

## ISCO & THE ISCO NEWSLETTER

The International Spill Control Organization, a not-for profit organization dedicated to raising worldwide preparedness & co-operation in response to oil and chemical spills, marine & freshwater pollution by plastics. promoting technical development and professional competency, & 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 & observer Status at the International Oil Pollution Compensation Fund

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## HEADLINE INTERNATIONAL NEWS

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## VIDEO: UN-BACKED SALVAGE TEAM ARRIVES AT FSO SAFER OFF YEMEN



*Photo: Salvage experts arrived at the FSO Safer off Yemen and are beginning with a visual inspection of the decaying vessel (Photo courtesy of UN)*

May 30 - The team for the UN-backed salvage effort of the decaying offshore oil storage tanker FSO Safer (406,000 dwt) arrived in Yemen today, May 30, to begin the operation that plans to transfer the more than one million barrels of crude oil from the decaying tanker. Boskalis and the team from SMIT reported that they departed Djibouti along with UN representatives on May 29 to begin an operation that has been estimated will take more than seven weeks.

"After two years of political groundwork, fundraising, and UNDP project development, the operation on the water is set to begin!," David Gressly, United Nations Resident and Humanitarian Coordinator in Yemen Tweeted today. After years of working to reach the agreements necessary for the operation, Gressly was aboard the Boskalis vessel Ndeavor as it arrived at the FSO Safer. The actual transfer of the oil is expected to take 19 days between the two ships. The Maritime Executive / [Read more](#) [Press release from UNDP](#)

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## INTERNATIONAL & REGIONAL NEWS

### FROM AGREEMENT TO ACTION: THE ROAD AHEAD FOR THE GLOBAL BIODIVERSITY FRAMEWORK

May 20 - International Day for Biological Diversity, celebrated each year on 22 May, is an opportunity to not only acknowledge the crucial role healthy biodiversity plays in the survival of the planet but also to assess the nature crisis.

With the theme 'From Agreement to Action: Build Back Biodiversity,' this year's Day follows the historic adoption of the Kunming-Montreal Global Biodiversity Framework by 196 nations at the 15th meeting of the Conference of the Parties in Montreal, Canada, in December 2022. UNEP / [Read more](#)

### THE 20TH MEETING OF THE MEDITERRANEAN COMMISSION ON SUSTAINABLE DEVELOPMENT CONVENES IN MARSEILLE

May 24 - 20th Meeting of the Mediterranean Commission on Sustainable Development (MCSD) 14-16 June 2023, Marseille, France. Mediterranean countries, institutions, representatives of the private sector and academia, and civil society organizations come together for a new push for sustainable development in the Mediterranean region. UNEP MAP / [Read more](#)

### HELCOM INDICATOR REPORTS PROVIDE THE LATEST EVALUATIONS OF BALTIC MARINE ENVIRONMENT

May 26 - The latest indicator evaluations on the status of the Baltic Sea marine environment have been published on the new HELCOM [indicator website](#).

The total number of indicators now amounts to 59, covering several major components of the Baltic Sea ecosystem including pelagic and benthic habitats, fish, waterbirds and marine mammals, as well as a number of human-induced pressures. HELCOM / [Read more](#)

### MEETING | BARCELONA CONVENTION OFFSHORE OIL AND GAS GROUP (OFOG) 2023

May 26 - The Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) has held the Fourth Meeting of the Barcelona Convention Offshore Oil and Gas Group (OFOG) Sub-Group on Environmental Impact from Tuesday 23rd to Wednesday 24th May 2023. REMPEC / [Read more](#)

## WHAT YOU NEED TO KNOW ABOUT THE PLASTIC TREATY NEGOTIATIONS IN PARIS THIS WEEK

May 29 - This week sees the second meeting of the [Intergovernmental Negotiating Committee \(INC\)](#), INC-2, take place in Paris, where countries will discuss an [options paper](#) that will be used as the basis for discussions at the meeting. It is the next step in a process that began in February 2022, at the resumed fifth session of the United Nations Environment Assembly ([UNEA-5.2](#)), when a historic resolution was adopted to develop an international legally binding instrument on plastic pollution, including in the marine environment. UNEP / [Read more](#)

### GLOBAL PLASTICS TREATY NEGOTIATIONS RESUME, WILL INNOVATORS BE AT THE TABLE?

May 29 - Dozens of entrepreneurs and startups have been working on plastic pollution mitigation and cleanup for years. Their absence from current negotiations puts the implementation of a Global Plastics Treaty at risk, says Peter Hjemdahl, co-founder and chief innovation officer of the Innovation Alliance for a Global Plastics Treaty. Championed by rePurpose Global and the Ocean Cleanup, the Innovation Alliance is pushing to bring innovators and entrepreneurs to the negotiating table. TriplePundit / [Read more](#)

### MAY 2023 MEETING OF THE IOPC FUNDS' GOVERNING BODIES

May 30 - The IOPC Funds' governing bodies held sessions from Tuesday 23 to Thursday 25 May 2023 at the headquarters of the International Maritime Organization (IMO) in London. A brief summary of the decisions taken at the sessions is available [here](#), and the full Record of Decisions of the meeting will be made available via the Document Services section very soon. IOPC Funds / [Read more](#)

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### **CANADA: STRIVING FOR A BETTER WORLD THAT LEAVES NO ONE BEHIND, TOGETHER WITH OUR G7 PARTNERS**

May 20 - Today, during the second day of the G7 Summit in Hiroshima, Japan, Prime Minister Justin Trudeau made a series of new investments to help address the needs of people in emerging economies and developing countries. The Prime Minister alongside fellow G7 Leaders, Leaders of invited guest countries, and Heads of guest international organizations highlighted the need for ambitious and coordinated action to advance the Sustainable Development Goals (SDGs) – a path forward for Canada and the world that leaves no one behind. Govt. of Canada / [Read more](#)

