ISCO INTERNATIONAL SPILL CONTROL ORGANIZATION ESTABLISHED 1984

NEWS

THE NEWSLETTER OF THE INTERNATIONAL SPILL RESPONSE COMMUNITY

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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

INTERNATIONAL NEWS

PLEASE CLICK ON THE BANNERS BELOW FOR MORE INFORMATION

HOW THREE COMPANIES ARE CLEANING UP THE WORLD'S PLASTIC-CHOKED RIVERS

August 3 - Every year, millions of tons of plastic waste pour into the ocean, much of coming from about 1,000 hyper-polluting rivers. And with overall waste generation poised to increase over 75% by 2050, the problem is only set to worsen.

Companies around the world have turned their attention to the problem of river waste, building various barriers, fences, and wheels that help to contain and remove trash as it flows downstream.

The approaches range from trash-scooping solar-powered barges to stainless steel fences, and different rivers will necessitate different methods.

Here's how three companies, Clearwater Mills, The Ocean Cleanup, and AlphaMERS are approaching the problem.

Baltimore's Mr. Trash Wheel gobbles up waste and debris after a big storm. Photo from Waterfront Partnership of Baltimore

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Containment booms are set up in a V-shape across the river, with rubber skirts that extend about two feet below the water's surface. This catches trash floating downriver and funnels it towards the "mouth" of the rotating water wheel, which is powered by the river's current and attached solar panels. The wheel's rotation powers a conveyor belt that lifts trash and debris out of the river and deposits it into a dumpster. Attached cameras allow the team to monitor how full the dumpsters are.

The Ocean Cleanup's Interceptor Original working on the Rio Ozama in the Dominican Republic in summer 2020. Photo from The Ocean Cleanup

The Ocean Cleanup is probably best known for its efforts to clean the Great Pacific Garbage Patch, an endeavor the company's young founder Boyan Slat started pursuing in 2013 after a TED talk he gave on the topic went viral. The company is now pursuing a dual focus since it's also built a series of river cleanup technologies.

The company's first river cleanup device, called the Interceptor Original, was released in 2019. It's a fully solar-powered barge that operates much like Baltimore's trash wheels, just on a larger scale. Sitting at the mouth of a river, it funnels trash onto a conveyor belt and automatically distributes the waste across six giant dumpsters.

The AlphaMERS floating barrier captures trash as it flows downriver Photo from AlphaMERS

India-based AlphaMERS makes another version of a simple river barrier and has 34 installations in eight different cities across the country.

Made of stainless steel mesh, the AlphaMERS fence floats a couple of feet above the water and dips about 16 inches below. "The hydrodynamics and the hydrostatic of this is very simple but excellent for the job," said AlphaMERS Founder D.C. Sekhar. "And it's made very rugged, very heavy duty with steel chains holding it on both sides. So it's able to withstand the monsoon flows immediately after the rain."

Watch video and learn more about these deveopments in the complete version of this excellent article published by CNBC.

INTERNATIONAL AND REGIONAL NEWS

ISCO NEWS

NEXT VOLUNTEERS AND MEMBERS ZOOM MEETING

This meeting is scheduled for 25th August 2022 at !500 hrs EST / 1900 hrs GMT / 20 hrs BST or the equivalent time in your own time zone.

The meeting agenda and link for joining this meeting will be advised in the next issue of the ISCO Newsletter.

U.S. SPECIAL ENVOY FOR YEMEN LENDERKING'S TRAVEL TO THE UAE, OMAN, AND SAUDI ARABIA

August 11 - U.S. Special Envoy for Yemen Tim Lenderking will travel to the United Arab Emirates, Oman, and Saudi Arabia starting August 11, while members of his team travel to Jordan, as part of our vigorous diplomatic efforts to help secure an expansion of the UN-mediated truce and bolster peace efforts. The Special Envoy and his team will focus on helping meaningfully expand benefits of the truce to all Yemenis and pave the way for a permanent ceasefire and an inclusive, durable Yemeni-led resolution to the conflict.

While in the Gulf, the Special Envoy will also continue to support UN efforts to raise awareness and funds for the Safer oil tanker emergency project. With about $14 million unfunded and a UN-Houthi agreement to offload the oil to a temporary vessel, we are the closest we have ever been to addressing the threat posed by this derelict tanker. An oil spill would exacerbate the world's worst humanitarian crisis, cause severe environmental damage, and impact global shipping and other economic activity. US Dept. of State / Read more

PEMSEA: INTEGRATED COASTAL MANAGEMENT - INTERVIEW WITH DR. CHUA THIA-ENG

August 11 - The following interview with Dr. Chua Thia-Eng is extracted from The PEMSEA Story, a narrative of PEMSEA's development and the growth of Integrated Coastal Management (ICM) throughout the seas of East Asia. Dr. Chua was PEMSEA's first Regional Programme Director of PEMSEA, serving from 1993 to 2007. He continues to work towards regional sustainability, serving as PEMSEA Chair Emeritus and providing advice to actors within the region.

PEMSEA had its beginnings in a regional project on Marine Pollution Prevention and Management. PEMSEA / Read more

NEWS REPORTS FROM AROUND THE WORLD

AUSTRALIA: REPORT SHOWS ZERO-TOLERANCE APPROACH LIFTS SHIPPING STANDARDS

August 9 - AMSA Executive Director of Operations, Michael Drake, said the regulator was widely reputed for having one of the most stringent inspection regimes in the world.

"Ships that fail to meet international standards represent an unacceptable risk to the safety of seafarers, Australia's precious marine environments and coastal communities," Mr Drake said.

"Our mission is to ensure safe ship operations and combat marine pollution from shipping. AMSA / Read more

CANADA: SHIP-SOURCE OIL POLLUTION FUND - 500th CLAIM SUBMITTED TO THE FUND

August 9 - August is Water Quality Month!. We take water quality seriously, 365 days a year! Recently, we received our 500th claim for ship-source oil pollution damage. Claims can be submitted by those who suffer damages from any type of oil, from any type of ship or boat, anywhere in Canadian waters.

Since 1989, we have paid over $28.7 million to Canadian claimants. Recent years have been especially active. The number of claims submitted has never been higher, making the 2016-2022 years a record in the 33-year history of the Fund.

Would you like to read more about these two incidents or any other ones? Have a look at our latest edition of the Incident Summaries compilation at: https://sopf.gc.ca/?page_id=11715. SOPF / Read more

CHILE: OPRC-1 COURSE FOR THE NARAU DE QUINTERO PUCHUNCAVÍ BAY FISHERMEN'S FEDERATION

August 9 – A plan led by the Captaincy of the Port of Quintero, with the support of some companies in the industrial belt, including ENAP, COPEC, AES ANDES, CODELCO, OXIQUIM AND PVSA.

This Friday, August 4, a total of 22 local fishermen were certified in the international course IMO 4.02 OPRC-1, (First Response Operator) executed by the Maritime Instruction and Training Center (CIMAR) in the city of Quintero.

The fishermen of Quintero and Puchuncaví were trained in an IMO type course (4.02) of First Response Operator, to provide them with theoretical-practical tools in the face of possible incidents of maritime pollution in the bay, making it a fundamental capacity available in the event of a hydrocarbon emergency.

