BLUE WATERS

Newsletter

On Marine Environment Protection

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From the Director General's Desk

At the outset, I would take the liberty to express a sense of reassurance at the increased participation of stakeholders and resource agencies at both the 18th NOSDCP meeting held on 31 May 2013 and the recently concluded NATPOLREX-V exercise, representing an increased commitment to oil spill response preparedness. The maiden participation of the IAF C-130 J Super Hercules remarkably not only enhances the reach and capability of the nation to respond to marine oil spill disasters within the Maritime Zones of India.

Considering the importance of joint capacity building for oil spill response amongst coastal states in the region, the Indian Coast Guard conducted the first ever modular IMO OPRC Level 1 and Level 2 international training programme for personnel from Maldives and Sri Lanka, under Indo-Maldives-Sri Lanka Trilateral Cooperation programme from 25 Nov to 10 Dec 2013 at Mumbai which also included their participation in NATPOLREX as international observers.

Marine Environment Protection is a wholesome concept for the Indian Coast Guard. I am happy to note that nearly twenty thousand people across all the coastal states of India participated in the Coastal Cleanup Day organised by us on 21-22 September 2013 under the aegis of South Asian Co-operative Environment Programme.

The six-monthly, annual conservation plan and measures initiated by the Coast Guard for the protection of the endangered Olive Ridley turtles in Orissa, since early eighties, remains a permanent feature on the Coast Guard's annual operational calendar. This year, 56 ship days and 25 aircraft hours were devoted to providing support to, both Central and State Governments for protection of the Olive Ridley turtles.

Risks to marine environment are a part and parcel of the country's burgeoning economic development. The key lies in pursuing sustainable development and ensuring that any externalities owing to the maritime transportation of oil and ongoing indigenous oil exploration and production are duly internalised.

Wishing you all a safe environ and clean seas in 2014.

Jai Hind.

(Anurag G Thapliyal)
Vice Admiral
Director General
Indian Coast Guard

28 Jan 14
New Delhi

Editorial

This issue of Blue Waters focuses on the challenge of carrying out "Net Environmental Benefit Analysis," or NEBA for short, as a necessary part of the contingency planning process.

The sinking of m.v. Bingo at the approaches to Hoogly harbor with 232 tonnes of bunkers and the consequent risk of oil pollution has highlighted the need for stringent legislation to deal with negligent ship-owners. The issue is expected to be addressed in a certain measure with incorporation of the provisions of the Nairobi Wreck Removal Convention in the Merchant Shipping Act, 1958.

The incidents discussed under both, World Watch and India Watch reveal that oil spills have largely occurred from pipelines, many for want of effective maintenance.

The section on IMO News brings out the significant progress made by the 1992 Fund in terms of winding up of the 1971 Fund and issuing guidance to Member States for presenting of claims and fructifying claims in the tourism sector.

As regards NATPOLREX-V, maiden participation of the Indian Air Force C-130J Super Hercules aircraft for oil spill surveillance and possible aerial dispersant spraying application has been a major addition to the national oil spill response architecture.

(AA Hebbar)
DIG
Director (FE)

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NET ENVIRONMENTAL BENEFITS ANALYSIS - THE INDIAN CONTEXT

Introduction

Assessment, Containment, Recovery, or Dispersal form the eventual components of a response to an oil spill. Whilst the ultimate goal of an oil spill response is to reduce the impact on the environment, in some cases the response activity is also undertaken as a public relation measure. A measured and an objective decision in the aftermath of an oil spill is critical considering the long term social, economic and long lasting environmental impact. A Net Environmental Benefit Analysis (NEBA) therefore becomes an important tool for the decision makers to evolve a consensus for selecting the methodology of oil spill response and in defining the scope of implementation of the response.

The decisions taken in the aftermath of major oil spill incidents, have revealed that oil response activities have in some cases aggravated the situation and have lead to even graver environmental impact especially in the case of use of chemical dispersants. Historically, dispersants had been quite toxic themselves, and dispersing oil before it reaches inshore habitats increases oil concentration in the water column in the short term affecting the marine life, but it could be a net environmental benefit in the long term. The use of dispersants itself therefore is a double-edged sword and the decision to use dispersants have to be weighed in the background of the net environmental benefit that would eventually accrue as against natural cleanup (otherwise also known as the 'do-nothing' option).

Tool for Decision Making

Environmental Analysis and study groups have analysed major oil spills and drawn lessons which go a long way in predicting the possible outcomes of a response strategy in the aftermath of a new incident. NEBA has been effectively applied in all such situations by utilizing the experience gained from previous oil spills. It serves as a decision making tool for the decision-makers, developed apriori in a localized manner for a region with the essential backdrop of the local social, economic and environmental factors. The ideal response to an oil spill will, therefore, vary from region to region depending upon the severity of the spill, type of spill, nature of spill, prevalent weather conditions and the predicted impact on the marine and human population.

Prime examples of application of NEBA include mv Braer oil spill in the United Kingdom in Jan 1993, where the 'do-nothing' option was explored and the oil was allowed to disperse naturally as the area of spill was near a rocky shoreline. In another example of an oil spill from a Chinese ship of the Danish coast in 2004-05, the oil was allowed to reach the shore. Eventually the recovery of oil became more cost effective.