### **CANADA: MEETING OF FEDERAL-PROVINCIAL-TERRITORIAL MINISTERS RESPONSIBLE FOR CONSERVATION, WILDLIFE, AND BIODIVERSITY – FEDERAL-PROVINCIAL-TERRITORIAL MINISTERS COMMIT TO COLLABORATIVE APPROACH ON RENEWED NATIONAL BIODIVERSITY STRATEGY**

May 26 - Federal, provincial, and territorial (FPT) Ministers responsible for conservation, wildlife, and biodiversity met in Ottawa, Ontario today, reaffirming their commitment to collaborating on shared objectives for the conservation and sustainable use of Canada's biodiversity, in accordance with each government's priorities and jurisdiction. Canada / [Read more](#)

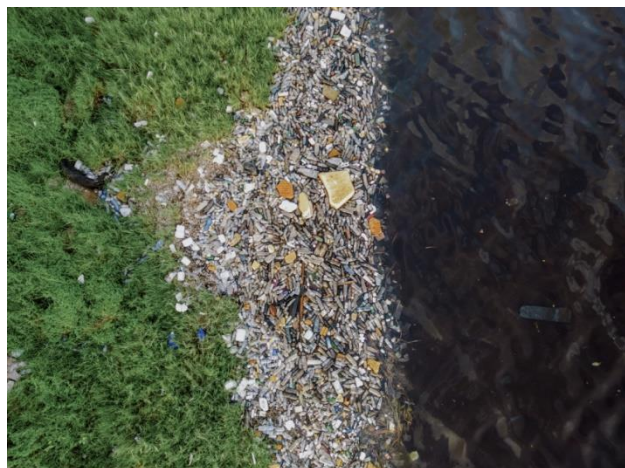
### **CHILE: THE CHILEAN START-UP CHANGING OUR RELATIONSHIP WITH PLASTIC**

May 17 - Walk into one of Chile's neighbourhood convenience stores, and you will see refill machines emblazoned with the name "Algramo". Customers bring reusable containers – each fitted with a unique RFID tag – to refill daily essentials such as shampoo, washing-up liquid and detergent. They can also order refills to their door and pay via a phone app. UNEP / [Read more](#)

### **CHINA MAKES PROGRESS IN YELLOW RIVER POLLUTION CONTROL**

April 27 - China has made solid progress in curbing the discharging of polluted water into the Yellow River and the dumping of wastes in the riverbed over the past few years, an official said Thursday. The progress is attributed to an array of outfall inspections along the second-longest river in the country since 2020, with five provincial-level regions involved, said Liu Youbin, spokesperson for the Ministry of Ecology and Environment, at a press conference. China Daily / [Read more](#)

### **COTE D'IVOIRE SETS SIGHTS ON PLASTIC POLLUTION**



*Photo: Annually, Côte d'Ivoire imports around 300,000 tonnes of plastic, much of this single-use products, while additional plastics are produced domestically. This single-use plastic is taking a heavy toll on the environment. Photo courtesy of UNEP/Olivier Girard*

May 31 - "University campuses, sports stadiums and streets in cities can at times be seen covered in white, with layers upon layers of water sachets," said Yapo, a professor of environmental science who has spent two decades researching the effects of pollution.

Yapo is one of a growing number of academics, entrepreneurs and state officials who are working to wean Côte d'Ivoire off single-use plastics, which the government has called "a silent catastrophe".

UNEP / [Read more](#)

### **EGYPT: SWITCHMED PROJECT'S FIRST ROUND TABLE CONFERS "PLASTIC POLLUTION CONTROL"**

May 15 - "Plastic Pollution Control" was the title of the Round Table on Sustainable Consumption and Production co-convened by CEDARE, WMRA & UNEP on May 9, 2023. As a global priority, Plastic Pollution Control comes as well on top of the Egyptian government's national agenda today. The Round Table, which was held back-to-back with the Launching event of SwitchMed II Project at Semiramis InterContinental Hotel, Cairo, brought together 85 stakeholders and experts. CEDARE / [Read more](#)

### **IRELAND: NEW EPA ONLINE PORTAL WILL PROVIDE GREATER TRANSPARENCY AND EASIER PUBLIC ACCESS TO ENVIRONMENTAL ENFORCEMENT INFORMATION**

May 26 - The Environmental Protection Agency (EPA) has today launched the first phase of a major new Online service, the Licensing

## NEWS REPORTS FROM AROUND THE WORLD (CONTINUED)

and Enforcement Access Portal or LEAP Online, which will allow the public to view the enforcement activities, actions and communications between the EPA and holders of EPA licences and permits. The public will be able to view this information on our website via desktop, tablet and mobile phone. EPA / [Read more](#)

### ISRAEL: NEW STUDIES EXPOSE CORAL REEF CRISIS IN EILAT

May 29 - Recent, unsettling studies conducted by Tel Aviv University have unveiled a deadly epidemic responsible for the widespread decimation of black sea urchins in the Mediterranean Sea and the Gulf of Eilat. Over the span of just a few months, the entire population of black sea urchins in Eilat was eradicated.

Disturbingly, similar occurrences have been observed at various other locations in the Gulf of Eilat, as well as in neighboring countries including Jordan, Egypt, Saudi Arabia, Greece, and Turkey. Mirage News / [Read more](#)

### MAURITIUS: STRENGTHENING OIL SPILL PREPAREDNESS PLANS IN MAURITIUS

May 25 - The impacts of oil pollution and its effect on the marine environment, and the importance of having in place an effective national framework for responding to oil spills were the focus of a national workshop held in Port Louis, Mauritius (22-24 May).

