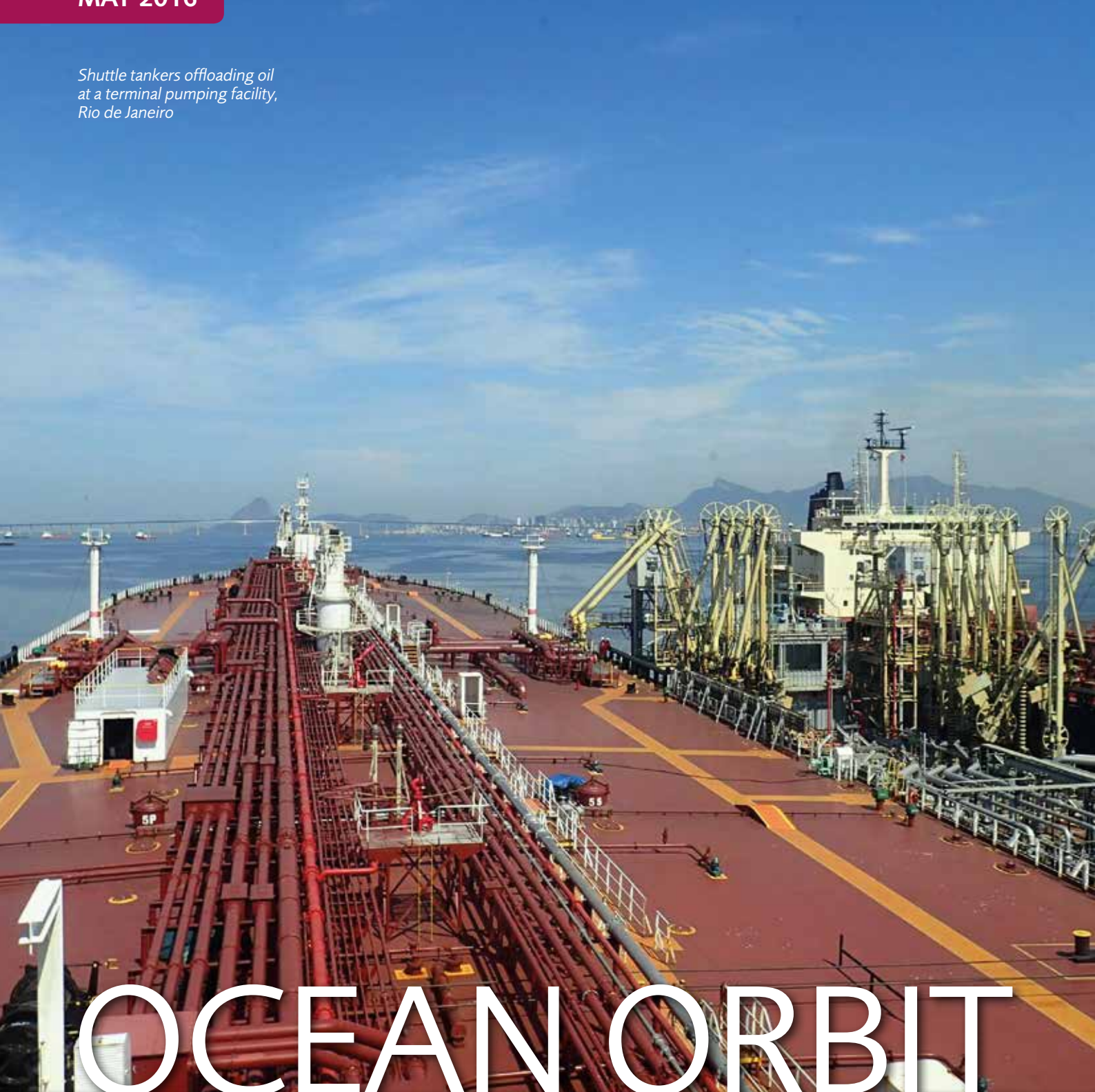


MAY 2016

*Shuttle tankers offloading oil  
at a terminal pumping facility,  
Rio de Janeiro*



# OCEAN ORBIT

THE NEWSLETTER OF THE INTERNATIONAL TANKER OWNERS POLLUTION FEDERATION LIMITED

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In case of a spill of oil or HNS (chemicals), please call us on the numbers below for advice and/or to mobilise us to site:

## EMERGENCY CONTACT

**9AM – 5PM (UK BUSINESS HOURS): +44 (0) 20 7566 6999**

This is ITOPF's office number; please ask to speak to a member of the technical team.

**OUTSIDE UK BUSINESS HOURS: +44 (0) 7623 984 606 or +44 (0) 20 7566 6998**

These numbers are linked to a message paging system. You should be ready to leave your name, contact number and a brief message. A member of the ITOPF technical team will return your call as soon as possible.

**Please do not rely on notifications of emergencies to ITOPF by email.**



We will require as much of the following information as possible:

### Essential Information

- Contact details of the person reporting the incident
- Name of vessel and owner
- Date and time of the incident (specifying local time or GMT/UTC)
- Position (e.g. latitude and longitude or distance and direction from the nearest port or landmark)
- Cause of the incident (e.g. collision, grounding, explosion, fire, etc) and nature of damage
- Description and quantity of cargo and bunker fuel on board
- Estimate of the quantity spilt or likelihood of spillage
- Name of the cargo owner
- Action, both taken and intended (and by whom), to combat pollution
- Status of the vessel and any planned salvage activities

### Additional Useful Information

- Weather and sea conditions, wind speed and direction
- Length, breadth and appearance of any slicks or plumes, including direction of movement
- Type of resources that may be at risk (e.g. fisheries or residential areas)
- Distribution of cargo and bunkers and location relative to damage

#### HNS Chemicals

- State – solid, liquid, gas, bulk, packaged
- UN or CAS number, MSDS, cargo manifest

#### Oil

- Density, viscosity, pour point, distillation characteristics, wax & asphaltene content



ITOPF looks at the controversy surrounding dispersants in this issue of Ocean Orbit (image shows a training exercise in Singapore)

## Managing Director's Review

Welcome to ITOPF's 2016 newsletter. This edition of Ocean Orbit is packed full of anecdotes from our activities since last summer. Recognising that pressure on time seems only to increase, we have adopted a slightly different approach this year. We've included more cameos of the incidents attended and placed the spotlight on our other activities in the form of a diary. We've also made much greater use of 'infographics' in this edition. This technique can be particularly effective when trying to visualise interactions, such as when describing the many different players involved in an incident, as you will see on pages 10–11.

We know that you enjoy some of our more 'meaty' articles and, in which case, we've included two; one on a topical issue – dispersants, and one with a country focus. This year, as one of our priority countries, it is Brazil and you'll see that the team has undertaken a number of activities to enhance preparedness and response alongside industry and government in Brazil in recent months.