Armada de Chile Directemar / Read more

CHINA: PEMSEA SUPPORTS THE 2022 EAST ASIA MARINE COOPERATION PLATFORM QINGDAO FORUM

August 4 - The Executive Director of PEMSEA, Ms. Aimee Gonzales, addressed the Opening Ceremony. On behalf of PEMSEA, she introduced the concept, framework, process, implementation, and achievements concerning the practice of integrated coastal management (ICM) and ICM System (ICMS) certification in the East Asian Seas region. She highlighted China's participation and contribution to the development of ICM and ICMS certification and looked forward to seeing more Chinese local governments implement ICM and receive ICMS certification in the future. PEMSEA / Read more

COLOMBIA: IOPC FUNDS - ONLINE EVENT ORGANISED BY THE UNIVERSITY OF CARTAGENA

August 11 - The IOPC Funds were invited to participate in an online event organised by the of the University of Cartagena, Colombia, on 11 August 2022. The Deputy Director/Head of the Claims Department, Liliana Monsalve, took part in a panel discussion entitled Global Politics and Commitments: International Agreements and Conventions. Mrs. Monsalve presented on the main aspects of the legal framework of the international liability and compensation regime for ship-source pollution, including the fundamental concepts for the admissibility of claims IOPC Funds / Read more

FINLAND: SYKE - EUROPEAN COUNTRIES PROVIDE A VARIETY OF SOLUTIONS TO THE PLASTIC CHALLENGE

August 11 - European countries are taking action to promote the circular economy of plastics and to prevent their negative impacts. The Finnish Environment Institute SYKE examined the selection of measures in different countries. The report found differences between countries in terms of the detail of plans and speed of action.

The circular economy of plastics is advanced in Europe mainly through regulatory, market-based, and financing measures. In addition to these, countries are utilizing informative measures, voluntary agreements as well as different research and development activities.

However, more specific information about the implementation schedule was often missing from the plans of many countries. Also, follow-up data about the effectiveness was rarely available. The strategy of the Netherlands positively stood out as it declared the budgets and schedules for the measures in an exceptional detail.

In Finland, the circular economy of plastics is advanced in The Plastics Roadmap coordinated by the Ministry of the Environment. The roadmap was originally published in 2018 and updated in the beginning of 2022.

The update took into account the evaluation of the original roadmap as well as the results from research projects that supported its implementation. The updated version also includes a schedule for Finland to reach the circular economy of plastics by 2030. SYKE / Read more

INDIA: IOPC FUNDS VISIT TO INDIA

August 8 - The IOPC Funds participated in Oil Spill India, an international conference and exhibition focusing on oil spill prevention, preparedness, and response in New Delhi, India, from 4 to 5 August 2022.

During the inaugural session, the Director was invited to deliver a keynote address and participate as a panellist in the opening discussion on global, regional and national developments. The Director explained that there was an increasing trend of oil being transported in Asia, which has increased the risk of oil pollution in the region. He highlighted that many coastlines in the region were protected under the 1992 Civil Liability and Fund Conventions and that the correct implementation of those Conventions was a vital part of preparedness. IOPC Funds / Read more

INDIA: ITOPF RETURNS TO INDIA FOR SIXTH OIL SPILL INDIA CONFERENCE AND EXHIBITION

August 10 - Oil Spill India (OSI 2022) took place at the Hotel Taj, New Delhi for its sixth iteration this year. ITOPF was in attendance with Richard Johnson, Technical Director featuring as an 'Esteemed Speaker,' giving insight on developments in maritime casualty response in a global, regional and national setting.

Richard was joined by David Campion, Senior Technical Adviser, where he spoke during the salvage session on the second day, presenting on the 'Synergy of Salvage and Pollution Response'.

With more than 400 attendees from 200 organisations and 60 speakers, OSI 2022 hosted discussions on oil spill prevention, planning, and response while also being a global forum for governments, policy makers, response organisations, research organisations, and equipment suppliers. ITOPF / Read more

ITALY: HELP THE SEA IN THE PRESENCE OF OIL: CIMA PROJECT

August 11 - From September 15, 2021, the technical-scientific collaboration agreement, called CIMA (Contrast to Accidental Marine Pollution by Hydrocarbons), signed between ISPRA and eleven marine protected areas (AAMMPP) in order to strengthen the protection of marine ecosystems in areas of high naturalistic value, through the "Implementation of activities aimed at the prevention and contrast of accidental pollution by hydrocarbons in Marine Protected Areas".

ISPRA / Read more

KOREA: CLEAN UP MARINE DEBRIS IN NATIONAL PARKS AND ENJOY A CUP OF TEA

August 9 - The Korea National Park Service (KNPS, Chairman Song Hyung-geun), an affiliate of the Ministry of Environment, has piloted the "ocean cleanup campaign" from August 8 at Hallyeohaesang National Park and Taeanhaean National Park. The "ocean cleanup campaign" is a compensation system that rewards visitors of national parks with gift certificates in exchange for collecting marine debris. A visitor who picks up marine litter in a bag provided by the national park receives a KRW 5,000 worth of local gift certificate or a mobile voucher redeemable for a beverage. Up to 3,000 people can benefit from the program on a first-come, first-served basis.

The marine and coastal national parks are ecologically diverse areas inhabited by endangered species such as the milky fiddler crab (Uca lactea). Still, oceanic debris disrupts the marine ecosystems of such parks. In light of this, KNPS has designed the "Ocean cleanup campaign" so visitors can voluntarily engage in activities to improve the marine environment.
Ministry of Environment / Read more

USA: LATEST NEWS REPORTS FROM NOAA OR&R

August 8 – Please click on the links below to download and read the latest news from NOAA OR&R

Riverside Park in East Newark, New Jersey Will Help Restore for a Legacy of Pollution | response.restoration.noaa.gov

On July 29, 2022, an interim crediting and settlement agreement was finalized that will allow for the construction of a new 5-acre riverside park on the Passaic River in East Newark, New Jersey, that will create much-needed green space in a historically underserved community.

The crediting agreement is the culmination of collaborative negotiations among the federal trustees (U.S. Fish and Wildlife Service and NOAA), the Department of Justice, and the BASF Corporation (BASF).

This park is an example of how both government and corporations can work together to make restoration happen.

Graphic showing proposed development of the East Newark Riverfront Natural Resource Restoration Project. Image credit: BASF

NEWS REPORTS FROM AROUND THE WORLD (CONTINUED)

Emergency Response Staff Receive Honors from Department of State | response.restoration.noaa.gov

Two OR&R scientists were recently recognized with a prestigious Department of State Honor Award for their work as part of the National Response Team (NRT) supporting environmental crises in other nations.

A group of people on a beach.U.S. staff assisting with the oil spill in Peru in early 2022: (from left) John Tarpley, NOAA OR&R; BM2 Jesus Valarde, U.S. Coast Guard; Brandi Todd, NOAA OR&R; MKC Manuel Rivera, U.S. Coast Guard. Image credit: USAID.

Announced at the NRT International Assistance Subcommittee meeting on Aug. 3, 2022, John Tarpley, regional operations branch chief in OR&R's Emergency Response Division, and Brandi Todd, scientific support coordinator in the Emergency Response Division, were part of a group receiving a Team Meritorious Honor Award from the Department of State Bureau of Oceans and International Environmental and Scientific Affairs.

John and Brandi served as members of the NRT deployment team for an oil spill north of Lima, Peru in February 2022. In addition, the OR&R spill response team has played key roles in nearly a dozen international environmental incidents where U.S. assistance was sought and provided. Some of the significant incidents included oil spill response planning, training, and spill exercise for Guyana's Civil Defense Commission in April 2022; the fire and eventual sinking of the container ship X-Press Pearl off the coast of Sri Lanka in 2021; an environmental emergency in Mauritius(in 2020, when the bulk carrier Wakashio ran aground on a coral reef; and the sinking of an oil tanker in a UNESCO World Heritage site in Bangladesh in 2014.

Marine Debris Program Participates in International Update at Gulf of Maine Council Meeting | response.restoration.noaa.gov

On July 28, 2022, NOAA Marine Debris Program Northeast Regional Coordinator Demi Fox attended a Gulf of Maine Council on the Marine Environment(link is external) meeting in Portland, Maine, to join a presentation on marine debris prevention and removal efforts underway in Canada and the United States.

