

ISCO & THE ISCO NEWSLETTER

The ISCO Newsletter is published weekly by the International Spill Control Organisation, a not-for-profit organisation supported by members in 45 countries. ISCO has Consultative Status at IMO, Observer Status at IOPC Funds and is dedicated to raising worldwide preparedness and co-operation in response to oil and chemical spills, promoting technical development and professional competency, and to providing a focus for making the knowledge and experience of spill control professionals available to IMO, UNEP, EC and other organisation.

ISCO COMMITTEE & COUNCIL

ISCO is managed by an elected executive committee members of which are **Mr David Usher** (President, USA), **Mr John McMurtrie** (Secretary, UK), **Mr Marc Shaye** (USA), **Mr Dan Sheehan** (USA), **M. Jean Claude Sainlos** (France), **Mr Kerem Kemerli** (Turkey), **Lord Peter Simon Rickaby** (UK), **Mr Li Guobin** (China), **Captain Bill Boyle** (UK) and **Mr Dennis van der Veen** (The Netherlands).

The Register of ISCO Members is maintained by **Ms Mary Ann Dalglish** (Membership Director). She is also responsible for collecting membership dues.

The Executive Committee is assisted by the non-executive ISCO Council composed of the following national representatives – **Mr John Wardrop** (Australia), **Mr Osman Tarzumanov** (Azerbaijan), **Mr John Cantlie** (Brazil), **Dr Merv Fingas** (Canada), **Captain Davy T. S. Lau** (China, Hong Kong), **Mr Li Guobin** (China, Mainland), **Mr Darko Domovic** (Croatia), **Eng. Ashraf Sabet** (Egypt), **Mr Torbjorn Hedrenius** (Estonia), **Mr Pauli Einarsson** (Faroe Islands), **Prof. Harilaous Psarافتis** (Greece), **Captain D. C. Sekhar** (India), **Mr Dan Arbel** (Israel), **Mr Sanjay Gandhi** (Kenya), **Chief Kola Agboke** (Nigeria), **Capt. Chris Richards** (Singapore), **Mrs Fatima B. Shaik** (South Africa), **Dr Ali Saeed Al Ameri** (UAE), **Mr Kevin Miller** (UK) and **Dr Manik Sardesai** (USA).

For more info on Executive Committee and Council Members go to www.spillcontrol.org

INTERNATIONAL DIRECTORY

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**A HAPPY NEW YEAR
TO ALL OUR READERS**



WITH HOPE FOR MORE PEACE IN THIS TROUBLED WORLD

International news

For more information on the event featured below, click on the banner



ISCO PRESIDENT, DAVID USHER LOOKS BACK AT 2016



2016 has been an eventful one for ISCO and as we welcome 2017 it is a good time to look back over the past year.

A major project in 2016, has been the development of the International Spill Response Contract. As described in issue 565 of the ISCO Newsletter (19th December 2016), this ISCO initiative resulted in the setting-up of a joint ISCO-BIMCO working group to develop an internationally recognised contract for spill response. The new contract will speed up the response to major oil spill events by making it possible to avoid the delays that can result from complex contract negotiations. Comparable to the availability of Lloyds Open Form for rapid response to emergency salvage needs the new international contract will be a major advance in spill response preparedness. Work on this project continues with completion expected by summer 2017.

Membership of ISCO has continued to grow. During the year ISCO welcomed new members from Azerbaijan, Croatia, Singapore, USA, Italy, South Africa, Nigeria, Indonesia, UK, Canada, and China.

During 2016 ISCO also welcomed new Members of the ISCO Council. Osman Tarzumanov of BP has taken over from Namig Gandilov as Member of ISCO Council representing Azerbaijan. Following the retirement of Anton Moldan. Fatima B. Shaik of the South African

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presentations on ISCO's mission and its work at various events - ISCO Member of Council, Capt. D. C. Sekhar at Oil Spill India, and at meetings of the Chemical and Industrial Management Organisation and the South Asian Association for Regional Co-operation. Also by Committee Members, Kerem Kemerli at Adriaspillcon in Croatia and Li Guobin at the Oil Spill Response Workshop in Beijing, China.

In May 2016 ISCO members assisted in an unusual task - A request for help was received via IMO from the Joint UNEP/OCHA Environment Unit seeking assistance to identify a suspicious object which was found on the shore of Somalia. To help solve the mystery ISCO was enabled to forward twenty-seven responses to the UNEP/OCHA team.

It has been a busy year and I'm proud of the contribution being made by our organization to world preparedness for response to major oil and chemical pollution events. Collectively, the membership of ISCO represents a vast resource of know-how, equipment and materials. Through ISCO, governments and others with spill response obligations can quickly find urgently needed help from members in forty-six countries. When our community embraces co-operation it's amazing what we can do.