The workshop was part of IMO's work to support parties to the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) with their National Oil Spill Contingency Plan (NOSCP). IMO / [Read more](#)

### SLOVENIA: TRAININGS WITHIN THE 'NAMIRS' PROJECT HELD IN KOPER



*Photo of trainees, courtesy of ATRAC*

May 31 - In the week between the 22nd and 26th of May, 2023, ATRAC held two training courses within the 'NAMIRS' Project. These training courses were held in Koper, Slovenia. The first training course's theme was 'Oiled Shoreline Clean-up' and it was two days long, whereas the second course was called 'At Sea Response' and it lasted three days. ATRAC / [Read more](#)

### TANZANIA: PROJECT TARGETS MARINE PLASTIC POLLUTION – AND POLICIES

May 30 - The Clean Shores Great Lakes project has been the response of Bahati Mayoma, a lecturer at the University of Dar es Salaam, to growing concerns about marine plastic pollution and the devastating impact it has on fish and marine organisms in Tanzania. As a researcher and assistant lecturer in aquatic ecology and pollution control, Mayoma wants to use the project to reduce the plastic litter influx into the region's water bodies through citizen science, community awareness, and the circular economy. University World News / [Read more](#)

### UK STRENGTHENS PLEDGE TO END PLASTIC POLLUTION BY 2040

May 26 - The UK, alongside 52 other members of the High Ambition Coalition (HAC) to End Plastic Pollution, has signed a far-reaching Ministerial Statement, calling for an ambitious global plastic pollution treaty to tackle plastic pollution and protect the marine environment. The HAC is a coalition of over 50 governments that have since agreed to end plastic pollution by 2040. UK Government / [Read more](#)

## NEWS REPORTS FROM AROUND THE WORLD (CONTINUED)

### USA: A BRIEF OVERVIEW OF CALIFORNIA'S PLASTIC POLLUTION PREVENTION AND PACKAGING PRODUCER RESPONSIBILITY ACT SB 54

May 26 - The Plastic Pollution Prevention and Packaging Producer Responsibility Act (SB 54) shifts plastic pollution responsibilities in California from consumers to producers. The law's objective is to reduce plastic material in the state incrementally by 2032. Although CalRecycle is in the process of developing the specific requirements, it is important that manufacturers, brand owners and other entities doing business in California are aware of this new law. It is likely to have far reaching impacts on many consumer products companies by assessing user fees and new recycling requirements on the types of plastic packaging sold in California. Mondaq / [Read more](#)

## NEWS FROM ISCO MEMBERS

### LAMOR LAUNCHING A NEW WEBSITE

Exciting news - we have launched a new website! The newly designed website reflects our strategy to be the world's leading provider of comprehensive environmental solutions while highlighting our expertise, mission and values. Our updated visual design creates a modern and engaging experience, making it easier than ever for you to explore our solutions, sustainable development, and Lamor as an investment. Take a tour around the new website and let us know what you think. [Check out our new website](#)

## NURDLES - PREVENTION, CLEAN-UP TECHNOLOGY AND ONGOING R&D WORK



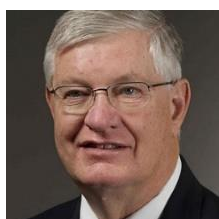
*The ISCO Executive Committee is looking into how our organisation can assist by co-operating with others in promulgating better prevention and response capabilities that can be adopted on a worldwide basis.*

*Readers of the ISCO Newsletter are invited to contribute information that can be shared within our community and help to improve our capability to counter this pollution in more effective ways.*

*ISCO Committee Member, Dr Larissa Montas, is a contributor to this section in the ISCO Newsletter and her next update will appear in a later issue.*

## 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.

### 135. Statistically sound comparison of standardized and simulation methods for oil spill source identification in real spill scenarios

Rocha, A.C., Bettencourt da Silva, R.J.N., Palma, C.  
(2023) Science of the Total Environment, 887, art. no. 163930,  
DOI: 10.1016/j.scitotenv.2023.163930

**ABSTRACT:** The comparison of oil patterns of a spill (Sp) and suspected spill source (SS) samples is based on ratios between correlated GC-MS signals of oil-discriminating compounds, i.e., diagnostic ratios (DR). The Student's t statistics (S-t) and a maximum relative difference (SC), proposed in standard methods, have been used for DR comparison due to their simplicity. An alternative methodology based on Monte Carlo Method (MCM) simulations of correlated signals, capable of accurately defining DR comparison criteria, proved that S-t and SC assumptions regarding DR normality and precision are frequently not valid, affecting comparison reliability. The performance of the approaches was accurately compared from independent signals of the same oil sample from a perfect match between Sp and SS. The present study describes the comparison of the approaches in real oil spill scenarios reproduced in International Round Robin Tests. Since as the number of compared DR increases, also rises the probability of not all equivalent DR being actually considered equivalent, the decision of oil pattern equivalence was based on two comparisons of independent sets of Sp and SS signals. The risk of true oil standard equivalency claims is compared for the three oil spill scenarios

studied, which are different considering oil types, DR sets and spill weathering. The ability of the approaches to distinguish the Sp sample from an oil sample known not to be the source of the spill was also assessed. The MCM based on two independent DR comparison trials was the only one consistently producing fingerprint comparison risks of correct equivalence claims larger than 98 %. MCM also performed better in distinguishing different oil patterns. It was concluded that comparing >22 DR does not change the risk of correct oil pattern equivalence assessment significantly. The complexity of the MCM approach is overcome by using user-friendly and validated software.

