the Regional Plan and MoU as a matter of High Priority.
- Bangladesh, Maldives and Sri Lanka had no objection to the text of the draft Plan and MoU.
- SACEP undertook mission to Pakistan in May 2009 and to India in July 2009 to finalize the Regional Plan and MoU.

UPDATE STATUS OF THE SIGNING OF THE MOU

- 4 member countries have already signed the MoU.
  - Maldives – 13th October 2009
  - Pakistan – 22nd July 2010
  - Bangladesh –27th September 2010
  - Sri Lanka-last week of December, 2014
- India is in advanced status of adopting the MoU.
- MOU and the Regional Plan will enter into force 3 months after the Secretariat, i.e. the Secretariat of the South Asian Seas Programme (SASP), has been notified by all five countries of their acceptance of the MoU in accordance with their national legislations

Role of SACEP as Secretariat

- The Parties (Countries) given the authority to the SACEP by the MOU to
  - prepare meetings, circulate papers;
  - facilitate the exchange of information; and
  - carry out such other work as may be necessary
- SACEP will work under the guidance of the meeting of the Parties, to provide within the limits of its resources secretariat services.

Source of Resources

In August 2013, a MoU was concluded between SACEP and IMO for the implementation of a NORAD funded project titled "Enhancing regional co-operation mechanisms on marine pollution preparedness and response in the SACEP region". Objectives of the MOU was:

- Effective implementation of the OPRC Convention and the OPRC-HNS Protocol
- Enhance regional cooperation on marine pollution preparedness and response in the SACEP

SOUTH ASIAN SEAS PROGRAMME

- 1/5 of world population living along the coast
- Unique coral reef, mangroves, Sea grass ecosystem providing habitat for large number of species as well s providing livelihoods for millions of people-fishery and tourism
- Importance of impact coastal ecosystems as defense mechanisms –Tsunami
- Main threats
  - Climate Change
  - Cyclone, delayed monsoons and unusual raining, flash flood and sea level rising
  - Land based source pollution
  - Sea based pollution-60% the world oil Tanker traffic

SOUTH ASIAN SEAS PROGRAMME

- Action Plan for SASP was formally adopted at a Meeting of Plenipotentiaries of the concerned countries held in New Delhi, on March 24th 1995.
- The Plan focuses on
  - Integrated Coastal Zone Management (ICZM),
  - oil-spill contingency planning,
  - human resource development and
  - the environmental effects of land-based activities.
- Although there is no regional convention yet, SASAP follows existing global environmental and maritime conventions and considers Law of the Sea as its umbrella convention.

COOPERATION MECHANISM

❑**The purpose of this Contingency Plan is to:**

- ➢Establish a mechanism for mutual assistance
- ➢Response to Marine pollution incidents

❑**Responsibilities under the Action Plan is:**

- •Exchange of information
- •Designation of National Authorities and points of contact
- • Meetings of National Operational Authorities responsible for the implementation of the Plan
- •Joint training and exercises

DESIGNATED NATIONAL AUTHORITIES FOR OIL SPILL CONTINGENCY PLAN

Country	Contact Ministry	Focal Pint/Person
Bangladesh	Ministry of Environment and Forest	Bangladesh Navy
India	Ministry of Earth Science	Director, Integrated Coastal area Management.
Maldives	Ministry of Transport and Communication	DG, Transport Authority
Pakistan	Climate Change Division	DG, Maritime Security Agency
Sri Lanka	Ministry of Environment and Renewable Energy	Chairman, Marine Environment Protection Agency (MEPA)

OBJECTIVES OF NATIONAL WORKSHOP

- To raise awareness and improve NOSCOP
- Comprehensive understanding of current status and capacity of preparedness and response
- Identify the main areas of improvement
- How to national plan may harmonize with draft regional plan
- To identify the potential obstacle for further development
- Development of an action plan and time frame

ASSISTANCE FROM MEMBER COUNTRIES

- Following the activation of the Plan, the Party who has activated the Plan may request assistance from the other Parties.
- Assistance might be requested in the form of:
  - trained response personnel and, in particular, strike teams;
  - specialised pollution combating equipment;
  - pollution treatment products; and
  - other means, including, in particular, self-contained units such as vessels and aircraft, and/or any combination thereof.


ASSISTANCE FROM MEMBER COUNTRIES CONT....
Under this MoU, in cases of major marine pollution incidents:
the Parties will cooperate in taking individually and jointly
The Parties will use their best endeavors to maintain their ability to respond to pollution incidents. This would include:
✓ Making a risk assessment regarding the traffic, offshore units, ports and oil handling facilities;
✓ A minimum level of spill response equipment capable of making a first response proportionate to the risk involved;
✓ Communication capabilities to notify without delay any pollution incidents; and
✓ Programmes for training and exercises


THANK YOU VERY MUCH

Presentation by Mr.George James Franklin, Consultant

Captain George J. Franklin

After obtaining a Masters Class 1 Certificate of Competency, I had 30 years expatriate marine experience in upstream, downstream, shipping and trading activities in the Shell Oil Company. This included pilotage, rig moving, ship to ship transfer activities, FPSO operations and maintenance, support craft management, marine advice to oil traders, new oil field developments in hostile areas, project work (Offshore facility installations), terminal management, SBM design and installation, HSSE and Risk Management.In the latter stages of my career, I was based in London where, amongst other responsibilities, I chaired the OGP Industry Work Group (GIRG) addressing the oil spill response issues post Gulf of Mexico incident in 2010.

In addition, I also chaired the Ocimf (Oil Companies International Marine Forum) working group tasked with re-writing and updating the Ocimf publications on the operation, maintenance and sparing policy regarding SPM's. This document is now due for publication in early 2015.

After retiring from Shell, in 2013, I formed Franklin Marine Limited offering marine technical and operational consultancy services to the industry.

SACEP
Project Overview
02 – 03 February 2015

The Objective

- **Objective - Enhancing regional co-operation mechanisms on marine pollution preparedness and response in the SACEP region (Bangladesh, India, Maldives, Pakistan and Sri Lanka)**

- The long-term objective of the project is the effective implementation of the OPRC Convention and the OPRC-HNS Protocol, while the short-term objective will be to enhance regional cooperation on marine pollution preparedness and response in the SACEP region through an early and effective implementation of the MoU on regional cooperation in case of emergency and through the revitalization of the regional contingency plan and its entry into force.

