

ISCO & THE ISCO NEWSLETTER

The International Spill Control Organization, a not-for profit organization 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 Intergovernmental, Governmental, NGO's and interested groups and individuals

ISCO holds consultative status at the International Maritime Organisation and observer Status at International Oil Pollution Compensation Funds

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INTERNATIONAL NEWS

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FIGHTING 'FOREVER CHEMICALS' WITH MICROBES

Per- and polyfluoroalkyl substances (PFAS) are some of the most persistent environmental pollutants, earning them the moniker "forever chemicals." Increasing concern about the adverse health effects of PFAS exposure has researchers seeking novel ways to break down the stubborn pollutants. A cover story in Chemical & Engineering News, the weekly newsmagazine of the American Chemical Society, that was produced in collaboration with ACS Central Science explains how microbes could help solve the PFAS problem.

PFAS are found in an array of items, including personal care products, stain- and water-repellent coatings and food packaging. Their persistence lies in their strong carbon-fluorine bonds, writes special correspondent XiaoZhi Lim. PFAS have become notorious for polluting the water and soil surrounding manufacturing facilities and military sites, and although the full health effects of the compounds are unknown, some are thought to be toxic or carcinogenic. After observing microbes consume contaminants from other environmental disasters, such as the Deepwater Horizon oil spill, scientists hypothesized that microbes could do the same for PFAS under the right conditions. However, some experts believe the presence of fluorine atoms renders these chemicals "almost bulletproof."

Despite the challenges, scientists are pushing forward to identify a microbial method to break down PFAS.

The key is for the microbe to find weak spots in the compounds' structure, which the bacterium *Gordonia* and at least one commercially available microbial culture have done. Moreover, a strain of the microbe *Acidimicrobium* appears to degrade perfluorooctanoic acid and perfluorooctane sulfonic acid (which have no weak spots) by defluorinating them. Even though these initial results seem promising, there are still significant challenges when it comes to degrading PFAS outside of the lab.

The paper, "Can Microbes Save Us from PFAS?," is freely available [here](#).

American Chemical Society / [Read more](#)

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Go to www.spillcontrol.org and enter your name and email address in the Registration Form (located on the right-hand side of the home page) then click on "subscribe"

NEWS REPORTS FROM AROUND THE WORLD

CANADA: GOVERNMENT AND HEILTSUK NATION COLLABORATE TO DEVELOP A LOCAL MARINE EMERGENCY RESPONSE TEAM

March 16 - Coastal First Nations have an intimate knowledge of lands and waters in their territory, and are often the first on the scene when there's an emergency on the water. When they are empowered to manage these environments, everyone benefits. Today, the Government of Canada and the Heiltsuk Nation are announcing the signing of a Memorandum of Understanding (MOU) committing both organizations to work together to enhance the Nation's role in marine environmental response within the Heiltsuk territory. Canadian Coast Guard / [Read more](#)

CHINA: GUANGXI ENVIRONMENTAL RESPONSE CAPACITY BUILDING PLAN

September 10 - Guangxi Ministry of Transport and Guangxi Maritime Bureau jointly issued the "Environmental Emergency Capacity Building Plan for the Prevention and Control of Ships and Related Operational Activities in Guangxi Zhuang Autonomous Region (2018-2020)" which proposes the environmental emergency capacity-building objectives and planning programs for the prevention and control of environmental emergency in the polluted waters of ships and related operational activities in the Guangxi jurisdiction. The Plan aims to protect the navigation of Guangxi's shipping economy, to effectively improve the emergency response capacity of ship pollution accidents as the core, and puts forward five aspects, such as emergency preparedness capacity, emergency organization capacity, rapid response capacity, emergency

support capacity and emergency rescue and removal capacity, and puts forward the tasks of strengthening the emergency plan system construction, perfecting the emergency system mechanism, constructing emergency information system, improving the level of equipment facilities, and promoting the construction of emergency team. [Thanks to Jenny Li, Hong Kong Spill Response Technology]

ISRAEL'S SHADOW WAR WITH IRAN MOVES OUT TO SEA

March 26 - The sun was rising on the Mediterranean one recent morning when the crew of an Iranian cargo ship heard an explosion. The ship, the Shahr e Kord, was about 50 miles off the coast of Israel, and from the bridge the sailors saw a plume of smoke rising from one of the hundreds of containers stacked on deck. The state-run Iranian shipping company said the vessel had been heading to Spain and called the explosion a "terrorist act."

But the attack on the Shahr e Kord this month was just one of the latest salvos in a long-running covert conflict between Israel and Iran. An Israeli official said the attack was retaliation for an Iranian assault on an Israeli cargo ship last month.

Since 2019, Israel has been attacking ships carrying Iranian oil and weapons through the eastern Mediterranean and Red Seas, opening a new maritime front in a regional shadow war that had previously played out by land and in the air. The Israeli campaign, confirmed by American, Israeli and Iranian officials, has become a linchpin of Israel's effort to curb Iran's military influence in the Middle East and stymie Iranian efforts to circumvent American sanctions on its oil industry.

