

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 organisations.

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International news

IMO – PROMOTING WRECK REMOVAL



June 28 - The IMO treaty covering the removal of wrecks has been part of discussions at the Wreck Removal Contracts and Operations [Seminar](#) in London (20-21 June). IMO's Jan de Boer gave an overview of the Nairobi International [Convention](#) on the Removal of Wrecks, which provides the legal basis for States to remove, or have removed, shipwrecks that may threaten the safety of lives, goods and property at sea, as well as the marine environment.

The treaty applies to shipwrecks, objects from ships at sea, drifting ships and floating offshore installations. Having entered into force in 2015, the instrument currently has 36 Contracting States, which represent just over 70% of the world's merchant fleet tonnage. [IMO What's New](#)

SCORECARD FOR ARCTIC ENVIRONMENTAL ISSUES DRAWS SURPRISING CONCLUSIONS

The World Wildlife Fund spent 18 months scoring how well Arctic nations are meeting their environmental goals. But as the WWF Arctic Programme's communications chief Clive Tesar explains, the grades are just part of a bigger picture.

Has the Arctic Council achieved its environment-related intentions over the past 10 years? The Arctic Council Conservation Scorecard – a new analysis by the World Wildlife Fund (known outside the U.S. and Canada as the Worldwide Fund for Nature) – paints a very mixed picture.

The alarmingly low grades on critical regional problems like preserving biodiversity and cleaning up shipping may not surprise informed Arctic observers. But the scorecard's uniformly high marks for international "oil

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International news (continued)

spill cooperation" seem at odds with the region's widely known lack of resources for dealing with potential Arctic drilling disasters.



Above: The WWF's scorecard for Arctic environmental issues gives uniformly high marks for international oil spill cooperation. But the conservation group says that's not the whole story: Arctic nations haven't yet made very ambitious commitments to deal with oil spills in Arctic waters.

As an official observer to the Arctic Council, WWF is ready to work with any Arctic nation that wants to dig into the deeper story behind its scorecard grades, Tesar said, and address Arctic conservation gaps. Arctic Deeply talked to Tesar about the scorecard and its implications.



Three polar bears approach the starboard bow of the submarine USS Honolulu while it is surfaced 450km (280 miles) from the North Pole. Sighted by a lookout from the bridge of the submarine, the bears investigated the boat for almost two hours before leaving. (U. S. Navy Photo by Chief Yeoman Alphonso Braggs)

The scorecard rates all the nations, as well as the council, highly in the arena of cooperation on oil spills. What accounts for these scores?

Tesar: In some sense this is counterintuitive. On the one hand, we're saying that the council and the states have delivered well on their commitments on cooperation on oil spills.

But on the other hand, the states aren't really ready, for the most part, to deal with a

major spill. They don't have that capacity. They don't have the equipment. They don't even necessarily have the techniques to capture oil in icy conditions. So how can it be that they're looking so good in this category?

The answer, as we went back again through what sorts of things the council is asking itself and its members to do, is that those things were important – but nowhere near what is required to address the whole problem. When we talk to the states around the scorecard we make certain to bring that up and say, "Don't rest on your laurels of this one. You might look really good but that's because your commitments that you made through the council were really not very

International news (continued)

ambitious, and really not sufficient to tackle the problem of how you would either cooperatively or individually tackle oil spills in Arctic waters.”

Where is the ambition lacking?

Tesar: It's lacking in terms of, say, being able to agree to things like a joint fund that the Arctic Council countries could pay into, that would help clean up any any spill that occurred within Arctic waters. Or to enact, on a national basis, legislation that was sufficient to really mitigate more effectively than has been done to date the risk of any spill.

NewsDeeply.com The above article has been abridged. [Read the complete text of this article](#)

Incident reports

INDIA: OIL PIPELINE LEAK AFFECTS 4 HECTARES OF FARM LAND

June 18 - THE SALAYA-MATHURA pipeline of Indian Oil Corporation (IOC) ruptured and crude oil leaked out of it, spreading over around four hectare of agricultural land in Mota Thavariya village near Jamnagar city on Saturday. The breach was reported at around 10 am as a stream of oil started coming out on an agricultural field. “IOC stopped pumping of oil in the pipeline and isolated a section of 500 metre of the pipeline in which the breach was reported. *The Indian Express* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

PAKISTAN: AT LEAST 148 KILLED IN OIL TANKER EXPLOSION AFTER RUSHING TO COLLECT SPILLED FUEL



June 25 - At least 148 people were killed as they rushed to collect spilled fuel after an oil tanker overturned and exploded in Pakistan, rescue workers have said.

Some 140 more people were wounded, including 40 in critical condition, said Mohammad Baqar, an official with local rescue services, adding that the toll was expected to rise.