Dispersant use is receiving greater attention, and not in a constructive sense. This is primarily due to legal action aimed at responders following their use in response to the DEEPWATER HORIZON incident. The article in this newsletter provides our views on dispersant use and links it to our more detailed Technical Information Paper

*"Let's not overturn many years of learning and credible scientific studies in favour of 'knee-jerk' reaction, especially if driven by political or financial gain."*

on the subject. It provides the background as to why I am concerned that fear of class-action law suits and misuse of science to sensationalise opinion will deter responders from making the right response decisions. These are difficult decisions to make at the best of times and responders need to know that they are protected when applying their knowledge and skill to mitigate pollution damage. Thinking about the challenges facing responders, our new film addressing preparedness and response in ice-covered waters is about to be released and will be available free of charge to stream from our website for use in training courses around the world.

The past year has been productive in many different ways and not just in terms of delivering on our strategic goals. There are several members of the team who are marking service milestones with us and we've included some short interviews with them. No less than five babies have been born to members of the team last year and more are expected in the coming year. There

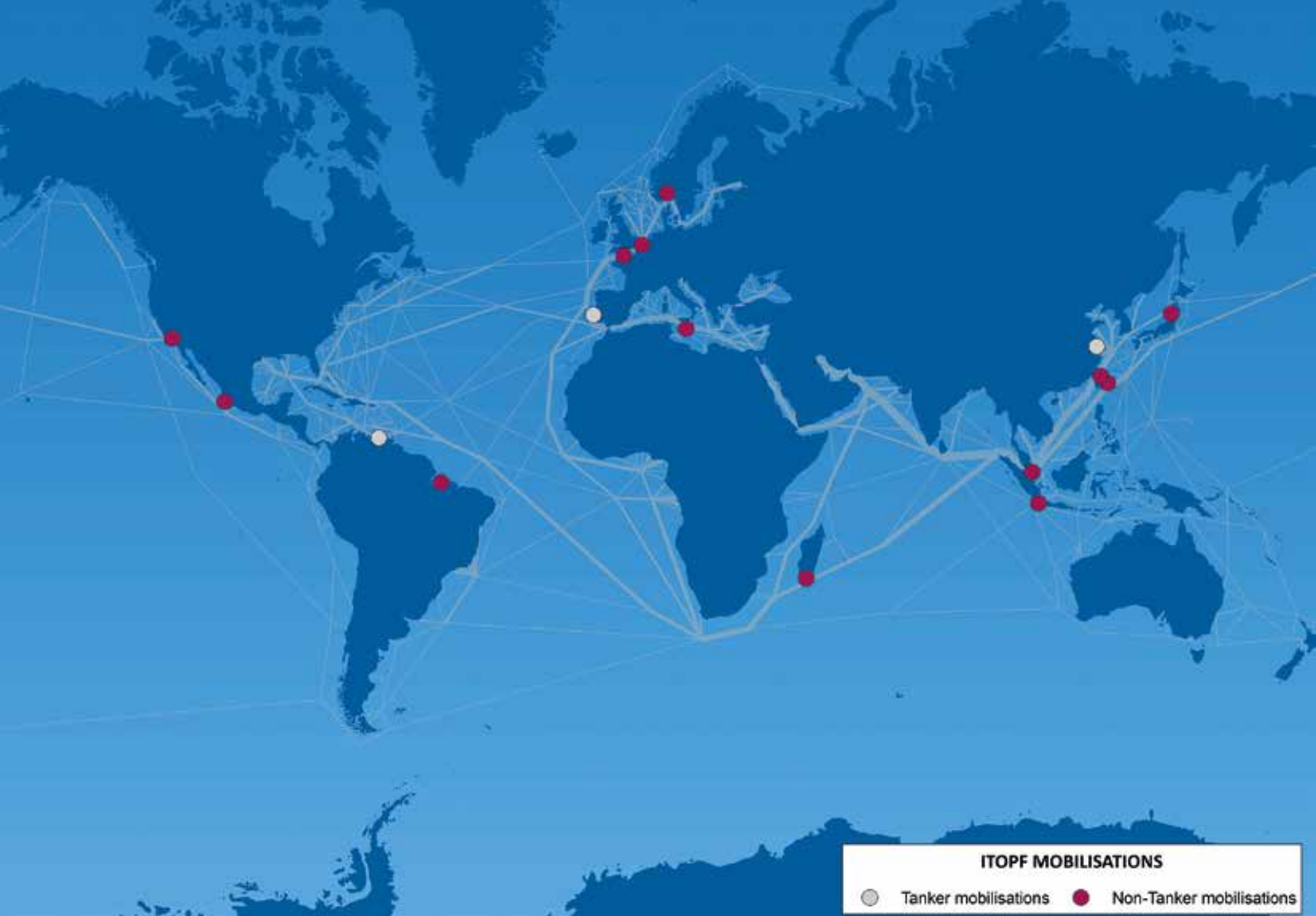


Dr Karen Purnell, Managing Director  
(Photo by Dianna Bonner)

have also been a number of staff promotions and staff changes; all of this news is included on page 20.

Finally, please take a few moments to read the article on how to report an incident to ITOPF. We do want to ensure that there is no delay in providing our services in an emergency but we have had a number of notifications via individual e-mail. This could lead to delay if one of our team is out of the office and, in which case, our 24/7 emergency number should always be used outside UK office hours.

I hope you will enjoy reading Ocean Orbit this year. As always, we welcome any feedback or ideas for articles you'd like to see featured.



ITOPF mobilisations since September 2015 and tanker oil movements

# Incidents in the Spotlight

ITOPF has been mobilised 16 times since the last issue of Ocean Orbit in August 2015, with the majority of incidents involving spills of bunker fuel. We're usually requested to attend between one and three incidents each month, but our involvement with a case rarely ends with the site visit. Following our return to the office, we are regularly asked to provide advice on, for example, continuing clean-up operations, claims assessment and contingency planning.

The team is also available to provide advice from the office for cases that may not require our full mobilisation. Since September 2015, we have provided remote advice for 13 incidents. Our involvement in these cases varies from a few hours in more straight-forward circumstances to several days or even weeks if they are more complex. Common requests include providing advice on the potential fate and effects of the pollutant, the resources at risk or the location of response equipment.

We are also regularly requested to provide advice related to claims assessment following an incident, though in these situations first-hand experience of the consequences of the spill and the decisions made on-site is always preferable.

Here we take a brief look at some of the cases we have been involved with over the last few months.

## Since September 2015

- 16 new mobilisations
- 3 tanker incidents
- 1 crude spill
- 1 non spill
- 2 HNS incidents
- 2 coal spills

## FINACIA 32

**Incident date:** 1 September 2015

**Place:** Southern coast of Ujung Kutonas peninsula, SW Java, Indonesia

**Vessel:** non-motorised barge

**Pollutant:** coal

**Nature of incident:** FINACIA 32 carrying 7524 tonnes of unburnt bituminous coal grounded during bad weather, capsized and spilled its entire cargo onto the beach and nearshore environment inside Ujung Kulon National Park, a UNESCO World Heritage Site in Java. Periods of strong weather in the weeks following the incident remobilised the coal along approximately 1.5km of shoreline, with some of it becoming buried and mixing with sand. Local villagers in conjunction with a local appointed salvor were employed to remove the coal from the beach to safely banded temporary storage areas outside the national park. The coal was stored in

jumbo bags and protected from the rain to reduce risks of leachate or coal self-combustion, whilst its ultimate destination was finalised.