Northwest Area Committee Oiled Shoreline Response Workshop | response.restoration.noaa.gov

On July 20-21, 2022, the Northwest Area Committee (NWAC) hosted an Oiled Shoreline Response Workshop at the Naval Air Station on Whidbey Island, Washington. Attendees represented the response community with over forty federal, state, tribal, and industry participants.

USA: MICHIGAN - TRIBAR TECHNOLOGIES FACING ENVIRONMENTAL VIOLATIONS OVER CHEMICAL SPILL IN HURON RIVER

August 10 - State environmental regulators are going after Tribar Technologies, the company responsible for dumping a dangerous chemical into the Huron River last month.

The Michigan Department of Environment, Great Lakes, and Energy served the Wixom company with multiple violations late Tuesday. EGLE alleges the company did not notify authorities of the discharge of a hexavalent chromium solution in a timely manner and did not follow rules guarding against the release of toxic chemicals. WDET / Read more

PEOPLE IN THE NEWS

NEW ADDITIONS TO THE ITOPF TEAM

August 10 - ITOPF has welcomed three new members to the team, Aaron McPherson, IT Support, and Maisie Mansfield and Teresa Rideout as Office Assistants.

Aaron previously worked as an IT (MIS) technician at a government department, supporting the smooth running of its IT and security systems. He has achieved a distinction as an IT apprentice and his role at ITOPF includes supporting the team with their day-to-day IT needs and maintaining and developing its information systems.

Maisie has a creative background. Having studied Film & TV at sixth form, she moved straight into working as a journalist, investigating animal welfare and the pet industry.

Teresa has a creative background, having studied art and photography to GNVQ level and worked as a freelance makeup artist for several years. She joined ITOPF in 2022 with support staff experience she gained from working within the financial services industry since 2013.

Maisie and Teresa are members of the Office, Administration & Travel Team and manage reception and visitor hospitality. They also provide administrative support to the wider team, assisting with facilities related duties, and organising team social events.
https://www.itopf.org/news-events/news/new-additions-to-the-itopf-team/

NEWS FROM ISCO MEMBERS

Corporate Members and Industry Partners of ISCO can submit news about new products and services in the "News from ISCO Members" section of the ISCO Newsletter. This is a free facility for Corporate Members. Given that the ISCO Newsletter has a large and highly targeted readership in over 50 countries, it's a cost-effective way to promote your organisation.

If you have some news you would like to share with readers of the ISCO Newsletter, send it to John.McMurtrie@spillcontrol.org

PACTOW EXPANDS ITS TUG FLEET AGAIN

August 12 - Melanesian marine services company, Pacific Towing (PacTow), has added yet another tug to its fleet. The Azimuth Stern Drive (ASD) tug 'Tavurvur' is a specialised harbour tug and will be permanently stationed at PacTow's dedicated tug base in Port Moresby. Tavurvur is the second of two tugs purchased by PacTow this year as part of the company's ongoing fleet expansion program.

Specialised ASD harbour tug Tavurvur is the latest tug to join Pacific Towing's 21 vessel fleet as part of the company's fleet expansion programme. The tug was named after the volcano that destroyed the Papua New Guinean town of Rabaul in 1994.

Pacific Towing staff (including GM Neil Papenfus, far left) at the Port Moresby dedicated tug base where new ASD harbour tug 'Tavurvur' will be permanently stationed alomg with the majority of the company's 21-vessel fleet.

Tavurvur, (originally 'Nimble'), shares many similarities to Koranga, another ASD tug PacTow purchased in the first half of 2022 for permanent deployment in Lae. Tavurvur is in class with Lloyd's Register, 30 metres long, and with a bollard pull of 60 tonnes.

Purchased out of Singapore where she was also reflagged, the new tug and her crew, including six PNG Nationals, travelled first to Makassar, Indonesia to top up her fuel bunkers and freshwater supply. They then sailed for Port Moresby via the Java, Flores, and Arafura seas, and then through the Torres Strait – a distance of 2,907 nautical miles.

General Manager, Neil Papenfus, confirms that the last decade has been one of diversification and growth for PacTow and that re-fleeting is necessary for this to continue. "We've diversified our service offerings, especially when it comes to servicing the oil and gas sector, while simultaneously delivering our services further afield. For example, in the last few years we've had our tugs and crews in Indonesia, Micronesia, Northern Australia, and even in United States' waters when conducting a tandem towage project for a client in Guam."

However, harbour towage is still PacTow's core business. "The two specialised harbour tugs we've purchased this year ensure that we can easily and safely maintain our current levels of service in the two biggest and most important ports in the country – Lae and Port Moresby.

Tavurvur and Koranga also help 'free up' other tugs in our 21-vessel fleet for unscheduled projects such as emergency response and salvage just about anywhere in the region, as well as for unexpected maintenance" explains Papenfus.

PacTow has operations throughout Papua New Guinea, as well as in Solomon Islands and Fiji, but also services broader Oceania and Southeast Asia.

The majority of PacTow's 200+ staff (97 percent of whom are Melanesian) are also located at the Port Moresby facility where new tug Tavurvur will be stationed. Also, at PacTow's Port Moresby tug base is a HACCP certified camp, training facilities, life raft station, as well as fully equipped marine engineering and fabrication workshops.

PacTow delivers excellent, reliable, and safe marine services through PNG and the broader Pacific. A well-maintained fleet, as well as a dedicated and exceptionally trained team underpin PacTow's ongoing expansion and success.

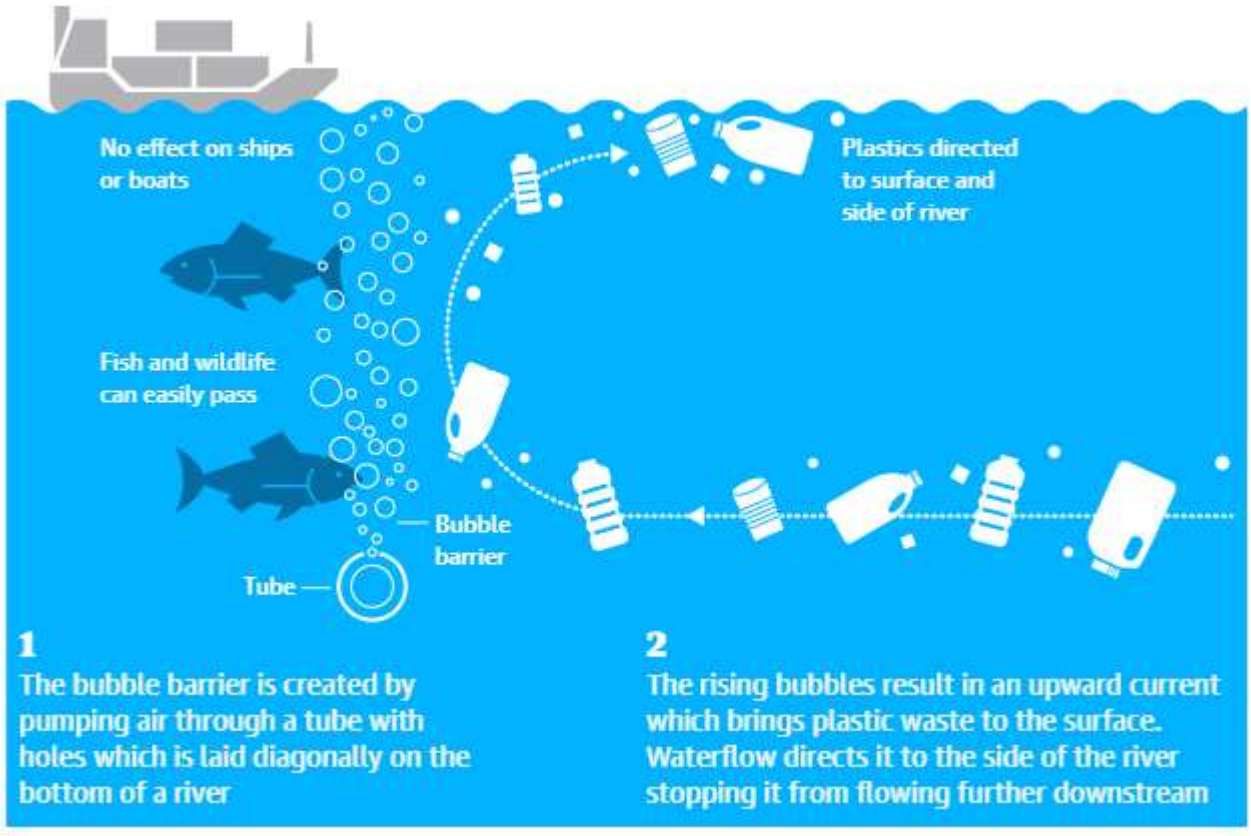
PacTow is part of a larger sea and land logistics group wholly owned by Steamships Limited. To learn more about PacTow: www.pacifictowingmarineservices.com