I wish you all the very best for 2017. Let us hope it will be a more peaceful year than 2016.

David Usher

International news (continued)

Petroleum Industry Association is the new Member of ISCO Council for South Africa. Most recent has been the appointment of Carlos Sagrera, MSc, MISCO as a new Member of ISCO Council representing Panama.

During the year ISCO delegations continued to contribute to the work of the IMO's Marine Environment Protection Committee (MEPC) and to its Pollution Prevention and Response (PPR) Sub-Committee, on document revision and updating.

ISCO Delegations have also contributed to the deliberations at three International Oil Pollution Funds meetings during the year.

Readership of ISCO's Weekly Newsletter has continued to grow steadily during the year. Its educational role has been enhanced by excellent articles from well-known authorities on spill response including Mark Francis, Alun Lewis, Ed Owens, Merv Fingas, John Brinkman, Wierd Koops, Steve Candito, Mark Hoddinott and others, including NOAA and the Norwegian Coastal Administration.

Work has also continued in building the very substantial Technical & Reference resource provided on the ISCO website members' area.

During 2016 ISCO took part in seven major International Events. The organisation gave out information and brochures at SPILLCON (Perth, Australia), ADRIASPILLCON (Opatija, Croatia), CLEAN PACIFIC (Oregon, USA), OIL SPILL INDIA (Mumbai, India), CONTAMINATION EXPO (London, UK), CLEAN GULF (Florida, USA) and OSRW 2016 (Beijing, China).

The ISCO Committee is particularly grateful to the contribution made by Members of the Executive Committee, ISCO Council and other members who helped the organisation in organising and manning exhibition booths at these events.

Members of ISCO Council and the ISCO Committee have also given presentations on ISCO's mission and its work at various events - ISCO Member of Council, Capt. D. C. Sekhar at Oil Spill India, and at meetings of the Chemical and Industrial Management Organisation and the South Asian Association for Regional Co-operation. Also by Committee Members, Kerem Kemerli at Adriaspillcon in Croatia and Li Guobin at the Oil Spill Response Workshop in Beijing, China.

EXHIBITION AT IMO IN LONDON TO MARK 50 YEARS OF GOVERNMENT AND INDUSTRY WORKING TOGETHER TO ADDRESS THE RISK OF OIL POLLUTION FROM SHIPS



In 1967, the grounding of the Torrey Canyon focused the world's attention on the risks and environmental impact of major marine oil spills. It became a catalyst for positive change resulting in the introduction of a comprehensive regulatory framework, safer shipping, improved preparedness and response and adequate compensation. This exhibition, entitled '50 years working

together: Government and industry collaboration to address the risk of oil pollution from ships' will be launched at the

International news (continued)

meeting of the IMO Sub-Committee on Pollution Prevention and Response at the IMO building in London on 16 January 2017 and is expected to remain on display at IMO for up to seven months.

Organisations that have worked with IMO to create this exhibition include ISCO, IOPC FUNDS, ITOFF, IG P&I, ISU, ICS and OCIMF.

Incident reports from around the world

FRANCE: FIRE LEAVES CHEMICAL TANKER ADrift



December 20 - On Monday afternoon, the chemical tanker Cape Bon suffered a fire in an electrical pane as she was transiting the English Channel. The loss of the panel knocked out her ship's service power and left her unable to maneuver.

The French authorities were notified, and they dispatched the intervention tug Abeille Languedoc, which departed Boulogne-sur-Mer and arrived on scene at 1750 hours. In addition, a French Navy helicopter carried an evaluation and intervention team out to the Bon, and after an inspection, they determined that she should be towed to an anchorage. *The Maritime Executive* [Read more](#)

USA: COLORADO - BP PIPELINE RUPTURES NEAR BAYFIELD, SPILLS INTO SAULS CREEK

December 20 - A BP pipeline running along Sauls Creek in Bayfield was discovered ruptured last week, spilling coal-bed methane produced water into the creek and forcing the emergency construction of an earthen dam to prevent contamination downstream.

The produced water – a byproduct of oil and gas extraction – traveled across a sagebrush/grass meadow and into Sauls Creek, an intermittent stream that flows into Beaver Creek, which meets the Los Pinos River a few miles south of Bayfield. *The Durango Herald* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

NIGERIA: FRESH OIL SPILLS HITS IBENO COMMUNITIES IN AKWA IBOM

December 22- Fresh oil spills suspected to emanate from the facility of American giant, ExxonMobil, have hit more than 10 communities situated on the Ibena shoreline in Akwa Ibom.