**ITOPF involvement:** ITOPF was on-site for six weeks and made recommendations for the clean-up and arranged sampling of seaweed due to local health concerns.

## FLINTERSTAR

**Incident date:** 6 October 2015

**Place:** 6 nautical miles off the coast of Zeebrugge, Belgium

**Vessel:** general cargo ship

**Pollutant:** IFO 380

**Nature of incident:** FLINTERSTAR carrying a cargo of steel plates sank in the North Sea off Belgium following a collision with an LNG carrier. It is estimated that over 100 tonnes of IFO 380 was spilled. At-sea response was carried out with guidance from regular aerial surveillance. Shoreline contamination was minor, with scattered tar balls found on sandy beaches in isolated locations in Belgium, the Netherlands and France.



*FINACIA 32 aground on reef*

**ITOPF Involvement:** ITOPF provided technical advice to all parties involved in the response. We also carried out joint aerial

surveillance with the Belgian authorities and participated in the working group overseeing the response operation.



*FLINTERSTAR: At-sea operations*



LOS LLANITOS aground on rocky cliffs

## LOS LLANITOS

**Incident date:** 23 October 2015

**Place:** Coco Beach, Manzanillo, Mexico

**Vessel:** bulk carrier

**Pollutant:** IFO 380

**Nature of incident:** LOS LLANITOS ran aground on rocky cliffs during Hurricane Patricia and sustained severe structural damage. A small amount of bunker fuel was released from the vessel but no shoreline oiling was observed. Salvors removed the remaining oil and other contaminants from the casualty and arrangements for dismantling the vessel in situ are underway.

**ITOPF Involvement:** ITOPF undertook fate and behaviour modelling in order to prepare for a potential large-scale release of oil from the casualty during bunker removal operations. We also made other contingency planning recommendations and participated in joint surveys to monitor the environmental impact of the wreck.

## CITY

**Incident date:** 10 January 2016

**Place:** Sakata port, Yamagata Prefecture

**Vessel:** general cargo ship

**Pollutant:** IFO 180, diesel and lubrication oil

**Nature of incident:** CITY ran aground at the Port of Sakata and subsequently broke

apart, resulting in a spill of bunker fuel. Due to heavy swell, some of this was carried over a breakwater into a neighbouring port, resulting in the contamination of various port structures, riverbanks and irrigation channels supplying water to adjacent rice paddies. Clean-up was hampered by heavy snow cover, but variously involved manual bulk oil recovery by sorbent pads and snares, scooping oil from the water with nets, scraping oil coatings from the side of channel walls and some high

pressure washing.

**ITOPF Involvement:** ITOPF participated in joint surveys with the authorities and provided technical advice and recommendations for clean-up. In particular, we worked closely with the clean-up contractors to develop the best techniques for the circumstances, given the complexities of the irrigation channels and the lack of in-country experience at dealing with this type of contamination.



CITY: Joint survey to discuss final inspection criteria

## TS TAIPEI

**Incident date:** 10 March 2016

**Place:** north of Shimen Town, Taipei, Taiwan

**Vessel:** containership

**Pollutant:** IFO 380, MDO, lube oil, HNS

**Nature of incident:** TS TAIPEI ran aground during bad weather following engine failure, spilling up to 110 tonnes of IFO 380 over a number of weeks which caused heavy contamination of the shoreline directly in front of the stricken vessel and intermittent contamination along approximately 25km of shoreline. Clean-up involved the manual collection of liquid bulk oil, oiled cargo and debris, with flushing and high pressure washing used to clean the rocky shores. Surf washing was used to clean oily sand. 8 of the 9 dangerous goods containers on board were successfully removed and the 9th container situated in the hold will be dealt with at a later stage.

**ITOPF Involvement:** ITOPF provided advice regarding contingency arrangements during the de-bunkering operation and a risk review of the ship's dangerous goods and their potential impacts. Following the oil spill, ITOPF undertook shoreline surveys to assess the extent of the shoreline contamination and provided technical input on clean-up strategies.

## ISTRACE

**Incident date:** 13 March 2016

**Place:** Port of Los Angeles, USA

**Vessel:** vehicle carrier

**Pollutant:** IFO 380

### Top 10 countries visited by ITOPF for spills in the last 5 years

- 1 SOUTH KOREA
- 2 UNITED KINGDOM
- 3 CHINA
- 4 SINGAPORE
- 5 FRANCE
- 6 PHILIPPINES
- 6 ITALY
- 6 TAIWAN
- 9 JAPAN
- 10 BRAZIL



Shoreline oiling in front of the grounded TS TAIPEI

**Nature of incident:** An estimated 400 litres of heavy fuel oil leaked from ISTRACE during bunkering operations. Droplets of oil were observed in several marina basins and streaks of oil contaminated wharf pilings, riprap and other vessels within the vicinity. Boom was deployed around all marinas and at other key points. Clean-up primarily involved pressure-washing wharf pilings, wiping surfaces with sorbents or scooping oil from the water with nets, using a workforce of up to ~170 people in the

field. ISTRACE was permitted to leave port once the vessel's hull was cleaned, an administrative security provided to the coast guard and satisfactory clean-up end points had been agreed.

**ITOPF Involvement:** ITOPF joined SCAT teams surveying the affected area and provided input to the State and Federal authorities on technical reasonableness of the decontamination plan and specified end points.



ISTRACE: Workers cleaning oil streaks from rip rap and pilings in marina

# Dispersants: ITOPF's Viewpoint

## Origin of the controversy

The use of dispersants as a response to marine oil spills has been controversial since detergents (rather than dispersants) were first used in large quantities in 1967 during the TORREY CANYON incident. As there was no prior experience of how to handle an oil spill of this magnitude, these toxic, solvent based cleaning agents (originally formulated to clean surfaces in ships' engine-rooms) were spread indiscriminately onshore and offshore in an attempt to break-up the oil. Unfortunately, their use has left a legacy that has been difficult to overcome. This is despite significant advances in learning and re-formulating dispersants that are far less toxic and has set the scene for a long and still lively debate between anti- and pro-dispersant factions within the scientific community, industry and the public at large.

The reasons for the controversy are many, ranging from concerns about adding another potentially toxic chemical into the environment, to mistrust, suspecting those in charge of the response of sinking the oil rather than removing it.

Since the TORREY CANYON incident, significant investment in developing more effective and less toxic dispersants has been made. New generation dispersants ('Type 3') can be applied from vessels or aircraft and are more effective at much lower dose rates than previously used thus limiting the volume of chemical needed to

*"ITOPF's view is that dispersants can provide critical operational advantages as they can be applied quickly over a large area..."*

disperse the oil.

Nowadays dispersants are the preferred response option for many countries that recognise the limitation of containment and recovery techniques in rough waters offshore. Stockpiles of dispersants and spraying equipment are located in strategic positions around the world in readiness to respond to large incidents.