"This is a full-fledged cold war that risks turning hot with a single mistake," said Ali Vaez, Iran program director at the International Crisis Group, a Brussels-based research organization. "We're still in an escalatory spiral that risks getting out of control." New York Times / [Read more](#)

LEBANON: REMPEC RESPONDS TO REQUEST FOR OIL SPILL RESPONSE ASSISTANCE

March 24 - On March 9th, 2021, REMPEC received a request for assistance from the Lebanese authorities regarding the oil spill incident affecting the Lebanese shoreline since 22nd February 2021. Patches of black petroleum and tar balls were found in coastal areas, mostly in the South, in particular in Nakoura, El Bayada, El Mansouri and in the Sour protected areas (Chawatina, Sour Rest house), as well as the protected areas of El Abbasiyeh.

Upon receipt of the request for assistance, under the leadership of the United Nations Environment Programme (UNEP), a coordination team was established involving representatives from the United Nations Resident Coordinator (UNRC), UNEP, United Nations Interim Force In Lebanon (UNIFIL), United Nations Development Programme (UNDP), United Nations Human Settlements Programme (UNHABITAT) and the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC).

On 23rd March 2021, REMPEC deployed onsite two experts of the Mediterranean Assistance Unit (MAU) from the Adriatic Training and Research Centre for Accidental Marine Pollution Preparedness and response (ATRAC). REMPEC / [Read more](#)

MALAYSIA: PROTECTING FORESTS, NATURAL HABITATS ESSENTIAL TO SECURE OUR LIVELIHOOD AND WELLBEING



March 23 - The International Day of Forests was recently celebrated gloriously with the launch of the Malaysian Forestry Policy. For the first time, this policy has brought Peninsular Malaysia, Sarawak and Sabah together for a more coherent management, protection and conservation of forest resources and natural heritage. The launch was a timely reminder on the importance of forests as well as to guide all Malaysians to pay extra attention in protecting them for our own survival.

On Oct 12 last year, while struggling to contain the coronavirus, we were shocked by an oil spill in the waters off Negri Sembilan and Melaka. The oil spill reached the shores of Port Dickson, causing severe damage to the beaches and triggered the death of mangroves in Tanjung Tuan Forest Reserve (TTFR).

After five months, many trees in the affected three-hectare site of TTFR had defoliated. Studies in the past six decades around the world have recorded and reported the detrimental effects of oil spills on mangroves and other coastal and marine lives, habitats and ecosystems. [New Straits Times / Read more](#)

QATAR: RESEARCHERS FIND WAYS TO CLEAN POLLUTED SOIL FROM OIL SPILLAGE

March 24 - Oil pollution has occurred in limited specific areas in Qatar, but extensive weathering caused by the harsh weather in Qatar has led to oil in these areas being at different stages of oxidation. Qatar University (QU) researchers have discovered that microbial remediation, which uses microorganisms to break down and therefore reduce toxic pollutants, has proved to be an attractive strategy to 'clean' polluted soil. Professor of Environmental Sciences at QU's College of Arts and Sciences, Prof. Nabil Zouari, said, "Qatar has limited soil and groundwater resources that are impacted by hydrocarbon contamination that occurs during the extraction, transport, and processing of oil and natural gas. Remediation of contaminated soil and groundwater is vital to minimize the effects of accidental hydrocarbon releases and protect this limited water resource."

"The novelty of this project resides in the ability of the indigenous Qatari bacteria to enhance biodegradation of weathered hydrocarbons and/or washing of weathered soil. It is anticipated that these novel bacterial strains are more active under the harsh physical and chemical conditions with Qatari soils, making them appropriate for use in enhanced oil recovery and bioremediation in Qatar." [The Peninsula / Read more](#)

SOUTH AFRICA TAKES PROACTIVE APPROACH TO MARINE POLLUTION

March 22 - South Africa is proactively preparing to manage marine pollution incidents to lessen their impact on the environment. The South African Maritime Safety Authority (SAMSA) said it will do this by ensuring that the appropriate resources and stakeholders are activated quickly, and that the decision-making process is done timeously. The 4th Joint Industry-Government National Oil Spill Response Exercise took place virtually on the Wednesday, following on from the 3rd National Exercise in November 2019. The 4th Exercise drill was to test the preparedness of the country in case of oil spillage emergencies. [Cape Business News / Read more](#)

UK: SEAFARER APP MAPPING OCEAN POLLUTION USED TO CLEAR ISLE OF MAN BEACHES

March 24 - The ocean pollution mapping platform Eyesea, which is supported by and uses data compiled by the commercial shipping industry, was recently deployed for the first time to organize a coastal clean-up operation. Launched in beta trials at the end of 2020, the system seeks to use data submitted by seafarers on commercial ships and recreational boaters to map pollution in the oceans and shoreline to help local authorities with clean-up operations.