Fig 1 - mv Braer oil spill

Contingency plans for handling a response to oil spill for a port, harbour or an offshore region are accordingly recommended to be developed on the basis of clear and transparent policies in consultation with all stake holders. This would essentially involve weighing of advantages and disadvantages of various

Fig 2 - Hatched Olive Ridley turtles

spill responses to the flora and fauna and their habitat, compared to the option of 'no response'. The contingency plan for oil spill response has to factor the short term and long term impact of the methodology deployed. Historically, focus has always been on mechanical means of removal, based on the philosophy that it is always a net environmental benefit to remove oil from the environment. The contingency plans as a result cater for deployment of mechanical means of containment and recovery devices at a short notice. Whilst containment and recovery appear to be the most effective response, it may always not be possible to implement due to inadequate logistical means of deploying the mechanical devices. Also, it is generally feasible to disperse oil only while it is relatively unweathered and of low viscosity. The window of opportunity for use of dispersants usually extends upto 1-3 days after the spill.

Fig 3 - Fishing

Decision-makers need to assess the expected impact of dispersed oil to make an informed decision as to whether dispersant use will be of net environment benefit. The tradeoff is essentially between its impact on the shoreline habitat, wildlife on the water surface and water column. The risks of impact need to be qualified for an objective comparison of the selected measure of response. Deliberations on the response methodology and quantifications of the risks form an essential component of the NEBA. Short term loss of water column marine life as an aftermath of use of dispersant has to be an accepted risk in such a response.

Cost effectiveness of a response methodology is also to be considered while evaluating a response strategy. The per tonne cost of oil recovery increases drastically as we move away from the shoreline to offshore and then to deep sea. The increase in the cost is essentially due to the requirement of deployment of specialised assets in the deep sea for a long duration of time. Therefore, cases in which the shoreline is not sensitive to the process of natural recovery needs to given serious consideration.

Do-Nothing Option

Natural recovery process or the 'do-nothing' option also needs to be deliberated over an overzealous

desire to react to a oil spill by all agencies concerned. NEBA in such a case has to be utilized in conjunction with the available options for response to compare the long term effects of the recovery process. Especially in areas which have coral reefs, conservation of the terrestrial and marine diversity for scientific purposes as well as for tourism can be an overriding factor for a decision against the potentially damaging effects of use of dispersants.

Fig 4 - Corals

Natural recovery process also needs to be considered especially for shoreline cleanup operation. Whilst it is easy to agree, that heavy accumulation of oil should be removed, deciding 'how clean is clean' and when to stop is difficult. Studies have revealed that 85% of rocky shores and 75% of salt marshes have recovered within three and five years respectively; regardless of whether they had been cleaned or not. Moreover, it is unreasonable to expect cleaning to reduce the recovery timescales significantly below three and five years, because of the inherent timescale of natural recovery processes. The NEBA is such scenarios recommends moderate cleanup for the sake of the interacting systems without prolonging the biological recovery time of the shore.

Indian Context

With a shoreline of 7500 kms and 44 million sq Km of territorial waters, and with almost 50% the world's crude oil being transported thorough the Indian waters, India requires to have an effective response strategy for an oil spill. Over the years the potential threat of an oil spill has exponentially increased. While there has not been any serious accident in the recent past, the ever increasing traffic of tankers through the region is a good enough reason for us to be prepared. The net environmental benefit approach for an oil spill response would essentially help us to build contingency plans based on the lessons learnt from the previous incidents of oil spills around the world.

Fig 5 - Mangroves

The contingency plans need to manage the response to off-shore spill, shoreline-bulk oil removal, shoreline clean up for secondary oil removal and restoration process to aid biological recovery. In each case, the plans have to be drawn on the basis of the perceived impact to the local environment and the available logistical effort. It is, therefore, prudent to divide the entire coast line according to the perceived threat levels of oil spill and concentrate efforts for development of infrastructure and ability to deploy pollution response assets within a short period of time. The decision for use of dispersants needs to be qualified in the contingency plan and is

to be resorted to with consensus of all agencies involved.

The Indian Coast Guard has been entrusted with the task of preserving and protecting the maritime environment along with prevention and control of marine pollution. Being the primary agency tasked with responding to offshore oil spills it is essential that NEBA practices are adopted by the Indian Coast Guard in planning and execution of all such response operations. In the aftermath of an oil spill, response management along the lines of contingency plans developed with net environmental benefit approach would be crucial in reacting suitably to a situation.

Past oil spills have shown that the media and the networked citizens would not tolerate the 'do nothing option' of the NEBA from the Coast Guard, even though 'doing something' may not be cost effective, if the ship owner absconds or the ship is without insurance. The application of NEBA principle in an Indian oil spill scenario may, therefore, take time. Until then, the present response option is likely to be the mainstay of the oil spill response strategy.

- Cdr Brijendra Singh Rawat
ICGS Samudra Prahari

NET ENVIRONMENTAL BENEFITS ANALYSIS - THE UNITED STATES APPROACH

Net environmental benefits are the gains in environmental services or other ecological properties attained by actions, minus the environmental injuries caused by those actions. A net environmental benefit analysis (NEBA) is a methodology for comparing and ranking the net environmental benefit associated with multiple management alternatives. NEBAs can be conducted for a variety of stressors and management options, including chemical contaminant mitigation, hydropower mitigation, global climate change mitigation (e.g., carbon sequestration), etc. NEBA for chemically contaminated sites typically involves the comparison of the following management alternatives:

(a) Leaving contamination in place

(b) Physically, chemically, or biologically remediating the site through traditional means

(c) Improving ecological value through onsite and offsite restoration alternatives that do not directly focus on removal of chemical contamination or combination of those alternatives.