The tanker overturned after trying to make a sharp turn on a national highway on the outskirts of the city of Bahawalpur. It was driving from the southern port city of Karachi to Lahore, the Punjab provincial capital, when the driver lost control and crashed.

“People of the area and passersby had started gathering fuel when the tanker exploded, burning everybody on and around the spot,” provincial government spokesman Malik Muhammad Ahmed

Khan told Reuters. Serious burn victims, several in critical condition, were airlifted by helicopter to hospitals in Bahawalpur and nearby cities for treatment.

Witnesses said about 30 motorcycles that had carried villagers to the accident site lay in charred ruins nearby. Eight other vehicles were destroyed, they added. *The Independent* [Read more](#)

MEXICO: ANOTHER SPILL REPORTED AT OAXACA REFINERY

June 26 - A new spill has been reported at the Pemex oil refinery in Salina Cruz, Oaxaca, causing further environmental damage to nearby waterways and a popular beach. A large fire broke out at the Antonio Dovalí Jaime refinery on June 14 after an explosion in an area where 500,000 liters of crude oil were stored. Rain that accompanied tropical storm Calvin had flooded the site the previous day. Oil also spilled into a nearby lagoon.

Now another spill has exceeded containment barriers and again flowed into nearby waterways, raising further concerns among local residents about environmental damage.

While a specialized team from Pemex began work to prevent the spill from spreading, protestors interrupted their work to demand they be contracted by the company to contribute to the clean-up effort.

There are also reports of contamination caused by black rain from the June 14 fire at Playa Brasil, some 20 kilometers from the refinery. The environmental damage has brought both fishing and tourist activity at the beach to a halt. *Mexico News Daily* [Read more](#)

Incident reports (continued)

UK: FIREFIGHTERS TACKLE BLAZE NEAR GATWICK AIRPORT AS EIGHT TANKS OF DIESEL BURST INTO FLAMES



June 26 - 12 crews were called to the blaze overnight as massive plumes of smoke billowed more than 100ft into the air.

Dramatic photos showed the ferocity of the fire, which erupted just six miles from the airport and raged for more than 10 hours.

The blaze broke out just after 1.15am on Monday morning at the Rowfant Business Park in Crawley Downs, West Sussex.

Daily Express [Read more](#)

[Thanks to JOIFF and Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

Comment from Kevin D. Westwood, JOIFF Director, Engineering & Technology –

“Diesel fuel spills are notoriously difficult to ignite as a liquid, I can contest to this from years of experience getting fuel props to ignite at the training field. Having to add small amounts of gasoline mix to accelerate the ignition process across the fuel surface. However, as a vapour it’s a different story. As a long carbon chain hydrocarbon diesel has one of the lowest Auto Ignition Temperatures (AIT) of Hydrocarbon fuels. How does this impact diesel in storage? The answer is its more hazardous and more easily impacted by external thermal impact. As the tank heats up it releases vapours into the ullage space creating a flammable gas mixture which under ambient conditions did not exist. With a low flammable explosion limit of 0.6 to 7.5 diesel tanks present one of the highest risks of your storage tank inventories when external thermal impact such as a bund fire or in small capacity tanks from external combustible fires in close proximity. Diesel the difficult to ignite liquid is not your friend when it’s in vapour form and when close to heat source! As a safety professional working in High Hazard Industry get to KNOW YOUR ENEMY”

USA: MICHIGAN - CREWS WORK TO CLEAN UP OIL SPILL NEAR BATTLE CREEK

June 28 - Cleanup crews are likely to be working this week and next week at the site of an oil leak in Calhoun County. The Department of Environmental Quality says approximately 4,000 gallons of oil and 20,000 gallons of brine water leaked from a steel line at an oil well. The well belongs to Omimex Energy in Convis Township, northeast of Battle Creek.

The DEQ says the leak was discovered on private property on June 12. A state geologist, Kristy Shimko, says there’s no threat to public health or safety. She says the oil migrated to a low wet area, which has been isolated by a clay berm. *Wood TV* [Read more](#)

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

AUSTRALIA: LEGAL ACTION LAUNCHED OVER GREAT BARRIER REEF OIL SPILL

June 22 - The Commonwealth Director of Public Prosecutions has opted to pursue proceedings in Townsville for the alleged pollution in July 2015, which saw up to 15 tonnes of oil wash ashore near Cape Upstart.

The ship company owner, Panama-based Globex Shipping, and its master, Kuk Hyun Jang, are each charged with two offences under the Protection of the Sea Act.

The Queensland government says the legal action sends a strong message to potential polluters, who could be fined up to \$17 million under the commonwealth law.

The court proceedings come after a 12-month investigation that pinpointed 17 ships which had been in the area 72 hours before the spill.