The Purpose

The Purpose of the project is to organize and coordinate activities aimed at:-

1. Preparing the countries for the entry into force of the MoU and of the regional contingency plan, thus leading to an early implementation of the MoU.

2. Revitalizing the regional contingency plan through revisiting and updating the regional plan after conducting a regional exercise. Addressing key operational and compensation issues and, in addition, identify any need to strengthen secretarial arrangements.

The Scope

The Scope of the project will cover the regional mechanisms for cooperation in case of marine pollution incident, notably, the Memorandum of Understanding for Cooperation on the Response to Oil and Chemical Pollution in the South Asia Seas Region (the MoU), the Regional oil and Chemical Pollution Contingency Plan for South Asia (the Regional Plan); and the secretariat arrangements for the MoU and the Regional Plan.

The Results/ Outcomes

- The Regional Contingency Plan, together with the MoU, have entered into force.
- A regional exercise has been conducted to test the communication and the operational procedures of the current Regional Contingency Plan and to identify any gaps.
- The Regional Contingency Plan revisited, completed and updated as necessary.
- The secretarial arrangements for the Regional Contingency Plan reviewed, updated and confirmed.
- Key issues of importance regarding cooperation in case of major pollution incidents, such as the use of dispersants, aerial surveillance and liability and compensation are addressed and related agreements reflected in the Regional Contingency Plan.

Action Items Review from First Meeting of National Authorities

02 – 03 February 2015

Action Item No. 1

SACEP Secretariat to write to the identified "Operational Authorities" for each State, requesting their nomination as the key point of contact for the organization of the first series of national-level preparatory meetings. SACEP's existing national focal points shall be copied into communications.

Action Item No. 2

The project consultant to draft and circulate a generic programme for the first series of national-level preparatory meetings - to include a review of the draft regional plan and facilitated 'walk through' of the regional plan's communications (POLREP) and cooperation procedures.

Action Item No. 3

Each State's Operational Authority to consider suitable candidate(s) for national consultants to assist with the organization of the first series of national-level preparatory meetings. These shall be nominated to the SACEP Secretariat.

Action Item No. 4

A tentative schedule for the first series of national-level preparatory meetings to be developed by the project consultant in coordination with Operational Authorities and the SACEP Secretariat.

Action Item No. 5

A tentative schedule for the first series of national-level preparatory meetings to be developed by the project consultant in coordination with Operational Authorities and the SACEP Secretariat.

Action Item No. 6

The Operational Authorities, in cooperation with the appointed national consultant and with guidance from the project consultant, to organize their national preparatory meeting. The meeting to include representatives from all key organizations involved in the national response system.

Project Phase Planning

02 – 03 February 2015

Phases

There are 6 clearly defined phases:-

1. Inception phase - *completed*
2. Adoption of a programme of activities within the Project framework - incorporating the First Regional Meeting) – completed
3. First series of national-level preparatory and capacity building activities for the review and understanding of the procedures in the draft Regional Contingency Plan
4. Testing of draft Regional Contingency Plan and especially the operational (communication) procedures through a regional exercise. Organization of the second series of national-level meetings to discuss outcomes from the regional exercise
5. Updating of the Regional Contingency Plan and Its Annexes as necessary
6. Adoption of the Revised Regional Contingency Plan and Its Annexes

SACEP Oil and Chemical Pollution Contingency Response Plan for South Asia

02 – 03 February 2015

1. Introduction

- Background
- Purpose and Objectives
- Scope and Geographical Coverage
- Definitions, Acronyms and Abbreviations[

2. Policy and Responsibility

- Exchange of information
- Designation of National Authorities and points of contact
- Meetings of National Operational Authorities responsible for the implementation of the Plan
- Joint training and exercises
- Revision and amendment of the Plan

3. Response Elements and Planning

- Assumption of Lead Role
- National ON-Scene Commander (NOSC)/Supreme On-Scene Commander (SOSC)
- Emergency Response Centres/Joint Emergency Response Centre
- Support Teams
- Command Structure
- Communications arrangements
- Response Planning
- Response strategy

4. Response Operations

- Response Phases
- Spill Monitoring
- Requests for Assistance within the Framework of the Plan
- Use of Dispersants
- Assistance from Outside the Region
- Termination of Joint Response Operations and Deactivation of the Plan

5. Reporting

- Initial Warning System
- Pollution Reporting System
- Post Incident Reports

6. Administration, Logistics and Funding

- Logistics
- Immigration and customs formalities
- Overflight procedures (see also Spill Monitoring)
- Navigation procedures
- Financial Procedures
- Medical Insurance and Medical Assistance
- Responsibility for Injury and Damage
- Documentation of Response Operations and Related Costs

7. Public Information.

- Public Relations Officer (PRO)
- Press Releases
- Press Conferences

Annexures (1)

- Annex 1: Directory of Competent National Authorities, Contact Points, Emergency Response Centres, National On-Scene Commanders and Other Relevant Addresses
- Annex 2 National Contingency Plans (Or Relevant Parts Thereof)
- Annex 3 Directory Of Response Personnel and Inventory of Response Equipment, Products and other means which each Party might offer as assistance in case of the activation of the Plan including information relating to the wages of personnel, the rental rates of equipment and the cost of materials.
- Annex 4: Communication System
- Annex 5: Guidelines for Reporting Oil Spills (Aerial Monitoring)

Annexures (2)

- Annex 6: Standard Format for Requesting Assistance
- Annex 7: Resources which might be made available from outside the Region, and their contact points
- Annex 8: Polrep Pollution Reporting System
- Annex 9: Claims Manual
- Annex 10: IMO Assembly Resolution A.869 (20), Guidelines for Facilitation of Response to an Oil Pollution Incident Pursuant to Article 7 and Annex of the International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990

- Appendix 1: Procedures for the Identification of Particularly Sensitive Sea Areas and the Adoption of Associated Protective Measures (Extract from Resolution A.885 (21)

Point of departure for industry efforts

1. Oil spills present evergreen environmental, financial, and reputational risks

2. Sustainable long-term industry and government commitment are necessary to tackle this ongoing issue

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Prior to Montara and Macondo