## Arguments for and Against Using Dispersants

Dispersants work by breaking the oil slick into tiny particles that distribute the slick from the water's surface into the water column. They do not sink the oil, rather the tiny droplets are buoyant in the first few metres of the water column where they are rapidly diluted by the currents thus preventing them from coming together again and re-forming the slick. The tiny droplets of oil are then biodegraded by



naturally occurring bacteria. Used under the correct conditions dispersants limit damage to sensitive coastal ecosystems (e.g. mangroves, saltmarshes) and associated socio-economic activities (e.g. fisheries, tourism).

Dispersants should not be used on refined products or viscous oils or in circumstances where the plume of dispersed oil could cause damage to important sub-surface resources; in particular those vulnerable to acute exposures such as corals, shellfish beds, caged fish and industrial water intakes (See ITOPF TIP 4 Use of dispersants to treat oil spills).

## DEEPWATER HORIZON – A Game Changer

While the use of dispersant has always been debated, the oil spill from the rig on the Macondo exploration well in the Gulf of Mexico in 2010 has been a game changer in terms of the sub-surface application of dispersants. Altogether, 7,000m<sup>3</sup> (approximately 7,000 MT) of dispersants were used of which about 2,900MT were applied directly at the wellhead. Given the volume of oil spilled (780,000m<sup>3</sup> or ~668,000 MT) the overall impact on the shoreline was relatively limited and it is very likely that dispersants played a role in this. However, controversy surrounds the use of dispersants in these circumstances and additional research to understand the long-term impacts of dispersants, dispersed oil or dispersant by-products at depth could help to define the operational parameters for future use.



Aerial application of dispersant following the DEEPWATER HORIZON spill (Photo courtesy of Lehmann/USCG)



## ITOPF's View

ITOPF regularly receives questions on the subject of dispersants from all over the world. Recently, these questions reflect the different concerns raised as a result of the DEEPWATER HORIZON incident in terms of dispersant toxicity and efficiency, as well as operational and legal considerations associated with dispersant use.

The fact that dispersants increase the bioavailability of oil is already well-known. Indeed, this is the main reason why dispersants are used; by breaking the oil into tiny droplets, dispersants make the oil more available to micro-organisms, in particular those organisms naturally present in the marine environment capable of feeding on oil. Although acute exposure to dispersant and oil particles in the water column will affect marine life locally, the effect is short-lived. When used in correct conditions, in the open sea, the concentration of dispersed oil decreases within hours to levels below those likely to cause long-term adverse effects on marine life populations.

ITOPF's view is that dispersants can provide critical operational advantages as they can be applied quickly over a large area comparing favourably with traditional containment and recovery options. This is clearly illustrated by the SEA EMPRESS incident in 1996. Post-spill studies indicated that the application of 446MT of dispersants at sea permitted the dispersion of up to 32,000MT of crude oil with very little effect on marine life, thus significantly limiting the impacts of oil on the coast of Pembrokeshire.

The operational aspects related to the application of dispersants are critical in the decision-making process. The time available to use dispersants is limited both by the weathering of the oil and its movement towards sensitive resources. Typically, depending on the type of oil and other environmental factors such as temperature and salinity, the effectiveness of dispersants decreases with time so they can become ineffective within hours or a few days after oil is spilled. Therefore, it is essential that contingency plans include clear policies and guidance to facilitate rapid decision making.

The concerns raised by dispersant use in response to the DEEPWATER HORIZON incident are understandable and need to be investigated. That said, any response technique can have its controversies and this is why decisions need to be made on a case-by-case basis taking into account advantages and limitations, including cost-effectiveness and conflicting priorities for protecting different resources from pollution damage. That is why an assessment of the net



*Dispersant spraying in Pakistan*

environmental and economic benefits of the different response techniques available should be undertaken when planning a response strategy.

## National Dispersant Policies

Some countries favour dispersant use as their primary response option, whilst for others it is considered a secondary option or not permitted at all. The national policy usually reflects the country's experience of oil spills, their resources at risks, the characteristics of their marine environment

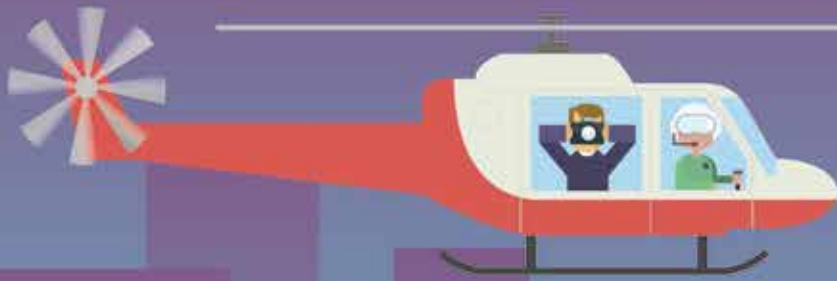
(i.e. enclosed sea versus open ocean) or even the strategic investments made in response resources. Ultimately, it is the responsibility of the relevant national authorities to decide whether or not dispersants can be used to respond to an oil spill. To avoid delays at the time of a spill, the decision on dispersant usage and indeed the precise circumstances under which they may be used, must be supported by a clear policy developed as part of the contingency plan, taking into consideration both environmental and operational aspects.

## Conclusion

The purpose of any oil spill response operation is to minimise the amount of damage caused. Response techniques have certain capabilities but all have their limitations. The DEEPWATER HORIZON incident stirred up the debate between supporters and opponents of dispersant use, but it must be noted that the impacts of the dispersed oil during this incident are still being investigated. Consequently, conclusions regarding their use in these circumstances should not be extrapolated to deter their use in other situations. Neither should threats of legal action be allowed to prevent responders from making the right choices to mitigate pollution damage.



*Different countries have different policies on the use of dispersants*



**ITOPF** – supports and assists all parties involved with a spill – shipowners, government and potential claimants – by providing objective technical advice, usually at the request of a P&I Club.

# Who's Who at an Oil Spill

**Media** – will always be involved in major incidents and may try to access the spill site to gain footage or interview response personnel. Members of the public are also likely to be active in filming the spill and response operation, providing comments and pictures via social media.



**Wildlife responders** – environmental groups or charities may provide trained responders to capture, rehabilitate and document oiled wildlife. They may be engaged by government agencies, the shipowner or via universities/charities. Some environmental NGOs may operate as lobbyists to influence the response.



**Volunteers** – in major spills members of the public or local community groups often step forward to help out with wildlife rehabilitation or general clean-up activities.



**Local community** – local villagers or fishermen may assist with manual clean-up activities. They are usually engaged by government agencies or the spill contractor when additional manpower or resources are required. This work may help offset financial losses they may have incurred as a result of the spill.