“Investigators tracked down these individual ships, many of which were on international voyages, checked on-board records, interviewed crews and took oil samples for elimination testing against samples from the spill,” Ports Minister Mark Bailey said. *The Courier Mail* [Read more](#)

News reports from around the world (continued)

INDIA: NATIONAL WORKSHOP ON INTERNATIONAL LIABILITY COMPENSATION REGIME, GOA

June 23 - On 8–9 June 2017, the IOPC Funds was invited to participate in a national workshop on the international liability and compensation regime in Goa, India, where the Head of Claims Department, Ms Liliana Monsalve, gave a number of presentations alongside ITOPI and the International Group of P&I Associations. Organised by the Directorate General of Shipping, India, for the benefit of relevant Government authorities and stakeholders, the two-day workshop was aimed at raising awareness of the regime. [IOPC Funds](#)

INDIA: OIL SPILL-HIT COASTLINE BACK TO NORMALITY

June 29 - Four months after two ships collided off Kamarajar Port in Ennore, leaving more than 35 km of Chennai's coastline affected by oil spill, the shores of Ernavoor, the 'epicentre' of the spill, has nearly returned to normality.

The groynes on the shores have been cleared off oil slick and fishermen have resumed fishing. There were no major signs of the oil spill at the port that saw more than 2,000 people, including volunteers, engaged in the clean-up operations. *The Hindu* [Read more](#)

MEXICO: GASOLINE THEFT BECOMES MAJOR CRIMINAL ENTERPRISE

June 22 - With a production of more than two million barrels of crude oil per day, Mexico ranks 12th among the world's petrol powers. Its oil industry is monopolized by state-controlled Pemex, which was created after the country nationalized the oil industry in 1938. It has since been a symbol of Mexican sovereignty and independence.

Almost eight decades after its creation, however, Pemex has lost much of its former glory. Plagued by a lack of investment and inefficiency, Mexican oil production has dropped steadily since reaching its peak of 3.38 million barrels per day in 2004. And while production drops, oil theft spikes. No less than 27,000 barrels of oil are stolen every day, according to Pemex, and the number of clandestine tapings of gasoline pipelines has increased a staggering 915 percent between 2011 and 2015.

Organized crime is the principal culprit. Across the country, Pemex's vast network of oil pipelines is an easy target for gangs who puncture the ducts and siphon away up to \$90,000 in a single tapping. With approximately 10 percent of Mexico's annual state revenue deriving from oil production, the losses are enormous. According to a recent investigation by the news website Animal Político, almost four billion gallons of fuel have been stolen since 2009, worth almost \$8 billion. *American Magazine* [Read more](#)

NEW ZEALAND: BE ALERT TO "DANGEROUS WRECKS" AND MUCH MORE!

June 30 - Maritime NZ will take over responsibility for issuing maritime navigational warnings to countries and vessels in the wider south west Pacific from mid-day today (Friday June 30).

"One organisation being responsible from beginning to end is safer for mariners," Mr Manch said. "Warnings to mariners will include alerting them to hazards such as dangerous wrecks, 'large unwieldy tows in congested waters', newly discovered rocks and reefs, changes or damage to lights and beacons, and weather," he said. *Mailchi.mp/mnz* [Read more](#)

RUSSIA: COURT UPHOLDS REPEAL OF \$5 MLN COMPENSATION FOR OIL SPILL NEAR SAKHALIN COAST

June 29 - The Commercial Court of the Far Eastern District has upheld a ruling of a lower court to repeal collection of 329.1 million rubles (about \$5 million) from Rostorg company, an owner of the ship Nadezhda, for damage to environment resulting from an oil spill near the island of Sakhalin, case documents read on Thursday.

Tanker Nadezhda, exploited by DV-Akvatoriya company, was stranded near the Nevelsk seaport on November 8, 2015. The vessel's hull suffered damage leading to an oil spill. The Pacific Maritime Administration of the Federal Service for Supervision of Natural Resource Usage (Rosprirodnadzor) has carried out an administrative investigation into the incident establishing all relevant facts. On December 7, 2016, the Sakhalin Regional Commercial Court ruled in favor of Rosprirodnadzor and recovered compensation from Rostorg. The court dismissed a claim against DV-Akvatoriya.

The court held that oil products spilled in the water due to a fault on the part of the defendant had direct toxic effect on water resources; therefore, individuals and corporate entities causing harm to environment in contravention of the relevant legislation are responsible for complete indemnification against the damage done. However, on March 6, 2017, the Fifth Commercial Court of Appeals has overturned the ruling because of Rostorg's bankruptcy. *Rapsi News* [Read more](#)

News reports from around the world (continued)

SPAIN: POLEX 24-17 - SALVAMENTO MARÍTIMO ORGANIZA UN EJERCICIO INTERNACIONAL DESALVAMENTO Y LUCHA CONTRA LA CONTAMINACIÓN EN SANTANDER



June 14 - Es el ejercicio anual de lucha contra la contaminación más importante y trata de reforzar la cooperación entre todas las administraciones para dar respuesta a casos de contaminación marina.