- Tanker spills traditionally considered as highest priority due to visibility and assumption they represent the highest risk
- The IPIECA – IMO Global Initiative (GI) program formally launched in 1996 with input from industry and government representatives as a long-term solution to:
  - Help ratify the relevant international conventions and protocols on Oil Spill Response Preparedness; and
  - Identify responsible government agencies in charge of oil spill preparedness and response

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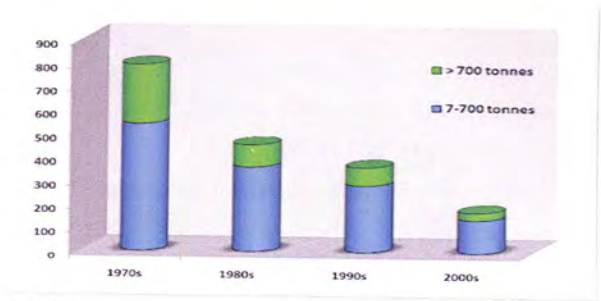
Evidence points to success of industry efforts on tanker spills



ITOPF 2010

…but then came Montara

…and then, Macondo

The OSR-JIP Mandate

- OSR-JIP has two key focus areas:
  - Looking at issues identified in the GIRG OSR process following the Montara and Macondo incidents and the implications for all aspects of spill response
    - Improve current "good practice" guidance particularly on dispersants
  - Developing risk/hazard based strategies for response preparedness
    - Promote research that advances understanding and response methodologies and risk assessment models

Overall OGP GIRG Projects

- GIRG PROJECT

1. Well Design.
2. Capping and Containment.
3. Oil Spill Preparedness and Response

Maritime vs upstream

- Surface releases and subsea releases have significant differences:
  - Mobile threat of known and finite size – weathering properties known
  - Fixed threat of unknown size - constantly replenished by fresh oil

- Industry needs to propose a global system of upstream spill response capability based on risk and hazard that is:
  - Compatible with the accepted Tiered Response Concept developed for surface/maritime spills
  - Scalable to take account of the actual need: Worst credible case
  - Acceptable to regulators
  - Capable of being integrated into upstream risk management systems, safety cases, and operations

Work Program (1)

- Prepare a standardised documentation and information package to raise awareness with public, industry and regulators, creating both scientific and non-scientific versions of material to suit a range of audiences
- Work with other groups (API, SWRP) and manufacturers on dispersant formulations and logistics for subsea dispersant supply and injection
- Encourage industry members to develop dispersant supply plans
- Research the environmental effects of dispersants
- Work toward a consensus on the adoption of a Recommended Practice on dispersant effectiveness monitoring. Implement through a communications package detailing the methods and equipment required and locating/identifying worldwide expertise on the technique
- Understand / develop standard methodologies for impact assessment, operating, and monitoring of In Situ Burn operations

Work Program (2)

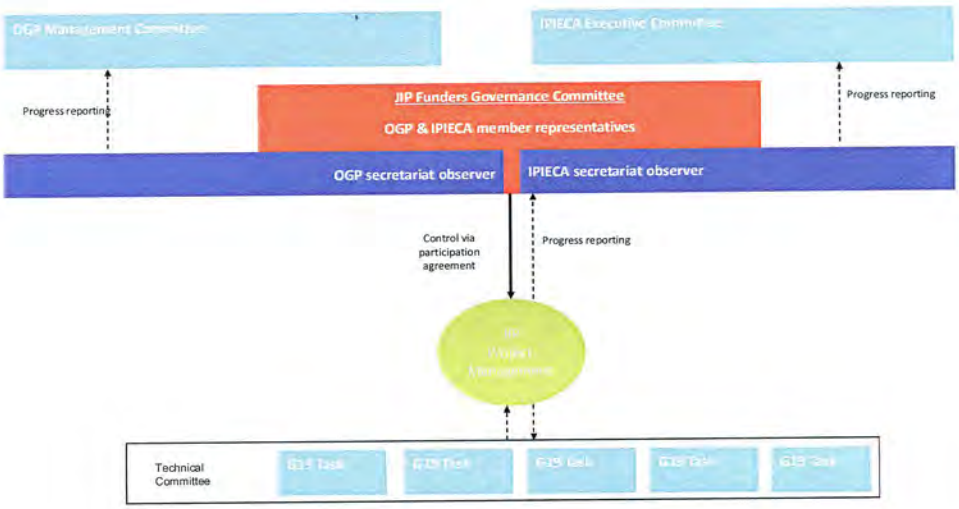
- Develop an assessment methodology to characterise exposure and the relationship between hazard and response readiness – particularly for upstream
- Develop a Recommended Practice on response exercises - scope, scale and frequency - and inculcate in member companies and OSROs.
- Develop a Recommended Practice on surveillance of oil spills
- Develop an assessment of potential global industry exposure to help inform the potential location of any additional resources
- Review the subsea trajectory and plume modelling used on Macondo and its comparison to real life observations
- Map and record the key IT/communications innovations developed in the Macondo response efforts as a template/guide for future responses
- Update the IPIECA Oil Spill Working Group good practice series to achieve a better balance between shipping and upstream. Promote an ICS approach where possible

Work Program (3)

- Track API work on responder indemnification/mutual aid to determine international relevance.
- Evaluate suitable options for a replacement aerial dispersant delivery system to replace the Hercules (not an issue in US)
- Develop a guideline on good practice in integrating responders (volunteer members of the public, authorities, and military) into an NOSCP
- Develop educational material, templates, etc. on decanting that can be used by operators to secure permission to utilize decanting as an authorized technique
- Review of existing guidance on responder PPE to develop a Recommended Practice on PPE for response workers globally
- Develop a public domain database on the range of oil characteristics that could influence safety, behaviour, fate, potential effects and response options/techniques

JIP membership & structure

- A further four have expressed interest.
- The structure of the JIP and the reporting lines back to the OGP Management Committee and IPIECA Executive Committee have been agreed.