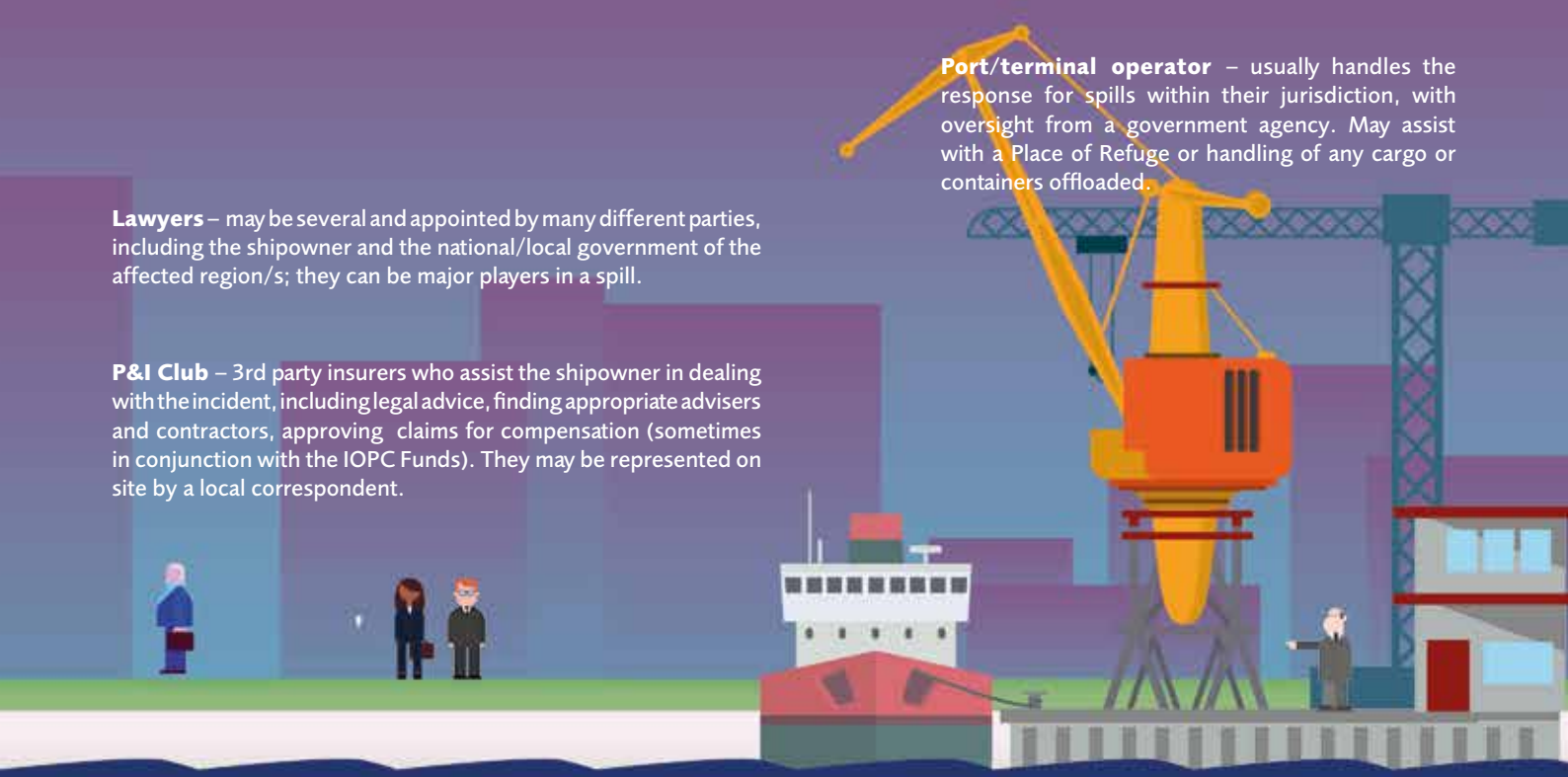
**Shipowner** – in some countries the responsible party for carrying out the response; in others the government agencies take the lead. The shipowner is represented on site by a local shipping agent and/or lawyers.

**Clean-up contractors** – provide the equipment and workforce for response activities. They may be pre-contracted by the shipowner, hired at the time of the incident by the shipowner or P&I Club, or engaged by the authorities.



**Surveyors** – as their name suggests, they are responsible for carrying out a variety of surveys following a spill, including surveys of the oiled shoreline, response measures, fisheries, and any damaged cargo. They are typically engaged by the correspondent on behalf of the P&I Club and shipowner.







**Port/terminal operator** – usually handles the response for spills within their jurisdiction, with oversight from a government agency. May assist with a Place of Refuge or handling of any cargo or containers offloaded.

**Lawyers** – may be several and appointed by many different parties, including the shipowner and the national/local government of the affected region/s; they can be major players in a spill.

**P&I Club** – 3rd party insurers who assist the shipowner in dealing with the incident, including legal advice, finding appropriate advisers and contractors, approving claims for compensation (sometimes in conjunction with the IOPC Funds). They may be represented on site by a local correspondent.




**Salvage company** – they lead the effort to save the ship and reduce environmental damage caused by the ship and/or its cargo at source. The decision to appoint salvors is usually made jointly by the P&I Club, shipowner and/or government agencies.




Shipowner is responsible for response under national legislation. Government agencies may be involved. Shipowner may be assisted by a surveyor.

**Cargo owner** – supports response efforts by providing precise information on the cargo. They may participate in the clean-up or with treatment of oily waste if they have the necessary resources ready and available. They are likely to have their own lawyers and surveyors in attendance.

**Claimants** – those who have suffered financial loss due to an oil spill, ie fishermen whose boats are oiled or hoteliers whose businesses are interrupted. Claimants can number thousands in a major incident. Compensation is prescribed under national legislation and may be paid according to applicable international Conventions.



**Government authorities** – usually lead or oversee the response depending on the scale of the incident. Agencies/departments typically involved include: Coastguard/Navy, Ministries of Transport, Environment or Emergency Affairs.



**Other advisers or experts** – they may be government departments/agencies or independent technical specialists in fields such as fisheries, tourism, environmental monitoring or public health, who provide specialist input into the response operation and damage assessment. Hull and machinery insurers and their representatives may also be involved.



SOPEP (Ship Oil Pollution Emergency Plan) exercise onboard Transpetro tanker (Photo courtesy of Transpetro)

## Country Focus – Brazil

**B**razil has an extensive coastline, a wide variety of potential sources of maritime pollution and a developing response capability. In the event of a major oil spill, the challenges are numerous and complex.

### Priority Country

Brazil has been identified as a priority country for ITOPF in its new strategic plan "20/20 Vision". This is due to its position as one of the world's foremost oil and gas producers and a major trading player. The Brazilian focus has primarily been on the development of response measures in respect of its expanding offshore industry, but ship-source spills are also a significant concern for the country.

### Risk

Brazil makes extensive use of shuttle tankers to transport oil from its offshore fields as an alternative to constructing oil pipelines. This brings with it a corresponding risk of spills along these busy routes.

There has also been a general rise in shipping traffic along Brazil's 7491km of coastline in recent years. Though currently suffering a recession, it remains the largest economy in Latin America and is rich in resources. It is a major exporter of commodities and also a strong importer of goods to support its 200 million citizens, the 5th largest population in the world.

All these factors combine to make the likelihood of pollution incidents high in Brazil and reinforce the urgent need for the country to ensure that it is in a good position to deal with the threat.