**136. Coastal bird community response to dredge-spoil tidal marsh restoration at New Round Island, Mississippi, U.S.A.**

Gamblin, A.E., Darrah, A.J., Woodrey, M.S., Iglay, R.B.  
(2023) *Restoration Ecology*, 31 (4), art. no. e13775,  
DOI: 10.1111/rec.13775

**ABSTRACT:** The northern Gulf of Mexico has been the focus of many coastal habitat restoration projects in the wake of new funding streams stemming from the settlement of the 2010 Deepwater Horizon oil spill litigation. One such project was the creation of New Round Island (RNDI) in Mississippi, a 86 ha island created using dredge material in 2017. The island design incorporated a novel U-shaped sand berm with multiple interconnected containment sells. In this study we sought to document changes in relative abundance of various coastal bird species. We conducted surveys for breeding and nonbreeding birds from June 2017 to May 2021, and we conducted nonbreeding surveys at two reference sites for comparison. Breeding bird numbers were dominated by colonial nesting species in years 1 and 2, which subsequently declined as vegetation cover increased. Solitary nesting species increased over time, with Wilson's Plover (*Charadrius wilsonia*) nest count increasing from zero in year 1 to 29 in year 5. Nonbreeding shorebird counts peaked in years 1–2 and subsequently declined, although shorebird counts also decreased at the reference sites. Relative abundance of waders (*Ardeidae*), rallids (*Rallidae*), and passerines (*Passeriformes* and allies) increased in comparison to reference sites. This study demonstrates the short-term benefits of this U-shaped island design to early-succession breeding species and nonbreeding shorebirds shortly after construction, with longer-term benefits to breeding Wilson's Plover and to marsh birds as vegetation fills in.

**137. No observed developmental effects in early life stages of capelin (*Mallotus villosus*) exposed to a water-soluble fraction of crude oil during embryonic development**

Nahrgang, J., Granlund, C., Bender, M.L., Sørensen, L., Greenacre, M., Frantzen, M.  
(2023) *Journal of Toxicology and Environmental Health - Part A: Current Issues*,  
DOI: 10.1080/15287394.2023.2209115

**ABSTRACT:** The rise in offshore oil and gas operations, maritime shipping, and tourism in northern latitudes enhances the risk of oil spills to sub-Arctic and Arctic coastal environments. Therefore, there is a need to understand the potential adverse effects of petroleum on key species in these areas. Here, we investigated the effects of oil exposure on the early life stages of capelin (*Mallotus villosus*), an ecologically and commercially important Barents Sea forage fish species that spawns along the coast of Northern Norway. Capelin embryos were exposed to five different concentrations (corresponding to 0.5–19 µg/L total PAHs) of water-soluble fraction (WSF) of crude oil from 6 days post fertilization (dpf) until hatch (25 dpf), and development of larvae in clean seawater was monitored until 52 dpf. None of the investigated endpoints (embryo development, larval length, heart rate, arrhythmia, and larval mortality) showed any effects. Our results suggest that the early life stages of capelin may be more robust to crude oil exposure than similar life stages of other fish species.

**138. Oxidative damage in the Vesper mouse (*Calomys laucha*) exposed to a simulated oil spill—a multi-organ study**

de Almeida, K.A., de Moura, F.R., Lima, J.V., Garcia, E.M., Muccillo-Baisch, A.L., Ramires, P.F., Pentado, J.O., da Luz Mathias, M., Dias, D., da Silva Júnior, F.M.R.  
(2023) *Ecotoxicology*,  
DOI: 10.1007/s10646-023-02657-4

**ABSTRACT:** Small wild mammals have been used to measure the damage caused by exposure to oil-contaminated soil, including deer mice. However, the study of toxic effects of crude oil using oxidative damage biomarkers in the wild rodent *Calomys laucha* (Vesper mouse) is absent. This investigation aimed to evaluate the effects of acute exposure to contaminated soil with different concentrations of crude oil (0, 1, 2, 4 and 8% w/w), simulating an accidental spill, using oxidative stress biomarkers in the liver, kidneys, lungs, testes, paw muscle, and lymphocytes of *C. laucha*. Animals exposed to the contaminated soil showed increases in

## RECENT INTERESTING PEER-REVIEWED OIL SPILL PUBLICATIONS (CONTINUED)

lipid peroxidation and protein carbonylation at the highest exposure concentrations in most organ homogenates analyzed and also in blood cells, but responses to total antioxidant capacity were tissue-dependent. These results showed that acute exposure to oil-contaminated soil caused oxidative damage in *C. laucha* and indicate these small mammals may be susceptible to suffer the impacts of such contamination in its occurrence region, threatening the species' survival.

### 139. Abundance and Distribution of Large Calcareous Thecosome Pteropods in the Northern Gulf of Mexico

Shedler, S., Seibel, B., Vecchione, M., Griffin, D., Judkins, H.  
(2022) *American Malacological Bulletin*, 39 (1), pp. 1-11.  
DOI: 10.4003/006.039.0107

**ABSTRACT:** The ecological role of large thecosome pteropods in the pelagic ecosystem of the northern Gulf of Mexico (GoM) may be substantial, both in the food web and biogeochemical cycling. We analyzed species abundances, vertical and horizontal distributions of large species with calcareous shells (those collected in 3-mm mesh nets). Pteropod samples were collected following the 2010 Deepwater Horizon oil (DWH) spill by two midwater sampling programs: the Offshore Nekton Sampling and Analysis Program (ONSAP 2011) and the Deep Pelagic Nekton Dynamics of the Gulf of Mexico (DEEPEND 2015) projects. All samples were collected using a 10-m<sup>2</sup> Multiple Opening/Closing Net and Environmental Sensing System (MOC10) midwater trawl, with 3-mm mesh. This gear sampled five discrete depths between 0-1500 m. Over 13,000 pteropod specimens were examined, with 25 species identified. *Clio pyramidata* Linnaeus 1767 was the most abundant species during both collection periods. Five genera (*Diacria*, *Clio*, *Styliola*, *Cuvierina*, *Cavolinia*) demonstrated diel vertical migration from the meso to epipelagic zone.