The Eyesea app was used as part of a survey of the coastline of Isle of Man after the island was battered last month by storms and high tides, which washed up large amounts of rubbish and debris as well as fishing nets. The platform was used to highlight areas where the concentrations of debris and rubbish had washed up, helping organizers to plan a clean-up initiative that saved time and maximize their efforts. The Maritime Executive / [Read more](#)



USA: LATEST NEWS REPORTS FROM NOAA OR&R

March 22 – Please click on the links below to read the latest News Reports from NOAA OR&R

[Disaster Preparedness Program Partners with the National Weather Service to Host Texas Winter Weather Hotwash](#)

This week, staff from the NOAA Office of Response and Restoration's [Disaster Preparedness Program](#) partnered with the NOAA National Weather Service to conduct a joint hotwash for National Ocean Service and NWS staff and facilities that were impacted by the recent winter weather outbreak across Texas.

[Two Draft Study Plans for Fish at Diamond Alkali Superfund Site in New Jersey Released](#)

As federal trustees for natural resources, the National Oceanic and Atmospheric Administration and the U.S. Fish and Wildlife Service are initiating studies to assess natural resource injuries related to the release of hazardous substances from or near the Diamond Alkali Superfund site. The site, centered in Newark, New Jersey, includes the [Lower Passaic River, Newark Bay](#), and other areas.

[Assessment and Restoration Division Scientist Judges First-Ever Virtual NOS Science Bowl Competition for High Schoolers](#)

Due to the Covid-19 pandemic, Assessment and Restoration Division scientist Ken Finkelstein took part virtually in the National Ocean Science Bowl (NOSB) Northeastern Competition. The annual NOSB competition holds regional events for high school students and invites the winners to the national tournament during the spring.

[Marine Debris Program Participates in 10-Year Remembrance of 2011 Japan Earthquake and Tsunami](#)

On March 11, the NOAA Marine Debris Program's (MDP) Pacific Island Regional Coordinator Mark Manuel, participated as a panelist in the 2011 Japan Earthquake and its Tsunami: A 10-Year Remembrance Special Event for Internal NOAA staff in the Pacific Islands Region.

[Marine Debris Program at the International Arctic Marine Litter Symposium](#)

On March 8, Peter Murphy, the Alaska for the Marine Debris Program, presented as part of an expert panel on marine litter monitoring at the International Symposium on Plastics in the Arctic and Sub-Arctic.

USA: CHEMICAL SAFETY BOARD ONLINE MEETING ON APRIL 2

March 25 - The CSB is an independent federal agency charged with investigating incidents and hazards that result, or may result, in the catastrophic release of extremely hazardous substances. The agency's Board Members are appointed by the President and confirmed by the Senate. CSB investigations look into all aspects of chemical accidents and hazards, including physical causes such as equipment failure as well as inadequacies in regulations, industry standards, and safety management systems.

TIME AND DATE: April 2, 2021, 11:00 a.m. EDT PLACE: Public Meeting Hosted via Audio Conference STATUS: Open to the public.

Audience members should use the following information to access the meeting: Dial-In: 1 (800) 697-5978 Audience US Toll Free 1 (630) 691-2750 Audience US Toll Passcode: 9464 051#

Contact Person for Further Information Hillary Cohen, Communications Manager, at public@csb.gov or (202) 446-8094. Further information about this public meeting can be found on the CSB website at: www.csb.gov.

YEMEN: HOUTHIS ‘PROVISIONALLY’ ACCEPT SAUDI PEACE PLAN

March 27 - Iran-backed Houthis have “provisionally” accepted a Saudi initiative to end the war in Yemen, but are demanding unchecked flights from Sanaa airport to unlimited destinations before giving the peace plan their final approval, a Yemeni news agency reported.

March 28 – When Saudi Foreign Minister Prince Faisal bin Farhan announced on March 22 a new initiative to bring peace to Yemen, Arab News asked him what could be done to defuse this ticking time bomb. “We are extremely concerned about the Houthis continuing to put up obstacles to the UN doing what it needs to do to safeguard this oil tanker that threatens a true ecological disaster of unprecedented scale in the Red Sea,” Prince Faisal replied.

The international community has made its stance clear. At the latest Security Council meeting on Yemen on March 16, the 15-member body spoke in unison against Houthi stalling. “The Houthis are now threatening irreversible catastrophe delaying the UN’s assessment and initial repair of the Safer oil tanker. It is well past time for the Houthis to quit stalling,” said Linda Thomas-Greenfield, the US ambassador to the UN. Arab News / [Read more](#)

ISCO NEWS

“WAY FORWARD” WORKING GROUP APPROVES ADOPTION OF INTERNET PLATFORM FOR ADVANCING NEW ISCO INITIATIVES

March 26 – Following on from another successful Zoom meeting last night agreement was reached to formally adopt Chanty as our communications platform, which will be the main focus for the working group updates, and to allow a more rapid exchange of ideas and views.

All 39 working group participants have now been invited to start using the platform which will not only allow members to exchange communications as a group but will also enable individual members to send messages or have conversations with other selected members at no cost. This will avoid the need for multiple exchanging and cc copying of emails that can all too easily be missed or lost – all communications between members of the volunteer group will be easily accessible and can be quickly found in one place. On a one-to-one basis, video communication between members is also available at the click of a button. It’s a big step forward and will enable the work of the group to proceed at a much faster pace.