### Spill History

In terms of spills, Brazil is ITOPF's 10th most visited destination since the start of the decade and our most visited country in Latin America. It has experienced 11 major oil spills from tankers (>700 tonnes) since our records began and 170 tanker spills in total.

The most recent major shipping incident involved the chemical tanker VICUÑA which suffered an explosion whilst discharging methanol in Paranaguá Port.



Much of the cargo of methanol on board was consumed by fire, evaporated or dissolved in the water upon release, but IFO 180, carried as bunker fuel, contaminated areas of high environmental sensitivity in the vicinity of the spill site. Shoreline clean-up was undertaken using predominantly manual methods and some water flushing; natural cleaning and recovery was allowed to take place at some remote locations.

More recently, ITOPF has attended an incident involving the gas carrier GOLDEN MILLER (December 2013) which suffered a fire during loading operations at the jetty of a gas terminal in the Port of Aratu. This

resulted in a spill of IFO 380 which oiled nearby shorelines and a naval base. Clean-up primarily involved manual scraping and wiping, flushing and pressure washing.

## Preparedness

Pollution response in Brazil is typically overseen by the environment departments of the 17 coastal states with the responsibility for mobilising and managing the response resting with the polluter. The recently enacted National Contingency Plan (NCP) (October 2013) sets out the roles, responsibilities and general provisions for spill response in Brazil to enable a coordinated action between the multiple government and industry parties involved. This is with the aim of expanding the capacity for responding to oil pollution incidents, minimising environmental damage and preventing damage to public health. A technical document to accompany the NCP (the NCP Manual) describing accepted response methods (for example, the types of dispersant to be used and the possibility of in-situ burning) is being developed by the government, but is not yet available.

Overall, there are varying levels of spill experience and training within the country and Brazil has yet to experience a large-scale shoreline response.

## Compensation & Fines

In terms of liability and compensation, Brazil has diverged from the path of the international regimes and pursued its own regulatory framework regarding pollution.

Though Brazil is party to the Civil



Shoreline clean-up following the GOLDER MILLER incident

Liability Convention 1969 (CLC 69), it is not party to any of its Protocols nor a member of the International Oil Pollution Compensation Funds (IOPC Funds). CLC 69 allows shipowners to limit their liability for spills of persistent oil carried in tankers up to a maximum of 14 million SDR or approximately \$19 million compensation. This compares unfavourably with the amount of compensation available in some neighbouring states, for example, approximately \$282million in Argentina

which has signed up to CLC92 and Fund 92 and \$1.04 billion for French Guiana which is party to the Supplementary Fund.

In Brazil, shipowners have no right to limit their liability in terms of environmental damage and the authorities have enacted various laws which impose fines for oil pollution incidents.

## ITOPF in Brazil

ITOPF has already started building relationships with government and industry in Brazil with the aim of supporting initiatives to promote effective preparedness and response to oil and chemical spills.

In addition to attending or providing remote advice on a number of incidents in the last few years, we have been one of the speakers at the Rio Pipeline Conference, September 2015. We also ran a joint seminar with Transpetro (the transportation subsidiary of Petrobras) on oil spill and shipping industry preparedness; this aimed to reinforce partnerships and trust between those parties involved in oil spill response in Brazil.

Last year, we subtitled our series of films 'Response to Marine Oil Spills' into Portuguese, with the kind assistance of Transpetro, and are planning on translating our Technical Information Papers in the near future.

For the coming months, preparations are underway to provide training and support to build the national capacity to deal with future pollution incidents.



Richard Johnson presenting at a joint ITOPF/Transpetro Seminar, September 2015  
(Photo courtesy of Transpetro)

# Out and About with ITOPF

ITOPF works with its Members and Associates around the world to ensure that the shipping industry is prepared and ready to respond to any spills that do occur. We also work with intergovernmental bodies and national governments and their agencies to promote effective response to marine spills of oil, chemicals and HNS worldwide.

Here we provide a snapshot of some of the assignments we have taken on since the last issue of Ocean Orbit in August 2015.



If you are considering undertaking drills, exercises, seminars or workshops, feel free to contact us if you would like us to participate or think we can help with your planning.

## MAY 2016



**AUSTRALIA:** Alex Hunt made a presentation on "Declining incidents and the implications" at SPILLCON 2016, the Asia-Pacific oil spill prevention and preparedness conference held in Perth, Western Australia.

## APRIL 2016



**MYANMAR:** Annabelle Nicolas-Kopec was one of the consultants at the IMO Technical Assistance Programme workshop on the development of the Yangon River oil spill contingency plan and national contingency plan for Myanmar.

## MARCH 2016



**USA:** Dr Karen Purnell met Members and Associates at the annual shipping conference & exhibition organised by the Connecticut Maritime Association (CMA), at which our Chairman, Paddy Rodgers was honoured as CMA Commodore of the Year. (Photo Chris Prevolos)

## FEBRUARY 2016



**DENMARK:** Franck Laruelle and Miguel Patel delivered a workshop on environmental monitoring in partnership with the Danish Institute of Biosciences in Copenhagen, Denmark. This was attended by representatives from the Danish Navy and Greenland government authorities.

## JANUARY 2016



**JAPAN:** Richard Johnson gave a presentation on 'Just when is oil spill preparedness too expensive?' to 150 industry and government delegates at the Petroleum Association of Japan (PAJ) Oil Spill Symposium 2016.

## DECEMBER 2015



**GREECE:** Members of the technical and technical support teams gave a number of presentations to our P&I contacts and shipowner Members and Associates in Piraeus, Greece.



Countries visited by ITOPF since September 2015

## NOVEMBER 2015



**UK:** ITOPF sponsored the Environmental Award at the Tanker Shipping and Trade Conference to help identify opportunities that would assist shipowners in meeting environmental standards. The Award went to Thordon Bearings Inc for its 'oil-free' propeller shaft.



**GHANA:** Romain Chancerel supported the Global Initiative for West, Central and Southern Africa (GI WACAF) at a regional conference in Accra, facilitating a table top exercise and round table discussions on international cooperation, legislation and shoreline clean-up.



**SRI LANKA:** Nicola Beer supported the IMO and the South Asia Cooperative Environment Programme (SACEP) at a regional workshop for oil spill preparedness and response for national authorities in South Asia.

## OCTOBER 2015



**NORWAY:** Five members of the team delivered a seminar at Gard's company headquarters in Norway which included a desktop exercise on claims assessment.



**SOUTH KOREA:** Nicola Beer supported the Korea Coast Guard at a joint Korea-Vietnam Workshop on marine pollution response techniques and compensation, providing advice on the role of ITOPF and sharing experiences of common challenges in trans-boundary incidents.

## SEPTEMBER 2015



**NORWAY:** Jessika Fuessel attended an oil spill exercise conducted by the Norwegian Coastal Administration and local authorities in Ny-Ålesund, Svalbard to test response options and raise awareness of potential issues with spills in the Arctic.

# Meet the Team

Meet some of the ITOPF team who are celebrating milestone anniversaries this year.