La alcaldesa de Santander, Gema Igual, la secretaria general de Transportes del Ministerio de Fomento, Carmen Librero, junto al director General de la Marina Mercante, Rafael Rodríguez Valero y el director de Salvamento Marítimo, Juan Luis Pedrosa han presentado el ejercicio internacional de salvamento y lucha contra la contaminación marina POLEX 24-17, organizado por la Dirección General de Marina Mercante y Salvamento Marítimo, que se celebra en Santander los días 14, 15 y 16 de junio. *Salvamento Marítimo* [Read more](#)

Post-exercise reports from [Cedre](#) and [IOPC Funds](#)

UK: NORTH P&I CLUB RESIDENTIAL TRAINING COURSE

June 23 - The IOPC Funds was invited by the North of England P&I Club to deliver a presentation at a residential training course at Lumley Castle in Chester-le-Street, the United Kingdom on 16 June 2017. Hosted by the North P&I Club, the annual marine insurance training course attracted delegates from across the shipping industry, with representatives from 15 different countries. IOPC Funds' Head of Claims Department, Ms Liliana Monsalve, gave a presentation on the role of the IOPC Funds and liability and compensation for oil pollution damage in general. <http://www.iopcfunds.org/news-events/detail/item/738/>

UKRAINE RATIFIES SALVAGE AND FOULING TREATIES

June 15 - Ukraine has ratified two important IMO treaties that help to protect the marine environment – the [International Convention on Salvage](#) and the Control of Harmful Anti-fouling Systems on Ships ([AFS Convention](#)).

H.E. Natalia Galibarenko, Ambassador of Ukraine to the United Kingdom, met IMO Secretary-General Kitack Lim at IMO Headquarters, London (15 June) to hand over the instruments of ratification. [IMO What's New](#)



USA: NOAA OR&R PARTICIPATES IN U.S. PACIFIC COMMAND-SPONSORED OCEANIA OIL SPILL RESPONSE WORKSHOP

June 30 - During the week of June 26, OR&R's Emergency Response Division participated in an Oceania Oil Spill Response Workshop sponsored by U.S. Pacific Command (USPACOM) in Honolulu, HI, for representatives from the countries of Fiji, Tuvalu, Nauru, Solomon Islands, Papua New Guinea, Samoa, Tonga, Kiribati, and Vanuatu.

The purpose of the week-long workshop was to enhance regional oil spill response capacity in Oceania, to share equipment capability among regional stakeholders, to promote communication on oil spill response readiness, to share lessons-learned and best practices from recent oil spill response efforts around the world, and to increase collaborative response efforts to protect natural resources and the environment. *NOAA OR&R* [Read more](#)

USA: PANAMA CANAL AUTHORITY, US NATIONAL RESPONSE TEAM ANNUAL EMERGENCY RESPONSE EXERCISE

June 30 - The week of June 26, OR&R Emergency Response Division (ERD) staff participated in the Panama Canal Authority (ACP)/US National Response Team (NRT) annual emergency response exercise, EcoCanal '17, both in Panama and the US. As part of the exercise, ERD sent its ACP-NRT Sub-committee member to Panama to act as a controller/evaluator for the exercise, while the NOAA NRT representative played his role in the exercise from the office in Silver Spring. For purposes of exercise, the scenario involved an imagined event involving two ships colliding in the Panama Canal causing an environmental threat from the release of hazardous cargo and the potential closure of the Panama Canal. *NOAA OR&R* [Read more](#)

News reports from around the world (continued)

USA: MICHIGAN FIRES CONTRACTOR FOR CONFLICT OF INTEREST IN STRAITS OIL SPILL ANALYSIS

June 21 - A company hired to analyze the worst-case scenario of an oil pipeline failure in the Straits of Mackinac has been fired because of a conflict of interest with Enbridge Energy LP, the state of Michigan announced Wednesday. An employee on the project subsequently worked on another project for Enbridge, which owns Line 5 in northern Michigan. Norway-based Det Norske Veritas, also known as DNV GL, is the contractor. The deal was terminated before the draft report had been delivered to the state. *Crain's Detroit Business* [Read more](#)

USA: \$1 MILLION GRANT WILL HELP MISSISSIPPI ADDRESS LEAKING UNDERGROUND PETROLEUM STORAGE TANKS

June 28 - The U.S. Environmental Protection Agency (EPA) awarded a \$1,094,000 grant to the Mississippi Department of Environmental Quality (MDEQ) to assist the state in cleaning up petroleum contamination from leaking underground storage tanks throughout the state. This grant is funded through the Leaking Underground Storage Tank (LUST) Trust Fund for the purpose of supporting state efforts to address this type of contamination. States may use these funds to support staff that oversee the cleanup projects or to pay for contractual services to perform cleanup projects. Some states, including Mississippi, use the funding for a combination of both. *EPA* [Read more](#)