SCIENCE & TECHNOLOGY

If you are interested in new technology you might find it useful to visit Technology Innovation News Survey at https://clu-in.org/products/tins/ and Tech Direct at https://clu-in.org/techdirect/archive/

'INCREDIBLY PROMISING': THE BUBBLE BARRIER EXTRACTING PLASTIC FROM A DUTCH RIVER

Technology applied to Oude Rijn river helps stop plastic pollution reaching sea - The bubble barrier can stop plastic flowing past and reaches the entire width of a river or canal.



Guardian graphic. Source: The Great Bubble Barrier

Katwijk is the site for the world's first river "bubble barrier" – an experimental concept where a 120-metre stream of rising bubbles, plus the water current, pushes plastic waste to one side in order to be collected.

"We place a perforated tube on the bottom of the waterway, at an angle, and then pump through compressed air: the rising air bubbles create an upward current that will lift plastic from the water column to the surface, and then at the surface – together with the flow of the river – it is all pushed to one side," explains Philip Ehrhorn, the chief technology officer at the Dutch startup The Great Bubble Barrier. "Here, we get the flow from the pumping station, or the wind can also push trash into the catchment system."

The company, run by a team of keen sailors, surfers and water enthusiasts, won an international Postcode Lottery Green Challenge in 2018 and started its first permanent pilot in a canal in Amsterdam the following year. The Guardian / **Read the complete article**

RECENT INTERESTING PEER-REVIEWED OIL SPILL PUBLICATIONS

A COLUMN CREATED BY DR. MERV FINGAS, MEMBER OF ISCO COUNCIL

This is part of a weekly column which provides the references and abstracts of new peer-reviewed scientific publications on oil spills. These references are selected on the basis of those papers that provide new insights into the fate, effects and control of oil spills. Readers may choose to obtain the full publications and to do so, one of three methods is suggested; contact your library, search the internet with the DOI (digital object identifier) provided, or search the internet for the exact title. These are given in the order of likely success in obtaining the article. Merv Fingas, ISCO Colleague.

99. Dynamic changes in the microbial community in the surface seawater of Jiaozhou Bay after crude oil spills: An in situ microcosm study

Zhou, Y., Kong, Q., Zhao, X., Lin, Z., Zhang, H. (2022)
Environmental Pollution, 307, art. no. 119496,
DOI: 10.1016/j.envpol.2022.119496

ABSTRACT: The changes in the composition and structure of microbial communities in Jiaozhou Bay are strongly affected by marine oil pollution, but the outcomes of the microbial responses and effects of dispersant application remain unclear. Herein, we performed an in situ microcosm study to investigate the response of the indigenous microbial community under crude oil alone and combined oil and dispersant treatment in the surface seawater of a semi-enclosed marine area of Jiaozhou Bay. The dynamics of the bacterial classification based on 16s rDNA sequencing were used to assess the changes with the crude oil concentration, dispersant use, and time. The crude oil resulted in a high abundance of the genera Pseudohongiella, Cycloclasticus, Marivita, and C1–B045 from the Gammaproteobacteria and Alphaproteobacteria classes, suggesting for hydrocarbon degradation. However, the dispersant treatment was more advantageous for Pacificibacter, Marivita, and Loktanella. Besides accelerating the rate of bacterial community succession, the dispersants had significantly stronger effects on the structure of the bacterial community and the degradation functions than the oil. A higher dose of oil exposure corresponded to fewer dominant species with a high relative abundance. Our study provides information for screening potential degradation bacteria and assessing the risks that oil spills pose to marine ecosystems.

100. Effects of asphaltenes on the photolytic and toxic behavior of bitumen and conventional oil products on saltwater,

Yang, Z., Yang, C., Zhang, G., Shah, K., Chen, B., Hollebone, B.P., Jackman, P., Beaulac, V. (2022)
Journal of Hazardous Materials, 436, art. no. 129137,
DOI: 10.1016/j.jhazmat.2022.129137

ABSTRACT: The effects of asphaltenes on the photolytic and toxic behavior of petroleum oil on seawater was investigated by exposing five original oils and their maltenes to solar irradiation for seven days. Polycyclic aromatic hydrocarbons (PAHs) experienced the fastest photo-oxidation, but negligible photolytic loss was observed for most normal alkanes and all the petroleum biomarkers from tri-cyclic to pentyl-cyclic terpanes in the test total oil and maltenes. The removal of most PAHs from some maltenes was greater than the corresponding total oils. Deasphalting process did not affect the characteristics of naphthenic acid fraction components (NAFCs) in all control samples. In all test oils, solar irradiation formed abundant NAFCs, in particular those only containing oxygen as the heteroatoms (Oo species). The formed Oo species were abundant in congeners having highly saturated congeners, and shifted to a lighter carbon number after exposed. Deasphalting process significantly enhanced the formation of Oo species (o from 2 to 4) for all test oils, in particular for the Cold Lake Blend and Bunker C. The toxicity of exposed maltenes was generally higher than the exposed total oil for most oils, suggesting the aqueous toxicity level was positively related to the formed NAFC intermediates.

101. An adversarial learning approach to forecasted wind field correction with an application to oil spill drift prediction

Li, Y., Huang, W., Lyu, X., Liu, S., Zhao, Z., Ren, P. (2022)
International Journal of Applied Earth Observation and Geoinformation, 112, art. no. 102924,
DOI: 10.1016/j.jag.2022.102924

ABSTRACT: Reanalysis wind fields are obtained by correcting the numerically forecasted wind fields based on observation data (i.e., either remote sensing or in-situ observations, or both). Although they are more accurate than forecasted wind fields, reanalysis wind fields tend to have time latencies because they can only be released after the observations are obtained. In order to produce accurate estimates of wind fields in a more timely manner, we develop an adversarial learning approach to correcting forecasted wind fields to be close to reanalysis wind fields. The adversarial learning approach is conducted by an adversarial ConvLSTM network (ACLN) framework that consists of a corrector and a discriminator. The corrector aims at comprehensively capturing both spatial and temporal characteristics of a sequence of forecasted wind fields and producing a corrected forecast wind field for the final field in the sequence. The discriminator tries to distinguish corrected forecast wind field from its corresponding reanalysis wind field. The training of ACLN is alternate between the corrector and the discriminator in an adversarial fashion. The adversarial training mechanism enhances the corrector's representational power. Additionally, the corrector exploits a residual learning architecture that effectively learns the differences between forecasted wind fields and the corresponding reanalysis wind fields. In this scenario, the well trained corrector requires neither reanalysis wind fields nor observations such that it can correct forecasted wind fields in a timely manner. Furthermore, corrected forecast wind fields are employed for oil spill drift prediction. Extensive experiments validate the effectiveness of the proposed ACLN framework in forecasted wind field correction along with oil spill drift prediction. Compared with ECMWF numerical forecasts, the ACLN achieves an average reduction of 6.2%, 6.9%, and 10.6% in RMSE,

MAE, and MAPE, respectively. Compared with a basic drift prediction method, the ACLN based prediction method reduces the error by about 5000 m in the Sanchi oil spill accident. The source codes are available at https://github.com/liyongqingupc/ACLN-WindFieldCorrection, providing a baseline for correcting forecasted wind fields.