In an interview with the News Agency of Nigeria, a youth leader in the community, Godwin Robert, who is the Secretary of Ulok Ulok People's Assembly, lamented that the oil spill case was the sixth this year and is destroying the environment. *The Eagle Online* [Read more](#)

GREECE: GROUNDED CARGO SHIP IN TROUBLE IN GREECE; NINE RESCUED, POLLUTION REPORTED

December 26 - Nine crew members have been rescued from a grounded general cargo ship that has run aground and is leaking oil in Andros, Greece. The Hellenic Coast Guard says the Antigua and Barbuda-flagged MV Cabrera ran aground Saturday in severe weather, leaving the ship partially sunk along the rocky coast in very heavy surf. All nine crew members have been airlifted by a Greek Navy helicopter and transferred to local hospitals.

A sheen of oil approximately 500 square meters was observed around the ship and along the coastline on Saturday, the Hellenic Coast Guard said. Oil spill response was being hampered by weather in the area. *gCaptain* [Read more](#)
Related report in [The Maritime Executive](#)

December 29 - Response crews in Greece are working to clean-up and pump oil from the stricken cargo ship MV Cabrera which ran aground December 24 on the Greek island of Andros during heavy weather. An update from the Hellenic Coast Guard on Wednesday afternoon said crews have been able to pump 4,600 liters of oil from one of the ship's fuel tanks. Meanwhile absorbent boom has been placed along the length of the ship, which is partially sunk along the rocky coastline. *gCaptain* [Read more](#)

Incident reports from around the world (continued)

PHILIPPINES: TYPHOON NINA CLAIMS TWO RO-ROS AND A TANKER

December 26 - Two ro-ros have sunk and a tanker has run aground in adverse weather caused by Typhoon Nina.

The ro-ro Starlite Atlantic sank off Batangas Bay in the Philippines on Monday. 15 of the vessel's crew have been rescued, another eight are believed to be missing. Another ro-ro, the Shuttle Roro 5, sank off the coast of Mabini, Batangas, as a result of the typhoon. All 25 crew and passengers are said to have been rescued.

The oil tanker MT Obama ran aground in Marinduque at the height of typhoon Nina, and there are fears of an oil spill. *The Maritime Executive* [Read more](#)

CHINA: OIL SPILL CLEANED UP OFF SOUTH CHINA COAST

December 27 - An oil spill near the coast of China's island province of Hainan will be cleaned up on Monday, according to the local government, but the ecological impact is still to be determined.

The spill was caused by a fuel leak on a cargo ferry along the coast of Wenchang City on Saturday. The spill, measuring one to three meters wide, stretched 400 metres long before cleanup efforts began.

Five salvage vessels and 80 rescuers were mobilised. By late Sunday afternoon, three quarters of the spill had been contained, according to officials with Wenchang municipal government. *Borneo Bulletin* [Read more](#)

USA: NEW MEXICO - TANKER TRUCK SPILLS FUEL INTO CIMARRON RIVER

December 29 - A commercial truck hauling a tanker full of fuel Tuesday slid on a patch of ice on curvy U.S. 64 east of Eagle Nest and ended up in the Cimarron River, leaking unleaded gas and diesel fuel, according to state police. *SantaFeNewMexican.com* [Read more](#)

News reports from around the world (countries listed in alphabetical order)

BAHAMAS: INTERNATIONAL OIL SPILL WORKSHOP HELD TO IMPROVE PARTNERSHIPS AND RESPONSE MECHANISMS

December 22- Fifteen countries participated in a four-day oil spill workshop in mid-December at the Lowell Mortimer Maritime Institute on Coral Island. Minister of Transport and Aviation, the Hon. Glenys Hanna-Martin, welcomed the delegates at the commencement of the workshop, held December 15-18, 2016.

Under the theme, 'Networking and Enhancing Partnerships,' Minister Hanna-Martin said that such workshops were extremely important, and comprised a mechanism for evaluating the National Maritime Policy Plan. "Regional cooperation is crucial in planning and responding to oil spills," said the Minister. "The objective is to review and improve national and regional oil spill plans." Once the plans have been reviewed, they are enhanced in order to further strengthen the region's response capabilities. *Government of the Bahamas* [Read more](#)

BANGLADESH: JOLTED INTO ACTION BY OIL SPILLS, BANGLADESH ACTIVATES FIVE-YEAR OLD REGIONAL COOPERATION AGREEMENT

December 26 - Bangladesh signed a regional cooperation agreement in 2010 but recent disasters have only now gotten it moving to formulate a contingency plan and receive regional cooperation.