USA: ANTICIPATION, UNCERTAINTY BUILD BEFORE RELEASE OF MACKINAC PIPELINE STUDY

June 28 - Next week, Michigan officials plan to publicly release a highly anticipated draft report about potential alternative routes for an aging oil and gas pipeline in the Straits of Mackinac between Lakes Michigan and Huron. It's another milestone in a process that officially began three years ago when state officials formed a task force to develop an action plan on Enbridge's Line 5 which, until then, faced relatively little public scrutiny. The process has also been a collective reaction to Enbridge's 2010 oil spill in Kalamazoo, the largest inland oil spill in U.S. history. *Midwest Energy News* [Read more](#)

USA: FIFTH CIRCUIT: RESPONSIBLE PARTY HAS RIGHT TO RECOVER CONTRIBUTION FROM OTHERS AT FAULT IN OIL SPILLS

June 29 - In a recent ruling dated June 9, 2017, *In re: Complaint of Settoon Towing LLC*, the U.S. Court of Appeals for the Fifth Circuit interpreted the statutory language of the Oil Pollution Act of 1990 (OPA) to grant the responsible party a statutory right of contribution against other entities who were partially at fault for discharge of oil, including amounts paid by the responsible party to claimants arising out of purely economic loss. *Holland & Knight* [Read more](#)

ISCO News

71ST SESSION OF THE IMO, MARINE ENVIRONMENTAL PROTECTION COMMITTEE

The IMO MEPC meets in London from the 3rd to 7th July. ISCO will be represented on this occasion by the Secretary Matthew Sommerville and ISCO Fellow, Douglas Cormack. Members of ISCO will be aware that obtaining and maintaining observer at IMO meetings was set as a key objective for the organization. Our attendance gives a voice to companies and individuals involved in spill control or provision of equipment and services at the forum where policy and regulation of the shipping industry is set.

The upcoming meeting has a packed agenda and over 160 documents have been distributed for review in advance of the meeting. In addition to reports from working groups and subcommittees key items on the agenda include discussions regarding ballast water treatment, air pollution, energy efficiency, identification and protection of special areas as well as our main interest pollution prevention and response. The bulk of the documents focus on measures to prevent pollution in its various forms that may arise from shipping activity. Prevention is an area where IMO has been particularly successful and a key cause of the reduction in number and scale of marine incidents. While the number of spills has reduced there remains an interest from governments particularly regarding development of guidance, training and materials associated with preparedness particularly for developing nations and in developing global best practice.

Included in the papers for this meeting is a joint paper submitted by BIMCO, ISU, P+I CLUBS, ITOPF and ISCO regarding the spill response contracts which you have heard about over the last few weeks. While the contracts were already launched at IOSC in Long Beach by Tony Paulson of West of England P+I and posted for free use on the ISCO and BIMCO websites. This paper is intended to ensure that government representatives who may not read ISCO news are aware of the contracts and their potential use. A report on the meeting will be included in the future ISCO news. [Matthew Sommerville, ISCO Secretary]

OIL SPILLS: INLAND RESPONSE GOOD PRACTICE GUIDELINES FOR INCIDENT MANAGEMENT AND EMERGENCY RESPONSE PERSONNEL

Part 2 of a new serialised article contributed by IPIECA and IOGP



Inland aquatic environments

For the purposes of this guide, inland aquatic environments or habitats encompass:

- freshwater rivers and streams, lakes and ponds, and wetlands;
- estuarine water bodies and shorelines; and
- shore or riverbank habitats including bedrock, man-made structures, sand, mixed sand and gravel, vegetated shores and mud.

Large inland water bodies, such as the North American Great Lakes and Lake Victoria in Africa, have waves and currents. However, compared to oceans, the currents are usually weak, and waves fluctuate with local wind conditions with no oceanic swell. Tides are low or non-existent, and water level fluctuations may be driven by water inputs and evaporation rates. Shores are usually narrower than marine beaches. Smaller lakes and ponds may have limited flushing rates and also be subject to variations in water levels due to seasonal effects and/or flooding. If water exchange rates are low, high nutrient levels and low oxygen levels can occur which can affect the biodegradation rates of the spilled oil. Lakes in higher latitudes can be subject to winter icing. Even large lakes can freeze over substantially, and ice cover along the shore is common.

Large rivers can have variable flow rates; these may be seasonally high which may lead to substantial flood events. River flows in estuarine environments are usually subject to tides and have varying salinity. Some rivers have multiple channels with mid-channel islands, and some have controlled flow due to the construction of locks and dams. Sediment loads can be high. There will be floodplains of varying widths with associated wetlands and backwaters.