The next Zoom meeting has been scheduled for Thursday 22nd April at the same time - 1500 EDT or 1900 GMT or Friday 23rd April at 0600 AEDT (or the equivalent date and time in your part of the world).

NEWS FROM ISCO MEMBERS

OSRL MARCH 2021 NEWSLETTER

Featured Insights In this March issue, we are pleased to share that OSRL's members can access remediation services directly through their membership package as a result of a formal call-off agreement with Remediation Specialist, REGENESIS.

We would also like to take the opportunity to welcome [The Prax Group as an OSRL Associate Member](#) and present you some key updates.

- The Full Ramifications of Cost-Cutting
- Reputation Protection in a Crisis
- Staff Blogs
 - A Trainers' Perspective on Face-to-Face Training in Times of Pandemic
 - A Bird's Eye View of Seabird Rescue at SANCCOB
 - Benefits of Hiring Oil Spill Response Equipment
- A Case Study
 - How we developed an Oil Spill Contingency Plan (OSCP) for the first upstream producer in Cambodia

As always, we are [just a phone call away](#) should you need any assistance. For latest information on our response readiness, do check out our [COVID-19 Readiness Dashboard](#). [Download the OSRL Newsletter](#)

NEW LAMOR GTA PUMP SERIES BROCHURE

Lamor’s GTA pumps come in three variants, each with a wide range of pumping capacities and optimized for a wide range of operational conditions.

[Download the new brochure](#) [Request a Full GTA Pump Training Video](#)

TRANS MOUNTAIN PIPELINE RECENTLY COMPLETED THE PURCHASE OF SEVERAL NEW AQUA GUARD SKIMMERS

The new skimmers will replace the existing AquaGuard skimmers in Trans Mountain's Oil Spill Containment and Recovery (OSCAR) trailers. The new skimmers have several improvements over the previous models and are easily integrated into Trans Mountain's existing OSCARS setup. The AquaGuard RBS Triton 35 Skimmer model was selected because of our response team's familiarity with its operation and its compatibility with existing recovery modules. These skimmers are especially effective in removing oil products from water, whether the product has combined viscosities (heavy and light) or a singular viscosity. This recovery flexibility is significant for Trans Mountain as both heavy and light oil products are moved via Trans Mountain's pipeline. Each skimmer comes equipped with ASTM capable connectors that allow for easy connection with Trans Mountain's spill containment boom. In addition, the front trough of each skimmer can be removed for better operation within high wave and windy conditions.

The Canadian Coast Guard and Western Canada Marine Response Corporation (WCMRC) have recently purchased RBS skimmer models as well. This allows Trans Mountain increased interoperability with its response partners in the event of a release into the Lower Fraser River or Burrard Inlet, as well as any future spill response exercises and training events. The skimmers will debut at Trans Mountain's upcoming ice response exercises in February 2021 and will be featured heavily throughout the remainder of Trans Mountain's spill response deployment exercises in 2021.

The Responder is now available online: <https://docs.transmountain.com/The-Responder-Winter-2020.pdf?mtime=20210318230414>

CONTRIBUTED ARTICLE

CLEANING INDIA'S POLLUTED RIVERS WITH A CLEVER SOLUTION



Captain Sekhar has been a member of ISCO since 2012 and represents India on the ISCO Council. He is the founder of AlphaMERS, listed among the top 50 SMEs of India. Founded in 2010, his company is engaged in developing new technology for river clean-up and wave energy harnessing. The company also provides oil spill response services to port and oil industry. Captain Sekhar has developed solutions for river clean up, harvesting ocean wave energy, and maritime perimeter security systems.

It has been reported that 8 million tons of plastics enters the world's oceans every single year. Various sources put the amount of plastics being carried by River Ganga alone anywhere between 115,000 to 600,000 tons per year.

If that doesn't make you think twice about asking for a plastic bag every time you buy groceries, nothing will.



Photo on left: Google earth // Floating Trash Barrier (FTB) deployed in a canal in Thoothukudi (TN) draining into the Bay of Bengal

We must remember that most of the estimates around plastic pollution is an extrapolation of little primary data and there is bound to be large variance in the actual plastic numbers being discarded and finding their way into rivers and waterways. The situation is grim, no doubt.

It's very easy to get pessimistic about the whole situation, but I like to focus on solutions we can implement and steps we can take to reverse the damage we are causing to nature -- and indirectly to ourselves in the longer run.

Developing an indigenous solution - The solution we developed was a floating trash barrier (FTB) that was deployed in the Cooum river in Chennai in 2017. This solution caught 22,000 tons of floating trash, of which 10 percent was plastics i.e 2200 tons of plastic in 2018 alone. We were able to catch 100 percent of surface plastics in this river, which was removed from the river and disposed of in an environmentally safe manner. This would have ended up in the sea, if not for the barriers. This exercise cost Rs 85 lakh in to deploy and absolutely nil operational expenditure for 24x7 securing of the full river width at nine locations.