After experiencing three major incidents over the last thirteen months, Bangladesh has finally started to formulate a national oil spill contingency plan. This will help the country avoid further large-scale damages and also receive cooperation from other countries in the region to jointly tackle such accidents. In fact a Memorandum of Understanding (MoU) was signed in 2010 among five coastal countries in South Asia- Bangladesh, India, Pakistan, Sri Lanka and the Maldives, but the initiative is only being taken now, five years later to draft the contingency plan under the MoU. *TheThirdpole.net* [Read more](#)

CANADA: FIVE OIL SPILL-RESPONSE BASES EAGERLY AWAITED ON VANCOUVER ISLAND

December 29 - While opposition to Kinder Morgan's Trans Mountain pipeline expansion project is widespread on Vancouver Island, some communities are looking forward to promised new oil spill response bases. Industry-funded Western Canada Marine Response Corporation is ready to put shovels in the ground on five bases in Nanaimo, Port Alberni, Ucluelet, Sidney and Beecher Bay. The plans are awaiting provincial approval for Trans Mountain as well as Kinder Morgan's final investment decision, expected between January and March.



SOURCE: CANADIAN COAST GUARD, WESTERN CANADA MARINE RESPONSE CORPORATION

The Times Colonist [Read more](#)

CHINA TO BUILD ITS FIRST DEEP SEA OIL SPILL RESPONSE CENTRE

December 19 - China will set up its first deep sea oil spill emergency center in the southern city of Shenzhen, China's state asset supervisor said on its website. The oil spill response center, in the vicinity of CNOOC's [0883.HK] Huizhou oilfield, will be capable to handle spills from pipelines located 1,500 meters below the sea surface level. *Yahoo News* [Read more](#)

INDIA: GULF OF KUTCH EXERCISE TO TEST READINESS TO COMBAT OIL SPILL

December 18 - The [Indian Coast Guard](#) (ICG)—the central coordinating authority for combating oil spills at sea—will conduct the sixth edition of National Pollution Response Exercise (NATPOLREX-VI) off Mundra in the Gulf of [Kutch](#) (GoK) on December 20 and 21.

Domestic oil production and transportation by ship and pipelines over the sea, pose a high risk of spills in Indian waters, which can severely damage marine ecosystems. NATPOLREX-VI aims to leverage synergies among stakeholders to tackle such a disaster and conduct an audit of oil handlers and agencies' capabilities by the two-day annual exercise scheduled to be conducted in two phases — table top and actual sea response. *Times of India* [Read more](#)

JAPAN: FUKUSHIMA \$70 BILLION CLEANUP LEAVES FOREIGN FIRMS DRY

December 28 - Cleaning up the Fukushima nuclear plant -- a task predicted to cost 86 times the amount earmarked for decommissioning Japan's first commercial reactor -- is the mother of all salvage jobs. Still, foreign firms with decades of experience are seeing little of the spoils. *Bloomberg* [Read more](#)

News reports from around the world (continued)

UK SIGNS EMERGENCY TOWING VESSEL 'IEVOLI BLACK' TO 5-YEAR CONTRACT OFF SCOTLAND



December 20 - The vessel is currently en route from the Adriatic and is scheduled to arrive on station at Kirkwall in the Orkney Islands by the end of the year, where it will relieve the current ETV Herakles. The hand-off is scheduled for December 31.

The MCA said the contract was awarded after an open market competition involving 22 bids, which were evaluated based on vessel type and dimensions, age, bollard pull, speed, crew complement and experience, training and exercises, efficiency and the chargeable day rate.

“This award demonstrates the UK Government’s commitment to protecting the marine environment,

specifically recognising the particular challenge in north and north-western Scotland where commercial tugs are scarce. The new contract provides the region with a new vessel which will regularly patrol her designated operations area,” the MCA said in a press release. *gCaptain* [Read more](#)

UKSPILL SIGNS NEW INTERSPILL AGREEMENT IN LISBON

Dec 21 – Co-Chairman of UKSpill, Richard Proctor, signed the new agreement for Interspill Committee, at EMSA offices in Lisbon on 13 December 2016. UKSpill was joined by NOSCA, Sycopol, OSRL, IPIECA, IMO, ITOPF, IOPC Funds and Cedre at this renewal of the support for this global event.

Planning for the 2018 event in London has already started, information will become available in the new year, in the meantime – Book the Date 13-15 March 2018. [News received from UK Spill Association]

USA: MASSIVE 2013 OIL SPILL IN NORTH DAKOTA STILL NOT CLEANED UP

December 18 - Three years and three months later, a massive oil spill in North Dakota still isn't fully cleaned up. The company responsible hasn't even set a date for completion.