Small rivers and streams can be shallow, with flow characteristics ranging from fast currents with falls and rapids to slow winding channels. All can freeze over during winter in colder climates. The channels can contain varying amounts of debris and sediment load.



Heavy rains caused a spill that led to the oiling of vegetation in the resulting flood.

Ecological effects

Exposure of the environment to oil can lead to several types of effects. There are two key concepts to consider: vulnerability (able to be exposed) and sensitivity (reactivity to exposure). It is the sensitivity of exposed habitats and organisms that dominates considerations of the environmental effects of a spill. Habitat characteristics which influence sensitivity include:

- species diversity and abundance;
- climate extremes and types of precipitation; and
- the amount of water circulation and flushing

Exposure to oil can have two types of effects on animals and plants:

1. Many compounds in oil are acutely (short-term and lethal) or chronically (long-term and sublethal) toxic, and exposure to sufficient concentrations for a long enough duration can cause sickness or death in plants and animals. Toxicity from ingestion and inhalation mostly results from the BTEX and PAH compounds because they are more soluble in water, especially the BTEX compounds. Light crude oils and petroleum products (gasoline, kerosene, diesel and No. 2 fuel oil) contain more of these compounds and are therefore more toxic than heavier oils that contain fewer of these compounds. These aromatic compounds are also the most easily weathered compounds in oil, and as spilled oil weathers, it becomes less toxic as a result. The PAHs persist in the environment longer than the BTEX compounds, and much longer-term toxicity results from their presence.

2. Physical smothering can occur if plants and animals become coated in thick layers of oil. Physical smothering is more likely with heavier crude and fuel oils, especially if they become emulsified, because of their greater viscosity and adhesion potential. These heavier oils can persist for long periods of time and cause longer-term environmental disruption, but their toxicity is minimal.

There can be indirect effects from the above through alterations in species diversity and abundance after a spill. For example, removal of grazing animals within a habitat due to toxicity or smothering by oil may allow a subsequent increase in vegetation until ecological balance is restored. Aggressive or invasive clean-up actions can also alter habitats. Care needs to be taken when choosing response techniques to ensure that the overall result is beneficial compared to taking no action.

Impacts on inland and marine habitats are judged by the relative severity of the impact and speed of recovery.

Habitat recovery is dependent on the:

- degree and persistence of oiling;
- characteristics and weathering of an oil;
- circumstances of a spill (especially the weather); and
- response techniques and tactics.

The recovery of species is dependent on:

- rates of reproduction; and
- the rate of recolonization from adjacent habitats.

The effects of oil on various classes of organisms are summarized below. Generally, organisms can accumulate hydrocarbons from surrounding water and air, and by the ingestion of food and contaminated sediment. The concentrations of hydrocarbons which may be found within organisms is a reflection of the physiochemical properties of the hydrocarbon, environmental conditions, characteristics of the exposed organisms, and the food chain.

- **Bacteria:** While some oils can be initially toxic to bacteria, many bacteria use oil as a food source and, consequently, remove spills from the environment. In agricultural areas, and urban or suburban areas with high run-off, nutrient levels from fertilizers are likely to be high, which increases the potential for eutrophication and plummeting levels of dissolved oxygen even without a spill.
- **Algae:** Freshwater and estuarine algae are affected by exposure to the lighter weight, acutely toxic volatile compounds in many oils, but algal populations usually recover very quickly. The acutely toxic effects decline quickly as the toxic components weather. An increase in cyanobacteria (which fix nitrogen) provides nutrients to spur new algal growth. Microorganisms (zooplankton) which feed on algae are usually suppressed by the toxicity of spilled oil, and the subsequent lower predation rate helps algae to repopulate.
- **Invertebrates:** These animals can be subject to acute and chronic toxic effects from exposure to spilled oil. Sublethal (chronic) effects include impaired growth and reproduction. After a spill, the invertebrate population density and diversity can be significantly altered and population changes can indirectly affect the survival of organisms higher up the food chain.
- **Fish:** Unlike marine species in the open ocean, which can avoid a slick, freshwater fish may be unable to avoid spilled oil in a smaller water body. Fish kills have occurred after spills in constrained fresh waters, and can be a direct result of hydrocarbon toxicity or may occur indirectly due to low dissolved oxygen. Fish can accumulate hydrocarbons in their tissues but can also metabolize them; short-term exposures may therefore result in few long-term effects.