## 25 years at ITOPF



**Tim Wadsworth**  
Technical Support Manager



**Joined ITOPF:** 1991  
**Qualifications:** BSc Engineering; LLB Law

**Working at ITOPF:** I joined ITOPF at a very busy time with the organisation's involvement in a number of significant oil pollution incidents, including KATINA P, NAGASAKI SPIRIT and AEGEAN SEA. All incidents were dealt with without the benefit of mobile phones, laptops, GPS and the other technology now taken for granted. My primary role on joining was to assist with sourcing and maintaining information on global response but subsequent incidents meant my greater involvement in claims work. Ensuing developments in technology have now made parts of the job more straightforward but have brought additional demands on our time.

**Typical day:** While overseeing claims work on a day to day basis at ITOPF, I speak regularly with the ITOPF Liaison officer to discuss the promotion of our work in China. Much of my time is spent liaising with the many organisations with which ITOPF has close ties.

**Best bits:** Being instrumental in establishing ITOPF's claims and technical support functions and seeing them develop into key services of the Federation.

**Worst bits:** The propensity to use theoretical and abstract models rather than evidence based surveys or science to support claims for environmental damage and witnessing the frustration and delays this approach causes to both claimants and those paying compensation.

## 20 years at ITOPF



**Deborah McKendrick**  
Information Officer



**Joined ITOPF:** 1996  
**Qualifications:** MA Librarianship; BA History

**Previous experience:** Institute of Petroleum (now Energy Institute) information service, BBC film library, various public libraries.

**First impressions of ITOPF:** I joined shortly after the SEA EMPRESS incident and the office was hectic but mostly empty as many of my colleagues had decamped to Pembrokeshire; I didn't see some people for months! It was a busy time and I only learnt some weeks later that major tanker spills were no longer a regular occurrence!

**Typical day:** A typical day is usually spent in the office; I'll likely be dealing with enquiries from partner organisations, Members and contacts, liaising with translators, updating the website or publications, cataloguing new material and, if there's a spill or threat of a spill, doing some background research for our technical team.

**Best bits:** Meeting some of our international shipowners and contacts at exhibitions worldwide and getting first-hand feedback on the services we offer.

**Worst bits:** Having so few library visitors and seeing the library and printed material in general sink into obsolescence in this digital age. I should add that the ITOPF library has plenty of unpublished hidden gems not available on the internet for the committed researcher to find (and a new, very easy to use, database!).

## 10 years at ITOPF



**Franck Laruelle**  
Technical Team Manager



**Joined ITOPF:** 2006  
**Qualifications:** MSc in Biological Oceanology and Oceanography, PhD Marine Biology

**Previous experience:** Oil spill response and environmental adviser at Cedre.

**What made you join ITOPF?** The attractiveness of widening the scope of my oil spill response experiences to a worldwide scale and assisting responders and populations with diverse cultural backgrounds to deal with diverse oil spill circumstances in diverse environmental and economic contexts.

**Typical day:** Besides managerial duties such as meetings and day to day management of the technical team workload, a regular review of technical staff's reports and support to the staff deployed on site. From time to time, emergency work including new incidents injects some variety and opportunities for refreshing technical brainstorming.

**Best bits:** Being part of the action and solution on site, seeing how the environment recovers from sometimes heavy initial impacts and sharing with others, sometimes completely unknown a day before, the excitement, rewarding feelings and sometimes frustration of dealing with complex, dynamic and emotional situations.

**Worst bits:** Being remote from the above for too long.



## 10 years at ITOPF



**Lisa Stevens**  
Information and  
Communications  
Manager



**Joined ITOPF:**  
2006  
**Qualifications:** BSc  
Physics with satellite  
technology

**Previous experience:** QinetiQ space department, Motorola, Southampton Oceanography Centre (now National Oceanography Centre).

### How has your role/industry changed?

Technology has changed dramatically over the past 10 years. Google Earth had not long been launched when I first joined ITOPF and that brought the world of mapping and geo-spatial data to the general public. This has helped with the development of products and sharing of information across the environmental and response sectors. Where previously we would need hard copy maps, today, we have smart phones and the ability to download digital maps on to our phones, take photos with embedded location information, type details and upload all this information so those in the office have instant access.

**Typical day:** My days are fairly varied, it could be liaising with development contractors, developing data management strategies, analysis, writing scripts/ programming new operational tools, assisting with STEM career outreach projects or, when we have incidents, providing oil spill model outputs.

**Best bits:** Learning about new technology and being involved in a company that can help make a difference to peoples' lives and/or environment.

**Worst bits:** When your colleagues are travelling off to exotic sunny destinations and you are sat in the office on a drizzly cold English day.

## 5 years at ITOPF



**Nicola Beer**  
Senior Technical  
Adviser



**Joined ITOPF:** 2011  
**Qualifications:**  
BSc (Hons) Marine  
Biology; PhD Marine  
Science

**Previous experience:** Marine environmental consultancy, research diving.

**First impressions of ITOPF:** When I arrived at ITOPF for my interview, the team was just trying to figure out the best way to get one of the Technical Advisers back from Tristan da Cunha, after a vessel grounded on the remote archipelago resulting in a spill of fuel oil and soya beans. I was hooked at this point, and left the interview desperate to get the job!

**Typical day:** It's hard to say what a 'typical day' entails, as even when in the office we can be involved with a wide range of different projects. As well as ongoing involvement with incidents we have attended, we also regularly provide remote advice on other cases, write and review technical reports, and contribute to training courses, seminars and workshops.

**Best bits:** I really enjoy the variety of the work we do, and the travel to unexpected and unusual destinations. Between spills we still get out and about a lot, meeting people from all walks of life at conferences and workshops. The most rewarding aspect is seeing your efforts on site to assist with a spill response pay off, even if it can take a while to convince people that your advice is based on sound science and practical experience.

**Worst bits:** When we're mobilised to a spill we are often on a plane within hours and then straight into meetings with the authorities or out in the field for surveys. Spills are always stressful situations, with emotions running high and a lot of pressure on all involved – circumstances made more challenging by jetlag and sleep deprivation.

## 5 years at ITOPF



**Annabelle  
Nicolas-Kopec**  
Senior Technical  
Adviser



**Joined ITOPF:** 2011  
**Qualifications:**  
PhD in Chemistry;  
MA Chemical  
Engineering

**What made you join ITOPF?** The idea of working in the marine environment has always been attractive to me; my family has a history of such work and I am a keen sailor. When I learned about ITOPF, I knew immediately that it was the perfect fit for me: applying science and technical expertise for the protection of the marine environment.

**Typical day:** I love that my work with ITOPF is not a typical desk job and there is no such thing as a typical day. On any given day I might be doing on-site emergency work, writing technical risk assessments to help mitigate damage from potential incidents, or giving a presentation to industry or government leaders on the ins and outs of spill response.

**Best bits:** I particularly appreciate travelling to very remote places that I would be unlikely to visit otherwise, and once there, working with small groups of people to meet difficult goals. I will always remember a response in Patagonia, Chile and while the work was demanding, the scenery and location was extraordinary.

**Worst bits:** On-site emergency work is very exciting and fulfilling, but the 18-hour days can leave one exhausted and writing up a technical situation report at the end of a long day can be challenging!