102. Shipping spills and plastic pollution: A review of maritime governance in the North Sea

Saliba, M., Frantzi, S., van Beukering, P. (2022)
Marine Pollution Bulletin, 181, art. no. 113939,
DOI: 10.1016/j.marpolbul.2022.113939

ABSTRACT: Plastic pollution of our oceans from land-based sources and shipping spills raises concerns for marine ecosystems, maritime industries and human health. This paper examines the systems and processes in place in the case of plastic pollution due to a shipping spill in the North Sea and the instruments and mechanisms to hold polluters accountable. A desk-based analysis was conducted, and 11 expert interviews contextualised the desk findings. From the 263 reported incidents from 1917 to 2021, 39 % of the reported container loss cases occurred in, or near, the North Sea. Fragmented jurisdiction, frail and uncoordinated policies, aid the shipping sector to deflect responsibility. Around 62 % of the obstacles mentioned by the interviewees addressed governance, including, notably, the lack of international measures, and regulations on shipping routes to protect sensitive areas. The study also identifies the difficulty to enforce compensation for the damage made to ecosystems and biodiversity.

103. Intraspecific Variation in the Sublethal Effects of Physically and Chemically Dispersed Crude Oil on Early Life Stages of Atlantic Cod (Gadus morhua),

Scovil, A.M., de Jourdan, B.P., Speers-Roesch, B.
(2022) Environmental Toxicology and Chemistry, 41 (8), pp. 1967-1976.
DOI: 10.1002/etc.5394

ABSTRACT: The offshore oil industry in Atlantic Canada necessitates a greater understanding of the potential impacts of oil exposure and spill response measures on cold-water marine species. We used a standardized scoring index to characterize sublethal developmental impacts of physically and chemically dispersed crude oil in early life stages of Atlantic cod (Gadus morhua) and assessed intraspecific variation in the response among cod families. Cod (origin: Scotian Shelf, Canada) were laboratory-crossed to produce embryos from five specific families, which were subsequently exposed prehatch to gradient dilutions of a water-accommodated fraction (WAF) and a chemically enhanced WAF (CEWAF;

prepared with Corexit 9500A) for 24 h. Postexposure, live embryos were transferred into filtered seawater and monitored to hatch; then, all live fish had sublethal endpoints assessed using the blue-sac disease (BSD) severity index. In both WAF and CEWAF groups, increasing exposure concentrations (measured as total petroleum hydrocarbons) resulted in an increased incidence of BSD symptoms (impaired swimming ability, increased degree of spinal curvature, yolk-sac edemas) in cod across all families. This positive concentration-dependent increase in BSD was similar between physically (WAF) versus chemically (CEWAF) dispersed oil exposures, indicating that dispersant addition does not exacerbate the effect of crude oil on BSD incidence in cod. Sensitivity varied between families, with some families having less BSD than others with increasing exposure concentrations. To our knowledge, our study is the first to demonstrate the occurrence in fishes of intraspecific variation among families in sublethal responses to oil and dispersant exposure. Our results suggest that sublethal effects of crude oil exposure will not be uniformly observed across cod populations and that sensitivity depends on genetic background. Environ Toxicol Chem 2022;41:1967–1976.

104 Modeling population effects of the Deepwater Horizon oil spill on a long-lived species,

Schwacke, L.H., Marques, T.A., Thomas, L., Booth, C.G., Balmer, B.C., Barratclough, A., Colegrove, K., De Guise, S., Garrison, L.P., Gomez, F.M., Morey, J.S., Mullin, K.D., Quigley, B.M., Rosel, P.E., Rowles, T.K., Takeshita, R., Townsend, F.I., Speakman, T.R., Wells, R.S., Zolman, E.S., Smith, C.R.
(2022) Conservation Biology, 36 (4), art. no. e13878,
DOI: 10.1111/cobi.13878

ABSTRACT: The 2010 Deepwater Horizon (DWH) oil spill exposed common bottlenose dolphins (Tursiops truncatus) in Barataria Bay, Louisiana to heavy oiling that caused increased mortality and chronic disease and impaired reproduction in surviving dolphins. We conducted photographic surveys and veterinary assessments in the decade following the spill. We assigned a prognostic score (good, fair, guarded, poor, or grave) for each dolphin to provide a single integrated indicator of overall health, and we examined temporal trends in prognostic scores. We used expert elicitation to quantify the implications of trends for the proportion of the dolphins that would recover within their lifetime. We integrated expert elicitation, along with other new information, in a population dynamics model to predict the effects of observed health trends on demography. We compared the resulting population

trajectory with that predicted under baseline (no spill) conditions. Disease conditions persisted and have recently worsened in dolphins that were presumably exposed to DWH oil: 78% of those assessed in 2018 had a guarded, poor, or grave prognosis. Dolphins born after the spill were in better health. We estimated that the population declined by 45% (95% CI 14–74) relative to baseline and will take 35 years (95% CI 18–67) to recover to 95% of baseline numbers. The sum of annual differences between baseline and injured population sizes (i.e., the lost cetacean years) was 30,993 (95% CI 6607–94,148). The population is currently at a minimum point in its recovery trajectory and is vulnerable to emerging threats, including planned ecosystem restoration efforts that are likely to be detrimental to the dolphins' survival. Our modeling framework demonstrates an approach for integrating different sources and types of data, highlights the utility of expert elicitation for indeterminable input parameters, and emphasizes the importance of considering and monitoring long-term health of long-lived species subject to environmental disasters. Article impact statement: Oil spills can have long-term consequences for the health of long-lived species; thus, effective restoration and monitoring are needed.

105. Ecotoxicity Studies for On-Site Disposal of Decant Water During Oil Spills: A Review

Liu, B., Chen, B., Ling, J., Ye, X., Dong, G., Matchinski, E.J., Zhang, B.
(2022) Frontiers in Environmental Science, 10, art. no. 944010,
DOI: 10.3389/fenvs.2022.944010

ABSTRACT: Mechanical oil recovery, a most used tool for oil spill response, can generate a considerable proportion of oil-contaminated water (10–70%). Large storage space is commonly required to transport the recovered oil and water mixture to shore. Transit and transportation consume loads of time, money, and resources while reducing oil recovery's overall efficiency and capacity. Techniques of on-site treatment and disposal of oily wastewater provide benefits for oil recovery by freeing storage space. However, the high petroleum content of decant water can lead to uncertain risks, if discharged into the marine ecosystem. Insufficient ecological toxicity data and research limit the standardization and establishment of regulative tools. To fill the knowledge gaps, this review comprehensively summarized recent studies on the potential impacts of the organic composition in decant water, including oil–water accommodated fractions, dispersed oil droplets, and other related chemicals, on various marine species (i.e., bacterium, invertebrates, fishes, plants, reptiles, and mammals). The toxicity effects and the ecological endpoints of oils, TPH, and PAHs on different species were discussed. Recommendations for future ecological impacts and decant water composition were provided to support the on-site disposal of the water fraction.