### 140. Impaired grazing of marine protozoa in sub-lethal exposure to the water accommodated fraction of crude oil and dispersant

Tang, C.H., Buskey, E.J.  
(2022) *Environmental Pollution*, 315, art. no. 120414,  
DOI: 10.1016/j.envpol.2022.120414

**ABSTRACT:** Despite the advances in safety technology and the improved implementation of precautionary measures, crude oil pollution has been occurring in the oceans globally. The water accommodated fraction (WAF) of crude oil and chemical dispersant are hypothesized to cause sub-lethal adverse effects on marine protists that are pivotal consumers of primary production. Exposure experiments were conducted to investigate the effects of crude oil and dispersant pollutants on the growth and grazing, separately, of protozoa species in cultures. In exposure to 0–30  $\mu\text{L L}^{-1}$  of chemically enhanced WAF (CEWAF), the heterotrophic dinoflagellate *Protoperidinium* sp. and the ciliate *Metacylis* sp. showed slower positive population growth or negative population growth even at low concentrations. The dose-response model showed that *Protoperidinium* sp. and *Metacylis* sp. were highly susceptible to the CEWAF toxicity (median inhibition concentrations (IC<sub>50</sub>) at 1.1 and 5.9  $\mu\text{L L}^{-1}$ , respectively) while one algal species *Ditylum brightwellii* was relatively tolerant to the toxicity (IC<sub>50</sub> at 168.7  $\mu\text{L L}^{-1}$ ). With suppressed growth and impaired grazing of the protozoan species at high CEWAF concentrations, accumulation of their algal prey in culture containers was observed, as reflected by higher final:initial prey ratios at high CEWAF concentrations. Additionally, exposure experiments to the treatments of WAF, dispersant alone (Disp), and CEWAF of the same concentration revealed that the heterotrophic dinoflagellate *Oxyrrhis marina* had reduced bulk grazing impact towards its algal prey population in all three treatments when compared to the control treatment (i.e., grazing mortality of prey at 1.05 d<sup>-1</sup>). Similarly, *Protoperidinium* sp. and *Metacylis* sp. had reduced per capita prey ingestion rates in exposure to WAF and CEWAF when compared to the control treatments. This study provides experimental evidence for the potential link between impaired grazing activities and the formation of algal blooms in sub-lethal exposure to crude oil pollutants.

## SCIENCE & TECHNOLOGY (

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### FUNGI AND PLANTS CLEAN UP CALIFORNIA'S INDUSTRIAL POLLUTION

May 31 - In an industrial wasteland in Los Angeles, Kreigh Hampel is uprooting California buckwheat with a pitchfork to find out how much lead it has absorbed, A volunteer collects plant samples as part of the University of California Riverside Phyto Myco Remediation Study in a vacant lot in Los Angeles. (AFP)

The plant's delicate white and pink flowers belie an astonishing cleaning power, which scientists think could be harnessed to get rid of dangerous pollutants -- and even recycle them. "That's the miracle of life," enthuses 68-year-old Hampel, who is volunteering on the project. "Plants really can do this work and they know how to do it, they've done it so many times over millions of years," he says.



## SCIENCE & TECHNOLOGY (CONTINUED) (

The experiment is part of a project run by University of California Riverside which has scattered carefully selected plants and fungi on this former industrial site in the hope of getting rid of the heavy metals and petrochemicals that have contaminated the area for decades. Hindustan Times / [Read more](#)

## INTERESTING ARTICLE (

### FROM SEAWEED PACKAGING TO NON-POLLUTING STOVES, HOW PRINCE WILLIAM IS SAVING THE PLANET

May 27 - THE Prince of Wales has lost count of the number of cups of tea he has been offered in his decades of public engagements. So too the glasses of water and endless specialty drinks as he has travelled the globe.

This week, during a visit to a Hackney start-up in east London, it was time for something very different. Offered a tray of patriotic red and blue edible bubbles filled with liquid, it was a memorable moment for more than one reason. First, the bubble the Prince chose was Cosmopolitan cocktail-flavoured and seemingly delicious. More importantly, it holds a key to saving the planet.

Developed by Notpla – one of the winners of Prince William’s Earthshot Prize – made from seaweed and called an Ooho, the packaging can replace single-use plastic water bottles and can disappear without a trace. The Daily Telegraph / [Read more](#)

## CONTRIBUTED ARTICLE (

### NEW BOOM DESIGN FOR IN-SITU BURN

An article contributed by OHMSETT, The National Oil Spill Response Research & Renewable Energy Test Facility



*Above: A new boom technique called the Restricted Burning Tongue is designed with a gate (fire break) at the mouth of the boom leading to a rigid stem of the fire boom to provide a controlled area for burning. Photo courtesy of Ohmsett*

It can be quite the sight to see, one we hope not to see often: a large swath of a boom in the open ocean containing a slick of oil set ablaze. In use for more than 50 years, in situ burning of surface oil is an effective tool for dealing with large-scale oil spills. Although fire booms have gone through extensive improvements and tests over the years to increase their efficiency, they still create thick black plumes of smoke and leave behind waterborne products of incomplete combustion due to insufficient oxygen and heat.

BSEE conducted research, including half-scale tests, to determine if a boom configuration of less than three meters would reduce

## CONTRIBUTED ARTICLE

airborne pollutants in the plume and the amount of waterborne burn residue. In October 2022, under a contract with BSEE, Elastec of Carmi, Ill., brought its modified fire boom equipped with an oil feed gate to Ohmsett to test its performance.