Governance and Resourcing

- First Governance Committee meeting held October 20th in Singapore alongside the OSRL board
- Participation agreement due to be finalized end November
- The JIP becomes active on ten signatures; latecomers can join, but must then accept the existing agreement
- Nominally a US$ 3MM project
- IPIECA Technical Director will be seconded to JIP for three years
- Strong liaison with API committees

NATIONAL OIL SPILL DISASTER CONTINGENCY PLAN

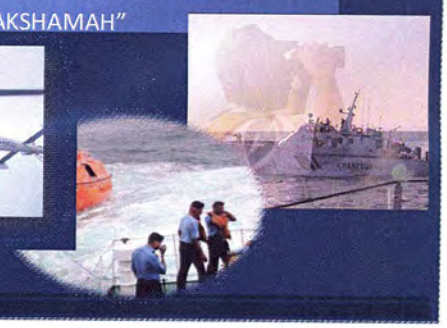
DIG AA Hebbar, TM
Director (Environment), Coast Guard Headquarters

PRESENTATION AT SACEP REGIONAL FORUM, NIOT, CHENNAI, 03 FEBRUARY 2015

Brief Overview of Indian Coast Guard vis-à-vis OPRC

Overview of Indian Coast Guard

- As an armed force of the Union of India
- Functioning under the Ministry of Defence
- Motto: "VAYAM RAKSHAMAH"



Duties and Functions

SAFETY AND PROTECTION OF ARTIFICIAL ISLANDS AND OFF SHORE OIL TERMINALS

PROTECTION TO FISHERMEN INCLUDING ASSISTANCE TO THOSE IN DISTRESS AT SEA

PRESERVE AND PROTECT THE MARINE ENVIRONMENT

TO PREVENT AND CONTROL MARINE POLLUTION

Duties and functions

ASSISTING THE CUSTOMS & OTHER AUTHORITIES IN ANTI-SMUGGLING OPERATIONS

ENFORCING THE PROVISIONS OF SHORE ACTMENTS AS ARE FOR THE TIME BEING IN FORCE IN THE MARITIME ZONES

SAFETY OF LIFE AND PROPERTY AT SEA

ASSIST IN COLLECTION OF SCIENTIFIC DATA

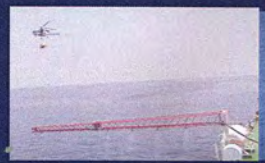
Ships

Aircraft

Pollution Control Vessels

- **Dedicated response vessels**

Oil pollution response resources



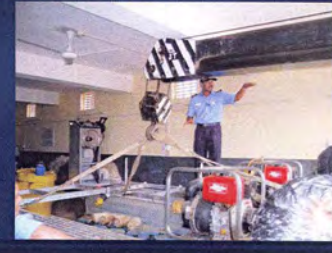
IMO Level-1 training

PLACE	COURSE	STRENGTH
VADINAR	Biannual	20-25
CHENNAI	Biannual	20
PORT BLAIR	Biannual	10
MUMBAI	Biannual	20-25

IMO Level-2 training

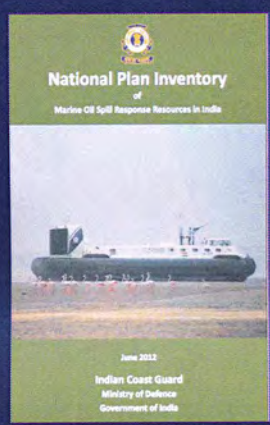
- By AMET University with ICG faculty support
- Biannual – February/ August
- 25 participants per course

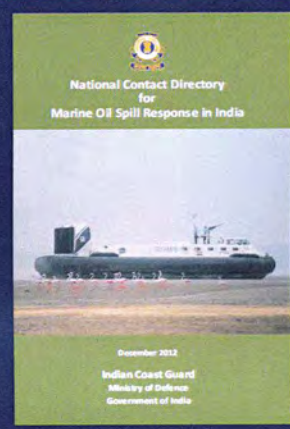
OIL SPILL RESPONSE DRILLS & EXERCISES



NATPOLREX

National plan inventory & Contact directory





17

NOSDCP Circulars

BLUE WATERS

INDIAN COAST GUARD

Participation at IMO

- MEPC
- OPRC-HNS
- IOPC FUND

INDIAN COAST GUARD

20

NATIONAL PLAN

INDIAN COAST GUARD

21

Introduction to national plan

- First promulgated in July 1996
- Updated in 1998, 1999, 2000, 2002 and 2006
- Originally designed for responding to oil spills

- Completely revised to reflect current international norms and best practices, key relevant national regulations, and cumulative experience
- Revised version facilitates national preparedness to HNS incidents and also fulfils obligation to have in place national plan to respond to HNS incidents
- Revised NOS-DCP 2014 comprises nine Chapters and 41 Appendices

Scheme of Chapters

1. Introduction
2. Emergency Organization
3. Division of Responsibility
4. Preparedness Management
5. Discovery and Notification
6. Initial Response
7. Response to Oil Spills
8. Response to HNS Incidents
9. Plan Review

Hierarchy of Contingency Plans

National Oil Spill Disaster Contingency Plan

Regional Oil Spill Disaster Contingency Plan

District Oil Spill Disaster Contingency Plan

State Oil Spill Disaster Contingency Plan

Facility Plan

Objectives of NOS-DCP

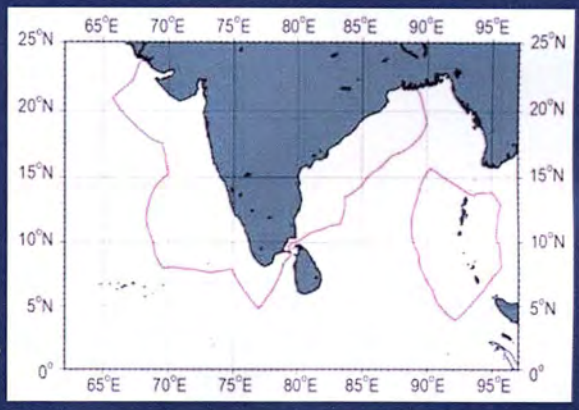
To establish...