Though crews have been working around the clock to deal with the Tesoro Corp. pipeline break, which happened in a wheat field in September 2013, less than a third of the 840,000 gallons that spilled has been recovered — or ever will be, North Dakota Health Department environmental scientist Bill Suess said. *The Kansas City Star* [Read more](#)

December 21 - U.S. Regulators Order Action to be Taken for North Dakota Oil Spill - U.S. pipeline regulators on Wednesday ordered Belle Fourche Pipeline Co. to improve leak detection, along with other actions, after a Dec. 5 incident that spilled about 4,200 barrels of oil in North Dakota.

Of that total, an estimated 3,100 barrels of crude oil entered the Ash Coulee Creek near Belfield, North Dakota. That oil has been contained. As of Wednesday, more than 1,900 barrels had been recovered from the creek, company spokeswoman Wendy Owen said by phone. *Insurance Journal* [Read more](#)

USA: PRESIDENT OBAMA BANS OFFSHORE DRILLING IN ARCTIC AND PARTS OF ATLANTIC

December 20 - U.S. President Barack Obama on Tuesday permanently banned new oil and gas drilling in federal waters in the Atlantic and Arctic Oceans, in one of his last environmental pushes before he leaves office next month.

In protecting the waters, Obama used a 1950s-era law called the Outer Continental Shelf Act that allows presidents to limit areas from mineral leasing and drilling.

Environmental groups said Obama’s use of the law meant the incoming administration of Republican President-elect Donald Trump could not simply reverse the action but would have to fight it in the courts.

The ban affects federal waters off Alaska in the Chukchi Sea and most of the Beaufort Sea and in the Atlantic from New England to Chesapeake Bay.

The move came in a joint announcement by Obama and Canadian Prime Minister Justin Trudeau to launch “actions ensuring a strong, sustainable and viable Arctic economy and ecosystem.”

News reports from around the world (continued)

Obama said in a statement on Tuesday that the joint actions “reflect the scientific assessment that, even with the high safety standards that both our countries have put in place, the risks of an oil spill in this region are significant and our ability to clean up from a spill in the region’s harsh conditions is limited.”

Canada will designate all Arctic Canadian waters as indefinitely off limits to future offshore Arctic oil and gas licensing, to be reviewed every five years through a climate and marine science-based life-cycle assessment. *gCaptain*
[Read more](#) Related report in [The Maritime Executive](#)

USA: ABANDONED TEXAS OIL WELLS SEEN AS "TICKING TIME BOMBS" OF CONTAMINATION



Photo: Ty Edwards, assistant general manager of the Middle Pecos Groundwater Conservation District, points to brackish water flowing from one of several flowing abandoned wells— originally drilled for oil, but later used for irrigation — that no state agency plans to plug. Rafael Aguilera for The Texas Tribune

December 21 - Texas is among several states grappling with a surge of abandoned drilling sites and dwindling funds to clean them up. Peculiar things can happen after folks drill deep into the earth — looking for oil, water or whatever — and leave a bunch of holes in the ground. Fluids can gurgle and leak, migrating where they don’t belong. In rare instances, land could even sink or collapse.

The oddest unintended consequences tend to bubble up in this pockmarked slice of West Texas, where wildcatters started poking holes in the ground nearly a century ago. *Texas Tribune* [Read the whole article and watch video](#)

ISCO news

ISCO WELCOMES NEW MEMBERS

Denis G. Daigle of the New Brunswick Department of Environment & Local Government, Canada has joined ISCO as an Individual Member.

Shanghai Yinai New Material Technology Co. Ltd. in China Has joined ISCO as a Corporate Member. The company’s website is at <http://www.yinaish.com>

Canadyne Technoloies Inc., based in Vancouver, BC, Canada has joined ISCO as a Corporate Member. The company manufactures response equipment including oil spill containment booms, oil skimmers, boom reels, powerpacks, and accessory items required for the containment and recovery of marine oil spills. The company’s website is at <http://www.canatec.com/>

ISCO AT OSRW 2016 EXHIBITION AND CONFERENCE IN SHANGHAI, CHINA



Project Director, Crystal Qin reported – “Thank you very much for your consideration and support. OSRW 2016 was closed successfully and we appreciated ISCO’s support represented by Mr Li Guobin, Member of the ISCO Executive Committee, who delivered a very excellent presentation to introduce ISCO to the audience at the event”

More information about ISCO and brochures, in Chinese language, were provided at the booth in the exhibition hall which attracted much interest from attendees.

This was the third time that ISCO participated at OSRW in China and the support given by our Chinese colleagues was very much appreciated.

EVALUATION

A new series of articles contributed by Mark Francis of Oil Spill Solutions



Mark Francis has been involved with the oil industry since 1975. He attended his first oil spill in 1976, the Tanker Elaine V incident. He became head of response for inland spills within the UK for British Petroleum E & P in 1980 for 10 years responding to well, storage tank and pipeline spills throughout the UK. Over the next 25 years he continued to build his international operations experience and has also specialised in spill response training, delivering IMO and other courses in more than 20 countries.