The new boom technique called the Restricted Burning Tongue is designed with a gate (fire break) at the mouth of the boom leading to a rigid stem of the fire boom to provide a controlled area for burning. BSEE Response Research Branch Chief Karen Stone describes the design as a wine glass formation where the cup of the boom system collects the oil. Once sufficient volumes are achieved, the gate at the apex of the boom is opened to allow the oil to spill into a long narrow stem where it will be ignited. "The narrow geometry allows air to reach the core to promote complete combustion.

What's really exciting is that OSROs [Oil Spill Removal Organizations] can use fire boom already in their inventory and not need to make additional investments."

While no actual burns were conducted at Ohmsett, the gated system was exposed to multiple wave conditions. "The objective was to determine if oil within the gated boom system would behave in a manner conducive for burning as well as measure other properties to aid in the future ignitions such as the extent of the oil, oil thickness, and the best location within the slick to ignite the oil," explained Stone.

The boom stem and gate system were rigged to the Ohmsett main bridge with two 50-foot lead sections of fire boom with the opening set 50 feet apart. Using a base stock refined test oil (Hydrocal 300), non-burning tests were conducted to observe seakeeping characteristics under tow and how the oil is transported through the gate and within the boom stem. The system was tested in calm and wave conditions. Cameras were set up in multiple locations on the boom itself and on the North Bridge to capture visual documentation of the boom's performance.

"The boom system passed with flying colors and the system underwent burn tests at a specialized test facility," said Stone. "BSEE and Elastec will demonstrate the technique during controlled offshore burn experiments being sponsored by the Canadian government."

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## TRAINING COURSES

**Training Course Providers – Please check entries below and advise editor on any necessary updates.**

### USEFUL LINKS

- **INTERNATIONAL – IMO E-LEARNING PLATFORM** [e-learning platform](#)
- **AUSTRALIA – AMOSC** - <https://amosc.com.au/training/>
- **AUSTRALIA & NEW ZEALAND – ALGA** - <https://landandgroundwater.com>
- **CHINA** - <http://www.sioetc.com>
- **EUROPE –** <https://www.emsa.europa.eu/newsroom/latest-news/item/3609-ems-training-catalogue-2019.html>
- **FRANCE - CEDRE** - [https://wwz.cedre.fr/en/content/download/10912/file/CalendrierFormation2023\\_EN.pdf](https://wwz.cedre.fr/en/content/download/10912/file/CalendrierFormation2023_EN.pdf)
- **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](https://www.ahmpnet.org/events/event_list.asp)

Members who would like to be listed here, please contact your editor – [john.mcmurtrie@spillcontrol.org](mailto:john.mcmurtrie@spillcontrol.org)

- **USA:** Elastec Fall Workshop, New Harmony, Indiana, 3-5 October 2023. [More Info](#)
- **COLOMBIA** -The OSRO Varichem of Colombia, corporate member of ISCO, announces new course in Latin America - Date: June 14th, 15th and 16th of June 2023.

The IMO I course aims to implement plans to manage and coordinate a first response team and the development and implementation of a contingency plan. This program provides participants the basic and strategic knowledge to develop skills required to an oil spill response. Our courses are taught by nationally and internationally trained and certified instructors, with extensive experience in handling all types of environmental contingencies, which guarantees the quality of the programs.

## TRAINING COURSES (CONTINUED)

Varichem de Colombia is the only one in Colombia with DIMAR certification for OMI 4.02, 4.03, 4.04; therefore, the students will receive double certification endorsed by DIMAR (General Maritime and Port Authority) and the International Nautical Institute. Cartagena Registration link:

<https://forms.office.com/r/3DpapkVTG> For more information please e-mail [sales@varichem.com](mailto:sales@varichem.com)

## UPCOMING EVENTS

TO VIEW UPCOMING EVENTS CLICK ON [HTTPS://SPILLCONTROL.ORG/UPCOMING-EVENTS/](https://spillcontrol.org/upcoming-events/)

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### JUNE 2023

- CANADA – 45<sup>th</sup> Technical Seminar on Environmental Contamination & Response, Edmonton, Alberta, 4-6 June, 2023
- WEBINAR – Exxon Mobil Oil Spill Response Knowledge Transfer, “Overview of Oil in the Sea IV”, Webinar 17, 6<sup>th</sup> June 2023
- AUSTRALIA – University of NSW, “Bioremediation Symposium”, 7<sup>th</sup> June 2023
- WEBINAR – Economist World Ocean Summit, 8<sup>th</sup> June 2023, 4pm CET, 3pm BST, 10am EDT, 7am PDT
- WEBINAR – From ITRC & ALGA, “Microplastics”, 13<sup>th</sup> June
- UK – UK & Ireland Spill Association Regional Networking Meeting, Consett, Co. Durham, 14<sup>th</sup> June, 2023
- NETHERLANDS – Chemical Watch Expo – “Emergency Response Compliance”, Amsterdam, 15-16 June 2023
- AUSTRALIA – Risk Assessment Symposium, Adelaide, 22 June 2023
- UK – Socotec Summer Environmental Event in partnership with UK & Ireland Association, Bretby, Derbyshire, 29<sup>th</sup> June 2023