- Effective system for detection and reporting of spill
- Adequate measures for preparedness for pollution
- Rapid and effective response to oil pollution
- Procedures for disposal of recovered material in an environmentally sound manner
- Record-keeping procedures for recovery of costs

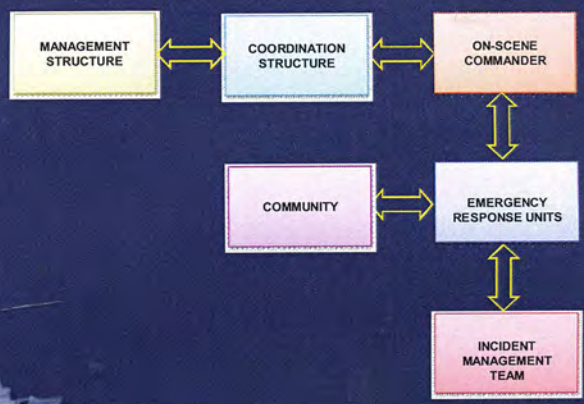
Definitions Included in the Plan

- Ship
- Offshore installation
- Oil
- Oily mixture
- Crude oil
- Noxious liquid substance
- Harmful substance
- Hazardous and noxious substance
- Incident
- Discharge
- Pollution damage
- Preventive measures

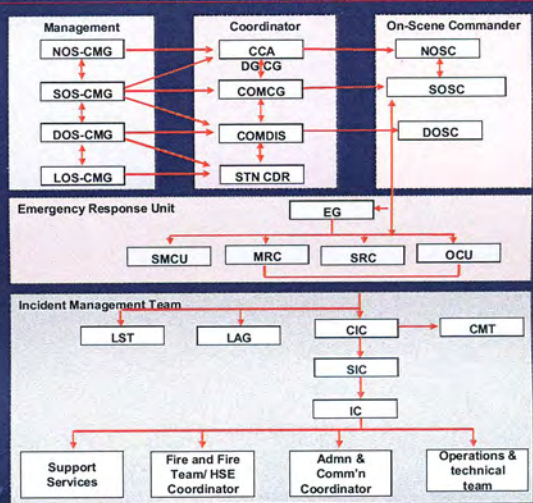
National Pollution Response Area



Block Diagram - National Structure



National Structure



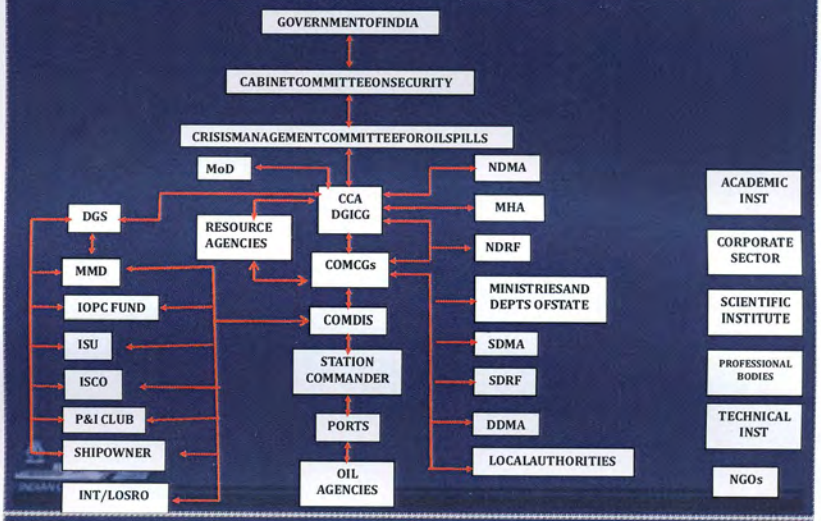
Specialist Advice and Assistance

- Ministry of Environment, Forests and Climate Change
- Ministry of Earth Sciences
- Ministry of Agriculture/ Dept. of Animal Husbandry, Dairying and Fisheries
- Ministry of Petroleum and Natural Gas
- Ministry of Shipping
- Directorate General of Shipping
- Indian Register of Shipping
- Mercantile Marine Department
- DG Shipping Communication Centre
- Major Ports
- Coastal Oil Refineries and Crude Oil Terminals
- Offshore Oil Installations
- Indian Navy
- Indian Air Force
- Shipping Corporation of India

Specialist Advice and Assistance

- Central and State Pollution Control Boards
- Local Fisheries Authority
- Indian National Centre for Ocean Information Services
- National Institute of Oceanography
- Integrated Coastal and Marine Area Management Project Directorate
- Central Marine Fisheries Research Institute
- Archeological Survey of India
- National Biodiversity Authority
- Bombay Natural History Society
- Mangrove Society of India
- Reef Watch Marine Conservation
- MS Swaminathan Research Foundation
- Wildlife Trust of India

Emergency Organisation for Oil Spill Disasters



Management Structure

National Crisis Management Group

1.	Defence Secretary	Chairman
2.	Home Secretary	Member
3.	Foreign Secretary	Member
4.	Secretary Environment & Forests	Member
5.	Secretary Shipping	Member
6.	Secretary Petroleum and Natural Gas	Member
7.	Secretary Urban Development	Member
8.	Secretary Ocean Development	Member
9.	Secretary Science and Technology	Member
10.	Secretary Agriculture and Co-operation	Member
11.	Secretary Chemicals and Petro Chemicals	Member
12.	Secretary Industrial Development	Member
13.	Secretary (Security) - Cabinet Secretariat	Member
14.	Director General Coast Guard	
15.	Chairman of the Concerned Port	
16.	Director General Hydro Carbons	
17.	Any member co-opted as deemed necessary	

Functions of NOS-CMG

- Continuously monitor the post incident situation
- Evaluate response to major oil pollution incidents
- Arrange manpower, equipment, resources and financial assistance
- Review adequacy of national and other contingency plans
- Suggest measures to prevent recurrence of incidents
- Suggest measures to reduce risk of pollution from ports/ oil installations

Composition of SOS-CMG

Chief Secretary	Chairperson
Secretary (Labour)	Member.
Secretary (Environment)	Member
Secretary (Health)	Member
Secretary (Industries)	Member
Secretary (Public Health Engg.)	Member
Secretary (Fisheries)	Member
Chairman, State Pollution Control Board	Member
4-Experts (Industrial Safety & Health) nominated by State Govt.	Member
Secretary/Commissioner(Transport)	Member
Director (Industrial Safety)/ Chief Inspector of Factories	Member
Fire Chief	Member
Commissioner of Police	Member
One Industry Representative nominated by State Govt.	Member
State Civil Defence Chief	Member
Secretary (Revenue/Home)	Member
Directorate of Industrial Safety and Health	Member
Any other member deemed necessary by the Chairman	Member
Chairman State Maritime Board	Member Secretary