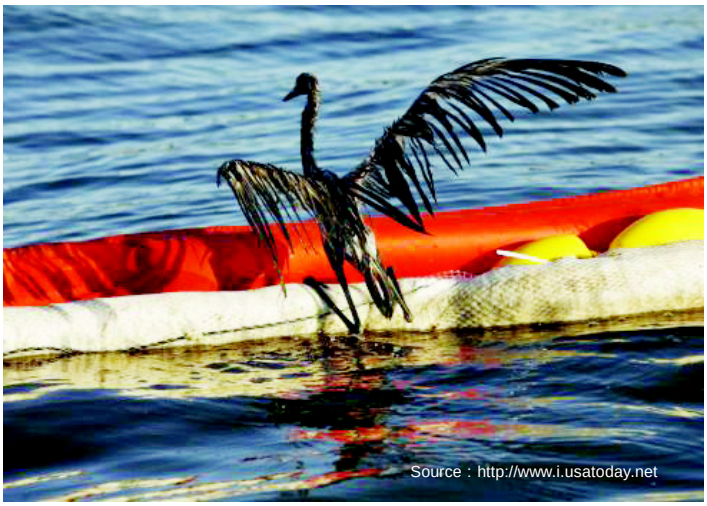

Fig 6 - Oily bird

NEBA involves goals that are common to both natural resource damage assessment and remedial alternatives analysis including valuing ecological entities, assessing adverse impacts, and evaluating restoration options. The Oak Ridge National Laboratory is known to be developing a framework for NEBA, with special application to petroleum spills in terrestrial, wetland and aquatic environments.

This framework is reportedly funded by the National Petroleum Technology Office of the U.S. Department of Energy. Primary information gaps related to NEBA include: non-monetary valuation methods, exposure-response models for all stressors, the temporal dynamics of ecological recovery, and optimal strategies for ecological restoration.

Fig 7 - Aerial application of OSD

Net Environmental Benefit Analysis (NEBA) applied to oil spill response is the process of considering advantages and disadvantages of different spill response options (including no response) to arrive at a spill response decision resulting in the lowest overall environmental and socioeconomic impacts.

Spill response will likely involve some combination of response options. There are no response methods that are completely effective or risk-free. NEBA should be conducted with appropriate regulatory agencies and other organizations as part of spill contingency planning. NEBA is important for pre-spill planning since some response options have a limited window of opportunity.

- Vijith VS, U/Nvk (QA)
ICGS Mundra

NET ENVIRONMENTAL BENEFITS ANALYSIS - A STEP-BY-STEP GUIDANCE TO IMPLEMENTATION

A Net Environmental Benefit Analysis or NEBA is used to evaluate the decision to use oil spill dispersants. The concept is that the total benefit of applying dispersants is evaluated compared to the potential damage that would occur if they were not applied. It is important to stress that at this time NEBA is more of a concept than a developed tool. The NEEBA, or Net Environmental and Economics Benefit Analysis, is a variation on this theme and adds the concept of economics to the vector. It should be stressed that this concept has been even less developed as a tool than the basic NEBA.

The sequence of analysis in NEBA is intended to proceed from the concentrations of oil expected under the slick, the toxicity of these diluted fractions to the local flora and fauna, and a comparison of this with the distribution and fate of the oil if not treated. It is proposed that these models be used to generate this type of information and sometimes even the economic analysis that flows with it.

Fig 8 - Sea birds fishing near shorelines

The following steps are followed for a full NEBA/ NEEBA analysis.

Step - 1

Generate the dispersant application and countermeasures scenarios. This is typically carried out using computer analysis and includes:

- Spread, thickness, and geographical prediction of oil deposition, including weathering and chemical composition;
- Application scenario, including dosage of the various amounts, predic-tion of effectiveness, and deposition of unburned fractions;
- Very importantly-concentrations of the oil under the slicks and their fate and movement;
- Effectiveness of mechanical and other countermeasure scenarios; and deposition and movement of the oil if no countermeasures were carried out.

A NEEBA analysis would include the economics of the three components- dispersant application, no-counter measures, and the normal mechanical removal efforts. The dilution of dissolved and dispersed hydrocarbons can be calculated. Dispersant scenarios should be calculated with the variances in the dispersibility of the oil. It is typical to calculate all the dispersant scenarios, with effectiveness half of the predicted amount and some percentage above to yield three scenarios.

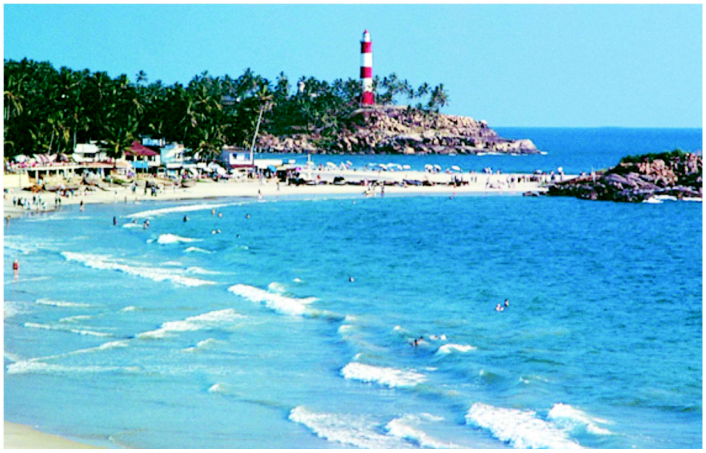

Fig 9 - Kovalam beach

Step - 2

Generate ecological-impact scenarios for mechanical countermeasures only, other forms of countermeasures that may be considered or applied-in suites or separately-dispersant-only, and no countermeasures. Again, economics can be included to yield a cost analysis. The impact scenarios will include the toxic effects on key species in the affected areas, the variances in trajectories, and a sensitivity analysis of the predicted oil concentrations under the slick. The predicted recovery of species is also modeled.