Part 11

Methods of Observation (continued)

Remote Sensing for Oil Spill Surveillance

Remote sensing bands and related instruments for oil spill detection are shown in the table below.

Band	Wavelength	Type of Instruments
Radar	1-30 cm	SLAR/SAR
Passive microwave	2-8 mm	Radiometers
Thermal infrared (TIR)	8-14 µm	Video cameras and line scanners
Mid-band infrared (MIR)	3-5 µm	Video cameras and line scanners
Near infrared	1-3 µm	Film and video cameras
Visual	350-750 nm	Film, video cameras and spectrometers
Ultraviolet	250-350 nm	Film. Video cameras and line scanners

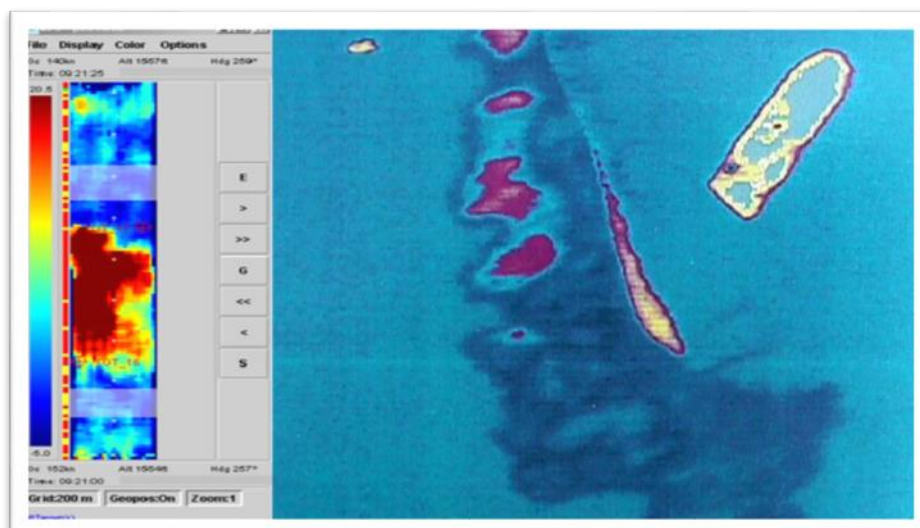
Infrared, visible and UV sensors will not be able to detect oil in inclement weather such as heavy rain or fog.

Visible sensors are generally used to create a base map for the oil spill.

Active sensors use their own energy source to capture information whereas passive sensors do not have their own energy source and rely on other energy sources.

Remote sensing bands and related instruments used for oil spill detection (adapted from Goodman, 1994)

Infrared Sensor



These systems may show the maximum extent of an oil slick and some information about thickness since thinner oil slicks appear cold and greater thicknesses appear to be hot.

The system is used best together with an Ultraviolet scanner and visual images.

Special feature (continued)

It consists of an aerial detection system, including a camera with infrared scanner, recording equipment and telemetry.

Some systems may provide in real time a view onboard a ship or from land, if the variation is compatible and the reception equipment available.

The principle of operation depends greatly on small differences of temperature between one area of the sea and another.

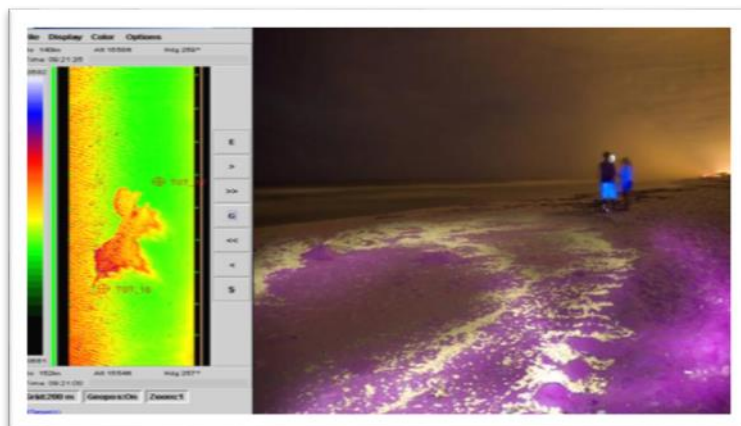
Good results then are highly dependent on meteorological conditions. Conditions of fog, low clouds and rough seas may yield very poor results.

Errors in interpretation are possible such as for example cold water in the ballast of ships during the summer, hot water effluents or irregular cloud formations.