Appendix B 2

Functions of SOS-CMG

- Review local and facility contingency plans
- Assist the State Government in planning, preparedness and mitigation of major pollution incidents
- Review/ facilitate work of District Crisis Management groups
- Nominate personnel to the Local Action Group (LAG) and Local Action Group Support Team (LST)
- Publish a list of experts and officials in the State who are concerned with the management of oil pollution incidents

Composition of DOS-CMG

District Collector	Chairperson
Inspector of Factories	Member Secy.
District Energy Officer	Member
Chief Fire Officer	Member
District Information Officer	Member
Controller of Explosives	Member
Chief, Civil Defence	Member
One Trade Union Representative nominated by District Collector	Member
Deputy Superintendent of Police	Member
District Health Officer/Chief Medical Officer	Member
Commissioner, Municipal Corporations	Member
Representative of the Department of Public Health Engineering	Member
Representative of Pollution Control Board	Member
District Agriculture Officer	Member
4 Experts (Industrial Safety & Health) nominated by District Collector	Member
Commissioner (Transport)	Member
One Representative of Industry to be nominated by the District Collector	Member
Chair-person/Member-Secretary of Local Crisis Groups	Member
Representative of the Port	Member
Representative of State Maritime Board	Member
District Forest Officer/ Wildlife advisor	Member
Any other member deemed necessary by the Chairman	

Appendix B 3

Functions of DOS-CMG

- Review facility contingency plans of ports/ oil installations
- Assist in preparation of the district oil spill contingency plan
- Assist the district administration in management of oil pollution incidents
- Continuously monitor every pollution incident
- Ensure continuous information flow to SOS-CMG regarding incident situation and mitigation efforts
- Conduct at least one full scale mock-drill at a facility each year and report observed strengths and the weaknesses of the plan to SOS-CMG

Composition of LOS-CMG

Sub-divisional Magistrate / District Emergency Authority	Chairperson
Inspector of Factories	Member Secy.
Industries in the District/Industrial area/ industrial pocket	Member
Transporters of Hazardous Chemicals(2 Numbers)	Member
Fire Officer	Member
Station House Officer (Police)	Member
Block Development Officer	Member
One Representative of Civil Defence	Member
Primary Health Officer	Member
Editor of local News paper	Member
Community leader/ Sarpanch/ Village Pradhan nominated by Chairperson	Member
One Representative of NGO to be nominated by the Chairperson	Member
Two Doctors eminent in the Local area, nominated by Chairperson	Member
Two Social Workers to be nominated by the Chair-person	Member
Environmental NGOs dealing with corals, mangroves, marine environment	Member
Representative of oil agencies	Member
Any other member deemed necessary by the Chairman	

Appendix B 4

Functions of LOS-CMG

- Prepare local oil spill contingency plan
- Train personnel involved in incident management
- Educate the population at risk of pollution about remedies and existing preparedness in the area
- Conduct at least one full scale mock-drill at a site every six months and forward a report to DOS-CMG
- Respond to all public inquiries on the subject

Periodicity of meeting - CMGs

CMG	Periodicity of meeting
NOS-CMG	As required basis
SOS-CMG	Once in six months
DOS-CMG	Every three Months
LOS-CMG	Every month

National Plan Working Group
Functions

- Advice CCA on strategic policymaking and funding direction
- Support CCA by considering overall operational aspects
- Consider issues such as the national plan, response equipment stockpiles, training, and contingency plan audits
- Address research, development, and technology, and environmental and wildlife interests of stakeholders to the Plan

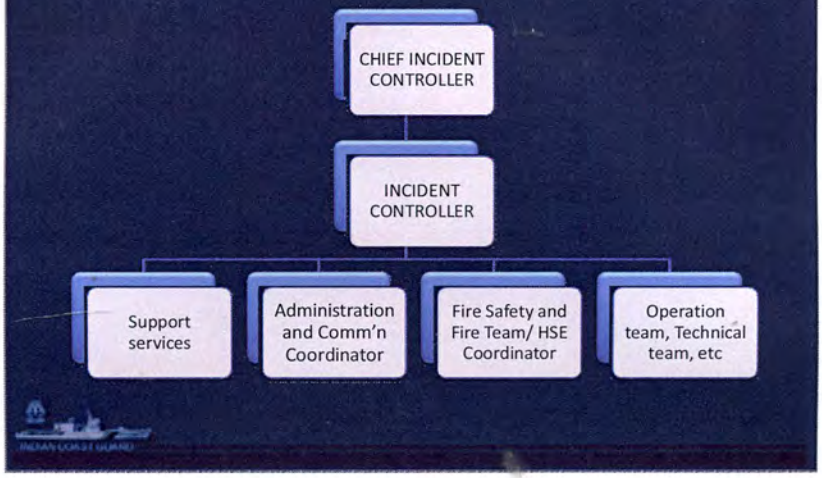
National Plan Working Group
Composition

Ministry of Environment and Forests
Ministry of Petroleum and Natural Gas
Ministry of Shipping/ Directorate General of Shipping
Ministry of Chemicals and Fertilizers
Ministry of Agriculture, Dept of Animal Husbandry, Dairying and Fisheries
Ministry of Earth Sciences
Directorate General of Civil Defence
Ministry of Health
Central Pollution Control Board
Indian Council of Agricultural Research
Industrial Safety and Health
Concerned industries
Centre for Environment and Explosive safety
Indian Chemical Manufacturers Association
Any other member who could advise on specialist matters

Appendix B 5

Incident Management Team

Incident Management Team



Chief Incident Controller

- Preparation, review and updating of plan
- Assessment of situation and declaration of oil spill emergency
- Mobilisation of main coordinators and key personnel
- Activation of Emergency Control Centre
- Deciding on assistance from MoU members/ external agencies
- Continuously reviewing situation and deciding response strategy
- Taking stock of casualties and ensuring timely medical aid
- Accounting for personnel after the emergency
- Ordering evacuation of personnel as and when necessary
- Taking decision in consultation with local Coast Guard and District Authorities when a tier 2 or tier 3 spill is to be declared

Local Action Group

- Planning Coordinator
- Operations and Technical Coordinator
- Logistics and Administration Coordinator
- Response Team Leaders (five per State)