TRAINING COURSES

USEFUL LINKS

- **INTERNATIONAL – IMO E-LEARNING PLATFORM** e-learning platform
- **AUSTRALIA – AMOSC -** https://amosc.com.au/training/
- **AUSTRALIA & NEW ZEALAND – ALGA** - https://landandgroundwater.com
- **EUROPE –** EMSA Academy 2022. Courses Catalogue
- **FRANCE - CEDRE** - Click on these links training catalogue and 2022 calendar.
- **UK & WORLDWIDE – OIL SPILL RESPONSE LTD.** - https://www.oilspillresponse.com/training/courses/
- **UK & WORLDWIDE – BRIGGS ENVIRONMENTAL SERVICES LTD.** - https://www.briggsmarine.com/services/training/
- **UK – NCEC HAZMAT ACADEMY –** More info
- **USA – TEXAS A&M UNIVERSITY – NATIONAL SPILL CONTROL SCHOOL** https://www.tamucc.edu/research/nscs/
- **USA – MPC, DETROIT -** https://marinepollutioncontrol.com/services/training-and-compliance
- **USA – ALLIANCE OF HAZARDOUS MATERIALS PROFESSIONALS -** https://www.ahmpnet.org/events/event_list.asp

Members who would like to be listed here, please contact your editor – john.mcmurtrie@spillcontrol.org

CERTIFICATE IN COMBATTING MARINE & AIR POLLUTION FROM SHIPPING

From Lloyds Maritime Academy - over 12 weeks (Part-time), Starting 23 August 2022. More info

CERTIFICATE IN MARITIME SAFETY MANAGEMENT & THE ISM CODE

From Lloyds Maritime Academy - Course commences 28th September 2022. More info

USA: OHMSETT - OIL SPILL RESPONSE STRATEGIES & TACTICS TRAINING

During the 3 ½ days of training, you will learn the strategies and tactics for successful spill response operations. Course Topics: Factors affecting oil spill movement + Fates & effects of spilled oil + Oil skimmer & containment boom selection & use + Booming & recovery strategies + Site safety planning + Incident Command System (ICS) + Alternative response techniques + Shoreline Characterization (Introduction to SCAT) + And More! September 20 - 23, 2022 - Tuesday - Thursday: 8:00 AM - 4:00 PM Friday: 8:00 AM - 1:00 PM; Register

FREE ONLINE SPCC TRAINING

HalenHardy's Oil Handler Annual Refresher Training is divided into six easy-to-digest microlearning modules. More info

UPCOMING EVENTS

WE HAVE CHANGED THE ISCO WEBSITE UPCOMING EVENTS PAGE. IN ADDITION TO UPCOMING CONFERENCES, EXHIBITIONS AND MEETINGS, ENTRIES NOW INCLUDE WEBINARS, SEMINARS, ETC. WHICH WERE FORMERLY ON A SEPARATE WEBSITE PAGE.

TO VIEW UPCOMING EVENTS CLICK ON HTTPS://SPILLCONTROL.ORG/UPCOMING-EVENTS/

To see ALL of the posted events you will need to click on "LOAD MORE" at the foot of each opened "upcoming events" page. Event organisers are requested to notify ISCO immediately if a listed event is cancelled or postponed. Your Editor does his best to keep the 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. Please advise the Editor if any of the entries require correction or updating. If you are holding an event you would like to be featured here, please send details to John.mcmurtrie@spillcontrol.org

NEWLY ADDED TO THE UPCOMING EVENTS PAGE

- **EM OSR Knowledge Transfer Webinar "The BIOS & ITOSS Shoreline Field Experiments" Dr Ed Owens**

RECENTLY ADDED TO THE UPCOMING EVENTS PAGE

- **OSRL: TPR Wheel Seminar Series - Inland Response Seminar, Thursday 18th August 1400 BST**
- **OSRL: TPR Wheel Seminar Series – Shoreline Assessment Technique (SCAT) , Wednesday 28th September 1400 BST**

WHEN YOU OPEN THE UPCOMING EVENTS PAGE YOU WILL SEE MANY MORE UPCOMING EVENTS

MESSAGES FROM EVENT ORGANISERS

USA: CLEAN PACIFIC – AUGUST 23-24

CLEAN PACIFIC is Only One Month Away! The 2022 CLEAN PACIFIC Conference is just one month away and we haven't seen you register! Make plans to join your peers from the Pacific Northwest to share experiences and discuss solutions to response challenges for oil and hazardous spills and environmental emergencies specific to the Pacific region. This year's event is set to be bigger and better with two full days of content, new exhibiting companies and over 250 in attendance! Registration rates increase by $100 after 8/19/2022. Download the brochure Registration networking-oriented sponsorship opportunities

INDIA: SPILLTECH CONFERENCE & EXHIBITION, 21-23 SEPTEMBER, 2022

To support the Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development, SpillTech will cover a wide range of topics revolving around prevention, mitigation & probable solutions to save the environment from any catastrophic disasters. Apart from the policy & regulatory updates, the event topics will revolve around oil & chemical spills, Ocean Debris, Waste & Solid waste management, Shoreline cleanup, Risk mitigation & a few more.

For ISCO Members a 10% discount on Registration Fee. http://spilltech.org/ Download event brochure Submit you abstract

FRANCE: SEA TECH WEEK 2022

Sea Tech Week®, Marine Science & Technology Conference - 26-30 September 2022, Brest, France – More info - https://www.seatechweek.eu/

CANADA: INTERNATIONAL OIL SPILL SCIENCE CONERENCE 2022 – OCTOBER 4-7

IOSSC 2022 REGISTRATION IS OPEN -Attendees will be able to connect with the oil spill response community, government, industry, and academia to work together to deal with the challenges in the field of oil spill response. The conference will bring experts from around the world to present their latest research in the field of oil spill science including spill prevention, contingency planning, and environmental rehabilitation.

Register before August 31, 2022 to pay our early bird rates. Preliminary Conference Programme Registration Website: https://sites.events.concordia.ca/sites/mpri/en/international-oil-spill-science-conference-2022/

BAHREIN: RECSO ENVIROSPILL CONFERENCE & EXHIBITION, 11-13 OCTOBER 2022

https://www.recsoenvirospill.org/

USA: CLEAN GULF CONFERENCE & EXHIBITION – NOVEMBER 8-10, 2022 PRELIMINARY CONFERENCE AGENDA

Welcome and Opening Keynote (Open to All Attendees) WEDESDAY, NOVEMBER 8 10:45 AM - 12:15 PM - Kevin M. Sligh Sr. MBA, CEM, Director, Bureau of Safety and Environmental Enforcement (BSEE) Kevin M. Sligh Sr. is the Director of the Bureau of Safety and

MESSAGES FROM EVENT ORGANISERS (CONTINUED)

Environmental Enforcement, Department of Interior. He joined BSEE on March 28, 2022, and leads the bureau in its mission to promote safety, protect the environment and conserve offshore energy resources through the regulatory oversight and enforcement. View Exhibition Contract View Conference Sessions Register for Clean Gulf

ITALY: ECOMONDO EXPO, RIMINI, 8-11 NOVEMBER, 2022

Let's meet at Ecomondo! Log in to the reserved area, fill in your data, download your ticket

AUSTRALIA: ALGA GROUNDWATER FATE & TRANSPORT SYMPOSIUM

ALGA's Groundwater Fate & Transport Special Interest Group (SIG) is pleased to announce the 2022 Groundwater Fate & Transport symposium will be held in Melbourne on 18 November 2022.