Once you decide to clean the river, one can be ambitious and arrest trash at zero operating expenditure. After all, you have flowing river water to do 99% of the job. The water-flow will bring the trash and plastics right up to your chosen spot on the riverbank. This chosen spot is usually where the stream crosses a road. You can bring excavators and tipper trucks once in a few days to remove it from the riverbank. No boats, no fuel and the low per ton cost of arresting and removing plastics from the streams is the achievement of using FTBs.

The floating barriers are passive devices guarding the whole river, 24x7 in rain or shine using natural flow of water. Placing boats with conveyors require fuel, work only few meters wide, in daylight without rain or fog. You can even configure to allow boats to cross while arresting the plastics. This solution sieves the solid waste on the surface while allowing the water to flow past. While seemingly

a very simple design, this combines the best of hydrostatics and hydrodynamics. Made of steel and aluminium, this approach withstands the test of heavy monsoon currents as well.

This river clean up compares well with other ongoing attempts to clean the ocean plastics, contrary to spending millions of dollars and managing to recover only a few tons of plastics. Extrapolating these figures for 50 such rivers passing through cities and towns across the country before draining into the seas, we are talking of over 100,000 tons of plastics reaching the sea every year, and this excludes major Indian rivers.

Photo on right: The FTB of AlphaMERS deployed in 2017

It helps to look at the issues of streams and drains in bins:

1. Solid waste clean up on surface
2. Silt transport at bottom
3. Water quality and liquid effluents

If you deal with solid waste on surface and silt transport flow will become efficient, even though the water is still quality poor. **That is half the battle won.**



Cooum river in

three imaginary

at the bottom, the dirty and water

Improving water quality in flowing waters is a different challenge. Any water treatment takes time to take effect and the water travels meanwhile. It is smarter to control the liquid effluents at source, though today it may seem easier said than done.

2-1-2-3 dimensional journey of plastics - The plastics leaks out of formal system, often due to apathy of citizens and sometimes due to overstretched municipal SWM infrastructure. These plastics spread on '2 dimensional land' in roadsides, playgrounds etc, until the first big rain hits and these loose plastics land up in the nearest drain. It now moves in this single dimensional long journey from the drain to the stream, rivulet, and the river, until it reaches the river mouth. It now spreads again to a '2 dimensional sea surface' until it breaks up into micro plastics and sinks into a 3 dimensional ocean water column.

Opting to arrest the runaway plastics during its single dimensional journey from drain to the river mouth is a 'no brainer' - Cleaning rivers may not have the 'oomph value' of setting out to clean the oceans, but is indisputably the most sensible. Shutting the taps before mopping the floor, it is called in common parlance.

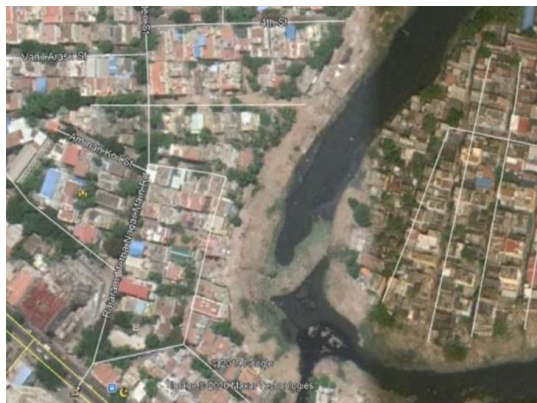


Photo on left: Google earth // The FTB deployed in a city river passing populated localities.

Once you decide to clean the river, one can be ambitious and arrest trash at NIL opex. **After all, you have flowing waters to do the job.** The waterflow will bring the trash and plastics right up to the riverbank, due to the alignment of the floating barrier. You can bring excavators and tipper trucks once in two weeks to remove it from the riverbank.

Image below shows how the trash barrier is deployed diagonally, trash collects at one spot accessible from riverbank adjacent to a road, easy to collect and dispose. One does not need to place an expensive boat in the stream to pick it up and send it to the river bank once again. Simple configuration allows the boat traffic to cross while arresting the plastics.

The floating barriers are passive devices guarding the whole river, 24 x 7 in rain and fog using natural flow of water. Placing boats with conveyors require fuel, work only few meters wide, in daylight without rain or fog.

Photo on right: Floating barrier deployed diagonally brings plastics and trash to riverbank at a location close to a road. It is picked off by excavators once a week from riverbank.

When in rivers and streams, let the flowing waters bring plastics to where you want to collect it, don't spend a penny on it.

Having said that, there is some basic design needs of such a device. A simple concept of drag force makes any solid impermeable curtains, a very irrational and poor choice. This application needs a 'sieve' which traps the macro plastics and lets the water flow past. That is why efforts using cheaper oil spill boom using impermeable coated fabric like PVC, Neoprene or Hypalon curtains fail in flowing waters. The last attempt in Mumbai in 2018 is a good example of this. The key differentiator here is the drag forces on a sieve versus the solid hanging curtain.