Fig 10 - Mangroves

Step - 3

The outputs of the total process include information on the effects for each countermeasure scenario, including the effects of undispersed oil or oil that was not subject to the dispersant process. These effects can then be evaluated in terms of their ecological value. The social costs and benefits are also evaluated at this stage.

A NEEBA analysis would include an evaluation of the economic costs and the benefits of each countermeasure scenario.

- Premraj, PSE (P) PRT (East)

EVENTS

INTERNATIONAL COASTAL CLEANUP DAY - 2013

International Coastal Cleanup Day was organized across the coastal states by the Coast Guard on 21/22 Sep 2013. Indian Coast Guard on behalf of South Asia Co-operative Environment Programme (SACEP) has been coordinating International Coastal Cleanup Day programme across the coastal states in India since 2006 with assistance of volunteers from schools/ colleges and district administration.

In ICC 2013, Mumbai had the highest participation of 2400 volunteers. Interestingly, Puducherry had the second highest participation of 2000 volunteers over the past years. New Mangalore was third at 1500 volunteers. Nationwide, a total of 19,935 volunteers participated in the ICC 2013 campaign conducted by the Coast Guard. Various govt and civil agencies including NCC cadets, school and college students formed the largest proportion of volunteers.

Debris collection was highest at Puducherry and Mandapam at approx 12,000 kg. Porbander saw debris collection of 11,000 kg. In Chennai, Tuticorin and Mundra 8,000 kg each was collected. A total of 1,16,026 kg of marine litter was collected during the nationwide campaign.

Fig 11 - ICC 2013 - Paradip

Fig 12 - ICC 2013 - Porbander

Apart from other armed forces, ICC 2013 received good support from the civil authorities, central and state government organisations, municipal corporations, NGOs, ports, hotels, and other private enterprise.

Region	No. of participants	Debris collected (kg)
West	8360	29911
East	6080	51150
North-east	400	1200
A&N	2026	5400
North-west	3069	28365
Total	**19935**	**116026**

Table 1 - Regionwise efforts in Coast Guard ICC-2013 campaign

Chief Guests for ICC 2013 included District Collectors, District Chief Conservator, District Police Commissioner, Deputy Superintend of Police, Tehsildar and Sub-Divisional Officer in smaller locations.

Fig 13 - ICC 2013 - Kakinada

Overall, the participation was in proportion to the local population, except Puducherry which has been witnessing overwhelming participation over the past years. The Coast Guard received adequate support from all quarters for conduct of the international coastal cleanup day. The event was well covered by the local print and electronic media.

TRILATERAL INDO-MALDIVES-SRI LANKA COOPERATION PROGRAMME FOR STRENGTHENING MARINE POLLUTION RESPONSE

The Indian Coast Guard conducted the IMO Oil Pollution Preparedness, Response and Cooperation (OPRC) level 1 and level 2 courses at Mumbai under the Indo-Maldives-Sri Lanka trilateral cooperation programme from 25 Nov 2013 to 06 Dec 2013. The training programme was conducted as an outcome of the second National Security Advisor level meeting on trilateral cooperation on Maritime Security between India, the Maldives and Sri Lanka held in Colombo on 08 Jul 2013.

Fig 14 - Trilateral Cooperation participants with DGICG onboard ICGS Samudra Prahari

Five participants each from Maldives and Sri Lanka participated in the training. IMO OPRC level 1 training for first responder was conducted from 25-29 Nov 2013 and level 2 training for on-scene commanders and supervisors was conducted from 02-06 Dec 2013.

Subject matter experts from the Coast Guard and different organisations including NDMA, NIO, ONGC, State Govt, Mumbai University etc served as faculty for imparting the two week long training.

Fig 15 - Gallery of events - Trilateral Co-operation

With an aim to provide a practical know-how and better understanding of the subject, a visit of the participants was arranged to a pollution response equipment manufacturing unit on the outskirts of Mumbai. In addition, a visit to the SCI oil tanker mv Gandhar was also arranged and participants were briefed on practical compliance of MARPOL regulations. Additionally, visit to Pollution Control Vessel ICGS Samudra Prahari and Pollution Response Team (West), Mumbai was also organized for practical demonstration of pollution response equipment.

Post completion of IMO level 1 and level 2 courses, trained foreign officers participated as observers in the fifth edition of National Level Pollution Response Exercise at sea off Mumbai on 10 Dec 2013. The sea exercise was preceded by a table top exercise on 09 Dec 13, enabling them to consolidate concepts acquired during the course of class room training.

Fig 16 - Pollution Response Equipment demo onboard ICGS Samudra Prahri

The foreign trainees were awarded certificates and memento onboard Pollution Control Vessel Indian Coast Guard Ship Samudra Prahari by Vice Admiral Anurag G Thapliyal, AVSM, Director General Indian Coast Guard, Chairman NOSDCP, on conclusion of NATPOLREX-V.

The conduct of IMO OPRC level 1 and level 2 training for the participants from Maldives and Sri Lanka has led to better mutual understanding of each others capacities, capabilities and SOPs for response to an oil spill. The successful completion of the IMO OPRC level 1 and level 2 training has enhanced the position of our county as an international player in oil spill response.