Contributed article (continued)

- **Amphibians:** The permeable skin of amphibians makes them more at risk than reptiles to oiling. The greatest risk to these animals is from smothering by physical coating, and toxicity due to ingestion of the oil.
- **Mammals and birds:** These animals are similarly susceptible to physical coating by oil, and to ingestion of oil through preening and consumption of oiled prey and plants. Physical coating of oil can severely affect the ability of fur and feathers to insulate an animal, resulting in hypothermia and possibly death. These injuries are often highly visible during a spill response and can lead to much public concern. Some species may smell the oil and avoid it.
- **Vegetation:** Oiling can affect more than just the plants themselves. Animals that live among the plants can become exposed to the oil by interacting with the plants. The oil on plants can remobilize during changes in water level or rain events, or can be transferred by animals and cause additional exposure effects

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To be continued next week

Events

TUNISIA: REGIONAL WORKSHOP ON OILED SHORELINE CLEANUP AND SKHIRA TIER 1 OIL SPILL RESPONSE EXERCISE



Photo: TRAPSA Terminal during loading operations

As previously announced, a Regional Workshop on Oiled Shoreline Cleanup and Skhira Tier 1 Oil Spill Response Exercise which will be held over 10-11 October 2017 in Borj Dhaifa Hotel in Sfax City and TRAPSA terminal in Skhira located in the Gulf of Gabes in the coast of the Mediterranean Sea in Southeast Tunisia.

The event will be organized jointly by the Mediterranean Oil Industry Group (MOIG), the Company of Transport by Pipelines in the Sahara (TRAPSA) and the

Centre of Documentation, Research and Experimentation on Accidental Water Pollution (Cedre).

The event will open on Tuesday, 10th October 2017 at 08:00 hours and is expected to close on Wednesday, 11th October 2017 at 15:15 hours. The theoretical part will take place in Borj Dhaifa Hotel in Sfax City on 10th October 2017 in which will be presented the involved companies in the exercise. To see the agenda, please download the Event Brochure on <http://www.moig.org/docs/EventBrochure.pdf>.

Mr Arnaud Guéna, Operations Manager at Cedre will perform a training course on Oiled Shoreline Cleanup according to Preparedness for Oil-polluted Shoreline cleanup and Oil Wildlife interventions-POSOW project manual procedures. The Wednesday, 11th October 2017 will be dedicated to water and oiled shoreline cleanup exercises in TRAPSA Terminal in Skhira.

The main objectives of the event are to improve preparedness and response to shoreline pollution, test plans, equipment and management capabilities, train various response teams, identify challenges in executing roles and responsibilities, identify lessons learned and areas of improvements and network with HSE and Response Professionals. The working languages of the event will be English and French.

Events (continued)

In order to enable MOIG to have all logistic arrangements made on time, it would be appreciated if you could download and complete the Registration Form on <http://www.moig.org/docs/RegistrationForm.docx> and return it to houcine.mejri@moig.org.tn or info.moig@planet.tn at your earliest convenience but not later 20th of September 2017.

MOIG recognizes that there are various levels of experience and expertise within and available to the MOIG membership. We would like this workshop and Tier 1 oil spill response exercise to bring that experience and expertise together so that we can all individually as MOIG members and collectively as an Industry Group benefit through participating in this event. I am looking forward to your active participation. [Mahmoud Abdessalm Kamour-MOIG Chairman]

The Mediterranean Oil Industry Group (MOIG) is an Industry Partner of ISCO

USA: CLEAN GULF HAS RELEASED PRELIMINARY 2017 CONFERENCE AGENDA

A full and robust initial conference agenda has been put together for the 2017 [CLEAN GULF Conference & Exhibition!](#) 28 conference sessions have been programmed by our [advisory committee](#), made up of a group of 75+ operators, state and federal regulators, consultants, service companies and OSROs. The sessions programmed cover topics that were identified as the most pressing issues in spill prevention, preparedness and response for inland, offshore and coastal incidents. **Complete session descriptions and speakers are now available to [view online!](#)**

ISCO is a supporter of the Clean Gulf Conference and Exhibition which will take place in Houston, Texas, on 5-7 December, 2017. The CLEAN GULF Conference & Exhibition focuses on improving oil and hazardous materials spill prevention, preparedness and response for inland, offshore and coastal incidents. ISCO commends this event and recommends your attendance. [More info](#)