CONTRIBUTED ARTICLE (CONTINUED)



Photo on left: The excavator scooping up weed and trash trapped by the FTB to load on tipper trucks for disposal.

It brings media interest to make artefacts with recovered plastics. But when you recover thousands of tons of plastics, you need industrial customers. A smarter approach is to handover the recovery to the municipal solid waste management system who have a working system.

These efforts are good candidates for corporates to support with CSR funds and showcase the results in removing plastic waste from water bodies.

This 100% indigenous river cleanup technology was developed by us in 2014, saw commercial traction in 2017 and there has been no looking back since. We have deployed this solution in eight Indian cities out of which four have come in the 'Covid' year of 2020.

We will deploy this solution in two more rivers in the next few months. We have developed and deployed solutions for lakes, storm water drains and related issues in water bodies. We seriously believe we can be enjoying the perks of clean water bodies around us in the next five years. We believe, thousands of people will find their own way to make a difference. We are confident, many like us will develop technologies that are simple, yet are very effective. After all, India is a country of a billion plus thriving minds. Intellectual capabilities are per capita resources, better distributed around the world than oil resources.

And we are eagerly awaiting the day when our floating trash barriers are not required anymore, because the populace have learnt to take ownership of the water streams and have learnt not to throw trash in them! [This is an abbreviated version of the article that Capt. Sekhar wrote for the India Times. [Read more](#) Sekhar DC sekhar@alphamers.com <https://www.alphamers.com/>

CORRESPONDENCE

LETTER FROM GRAHAM MCKAY

"I am working on behalf of a client in West Africa and looking for suitably qualified contractors who can provide services, equipment and training in Oil Spill clean up and remediation for both onshore and swamp based incidents . I would appreciate if someone can point me in the right direction?" gmckay@mckay-international.com

UPCOMING WEBINARS

OSRL - EXPERT SEMINAR: INCIDENT AND CRISIS MANAGEMENT - WORKING TOGETHER TO BRING ORDER TO CHAOS

Monday 29th March 1400 GMT

Principal Consultant Rosie Buse and Principal Trainer Tim Coombs will be joined by Dawn Gibson, Global Crisis Manager for Vodafone to discuss the differences and commonalities between Crisis Management and Incident Management.

This seminar will explain why both are essential for responding to major events, how escalation is managed and the role of liaison between the different teams to enable them to achieve their objectives [More info and registration](#)

FREE WEBINARS FROM UK AND IRELAND SPILL ASSOCIATION

Wed, 14 Apr 2021 15:00 BST [Spill Knowledge Base: Marine Dispersants](#)

Wed, 19 May 2021 15:00 BST [Spill Knowledge Base: Storage Tanks](#)

Wed, 16 Jun 2021 15:00 BST [Spill Knowledge Base: Marine Special Equipment](#)

Click on the blue titles for more info on specified webinars. [view our upcoming virtual events here.](#)

ALGA – AUSTRALIAN LAND & GROUNDWATER ASSOCIATION

Over 100 Webinars can be accessed - <https://landandgroundwater.com/webinars>

ONLINE AND OTHER TRAINING COURSES

CEDRE: "FIGHTING ACCIDENTAL OIL POLLUTION AT SEA AND ON THE COAST - LEVEL IMO 2"

Sessions in French: May 31 to June 4, 2021 [More info](#)

EMPIRE EGYPT - OIL SPILL RESPONSE - 1 DAY FOUNDATION COURSE

1 Day online self-paced training program which provides a foundation knowledge and skills for on-site first response to oil spills with the emphasis on combating and the various clean-up methods, supported by exercises and quizzes. A Certificate of Completion will be issued for candidates who pass the final assessment exam.

[More info](#) For ISCO members and readers a 50% discount is available until 31 March 2021. Using the code: ISCO50

LLOYDS MARITIME ACADEMY – CERTIFICATE IN OIL SPILL RESPONSE

Our [Certificate in Oil Spill Response](#) starts on 14th April, and we wanted to remind you why this course is essential for you. This 12-week distance learning course has been designed in line with the IMO's International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), therefore it's your chance to get the best knowledge you can in oil spill safety and effective emergency response.

USA: HAZARDOUS MATERIALS CODE ENFORCEMENT P0615

June 13-18, 2021. Emmitsburg, Maryland. 6-day on-campus - This six-day course is designed to guide students in gaining and sharing the knowledge, skills and abilities to effectively recognize and analyze hazardous materials risk, classify the materials, and apply the codes, standards, and regulations to prevent incidents and mitigate threats to life and property. [More info](#)

INTERTANKO : NEW ENCLOSED SPACE SAFETY VIDEO LAUNCHED

The International Group of P&I Clubs has launched a new enclosed space safety video, drawing attention to the risk of fatalities caused by entering enclosed spaces on board ships.

The loss prevention units of the 13 IG clubs (i.e. the ex-seafarers who provide advice and guidance on technical matters to shipowner members of the clubs) worked in collaboration with a media company to produce the animation – and while the central tenet focuses on seafarers, the message applies equally to stevedores and surveyors who are among those to die in these tragic circumstances.