However, with a capable operator and good interpretation, good and accurate results may be obtained and confirmed by other systems. This system could show where the best place is to use skimmers and dispersants.

This system also has problems with algae, coastal areas with upwelling of water masses. Since the price is not very high, this is the tool most used for monitoring.

Ultraviolet Sensor



A sensor detects UV radiation from the sun reflected by the oil and gives an exact estimate of the area of the spill.

The UV system only functions with daylight and, even better, with sunlight.

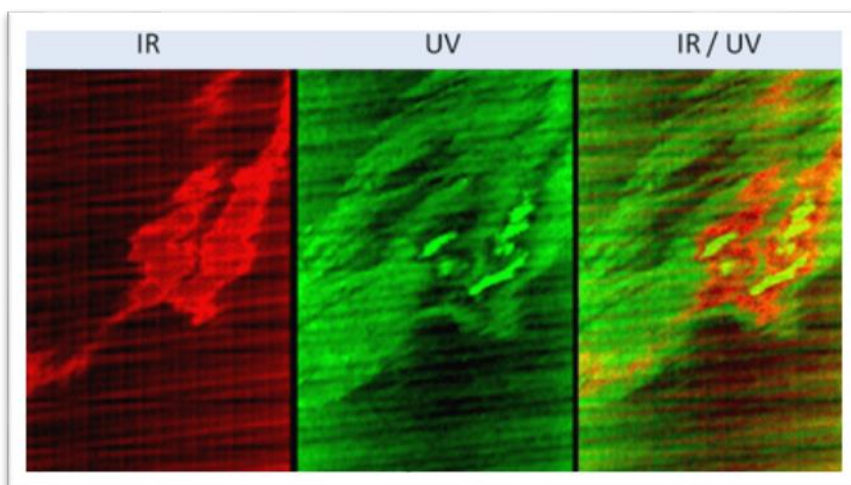
Many errors are committed in areas sheltered from the wind, when the sea loses its roughness, thus increasing the reflection in the presence of biogenetic materials.

With information from ultraviolet and infrared scanners, it is possible to obtain an exact estimate of the extent of the oil slick.

This equipment results in the best spatial view of the incident, showing even the silver sheens of the oil spills.

Right shows that when the images of Infrared and Ultraviolet separately are bought together; you get an image which shows both the extension of the slick as well as the thicker area.

This is very important for strategies of using dispersant as well as containment and recovery as we need to direct these operations to the areas with the thickest concentrations to be most effective.



Acknowledgement of borrowed photos and other material in this article – Over a period of years Mark has compiled an extensive repertoire of material for training purposes, some of which has been replicated in this article. As all the original sources cannot all be recalled, he apologises for not being able to acknowledge all of the individual sources but does wish to record his gratitude to those who have helped him

To be continued

Correspondence

COMMENT FROM J. "SJON" HUISMAN, EMERGENCY RESPONSE ADVISOR, RIJKSWATERSTAAT

The article series by Mark again makes me comment.

Visual observations and using a photo camera is an important aspect of oil spill assessment. We take as basic principle that downward looking imagery is best at 80-90 degrees angle; that photo's should be taken from all four sites in order to look with the wind and against the wind/waves.

Mark rightly states that one might be mistaken by other natural phenomena. However, our operators MUST know their area of operation by heart and know what kind of phenomenon is where. Of course I will not exclude mistakes, but almost everything can be checked when down on base.

Another issue that may create some difficulties now and also in the past is the quality of the colour display or the colour print (in the old days). I recall that in the development of the BONN AGREEMENT OIL APPEARANCE CODE a series of photo films was used for the same oil slicks, but brought to different print shops. Obviously a rainbow colour did not turn into brown or black, but there were fantastic differences in quality creating some great problems when judging the spill.

Therefore my advice: on making an extensive observation, record data and take video and photos from four sites; and discuss with others on board what is observed. Leave the area to return in an hour and look at it again. This is done in major oil slicks, not so much in operational pollution. Then inform users of all the data that you have tried to get and have a best guess about type of oil and volume.

In the inter-comparison flights undertaken in BONN AGREEMENT in the nineties it was concluded that when a known fixed quantity of oil is released and observed by more than one aircrew in a sequence, the second and third aircraft (after 2 and 3 hours) estimate a larger volume. That is totally due to the fact that the spreading is more rapid than the change in appearance (colour), so a large area and same colour leads to higher volumes as the evaporation and dissolution is less quick.

Being an observer is a very difficult and challenging job, like a referee in a football match.

J. "Sjon" Huisman, Emergency Response Advisor, Rijkswaterstaat, The Netherlands

Technical support

USA: NEW VERSIONS OF CAMEO FM AND TIER2 SUBMIT ARE NOW AVAILABLE.