FIFTH NATIONAL LEVEL POLLUTION RESPONSE EXERCISE

NATPOLREX-V

The Indian Coast Guard demonstrated its preparedness and readiness to intervene effectively in containing an oil spill disaster at the fifth edition of National Level Oil Spill Response Exercise titled CLEAN SEA-V, conducted at sea off Mumbai from 09-10 Dec 2013. The exercise tested the preparedness of the Coast Guard and other resource agencies in responding to a major oil spill by invoking the provisions of the NOSDCP established and implemented by the Coast Guard. The exercise was reviewed by the Chairman NOSDCP, Vice Admiral Anurag G Thapliyal, AVSM, Director General Indian

Fig 17 - Boom laying by MbPT Tugs

Coast Guard.The Indian Coast Guard is the Central Coordinating Agency for responding to oil spills in the maritime zones of India and has developed the National Oil Spill Disaster Contingency Plan which delineates the responsibilities of different government organisations and departments and other resource agencies for effective response to any oil spill.

Fig 18 - IAF Super Hercules C-130 J during NATPOLREX V

The exercise was conducted in two phases. A table top exercise was conducted on 09 Dec 2013, wherein a simulation was carried out to rehearse the standard operating procedures of various stakeholders for search and rescue, activation of NOSDCP, oil spill trajectory assessment, mitigation measures for resources at risk and shoreline protection.

At sea oil spill response exercises were conducted on 10 Dec 2013 off Mumbai. The exercise evolutions included mobilisation of various pollution response resources, fire fighting assistance to stranded ship, intervention measures that included towing of stranded vessel away from coast to minimize the effect of oil spill on the coastline and pollution response operations that included containment and recovery of spilt oil, application of dispersant by ICG ships/aircraft and ships of other resource agencies. Nine Indian Coast Guard ships including one pollution control vessel, three CG Chetaks, two Dornier aircraft, one IAF

Fig 19 - OSD being sprayed through spray arms

Super Hercules C130J aircraft, one Indian Naval Ship, two tugs from MbPT/JNPT, two OSVs from ONGC, two MSVs/OSVs from other resource agencies and one tanker from Shipping Corporation of India participated in NATPOLREX-V. A total of 58 participants from 35 agencies participated in the exercise.

Exercise Clean Sea-V validated and reinforced response mechanism and enabled Indian Coast Guard to fine tune the actions required in such eventualities by improving coordinating and communication with different agencies. The highlight of the exercise was the maiden participation of Indian Air Force C-130J Super Hercules aircraft and ten participants from Maldives and Sri Lanka as international observers.

Fig 20 - DGICG handing over memento to ACAS Ops (T&H), IFA

IMO NEWS

PROCEEDINGS OF SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC) 18th SESSION

16-20 SEPTEMBER 2013

New SOLAS requirements for atmosphere-testing instruments

The Sub-Committee agreed on a new draft SOLAS regulation XI-1/7 on *Atmosphere testing instrument for enclosed spaces*, to require ships to carry an appropriate portable atmosphere-testing instrument or instruments, capable of measuring concentrations of oxygen, flammable gases or vapours, hydrogen sulphide and carbon monoxide, prior to entry into enclosed spaces. The Sub-Committee also agreed on a draft MSC circular on Guidelines to facilitate the selection of portable atmosphere-testing instruments for enclosed spaces as required by SOLAS regulation XI-1/7, for submission to MSC 93 for approval. Draft consequential amendments to the Code for the construction and equipment of mobile offshore drilling units (1979, 1989 and 2009 MODU Codes) were also agreed.

Fig 21 - Mobile Offshore Drilling Unit

Draft amendment to IMDG Code

The Sub-Committee agreed, in principle, to draft amendment 37-14 to the International Maritime Dangerous Goods (IMDG) Code and supplements, and instructed the editorial and technical group to finalize the amendments. The amendments update the IMDG code, including harmonization with the latest UN Recommendations on the Transport of Dangerous Goods and amendments to reflect and harmonize with the International Atomic Energy Agency (IAEA) Regulations for the Safe Transport of Radioactive material, 2012 Edition.

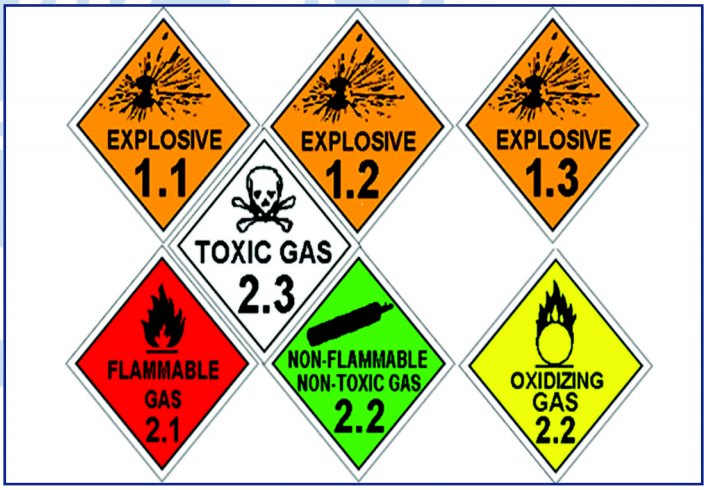

Fig 22 - IMDG Code

ACEP database developed by BIC

The Sub-Committee noted that the Bureau International des Containers et du Transport Intermodal (BIC) had developed a pilot database (www.bic-acep.org) for tracking Approved Continuous Examination Programmes (ACEP). It was agreed, in general, that the pilot BIC database should be developed as a global ACEP database. The Sub- Committee noted that BIC members would bear the associated costs.