The issue is hugely important and the IG is very keen to play a part in the mitigation of preventable deaths on board ships. The animation is available on the International Group website [Enclosed Space Entry - The International Group of P&I Clubs \(igpandi.org\)](#) and has been added to the Group's [LinkedIn](#) channel.

ALGA: PFAS 101 TRAINING MODULES

These training modules, prepared by members of ALGA's Emerging Contaminants of Concern Interest Group (EmCoC IG), consists of 9 online modules covering aspects of PFAS from health risk and community consultation to investigation and remediation. The content for the modules has been developed with a principally Australian and New Zealand focus, but also draws examples of best practice from around the world, making it up to date, expansive yet locally relevant. [More info](#)

CONTRACTS, TENDERS AND BUSINESS OPPORTUNITIES

REQUEST FOR TENDER FROM NORWEGIAN CENTRE FOR OIL SPILL PREPAREDNESS AND MARINE ENVIRONMENT

If you missed this announcement in last week newsletter, you can find it at <https://spillcontrol.org/business-opportunities/>

INTERNATIONAL OPEN TENDER NOTIFICATION SERVICE

This is a subscription service. [Have a look to see examples of open tenders.](#)

OTHER OPPORTUNITIES: USA & EUROPE

US Government solicitations are frequently posted in Technology Innovation News Survey, US EPA Tech Direct and USA Federal Contracts Update.

European Maritime Safety Agency invitations to tender are often posted in The EMSA Newsletter.

See "Links for other publications" for links to download current issues of these publications.

Readers are welcome to post tender invitations in this section.

UPCOMING EVENTS

Event organisers are requested to notify ISCO immediately if a listed event is cancelled or postponed

Your Editor is doing his best to keep this listing up-to-date but it should not be assumed that listed events have not been cancelled or postponed. It is recommended that you check with event organisers before finalising your attendance plans.

If an event title is not printed in blue ink it is not hyperlinked to the event website. This may be because the website is not yet available or because the link for the website has not yet been given.

If you want to request the addition of an event please contact the Editor.

For more information click on Title of Event			
COUNTRY	2021	TITLE OF EVENT	LOCATION
VIRTUAL EVENT	March 29-31	Meeting of the IOPC Funds' governing bodies	Online
UAE	April 6-7	HSE Forum UAE 2021	Dubai
VIRTUAL EVENT	April 8	IMO Council Meeting	Online
VIRTUAL EVENT	April 14	West MOPoCo Closure Event	Online
VIRTUAL EVENT	May 1-2	Tri-State Bird Rescue & Research Open House	Online
USA	May 9	APICOM GM Meeting	New Orleans LA
VIRTUAL EVENT	May 10-13	International Oil Spill Conference (IOSC 2021)	Online
VIRTUAL EVENT	May 20-21	European Maritime Day	Online
VIRTUAL EVENT	May 25-27	Fourteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)	Online
VIRTUAL EVENT	June 8-9	Environment Analyst Global Business Summit 2021	Online
VIRTUAL EVENT	June 8-10	43rd AMOP Technical Seminar on Environmental Contamination and Response	Online
USA	June 8-10	Elastec Spill Workshop 2021	Carmi, IL
TUNISIA	June 15	Training on Readiness Evaluation Tool for Oil Spills	Hammamet
TUNISIA	June 16-17	Regional Workshop on Oil Spill Waste Management	Hammamet
USA	August 17-18	Clean Pacific Exhibition & Conference	Renton, WA
USA	September 7-10	Hazmat Emergency Response Workshop	Sacramento, CA
NETHERLANDS	September 9-10	Envirotech for Shipping Forum	Rotterdam
USA	Sept. 13-15	Clean Waterways Conference & Exhibition	Louisville, KY
CROATIA	October 26-28	Regional Workshop – Enhancing Preparedness and Response in the Adriatic & Mediterranean Regions	Opatija
CROATIA	October 29	MOIG General Assembly Meeting	Opatija
USA	Nov. 16-18	Clean Gulf Conference & Exhibition	San Antonio, TX
BAHREIN	Nov. 28-30	International Conference & Exhibition on Spills, Clean Seas & Environment	Bahrein

Please advise the Editor if any of the above entries require correction or updating. John.mcmurtrie@spillcontrol

MESSAGES FROM EVENT ORGANISERS

INTERNATIONAL OIL SPILL CONFERENCE

Join us virtually May 10-14, 2021 for the **2021 International Oil Spill Conference** to access the greatest content and research, and broadest range of international oil spill response professionals in the industry. From local response to global application, IOSC 2021 is *the* premier event for the oil spill response community.

Registration rates for IOSC 2021 increase next month! Register now and secure your seat at this year's virtual event. With more than 160 papers across nearly 50 **breakout sessions**, poster presentations, 10+ interactive **Short Courses**, our popular **Film Festival & Photo Contest**, and the **virtual exhibit hall**, IOSC continues to be the most comprehensive conference for the oil spill response community. [Registration](#)

Questions? Contact us today by **email** or phone at +1-202-973-8689.