Upcoming events summary

COUNTRY	2017	TITLE OF EVENT	LOCATION
For more information click on Title of Event			
UK	Jan 16 – July 7	IMO Exhibition – 50 Years Gov't & Industry Co-op'n	London
UK	July 3-7	IMO Marine Environment Protection Committee	London
NIGERIA	July 13-14	Marine Safety & Fisheries Protection Conference	Lagos
CHINA	July 14	6th NOWPAP DELTA Exercise	Weihai
SENEGAL	July 17-20	International Workshop on Dispersant and NEBA	Dakar
SINGAPORE	Sept. 4-6	Salvage & Wreck Asia	Singapore
NIGERIA	Sept. 5-7	National Workshop on Liability and Compensation	Abuja (TBC)
UK	Sept. 5-8	SPE Offshore Europe	Aberdeen
UK	Sept. 6-7	8th Maritime and Salvage Response	London
UK	Sept. 20-21	The Emergency Services Show	Birmingham
UK	Sept. 27-28	Contamination Expo Series 2017	London
FRANCE	Sept. 28	CEDRE Information Day – “Spills in Ports”	Paris
TUNISIA	Oct. 10-11	Oiled Shoreline Clean-up W'shop & Tier1 Exercise	Sfax City
CANADA	Oct.30-Nov.1	Arctic Shipping North America Forum	Montreal
CHINA	Nov. 1-3	Oceanology International China	Qingdao
IVORY COAST	Nov. 6-9	GI WACAF Regional Conference	Abidjan
UAE	Nov. 13-16	Abu Dhabi Int'l Petroleum Exhibition & Conference	Abu Dhabi
UK	Nov. 29-30	11th Arctic Shipping Summit	London
USA	Dec. 5-7	Clean Gulf Conference and Exhibition	Houston, TX
	2018		
UAE	Feb 28 – Mar 1	Offshore Arabia Conference & Exhibition	Dubai
UK	March 13-15	2018 INTERSPILL Conference and Exhibition	London
UK	March 13-15	Oceanology International 2018	London
UK	May 23-24	HAZMAT 2018	Stratford on Avon
USA	June 19-21	Clean Pacific Conference and Exhibition	Portland, OR
To request posting of an event of interest to the Spill Response Community please send details to the Editor			

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	May 2017
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	Current issue
EMSA Newsletter	News from the European Maritime Safety Agency	June 2017 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	April 2017 issue
IMO News Magazine	News from the International Maritime Organization	Summer 2017 issue
IMO Publishing News	New and forthcoming IMO publications	May-June 2017
Intertanko Weekly News	International news for the oil tanker community	June 30, 2017
JOIFF "The Catalyst"	Int'l Organisation for Industrial Hazard Management	Q2 2017 issue
Maritime Executive Magazine	Often contains articles of interest to the spill response community	May-June 2017
MOIG Newsletter	News from the Mediterranean Oil Industry Group	April 2017 issue
NOWPAP Quarterly	News from the North West Pacific Action Plan	Quarter 1, 2017 issue
Ocean Orbit	Newsletter from the International Tanker Owners Pollution Federation	May 2016
OCIMF Newsletter	News from the Oil Companies International Marine Forum	May 2017 issue
Pollution Online Newsletter	News for prevention & control professionals	June 28, 2017
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	Spring 2017 issue
Technology Innovation News Survey	News from US EPA – Contaminated Site Decontamination	March 1-31, 2017
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	July 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

Training

USA: NOAA OR&R - SCIENCE OF OIL SPILLS CLASSES



Science of Oil Spills (SOS) classes help spill responders increase their understanding of oil spill science when analyzing spills and making risk-based decisions. They are designed for new and mid-level spill responders.

These multi-day trainings cover topics including:

- Fate and behavior of oil spilled in the environment.
- An introduction to oil chemistry and toxicity.
- A review of basic spill response options for open water and shorelines.
- Spill case studies.
- Principles of ecological risk assessment.
- A field trip.
- An introduction to damage assessment techniques.
- Determining cleanup endpoints.

Most examples provided in the class relate to oil spills that have occurred in coastal and marine environments; however, much of this information applies regardless of the spill location (e.g., inland vs. coastal). SOS classes are held 2-4 times per year in different regions of the United States. One course per year is held in the spring or summer at NOAA's [Western Regional Center](#) in Seattle, Washington. There is no tuition fee for SOS classes; however, attendees are responsible for their own travel costs. [More info on upcoming classes and application form.](#)

Stop Press – Breaking News

USA: ILLINOIS -TWENTY-FIVE TANKER CARS DERAIL IN PLAINFIELD, CAUSING CRUDE OIL SPILL

June 30 - Plainfield Police Sgt. Mike Fisher says 25 cars carrying crude oil were involved, and three were leaking an estimated 40,000 gallons of crude. Emergency crews have been able to cordon off the spilled material and keep it from reaching the nearby DuPage River, he said. CBS News [Read more & watch video](#) [Thanks to Mark K. Shaye]

UK: OIL TANKER CARRYING 38,000 TONS OF PETROL AND GIANT CARGO SHIP SMASH INTO EACH OTHER IN ENGLISH CHANNEL

July 2 - An oil tanker and a cargo ship collided Saturday off Britain in one of the world's busiest shipping routes, but no injuries or spills have been reported, authorities said. The tanker had 38,000 tonnes of petrol on board at the time of the collision with a 720-foot cargo boat in the Strait of Dover, which is where the North Sea and the Channel meet. Mail Online [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

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