PROCEEDINGS OF IOPC FUND MEETINGS

21-25 OCT 2013

Guidance for Member States

The sixth intersessional Working Group (WG) chaired by Mr Schofish of Germany, in its report presented practical solutions and detailed guidance for Member States in the event of an oil spill. Its work was approved for publication as 'Guidance for Member States'. The Guidance includes the following role of member states:-

- Government claimants to take initiative 'stand last in the queue' (SLQ) to overcome difficulties encountered in the application of the International Conventions. The purpose of SLQ is to increase the level of payments to no-governmental claimants to avoid pro-rating together.
- Member State is entitled to Subrogation of claims settled by the State
- Member States may enter cooperation agreements with the shipowner and the shipowner's insurer
- Member States shall reimburse overpayment of interim payments
- A Member State may offer the resources and personnel of its domestic insurers to assist the 1992 Fund following an incident in which case an MoU could be established with the domestic insurance body
- Member States could facilitate grouping of claims/claimants into categories allowing a large number of similar claims to be assessed as one body of claims against same criteria with the outcome that grouped claims can be dealt with more quickly than if they are presented individually
- Member States could draw up national expert list/expert mediation panel and these experts could be called upon at the request of one or more Member States affected by an incident, to look into possible compromise solutions
- Member State should consider the Model MoU with the 1992 Fund and the shipowner's insurer
- Member States should consider granting access to statistical data
- Member States should prepare and maintain an up-to-date database of the prices of commodities at risk of oil pollution damage or a database of sources of such information which would be available to Club/Funds' experts in the event of an incident
- The national response agencies of the Member States should coordinate with IOPC Fund delegates
- Member States should facilitate use of social security systems

Guidelines for Presenting Claims in the Tourism Sector

Guidelines for presenting claims in the tourism sector were approved for publication. The salient features of the guidelines are as follows:-

- Only business providing goods or services directly to tourists and/or leisure visitors in the immediate vicinity of the affected area are eligible for compensation
- For a claim to be admissible, the claimant must be able to show that he/she has suffered a financial loss due to the pollution and this loss has a direct link to the contamination due to oil
- Claim should be made by the owners or directors of the business
- Businesses and organisations that rely on tourists or leisure visitors for all or part of their income

are entitled to make claim for economic loss where they can prove that their gross profit was negatively affected by the pollution

- It is the responsibility of the owner/director of the business to keep his losses as low as possible
- Accurate records of any additional costs or losses incurred due to contamination should be kept by the claimant
- Compensation for damage to property or equipment due to contamination of spilled oil can be claimed
- Claims will be paid only for losses caused by contamination of oil from an oil tanker
- There must be a direct link between the contamination and the economic losses of claimant
- Claim will only be paid for property damage, pure economic loss caused by contamination and/ or consequent area-wide mitigation marketing by authorized organisations
- The economic loss or expense must have already taken place. Claims for future anticipated losses will not be considered
- The claimant must prove how much he has lost by providing revenues/gross profits from previous comparable periods as a base to any calculation, as well as dated invoices for additional costs other documented evidence

Fig 23 - Marina beach, Chennai

- Compensation can only be claimed if the claimant is undertaking a lawful activity and operates with all necessary licences and permits.

Compensation for VAT

There was considerable debate on compensation for Value Added Tax (VAT) on the document submitted by France emanating from its non-recoverability in the *Prestige* incident. In French law, damage incurred included VAT paid to contractors, and non-reimbursement had resulted in additional loss. In fact, VAT had been reimbursed by IOPC Funds in previous spills to private individuals, companies or local and regional authorities as long as they were separate legal entities from the State. According to legal opinion, since the State was both the party paying and receiving the tax, the State had received restitution and thus suffered no loss. Given the complexity of the issue, it was decided that the issue should be studied further by the Director of the IOPC Funds.

Fig 24 - mv Prestige oil spill

Winding up of the 1971 Fund

The winding up of the 1971 Fund was discussed at length. The recommendation of the Consultation Group that it should be wound up as soon as possible was widely supported. The International Group of P&I Associations, however, expressed strong reservations. The various legal and procedural steps involved in the winding-up were elucidated by the Chairman of the Consultation Group. The Director was instructed to

study the issues further in consultation with the Legal Affairs and External Relations Divisions of IMO. The Director intended to report on procedural matters in the spring 2014 session and expected the decision to dissolve the 1971 Fund would be made at the October 2014 session.

2010 HNS Protocol

Eight States had signed the 2010 HNS Protocol. Training courses on the HNS Convention were delivered at REMPEC, Malta and EMSA, Lisbon and similar program was scheduled in Malaysia in November 2013. Denmark informed having adopted a legislation requiring HNS receivers in the country to report contributing cargoes starting January 2014.

An informal meeting on the 2010 HNS Convention was held on 24 Oct 2013. States provided an update on the implementation of the HNS Convention and identified the challenges they are facing. It was noted that given the contributory nature of the HNS Convention and the entry into force requirements, states need to have better knowledge of the status of the Convention's implementation. This is critical information when consulting with stakeholders and briefing internally. It was agreed that an Informal Correspondence Group be reconstituted to continue the dialogue among states and observer delegations and maintain the momentum for the Convention's entry into force and that François Marier of Canada would be its coordinator. The coordinator will explore with the IOPC Funds the possibility of creating a page on the HNS Convention's website where messages, document and web links can be more easily shared.

Next Meeting

The Governing bodies agreed to hold an Extra-ordinary session of the 1992 Fund Assembly and the 1971 Fund Administrative Council during the week of 05 May 2014 and the next regular session during the week commencing 20 Oct 2014.