'Oil Spills in Cold Climates' sets the scene for the increasing focus on Arctic maritime activities

## Oil Spills in Cold Climates

The 8th instalment of ITOPF's Response to Marine Oil Spills film series will soon be available to view online. 'Oil Spills in Cold Climates' sets the scene for the increasing focus on Arctic maritime activities and the need to be prepared for an oil spill in a remote and inhospitable environment.

Filmed on location in Svalbard, Sweden and Canada, it reviews the various response strategies in the clean-up toolkit and the challenges that could be faced implementing them in icy waters.

The film features interviews with experts from government, industry and

science and follows ITOPF staff as they train for harsh and dangerous Arctic conditions.

Oil Spills in Cold Climates highlights three key messages: the importance of improving our scientific knowledge; learning from actual incidents; and developing a spill response infrastructure with the help of international co-operation.

From June this film will be freely available to view at <http://www.itopf.com/knowledge-resources/library/video-library/> and will be subtitled in English, Chinese, French, Spanish, Turkish, Portuguese, Russian, Arabic, Korean and Japanese.

## Ice Study Wins 2016 ITOPF R&D Award

Oil in ice is also the theme of this year's ITOPF R&D Award which went to Rosdam (Remote Oil Spill Detection And Monitoring on ice-covered waters), a project led by the Centre for Signal and Image Processing at the University of Strathclyde, UK in partnership with the Scottish Association for Marine Science (SAMS).

The Award is being used to fund a 1-year feasibility study to investigate the detection capability of hyperspectral imaging technology (HSI) for oil spillages in ice-affected waters. Further details are available on ITOPF's website.

### ITOPF Response to Marine Oil Spills Film Series

- 1 Introduction to Oil Spills
- 2 Aerial Surveillance
- 3 At Sea Response
- 4 Shoreline Clean-up
- 5 Waste Management
- 6 Environmental Impacts
- 7 Oil Spill Compensation
- 8 Oil Spills in Cold Climates



# Owners' Orbit



## Membership Dues

ITOPF changed its dues structure for Members this year. Previously dues were calculated according to tonnage alone. However, in recent years the sometimes disproportionate amount of staff time spent on call-outs or enquiries from smaller tankers highlighted the need to spread the costs more equitably across the whole Membership.

Accordingly, at an Extraordinary General Meeting in June 2015, Members voted to introduce an administration fee per tanker, in addition to a rate per ton. This has no effect on the total income received by ITOPF, which remains the same under the new system.

For 2016/2017 the administration fee is set at £20 per tanker with the dues rate an additional 0.50 of a UK penny per GT (down from 0.57). So, for a 50,000 GT tanker the amount payable for the year is £270 (£20 administration fee plus £250 based on the rate per ton).

The administration fee does not apply to Associates (non-tankers).



*Karen Young, Membership Secretary*

## Record Forms

Members and agents are reminded that they can access the ITOPF Membership database directly to retrieve copies of their own Membership Record Forms and cross check that all their tankers are correctly entered with ITOPF. Please contact the Membership Secretary, Karen Young ([karenyoung@itopf.com](mailto:karenyoung@itopf.com)), to obtain a username and password and be directed to the web link. (Please note, the database is not available through our website).

## ITOPF Members

**7,320** tanker owners & bareboat charterers  
**12,230** tankers, barges, gas carriers, FSUs/FPSOs & combination carriers with total gross tonnage of **375 million**  
~**97%** of world tanker fleet

## ITOPF Associates

Owners & bareboat charterers of all other types of ship with total gross tonnage of **751 million**  
>**90%** of world ocean-going fleet

## Calling all DPAs

We should like to contact the Designated Person Ashore (DPA) or those specifically responsible for oil spill response amongst our shipowning Members and Associates. This will help us to establish a point of contact in the event of a spill and enable us to raise awareness of the services ITOPF can offer directly with those in the frontline during an incident.

If you are a DPA (and haven't been in touch with us already), please help us to help you by completing a survey available on our website (<http://www.itopf.com/members-associates/designated-person/dpa-survey/>).

We will add your name to our mailing list so that you automatically receive copies of the ITOPF Handbook and other technical publications. You will also receive invites to any local events that ITOPF is running that may be helpful for your role.



*Dr Karen Purnell hears about life on board a tanker at the invitation of one of our Members, Tsakos Shipping, January 2016*

# Staff News

We are pleased to have been successful in recruiting to fill vacancies that arose during the course of the year. In November 2015, we welcomed **Jenny Maher** to the position of Finance Officer. Jenny has worked in finance for over 25 years and is responsible for ITOPF's financial information systems and accounting transactions, which includes the collection of Membership and Associate dues and expense claims. In April 2016 **Claire Gorringe** joined us as Team Secretary with responsibility for ensuring the team get safely to (and from) their destinations and for providing secretarial and administrative support. Claire has an Executive PA diploma and previously worked at the Royal Institution of Chartered Surveyors.

Two new Technical Advisers will join the team in June: **Nancy Wong** and **Phil Ruck**. Nancy has a background in biochemistry and consultancy and, apart from being well-travelled, is also fluent in Cantonese. Phil has a Masters in Environmental Technology and previously worked for IPIECA. Also in June, **Jo Woodward** will join ITOPF as PA to the Managing Director and Technical Director. Jo brings a wealth of experience supporting directors from different industries and will be responsible for enabling Karen and Richard to focus more on the strategic activities of the Federation.

This year we said goodbye to four



Claire Gorringe and Jenny Maher

members of the team. In January, **Susannah Musk** left ITOPF to take up a position as Flood and Coastal Erosion Risk Management Officer with the Environment Agency and **Jessika Fuessel** left for a research post with the National Oceanography Centre, Southampton. In April we said goodbye to **Rebecca Coward** who decided not to return to ITOPF after the birth of her twins last year, and to **Joe Green** who will be taking up a new position with Royal Haskoning.

We are pleased to announce a number of promotions. **Annabelle Nicolas-Kopec**, **Nicola Beer** and **Miguel Patel**, who have been working at ITOPF since 2011, become Senior Technical Advisers. **Lisa Stevens**

has been promoted to the position of Information and Communications Manager with responsibility for ITOPF's information, communication and education services. On the administration side, **Jayne Foster** has been promoted to Office Coordinator with responsibility for the smooth and efficient running of the office.

We also offer our congratulations to four members of staff who had babies last year. The wife of our IT Systems Manager, **Chris Pavey** gave birth to a baby girl; Senior Technical Advisers, **Kelly Reynolds** and **Annabelle Nicolas-Kopec** both had baby boys, and **Rebecca Coward** had one of each!

If you would like to be added to our mailing list for *Ocean Orbit*, or wish your details to be amended, please email us at [terrygoodchild@itopf.com](mailto:terrygoodchild@itopf.com), indicating your preference for a printed or electronic version or both.

A PDF version of *Ocean Orbit* is also available on our website.



Dr Karen Purnell being presented to Princess Anne at the Younger Brethren's Guest Night, February 2016 (Photo courtesy of Mark Dalton and Trinity House)



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