### JULY 2023 & ONWARDS

- WEBINAR – ExxonMobil Oil Spill Response Knowledge Transfer, “Input of Oil to the Sea”, Webinar 18, 12<sup>th</sup> July 2023
- WEBINAR – ExxonMobil Oil Spill Response Knowledge Transfer, “Accidental Spill Mitigation”, Webinar 19, 1<sup>st</sup> August 2023
- WEBINAR – ExxonMobil Oil Spill Response Knowledge Transfer, “Oil Chemistry and Fates of Oil in the Sea”, Webinar 20, 5<sup>th</sup> September 2023
- AUSTRALIA – SPILLCON Conference & Exhibition, Brisbane, 11-15 September 2023
- AUSTRALIA – SPREP/IMO/ARPEL Workshop, “Developing Oil Spill Preparedness & Response Planning In Pacific Small Islands & other Developing States”, Brisbane, 15<sup>th</sup> – 17<sup>th</sup> September 2023
- USA – Elastec Fall Workshop. New Harmony. Indiana, 3-4 October 2023
- WEBINAR – ExxonMobil Oil Spill Response Knowledge Transfer, “Environmental Effects of Oil in the Sea”, Webinar 21, 3<sup>rd</sup> October, 2023
- ITALY – ECOMONDO Exhibition & Conference, Rimini, 7-12 November 2023
- WEBINAR – ExxonMobil Oil Spill Response Knowledge Transfer, “Human Health Effects of Oil in the Sea”, Webinar 22, 7<sup>th</sup> November 2023
- WEBINAR – ExxonMobil Oil Spill Response Knowledge Transfer, “Round Table Discussion to provide Summary and Recommendations”, Webinar 23, 5<sup>th</sup> December 2023
- UK – Seatrade Maritime Salvage & Wreck Conference, 6-7 December 2023

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

SOME OTHER INFO AND UPCOMING EVENTS

Recordings of past ExxonMobil OSR Knowledge Transfer Webinar Recordings – [Access and Download](#)

UK & Ireland Spill Association - Alternative Marine Fuels And Their Implication For Spill Response Webinar is [now available to watch on YouTube.](#)

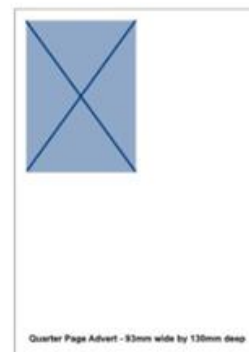
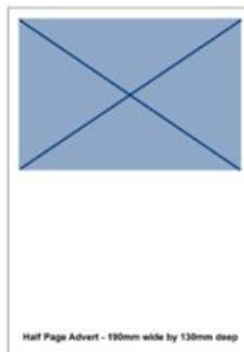
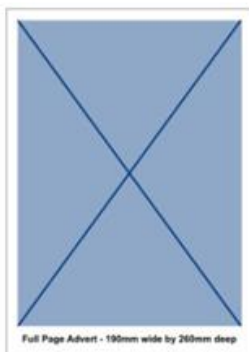
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## MESSAGES FROM EVENT ORGANISERS

### **CANADA: 45TH AMOP TECHNICAL SEMINAR ON ENVIRONMENTAL CONTAMINATION AND RESPONSE: EDMONTON, 6-8 JUNE 2023**

The Seminar provides a forum for professionals working in the field of oil and hazardous materials spills. The forum facilitates the transfer of scientific results and is intended to link research and the operational community. All submitted papers are peer-reviewed by scientific and technical experts. The Technical Seminar features plenary sessions of 10- or 20-minute presentations on spill-related topics including Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE). Sessions will begin at 8:00 a.m. each day. The presentations are followed by a 5- or 10-minute question and answer period. Sessions may also conclude with Speaker's Corner presentations at which results of more recent research can be discussed without an associated paper. Government of Canada / [Seminar Information](#)

### **AUSTRALIA: BRISBANE - SPILLCON 2023: 11-15 SEPTEMBER 2023 & WORKSHOP, 15-17 SEPTEMBER 2023**

The Australian Institute of Petroleum (AIP) and the Australian Marine Oil Spill Centre (AMOSC) invite you to attend the international oil spill conference for the Asia-Pacific region, Spillcon 2023. Spillcon 2023 will bring together local, regional and global environmental and shipping representatives across industry, government and non-government organisations to provide an avenue to discuss issues including causes and prevention, preparedness, response management and environmental issues. Spillcon 2023 has been confirmed for 11 – 15 September 2023 at the Brisbane Convention and Exhibition Centre, Queensland, Australia. This website will be regularly updated with further information for sponsors, exhibitors and delegates. <https://www.spillcon.com/>  
<https://mailchi.mp/64c839ee8f69/spillcon-2023-delegate-bookings-open?e=ce373d43ca>

## MESSAGES FROM EVENT ORGANISERS (CONTINUED)

A [Regional Workshop](#) has been organised by SPREP/IMO/ARPEL for the weekend immediately following Spillcon 2023.

15 - 17 September 2023 [Brisbane Convention & Exhibition Centre](#)

The [Regional Workshop](#) aims to share international experience and up-to-date knowledge on key issues of oil spill preparedness and response, aimed specifically at those based in the island nations of the South Pacific Area. It will also assist in the use of a suite of environmental management and governance tools for governments as well as present the experience gathered in other parts of the world with similar characteristics. Information, including the registration form for this Regional Workshop being held on 15 - 17 September 2023 in Brisbane, will be available [here](#). Should you have any additional questions please [contact Paul Irving at SPREP](#).