REPORTS

INDIA WATCH

URAN OIL SPILL

An oil spillage was reported by M/s ONGC Ltd on 07 Oct 2013, due to a rupture of its Mumbai High-Uran pipeline at Uran Plant, Mumbai. M/s ONGC reported that the spill occurred post power failure at the Uran plant at about 2000 hrs on 06 Oct 2013. The power failure had resulted in a shutdown of processing units and during this period, there was increase in oil line pressure due to which oil leakage occurred inside the plant. The leakage was arrested by clamping. However, approximately 04-05 M^3 of crude oil is suspected to have spilled onto the shoreline/sea.

Fig 25 - Shoreline view of ONGC Uran facility

A Coast Guard helicopter deployed for assessment ascertained that the seepage of oil from the ruptured line was accumulating in the storm water drain within the plant and flowing into the sea causing shoreline pollution.

The seepage from the rainwater drain into the sea was arrested by laying saw bags at the drain mouth initially and subsequently by sand/mud. A private

contractor was engaged by ONGC for recovery and shore line clean up. Samples were collected from the affected area by the National Environmental Engineering Research Institute (NEERI) and Maharashtra Pollution Control Board (MPCB) on 09 Oct 2013. The Central Pollution Control Board (CPCB) inspected the Uran plant facility to review the cause of the spill.

About 25 barrels of oil was recovered through the combined efforts of ONGC and private oil spill response provider. The skimming process was completed on 21 Oct 2013 and the drain line was cleaned.

Fig 26 - Recovery of spilled oil using skimmer

SINKING OF mv BINGO

A Panama flagged cargo vessel mv Bingo on passage from Sagar anchorage to China sank 22 nm South of Sagar Island on 12 Oct 2013 during the severe cyclone 'Phailin'. All eighteen crew abandoned vessel and were rescued by Digha Police off Subarnarekha river mouth. The vessel was carrying 232 MT of FFO and 30 MT of diesel onboard at the time of its sinking.

Coast Guard pollution control vessel ICGS Samudra Paheredar was initially deployed from Vizag for responding to any oil spill. A notice under section 356 (J) of Merchant Shipping Act, 1958 was issued to the owner, agent and shipping company of the vessel on 14 Oct 2013 for taking preventive action against possible oil spill.

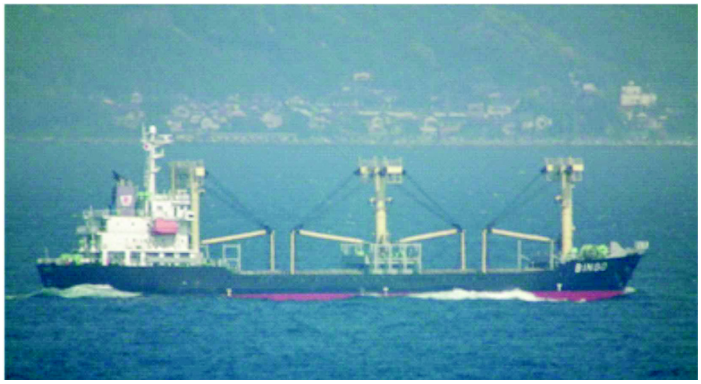

Fig 27 - mv Bingo before sinking

The Chairman, West Bengal Pollution Control Board has held meetings with representatives from Kolkata Port Trust, West Bengal State Police, M/s JB Boda Surveyors Pvt Ltd, M/s Croweboda & Company Pvt Ltd, M/s Sima Shipping Company and Indian Coast Guard to identify and finalize a salvage agency and action plan for the removal of the oil in a time bound manner. The shipping agent subsequently informed that the salvage agency is being arranged by the Protection and Indemnity (P&I) Club. Site survey was undertaken by eight divers from 12-17 Dec 2013 arranged by Lords contractor through P&I Club to block all vent pipes of mv Bingo.

Coast Guard units are regularly deployed for monitoring area for any oil spill contingency from the wreck. The area around the wreck is also being monitored through aerial surveillance. Coast Guard ships are responding to occasional minor sheens emanating from the wreck.

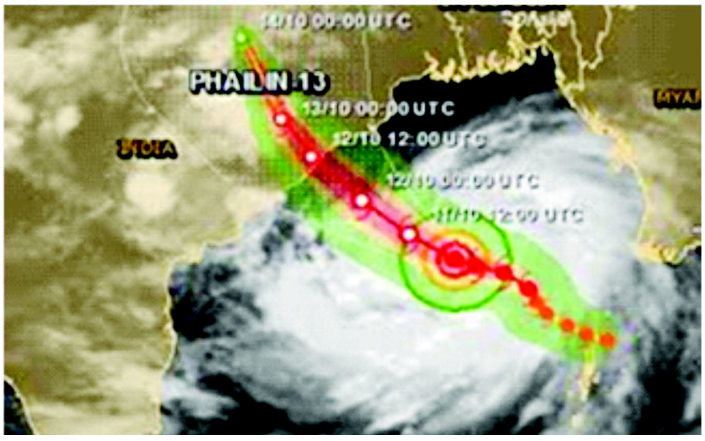

Fig 28 - Cyclone Phailin

Fig 35 - Grounded Power Barge 103

from Estancia along the coast. Around 10 ha of mangroves were affected. Between 21 and 23 November 2013, environment experts from the Philippines Environmental Management Bureau visited the site of the oil spill together with a United Nations Disaster Assessment and Coordination (UNDAC) environment expert, and a public health expert from the World Health Organization, in order to jointly undertake a preliminary assessment of the threats the spill poses to human health, livelihoods and the environment. The oil spill was a threat to the livelihoods of the population who depend mainly on fishing and tourism, and had been heavily affected by the typhoon.