Local Action Group Support Team

- Environmental Advisers
- Finance & Administration Officer
- Wildlife Officer
- Equipment Operators

Environment Group

- Advise on environmental aspects and public health impacts
- Advise on impacts of response, both real and potential
- Encourage collection of baseline data of vulnerable environmental features immediately before impact of the pollution plume
- Track success of preventive and counter pollution measures
- Begin to assess overall long term environmental impact

Facility Contingency Plan

- Requirement to hold a facility Contingency Plan
- List of plan holders by MoS, MoPNG, State Maritime Board, State Government
- Revision, at least once every five years or, whenever significant change in any of the plan elements
- Updating, at least annually

Place of Refuge

- Obligation to provide place of refuge
- Certain places identified in Committee Report of Chairman National Shipping Board
- Guidelines being developed

Mock drills and Exercises

- By every port facility and oil installation
  - at least once every three months
- Area or regional level exercises
  - at least once every six months
- National level pollution response exercises
  - conducted at least once a year
  - mobilization of stakeholder resources

Competency Standards

- **IMO OPRC Level 1**
  - all responders including LST personnel, and supervisors appointed as on-site managers
  - certificate deemed to be valid for 5 years from date of issue
  - periodic training to maintain currency of certification
- **IMO OPRC Level 2**
  - middle management personnel responsible for managing the operational response, e.g. CIC, SIC, IC, and environment and scientific coordinators, and Fire Brigade (Haz Mat) specialists, and LAG personnel

Discovery and Notification

- Duty to Report
- Occasions for Report
- Contents of Report
- Supplementary Report
- Reporting Procedures
- Follow-up on Reports

Response

- Salvage
- At-Sea Response
- Harbour Response
- Shoreline Response

Emergency Response Units

Emergency Response Units

SALVAGE MONITORING AND CONTROL UNIT	**SMCU**	To monitor and control salvage operations
MARINE RESPONSE CENTRE	**MRC**	To direct response action at sea
SHORELINE RESPONSE CENTRE	**SRC**	To direct shoreline response
EMERGENCY CONTROL CENTRE	**ECC**	To monitor operations to contain any potential pollution within an offshore installation and its reservoir or a port facility jurisdiction
ENVIRONMENT GROUP	**EG**	To provide environmental and public health advice to all these centres

Emergency Response Units

SALVAGE MONITORING AND CONTROL UNIT	**SMCU**	To monitor and control salvage operations
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ENVIRONMENT GROUP	**EG**	To provide environmental and public health advice to all these centres

Offshore Control Unit

- Coast Guard Commander
- Emergency operations manger
  - link between Coast Guard, Emergency Response Centre and Offshore Installation Manager
- Operator's representative
  - represents the interests of the owner, operator, contractors and liability underwriters of the offshore installation
- Environmental liaison officer
  - advises on the environmental implication of any proposed actions
- Representative of DGH
  - advices on the importance of the installation to strategic supplies and other matters of public interest
- Specialist or technical advisor
  - either from the operator, the DGH or an independent source, provides advice as circumstances require

Marine Response Centre

- Coast Guard Pollution Response Officer
  - to manage sea borne and air borne operations
- Coast Guard Logistics officer
  - to organise deployment of equipment and control all Coast Guard financial commitments
- Representative of the port authority
  - if the incident involves a port or its services
- An officer of the state fisheries department
  - to advise on impact on fisheries and liaise with fisheries cooperatives
- Local administration official
  - to act as liaison officer with the Shoreline Response Centre
- Environmental Liaison Officer, nominated by Environment Group
- Defence Public Relations Officer
  - to liaise with the media

Emergency Control Centre

The contingency plan will predetermine whether Emergency Control Centre would be located at the port's own operations room or at the nearest Coast Guard facilities taking account of many factors, including :-

- Availability and range of communication equipment
- Ancillary equipment such a radar for the control of port traffic
- Availability of local knowledge - sensitive areas, bathymetry, port resources to supplement salvage and counter pollution
- Size of building and number of rooms (large rooms for press briefings and communication, quiet rooms for decision making by SCU)
- Availability of support staff

Risk Categorisation: Port Facilities

Category	Description
A	Port handling crude oil/tanker visits /SPM/STS
B	Ports which handle products only OR Ports which handle ships carrying > 1000 tons of fuel/bunker oil
C	Other than Cat 'A' and Cat 'B'

Inventory Standards: Port Facilities

		Risk Category		
		A	B	C
EQUIPMENT	Inflatable Boom in metres	2000	1000	600
	Skimmer (20TPH)	4	4	2
	OSD Applicator	6	2	2
	Oil Spill Dispersant (litres)	10,000	5,000	3,000
	Flex Barge (10 Tons)	4	02	2
	Current Buster booms at ports where tidal current is >2 Kn (Nos)	2	---	--
	Current Buster booms at ports where tidal current is >4 Kn (Nos)	--	2	--
	Sorbent boom pack (meters)	500	200	--
	Sorbent Pads (Nos)	2000	1000	--
	Shoreline cleanup Equipment	Mini Vacuum pumps	--	--
		OSD Applicator	--	--
		Fast tanks-05	--	--
VESSE	Work Boats	2	1	1
	Tugs	2	1	--
MANPOWE	IMO Level 1	10	6	2
	IMO Level 2	4	2	--
	Other	10	10	5

Risk Categorisation: Oil Agencies

Category	Description
Super A	Agencies operating more than five offshore platforms in an area
A	Offshore E&P Installation for crude oil, SPMs handling crude oil, FPSO, platform involved in crude oil transfer
B	Vessel/platform involved in drilling operation
C	Only gas based E&P Ops/LPG/LNG/Naptha

Inventory Standards: Oil Agencies

		Risk Category			
		Super A	A	B	C
EQUIPMENT	Inflatable Boom in metres	2000	1000	600	600
	Skimmer (20TPH)	4	4	2	2
	OSD Applicator	6	2	2	2
	Oil Spill Dispersant (litres)	10,000	5,000	3,000	3,000
	Flex Barge (10 Tons)	4	2	--	--
	Current Buster booms at ports where tidal current is >2 Kn (Nos)	2	2	---	--
	Sorbent boom pack (meters)	500	200	--	--
	Sorbent Pads (Nos)	2000	1000	--	
	Shoreline cleanup Equipment	Mini Vacuum pumps	--	--	--
		OSD Applicator	--	--	--
		Fast tanks-05	--	--	--
VESSEL	Work Boats	2	1	--	1
	MSV/OSV/Tugs	2	1	1	--
MANPOWER	IMO Level 1	10	6	2	2
	IMO Level 2	4	2	--	--
	OTHER	10	10	5	5