## USA: CLEAN GULF CONFERENCE & EXHIBITION – SAN ANTONIO, NOVEMBER 7-9, 2023

**Now Accepting Reservations for Exhibit Space and Sponsorships for CLEAN GULF 2023** - Make an impact on buyers from oil & gas, maritime, rail, environmental companies and regulatory agencies with an exhibit space or sponsorship at the [CLEAN GULF Conference & Exhibition](#). Attendees at CLEAN GULF are looking for new products, services, and technologies to help them better prepare or respond to a hazardous spill or environmental emergency. Clean Gulf Conference & Exhibition | November 7-9, 2023 | <https://ssl.linklings.net/conferences/IOSC/> Henry B. Gonzalez Convention Center | San Antonio, TX [Registration Now Open for CLEAN GULF 2023 + Sessions Announced!](#)

## USA: IOSC 2024 CALL FOR PAPERS AND POSTERS

The International Oil Spill Conference (IOSC) brings together the broadest range of global oil spill response professionals to discuss the latest research, technology, and resources impacting our community today. Submit a proposal to become a leader at our next convening in New Orleans, Louisiana, May 13 - 16, 2024. The IOSC is looking for technical and policy papers and posters under five general categories: Preparedness, Prevention, Remediation, Response, Restoration. [More info](#)

## CONTRACTS, TENDERS AND BUSINESS OPPORTUNITIES

### INTERNATIONAL OPEN TENDER NOTIFICATIONS

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 European Maritime Safety Agency invitations to tender are often posted in The EMSA Newsletter <https://www.emsa.europa.eu/newsroom/newsletters.html>

## LINKS FOR DOWNLOADING AND READING OTHER PUBLICATIONS

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

As a service to its Members 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.

## NEW PUBLICATIONS

### PEMSEA E-BULLETIN

May 31 - From this edition onwards, we will combine the Blue Economy Bulletin and PEMSEA's e-bulletin, highlighting both the latest in our work and the most relevant news and trends in sustainable management of our seas and ocean. For this issue, let us take you back to PEMSEA's milestones in 2022 through our Annual Report, and showcase the on-going efforts in reducing solid waste and marine plastics in the East Asian Seas Region. [Read the PEMSEA E-Bulletin](#)

### MAY 2023 MOIG NEWSLETTER

MOIG Newsletter Issue 058. It includes the following articles :

- Regional Workshop on Waste Management and Wastewater Treatment
- Management Committee Meeting N°22
- New Update on MOIG Activities 2022-2023 in the UIA's Yearbook
- Meeting MOIG – AQUAQUICK [Read the May 2023 Moig Newsletter](#)

### USA: NOAA "INCIDENT RESPONSES FOR APRIL 2023"

Every month, OR&R's Emergency Response Division provides scientific expertise and services to the U.S. Coast Guard on everything

## INCIDENT REPORTS

from running oil spill trajectories to model where the spill may spread, to identifying possible effects on wildlife and fisheries and estimates on how long the oil may stay in the environment. We also get requests to track and model other floating objects. So far this year, OR&R has provided support to 54 incidents. In April 2023, OR&R provided response support to 19 incidents, including seven new incidents in five different states. Here are some of April's notable incidents. [Keep reading](#)

Here is the complete list of April's incidents. Click on the links to find out more:

- [Bucket of Engine Oil Washed up at Sitka Sedge State Natural Area, OR](#)
- [Fishing Vessel Fire, Hylebos Waterway, Tacoma, WA](#)
- [Discharge of Crude Oil from Well Flowline into Marsh Area, Cameron, LA](#)
- [Washington State Ferry Aground, Bainbridge Island, WA](#)
- [Sheen Observed from Unknown Source, Main Pass Area, Gulf of Mexico](#)
- [Fishing Vessel Taking on Water, Partially Sunk, Port of Ilwaco, WA](#)
- [Crude Oil Discharge into Intracoastal Waterway, Hackberry, LA](#)

## MARITIME ACCIDENT REPORTS FROM THE MARITIME BULLETIN

In the Maritime Bulletin, Mikhail Voytenko regularly advises on vessel abandonments, groundings and sinkings – several every week – but, unless there is an immediate and significant release of oil or chemicals, spillages are not reported. However, many of Mikhail's reports cover incidents that may have potential to cause pollution. To view all of his reports, visit <https://www.maritimebulletin.net/>

### PHILIPPINES: MT PRINCESS EMPRESS OIL SPILL UPDATES

May 30 - Oil Siphoning Operation Begins for Wreck of the Princess Empress The Maritime Executive / [Read more](#)

### PHILIPPINES: PCG DETECTS OIL SPILL IN TWO BATANGAS TOWNS

May 23 - On 23th May, the Philippine Coast Guard (PCG), deployed a response team to contain the oil spill that was detected in two municipalities in Batangas. Safety4Sea / [Read more](#)

### PAKISTAN: TOXIC CHEMICAL SPILL IN RAWAL DAM RESULTS IN MASSIVE FISH, AQUATIC LIFE LOSS

June 1 - Rawal Dam, a vital water source in the region, experienced a devastating incident as thousands of fish and aquatic life perished due to a toxic chemical spill. The incident came to light on Thursday when authorities discovered that the water had been contaminated by poisonous substances, leading to the widespread death of marine organisms. Dunya News / [Read more](#)

### USA: TRAIN CARRYING HAZARDOUS MATERIALS DERAILS IN NORTHWESTERN MINNESOTA

June 1 - Canadian Pacific reports they responded around 4:30 p.m. Wednesday for a reported derailment just south of Lancaster, Minnesota. Highway 59 is closed for the cleanup, which the Minnesota Department of Transportation says could take two to three days. Yahoo News / [Read more and watch video](#)

### BRAZIL: NORWEGIAN PIPE LAYER ON FIRE AFTER EXPLOSIONS - VIDEO

June 2 - Two explosions, followed by fire, occurred on board of pipe layer ship SKANDI BUZIOS early in the morning Jun 2 at Porto do Acu port, Brazil. No injuries reported, understood firefighting still going on as of 1330 UTC Jun 2, with two tugs and anti pollution boat. Maritime Bulletin / [Read more](#)

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