The symposium aims to share the latest insights, developments and applications for improving our understanding of contaminant behaviour in the environment. https://www.cvent.com/c/abstracts/e9e34139-c7a0-4969-88b9-e2cfb510baab

USA: CALIFORNIA -10TH BIANNUAL OIL SPILL RESPONSE TECHNOLOGY WORKSHOP FEBRUARY/MARCH 2023

California Department of Fish and Wildlife Office of Spill Prevention and Response (OSPR) and Chevron 10th Biannual Oil Spill Response Technology Workshop February/March 2023 in California (TBD). **Inviting short abstracts by August 25th, 2022** for field or video demonstrations, and or traditional lecture presentations. Email or request more info: TechWorkshop2023@wildlife.ca.gov

NORWAY: NOSCA SEMINAR 2023: MARCH 20-24, 2023

The green shift challenges: New oils and new energy carriers. Marine littering. Biological threats Registration

USA: COLORADO - CLEAN WATERWAYS 2023: 11-13 APRIL, 2023

Now Open: CLEAN WATERWAYS 2023 Call for Presentations, The CLEAN WATERWAYS program is developed by a government/industry-based committee of approximately 45 professionals, and the committee is looking for leaders to help shape the conference. All abstracts submitted are reviewed for content and relevance by the committee and are selected by consensus. **Abstracts will be accepted for consideration until Thursday, August 25th, 2022.**

CLEAN WATERWAYS serves the spill response industry in prevention, preparedness and response in the inland environment. It delivers a forum for attendees to come together to discuss case studies and lessons-learned from both recent and past incidents, discover the latest technologies advancing the industry and build relationships with all parties involved in a response. The 2023 Conference will take place in Denver, CO, April 11-13. Call for abstracts and more info

AUSTRALIA: BRISBANE - SPILLCON 2023: 11-15 SEPTEMBER 2023

We are delighted to announce that Spillcon 2023 has been confirmed for 11–15 September 2023 at the Brisbane Convention and Exhibition Centre, Queensland, Australia. For more information contact Spillcon Event Team, Nicky Reading, GPO Box 279, Canberra ACT 2601, Australia; Phone +61 417 244 355, Email spillcon@aip.com.au

CONTRACTS, TENDERS AND BUSINESS OPPORTUNITIES

INTERNATIONAL OPEN TENDER NOTIFICATION SERVICE

This is a subscription service. https://www.tender247.com/keyword/oil+spill+tenders+global

OTHER OPPORTUNITIES: USA & EUROPE

US Government solicitations are frequently posted in Technology Innovation News Survey https://clu-in.org/products/tins/ US EPA Tech Direct https://clu-in.org/techdirect/archive/ and USA Federal Contracts Update https://clu-in.org/Federal-Contract-Opportunities European Maritime Safety Agency invitations to tender are often posted in The EMSA Newsletter https://www.emsa.europa.eu/newsroom/newsletters.html

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https://spillcontrol.org/2021/10/19/links-for-downloading-and-reading-other-publications/

LINKS FOR DOWNLOADING AND READING OTHER PUBLICATIONS (CONTINUED)

As a service to its Menbers ISCO provides a listing of publications that may be of interest to our community. This page provides details and links for downloading more than 40 publications most of which can be accessed at no cost. This page is frequently updated. ISCO depends on regular receipt of updated URL links for listed publications. If these are not received, relevant entries will be discontinued. ISCO is currently looking for a volunteer to take care of maintaining, improving and updating this page.

JOB OPPORTUNITIES

IPIECA IS LOOKING FOR A SUSTAINABILITY RESEARCH INTERN

Title: Sustainability Research Intern
Location: Ipieca London office, Basinghall Street, London EC2V 5DE (with agile working available)
Duration: 6 months For more info visit https://spillcontrol.org/job-vacancies/

CANADA: PHYSICAL SCIENTIST SPECIALIST (SPILL MODELING)

Environment and Climate Change Canada - Science and Technology Branch - Water Science and Technology Directorate
Ottawa (Ontario) PC-03 $89,861 to $106,933 For further information on the organization, please visit Environment and Climate Change Canada **Closing date: 16 August 2022 - 23:59, Pacific Time. Who can apply:** Persons residing in Canada, and Canadian citizens and Permanent residents abroad. More info **Apply online**

CORRECTION

Your editor apologises for an error in the announcement of the retiral from the ISCO Executive Committee of M. Jean Claude Sainlos. (ISCO Newsletter 850, Page 2). Please note that when M. Sainlos retired from the IMO his position was Director of the IMO's Marine Environment Division.

INCIDENT REPORTS

USA: NOAA OR&R SUMMARY OF INCIDENT RESPONSES FOR JULY 2022

So far this year, OR&R has provided support to 98 incidents. In July, OR&R provided response support to 21 incidents, including 11 new incidents in seven states and one territory (the U.S. Virgin Islands).

Staff prepared 147 new incident reports and documents, including nine fate and trajectory analyses. Cumulatively, these incidents posed an approximate risk of over 66,000 gallons of oils and 77,000 metric tons of chemicals. (Note: Spill volumes are approximate and based on initial information that may be updated after further investigation).

Here is the complete list of July's incidents, click on the links to find out more:

- Oil Spill as a Result of a Break in a Transmission Line, Gulf of Mexico, LA
- 50-foot Yacht Sunk in Glacier Bay, AK
- Fishing Vessel Sunk at Pier, Neah Bay, WA
- Freighter Carrying Petroleum Coke Lost Propulsion, Dixon Entrance, AK
- 50-foot Sport Fishing Vessel Sinking, Pensacola Beach, FL
- 67-foot Fishing Vessel Sunk, 90 East of Gloucester, MA
- Above-ground Storage Tank Releases Used Cooking Oil at Norfolk Oil Transit, Norfolk, VA
- High Concentrations of Sargassum Affecting St. Croix Desalination Plant and Primary Source of Water, U.S, Virgin Islands
- 1924 Former Car Ferry Partially Sunk, Astoria, OR
- Bunker Oil Discharge from Tanker into Lower Mississippi River, Almedia, LA
- Diesel Spill at Navy Pier, Base Kitsap-Bangor, Silverdale, WA

UK: POLLUTION TEAMS CONTINUE WORK TO REDUCE OIL SLICK OFF EAST KENT COAST

August 8 - Pollution response teams continue work to reduce an oil slick first reported 12 nautical miles off the east Kent coast at the end of July. Aerial surveillance flights continue to report reduced areas of sheen and vessels continue to work to collect and capture any visible surface oil.

Work continues to reduce the oil slick (Photo MCA)

The Maritime Coastguard Agency, which is the lead organisation on the clean up operation says reports and surveillance work demonstrates that the slick is reducing and the risk to the shoreline diminishing. Reports have been received of minor spots of oil on the beaches at Deal and both HM Coastguard and pollution response contractors are undertaking regular patrols of the beaches. Isle of Thanet News / Read more

CUBA: UPDATES ON MAJOR FIRE & OIL SPILL

August 8 - Fire at Cuban Petroleum Terminal Expands to Fourth Fuel Tank - The fire at Cuba's Matanzas tank farm has spread to two more giant storage tanks, bringing the total to four and increasing the complexity and challenge of the firefighting response. The fire started with a lightning strike on one tank at the Matanzas Supertanker Base east of Havana on Friday night. On Saturday morning, the heat and fire from the burning tank ignited the adjacent tank, causing a massive explosion which left more than 120 injured and 17 missing. In the early hours of Monday morning, another massive blast occurred as the fire ignited a third tank. The smoke initially obscured the tank and made evaluation difficult, but Cuban officials confirmed the incident later in the day. In a press conference late Monday, firefighting chief Lt. Col. Alexander Ávalos Jorge said that the fire had "compromised" a fourth tank and that the timeline for extinguishing the blaze remains uncertain. The Maritime Executive / Read more