Download CAMEOfm 3.3 at <https://www.epa.gov/cameo/cameo-software>

Download Tier2 Submit 2016 at <https://www.epa.gov/epcra/tier2-submit-software>

Note: If you're upgrading to CAMEOfm 3.3 from a previous version of CAMEOfm, follow the instructions in the guidance document (provided on the download page) to ensure that you don't lose your current data.

Want to know if your software is up to date? The latest versions of the CAMEO software suite programs are ALOHA 5.4.7, CAMEO Chemicals 2.7, CAMEOfm 3.3, MARPLOT 5.0.3, and Tier2 Submit 2016.

The CAMEO Team at EPA and NOAA [Thanks to Alan Finkelstein of HAZMAT 101 Group]

Publications

EUROPE: EMSA - ANNUAL OVERVIEW OF MARINE CASUALTIES AND INCIDENTS 2016

December 20 - The Annual Overview of Marine Casualties and Incidents consists in a high-level analysis of accidents reported by the EU Member States in European Marine Casualty Information Platform (EMCIP).

For more info and to download the Annual Review go to -

<http://www.emsa.europa.eu/news-a-press-centre/external-news/item/2903-annual-overview-of-marine-casualties-and-incidents-2016.html>

Links for recent issues of other publications (in alphabetical order)

AMSA Aboard	News from the Australian Maritime Safety Authority	December 2016
ASME EED EHS Newsletter	News and commentary on HSE issues from George Holliday	Most recent issue
Bow Wave	Sam Ignarski's Ezine on Marine & Transport Matters	Current issue
Cedre Newsletter	News from Cedre in Brittany, France	November 2016
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	Current issue
EMSA Newsletter	News from the European Maritime Safety Agency	December 2016 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	December 2016 issue
IMO News Magazine	News from the International Maritime Organization	No 4, 2016
IMO Publishing News	New and forthcoming IMO publications	November 2016
Intertanko Weekly News	International news for the oil tanker community	December 21, 2016
JOIFF "The Catalyst"	Int'l Organisation for Industrial Hazard Management	October 2016 issue
MOIG Newsletter	News from the Mediterranean Oil Industry Group	October 2016 issue
NOWPAP Quarterly	News from the North West Pacific Action Plan	Quarter 1, 2016 issue
Ocean Orbit	Newsletter from the International Tanker Owners Pollution Federation	May 2016
OCIMF Newsletter	News from the Oil Companies International Marine Forum	December 2016 issue
Pollution Online Newsletter	News for prevention & control professionals	December 21 2016
Safe Seas, Clean Seas	Quarterly Newsletter from Maritime New Zealand	December 2016 issue
Sea Alarm Foundation Newsletter	Oiled wildlife Preparedness and Response news from Sea Alarm	Autumn 2015 issue
Technology Innovation News	News from US EPA – Contaminated Site Decontamination	November 1-15, 2016
Transport Canada Newsletter	News and articles re transport of dangerous goods in Canada	December 2016 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	January 1, 2017
USA EPA Tech News & Trends	Contaminated site clean-up information	Spring 2016 issue
WMU Newsletter	News from the World Maritime University	December 2016 issue

Your editor depends on regular receipt of updated links for listed publications. If these are not received, relevant entries may be discontinued

Events

UK: IMO POLLUTION PREVENTION & RESPONSE (PPR) SUB-COMMITTEE MEETING IN LONDON

The meeting runs from 16/01/2017 to 20/01/2017 at the IMO HQ building at 4, Albert Embankment, London SE1 7SR. Members of attending delegations are required to register in advance.

Upcoming events summary

COUNTRY	2017	TITLE OF EVENT	LOCATION
For more information click on Title of Event			
USA	January 4-6	27th Annual, No-Spills Conference	Acme, Michigan
KUWAIT	January 10-12	Kuwait 2nd Oil Spill Conference	Kuwait
UK	January 16=20	IMO PPR Sub-Committee Meeting	London
JAPAN	February 2	PAJ Oil Spill Workshop 2017	Tokyo
UK	March 7	UK Spill Annual Members' Meeting and Dinner	London
USA	March 28-30	2017 SCAA Annual Meeting & Conference	Washington DC
UAE	April 10-12	RECSO EnviroSpill 2017	Abu Dhabi
SINGAPORE	April 25-28	10th Intl Chemical and Oil Pollution (ICOPCE)	Singapore
USA	May 15-18	International Oil Spill Conference	Long Beach CA
USA	June 27-28	Clean Waterways	Louisville KY
2018			
UK	March 13-15	2018 INTERSPILL Conference and Exhibition	London
To request posting of an event of interest to the Spill Response Community please send details to the Editor			

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