Fig 36 - Oiled Estancia shoreline

QINGDAO OIL SPILL

Fig 37 - Volunteers set up oil fences to control leaked oil

The pipeline connecting Huangdao to Weifang in the northeastern province of Shandong owned by Sinopec Corp which is the largest oil refiner in China, began leaking oil into Qingdao's streets and port early morning on 22 Nov 2013. The pipeline was shut off about 15 minutes after the leak began, and workers began repairs. However, the oil caught fire later and exploded in two locations. The underground pipeline's explosion opened a hole in the road that swallowed at least one truck and oil seeped into utility pipes under Qingdao. Gas and oil exploded and caught fire over the sea and barriers were set up to keep it from spreading further than the 32,000 sq ft area already contaminated. More than 50 people were killed in the explosion and several were injured. The explosion spilled oil into the ocean, and temporarily shut down one of China's largest crude import terminals.

Fig 38 - Rescue operation in progress after explosion in oil pipeline

COAST GUARD POLLUTION RESPONSE TRAINING AND EXERCISES

ANNUAL CALENDAR - 2014

WESTERN REGION

IMO LEVEL COURSE

DATE	VENUE	TYPE OF COURSE	COORDINATOR
15-19 Apr 14	Mumbai	IMO Level 1 Course	PRT(West)
21-25 Oct 14	Mumbai	IMO Level 1 Course	PRT(West)

EXERCISE & TRAINING

DATE	VENUE	TYPE OF TRAINING	COORDINATOR
04-05 Mar 14	Kochi	Level 2 Exercise	DHQ-4
02 Apr 14	Murud Janjira	Level 1 Exercise	ICGS Murud Janjira
08 Oct 14	New Mangalore	Level 1 Exercise	DHQ-3
29 Oct 14	Vizhinjam	Level 1 Exercise	ICGS Vizhinjam
18 Nov 13	Lakshdweep	Level 1 Exercise	DHQ-12

ANDAMAN & NICOBAR REGION

IMO LEVEL COURSE

DATE	VENUE	TYPE OF COURSE	COORDINATOR
17-21 Feb 14	Port Blair	IMO Level 1 Course	PRT(A&N)
25-29 Aug 14	Port Blair	IMO Level 1 Course	PRT(A&N)

EXERCISE & TRAINING

DATE	VENUE	EXERCISE/TRAINING	COORDINATOR
Nov/Dec 14	Port Blair	PR Demonstration	PRT(A&N)

NORTH-EAST REGION

EXERCISE & TRAINING

DATE	VENUE	TYPE OF COURSE	COORDINATOR
07-08 May 14	Haldia/Kolkata	Exercise /Mock Drill	DHQ-8
12-13 Nov 14	Paradip	Exercise/ Mock Drill	ICGS Paradip

EASTERN REGION

IMO LEVEL COURSE

DATE	VENUE	TYPE OF COURSE	COORDINATOR
24-28 Feb 14	Chennai	IMO Level 2 Course	AMET University/ PRT(East)
24-29 Mar 14	Chennai	IMO Level 1 Course	PRT(East)
07-11 Jul 14	Chennai	IMO Level 1 Course	PRT(East)
18-22 Aug 14	Chennai	IMO Level 2 Course	AMET University/ PRT(East)

EXERCISE & TRAINING

DATE	VENUE	TYPE OF TRAINING	COORDINATOR
22-23 Jan 14	Tuticorin	Level 1 Exercise	ICGS Tuticorin
11-12 Feb 14	Chennai	Mock Drill	DHQ-5
23-24 Apr 14	Vizag	Mock Drill	DHQ-6
21-22 May 14	Puducherry	Level 1 Exercise	ICGS Puducherry
23-24 Jul 14	Kakinada	Mock Drill	ICGS Kakinada
10-11 Sep 14	Krishnapatnam	Mock Drill	ICGS Krishnapatnam

NORTH-WEST REGION

IMO LEVEL COURSE

DATE	VENUE	TYPE OF COURSE	COORDINATOR
08-11 Apr 14	Vadinar	IMO Level 1 Course	ICGS Vadinar
07-10 Oct 14	Vadinar	IMO Level 1 Course	ICGS Vadinar

EXERCISE & TRAINING

DATE	VENUE	TYPE OF TRAINING	COORDINATOR
11 Feb 14	GoK Area	Mock Drill	ICGS Vadinar
10 Apr 14	Off Vadinar	Exercise /Mock Drill	ICGS Vadinar
13 May 14	GoK Area	Mock Drill	ICGS Vadinar
12 Aug 14	GoK Area	Mock Drill	ICGS Vadinar
09 Oct 14	Off Vadinar	Exercise/Mock Drill	ICGS Vadinar
11 Nov 14	GoK Area	Mock Drill	ICGS Vadinar

Did you see an oil spill in Indian Waters ?

Please notify the Indian Coast Guard

OIL SPILL REPORTING FORM

Particulars of Person/Organisation Reporting Incident

i.	Title	:
ii.	Company	:
iii.	Telephone/Telex Number	:
iv.	Date/Time	:
v.	Spill Location	:
vi.	Type and Quantity of Oil Spilled	:
vii.	Cause of spill	:
viii.	Response to Spill, if any	:
ix.	Any other information	:

If the format frightens you, just pick up the phone and call the Indian Coast Guard...

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