August 10 – From Carlos Sagrera, ISCO Representative in Latin America. - "In relation to the fire at the Matanzas Tank Battery in Cuba, considered by the Government of Cuba as the worst industrial fire in its history, it is reported by the Fire Department Authorities today, Wednesday, August 10, that it is beginning to be controlled. Work is being done in three different sectors of the area of the 4 affected tanks, of which 3 have already collapsed. As indicated, the panorama became difficult as of Monday, August 8, due to high temperatures, the size of the tanks and the wind, factors that changed firefighting strategies It is estimated that the presence of experienced firefighters from Mexico and Venezuela have helped decision making. So far there are about 4000 residents evacuated from nearby areas, a confirmed deceased from the Fire Department and another 17 missing and more than 100 injured of varying degrees.The fire has also generated that the main electricity generator In the country, the Antonio Guiteras Plant, located about 3 km from the source of the fire, was disconnected due to lack of water for cooling, which is being used to suffocate the flames in the fire. This generated an affectation of 40% of the demand for electricity in the hours of greatest consumption on Monday, August 8. Spanish links are attached with Cuban and international news about the incident and photos of it.

https://www.bbc.com/mundo/noticias-america-latina-62472176
https://elpais.com/internacional/2022-08-09/una-serie-de-explosiones-complica-la-extincion-del-incendio-en-unos-tanques-de-combustible-en-cuba.html
http://www.cubadebate.cu/noticias/2022/08/09/base-de-supertanqueros-de-matanzas-batalla-minuto-a-minuto-contra-el-fuego/
https://actualidad.rt.com/actualidad/438034-satelite-espacial-incendio-cuba-matanzas
https://www.rtve.es/noticias/20220809/explosiones-complican-extincion-incendio-cuba/2395242.shtml
https://www.dw.com/es/el-incendio-en-cuba-y-la-precariedad-de-sus-infraestructuras/a-62749550

August 12 – **More Cuban press reports with many photos** and updates received from Carlos Sagrera, ISCO Representative in Latin America.

https://elpais.com/internacional/2022-08-11/las-devastacion-que-dejo-el-incendio-en-los-depositos-de-combustible-en-cuba-en-imagenes.html
http://www.cubadebate.cu/noticias/2022/08/11/fallece-paciente-hospitalizado-tras-incendio-en-matanzas-informa-salud-publica/

August 12 - Fire at Cuban Oil Terminal is Out, But Disruption is Just Beginning - The devastating fire at the Matanzas fuel oil terminal in Cuba is out, but the damage is far from over. The blaze took out four of the site's eight large storage tanks, impeding marine terminal operations and forcing tankers to divert to smaller ports. The Maritime Executive / Read more

USA: LOUISIANA - OIL TANK PLATFORM COLLAPSES, OIL SPILLS IN TERREBONNE BAY

The Coast Guard is responding to an oil spill after an oil tank platform collapsed at the Hilcorp Caillou Island facility in Terrebonne Bay, Louisiana August 8, 2022. U.S. Coast Guard courtesy photo

August 9 - The U.S. Coast Guard is responding to an oil spill after an oil tank platform collapsed at the Hilcorp Caillou Island facility in Terrebonne Bay, Louisiana, on Monday.

Coast Guard Marine Safety Unit Houma personnel initially received a notification from the National Response Center stating the platform experienced a structural failure causing a tank to fall into the water and spill the oil.

Environmental Safety & Health Consulting Services has been hired as the oil spill removal organization. Current response actions include 4,500 feet of containment boom, three skimming vessels, and five response vessels on scene. Hilcorp estimates less than 14,000 gallons of crude oil entered the water. Offshore Engineer / Read more

August 11 - Photos: Oil Recovery Concludes for Calliou Island Spill - The U.S. Coast Guard, the Louisiana Oil Spill Coordinator's Office and oil and gas company Hilcorp are winding up the oil-recovery response to the spill that occurred at the Caillou Island facility in Terrebonne Bay, Louisiana.

The responders deployed 10,000 feet of containment boom, three skimming vessels and ten fast response vessels to contain and recover oil. The coast guard reported that only minimal marsh and wildlife impacts have been observed, and there are no fishery closures. The Maritime Executive / Read more

USA: MICHIGAN - HURON RIVER REMAINS OFF LIMITS BECAUSE OF CHEMICAL SPILL

August 11- Until further notice, the Michigan Department of Health and Human Services (MDHHS) is recommending that people and pets avoid contact with the Huron River water between North Wixom Road in Oakland County and Kensington Road in Livingston County. This includes Norton Creek downstream of the Wixom Wastewater Treatment Plant, Hubbell Pond (also known as Mill Pond),

and Kent Lake. As additional water test results are received, MDHHS could expand this recommendation to other areas of the Huron River. The recommendation goes on to say: • Don't swim in, wade in, play in or drink water directly from the Huron.

At press time, the latest update on Wixom's website reads, "Multiple agencies have been and will be sampling the Huron River water system over the coming days/weeks/months. It does appear, based on the first test results, that the Wixom WWTP (Wastewater Treatment Plant) has served to filter and/ or contain some portion of the untreated hexavalent chromium discharged by Tribar. Additional sampling and testing of the Huron River water system and the Wixom WWTP will continue for an indefinite period of time. These results will be important in determining the severity of the situation and what steps should be taken for the Huron River water **system and the Wixom WWTP." The Spinal Column / Read more**

August 11 – Series of timeline reports in Click-on Detroit

August 12 - FBI involved in investigation of Huron River chemical release - Clean-up efforts are continuing on Thursday morning as new details emerge surrounding the chemical spill in the Huron River. It's expected that the company responsible for leaking 10,000 gallons of a cancer-causing toxin into the river will release more information on how it happened.

A former employee is suspected of overriding a safety alarm 460 times in a three-hour span, which is about once every 20 seconds, and the investigation revealed that the employee wasn't even supposed to be in the building. WXYZ Detroit / Read more

IRAN: "OIL RIG IN PERSIAN GULF TO BLAME FOR POLLUTION OFF COAST"

August 11 - The director general of the Environmental Protection Department of Iran's Bushehr Province says leakage from an oil rig in the Persian Gulf is probably to blame for oil spills off the Kangan and Asalooyeh coasts in southern Iran. Farhad Gholinejad said officials previously though the leakage came from vessels.

He stressed that an operation is underway to clean up the oil spill in cooperation with other state bodies including municipalities and the general administration of ports and maritime affairs. IFP News / Read more

GERMANY: 'THE PROBLEM IS ENORMOUS': CHEMICAL SPILL SUSPECTED IN MASSIVE FISH DIE-OFF

August 12 - Polish and German environmental detectives are attempting to trace the origin of a suspect chemical spill that has already killed tonnes of fish in the Oder river. The as yet unidentified toxin appears to be the only explanation for the mass die-off of fish, officials from both counties say.

According to local German broadcaster RBB, the state laboratory found high levels of mercury in the water samples. However, Wladyslaw Dajczak, head of Poland's Lubusz province, said that tests run on August 10 and 11 showed mercury was found only in "trace amounts", well within allowed levels. The New Daily / Read more

USA: DIESEL PIPELINE BREAK SPILLS 45,000 GALLONS OF FUEL IN WYOMING

August 13 - A diesel pipeline in Wyoming owned by a company that's being sued by federal prosecutors over previous spills in two other states cracked open and released more than 45,000 gallons (205,000 liters) of fuel, a state official said Friday. Cleanup work is ongoing from the spill that was discovered by the pipeline's operator on July 27, said Joe Hunter, Emergency Response Coordinator with the Wyoming Department of Environmental Quality. The fuel spilled on private ranchland near the small community of Sussex in eastern Wyoming, he said Business Standard / Read more

USA: NORTH DAKOTA – CRUDE OIL SPILL FROM BULK OIL TANK

August 13 - Crude oil was released from a bulk oil tank about three and a half miles northeast of Killdeer. Leland estimates 7,560 gallons of oil discharged, a portion of which left the well pad. No surface water areas were impacted. Minot Daily News / Read more