Coastal State LCP

Key Elements

- Sensitivity mapping
- Protection priorities
- Shoreline protection
- Shoreline cleanup
- Response personnel
- Waste disposal
- Fisheries closure areas
- Re-imbursements

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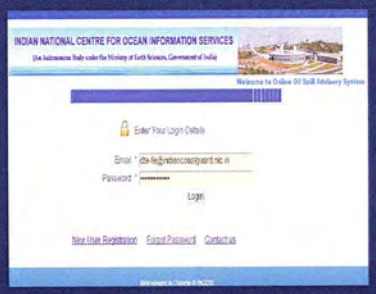
Inventory Standards: Coastal States

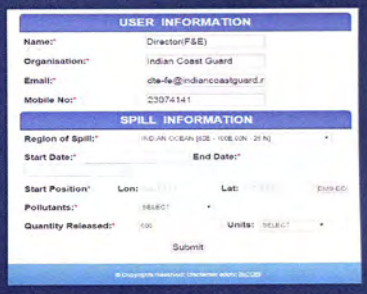
PALLETISED CONTENTS
Inflatable Boom 240m in 10m & 20m lengths
Boom ancillary pallet
Shore Sealing Boom 400m in 10m & 20m lengths
Minivac System
Multi Skimmer 10TPH and 20 TPH
Portable temporary Storage Devices x 8 nos.
Inflatable Shelters
Decontamination Station Equipment
Spate pumps x 3
Suitable Power pack
Discharge hose
Command pallet *(Walkie Talkie, Torch, Folding Table, Folding Chair Map of the Area, etc)*

Way Ahead - National Capabilities

AID TO RESPONSE	PROVISION BY
Capping device *(rating ≥ 10,000 PSI, 3000m depth, possibility of offset installation)*	MoPNG
Subsea oil spill dispersant system	
Large scale OSD stockpile	
Emergency towing vessels *(bollard pull ≥ 200 tons)* x two	MoS
Salvage vessel	
Hot Tapping Device	
High Volume Offshore Skimming System	MoD
Incineration Boom	
Aerial Dispersant Delivery System	
Ecological Sensitivity Index Map	MoEF
Oil Finger Printing Laboratory	DoST
Radar oil spill detection capability	MoD, MoPNG, MoS

Online Oil Spill Advisory



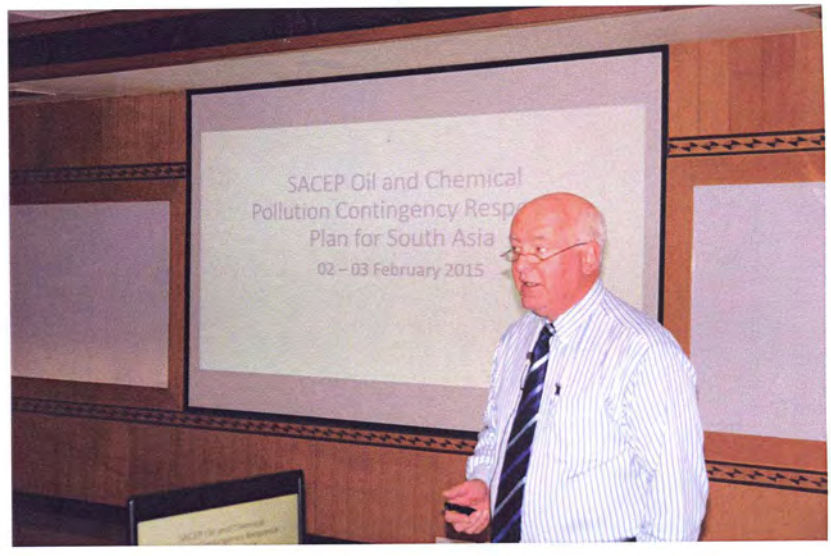


INDIAN COAST GUARD

Thank you

INDIAN COAST GUARD

Photographs of the session


SACEP Oil and Chemical
Pollution Contingency Resp
Plan for South Asia
02 – 03 February 2015


India /
kinley


NATIONAL OIL SPILL
DISASTER CONTINGENCY PLAN

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29.	Krishnapatnam Port Co.Ltd.;	Capt.P.K.Gaur President (Marine) & Dy. Conservator Krishnapatnam Port Co.Ltd.; P.O. Bag No. 1, Muthukur, Nellore - 524 344. Andhra Pradesh.	pradeepgaur@krishnapatnamport.com	
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39.	Spilcare Environmental Technologies Pvt Ltd	Mr.Nitin Khanna Director Spilcare Environmental Technologies Pvt Ltd 128/12, Emerald Bldg Annanagar West Extention, Thirumangalam Chennai -600 040	E-mail : khanna@spilcare.com Web : www.spilcare.com	Tel : 091-44-6566 1522 Fax : 091-44-2615 8457

40.	PPN Power Generating Co. Pvt	Mr.Koti Reddy, PPN Power Generating Co. Pvt LtdNagapattinam Ho, Pillaiperumalnallur Post Thirukadaiyur, Nagapattinam – 611001	kotireddy@ppnsite.com	9489442049
41.	Chemplast Sanmar Ltd, Karaikal	Mr.R.Padmanabhan, Chemplast Sanmar Ltd, Karaikal 611002	RPSah@sanmargroup.com, rpsah@sanmargroup.com	9894740287
42.	ICMAM	Dr.S.Sundara Moorthy Scientist-F ICMAM Project Directorate, 2nd Floor, NIOT Campus, Velacherry-Tambaram Main Road, Pallikkaranai,Chennai - 600100	sundar@icmam.gov.in	Tel:66783584
43.	ICMAM	Dr.Tune Usha Scientist-E ICMAM Project Directorate, 2nd Floor, NIOT Campus, Velacherry-Tambaram Main Road, Pallikkaranai,Chennai - 600100	usha@icmam.gov.in	Tel:66783587
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