JOB SEEKERS

EXPERIENCED HSE MANAGER & HEAD OF OIL SPILL EMERGENCY RESPONSE

Available - For details please visit <https://spillcontrol.org/job-seekers/>

LINKS FOR DOWNLOADING AND READING OTHER PUBLICATIONS

AMSA Update	Latest News from the Australian Maritime Safety Authority	Current issue
ATRAC Newsletter	News from the Adriatic Training and Research Centre	October 2020
AUSMEPA Bulletin	News from the Australian Marine Environment Protection Assoc'n	Summer 2020
BIMCO Bulletin	Marine and shipping-related news from BIMCO	March 2021
Newsletter from George Holliday	News and commentary on HSE issues from George Holliday	Free on request
Cedre Newsletter	News from Cedre in Brittany, France	January 2021
EMSA Newsletters	News from the European Maritime Safety Agency	Current issue
Environmental Expert	Environmental News from Environmental Expert	Current issue
GDACS Newsletter	Daily alerts for natural disasters – earthquakes, floods, typhoons, etc.	Free on request
GEF Newsletter	Monthly Newsletter from the Global Environment Facility	Subscription
GESAMP	Group of Experts on the Scientific Aspects of Marine Environmental Protection	Latest news
GISEA Quarterly Newsletter	News from Global Initiative for South-East Asia	Q3 2020
IMO News Magazine	News from the International Maritime Organization	Autumn/Winter 2020
IMO Publishing Newsletter	New and forthcoming IMO publications	September 2020
ITOPF Ocean Orbit	News magazine from ITOPF with interesting spill response articles	February 2021
JOIFF Catalyst Newsletter	Int'l Organisation for Industrial Hazard Management	Q1 2021 issue
Maritime Executive Magazine	Often contains articles of interest to the spill response community	Current issue
MEDNEWS	News from UNEP Mediterranean Action Programme	02 / 2020
MOIG Newsletter	News from the Mediterranean Oil Industry Group	February 2021
NCEC Newsletter	News from the National Chemical Emergency Centre	December 2020
Navigate Response	Global crisis communications network for shipping & marine	Current issue
NOAA OR&R	Weekly round-up of news from NOAA's Office of Response & Restoration	Latest issue
Oceanbuzz	Newsletter giving news on the Ocean Technology Industry	Current issue
OCIMF Newsletter	News from the Oil Companies International Marine Forum	Current issue
OHMSETT Gazette	Oil Spill Response Research & Renewable Energy Test Facility Quarterly	Autumn 2020
Oiled Wildlife Log	Bi-annual Newsletter from Tri-State Bird Rescue & Research	January 2021
OSPAR Newsletter	Protecting & Conserving the N.E. Atlantic and its resources	End of year 2019
PEMSEA Newsletter	Healthy oceans, people and economies in the East Asian Seas	Current issue
Pollution Online Newsletter	News for pollution prevention & control professionals	Current issue
Salvage World	Quarterly Newsletter of the International Salvage Union	Current issue
Sea Alarm Foundation Newsletter	Oiled wildlife Preparedness and Response news from Sea Alarm	Current issue
Society of Maritime Industries	News from the UK's maritime engineering and business services sector.	October 2020
Spill Alert	Quarterly Newsletter from UK & Ireland Spill Association	December 2020
Technology Innovation News Survey	News from US EPA – Contaminated Site Decontamination	Feb. 1-15, 2021
The Maritime Advocate	Maritime News from Sandra Speares	Current issue
UNEP News	Latest News from United Nations Environmental Programme	Latest News
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	March 1, 2021
USA Federal Contract Opportunities	The authoritative source for federal contract opportunities	March 15-21, 2021
Water Pollution & Flood News	Monthly round-ups of UK & Worldwide Spill and Flood News	Free on request
WestMOPoCo	Western Mediterranean Region Marine Oil & HNS Pollution Co-operation	November 2020

Your editor depends on regular receipt of updated URL links for listed publications. If these are not received, relevant entries will be discontinued. Publishers are kindly requested to advise the editor john.mcmurtrie@spillcontrol.org if any of the links are not up-to-date.

INCIDENT REPORTS

SUEZ CANAL – UPDATE AS AT SUNDAY 28th MARCH

March 28 - Suez Canal salvage teams are alternating between dredging and tugging as they continue to try to dislodge a massive container ship blocking the busy waterway. Dredgers have so far shifted 27,000 cubic metres of sand, to a depth of 18m (59ft) with work set to continue around the clock. Egypt's President Abdel Fattah al Sisi has ordered preparations for the possible removal of some of the ship's cargo to help refloat it. Dredgers have so far shifted 27,000 cubic metres of sand, to a depth of 18m (59ft) with work set to continue around the clock. Suez Canal Authority (SCA) chairman Osama Rabie told Egyptian state TV "The rudder was not moving and it is now moving, the propeller is working now, there was no water underneath the bow, and now there is water under it, and yesterday there was a four-metre deviation in the bow and the stern." Microsoft News / [Read more](#)

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