



## 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 Funds

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## INTERNATIONAL NEWS

### IMO AGREES NEW GUIDANCE FOR SAFE TRANSPORT OF PLASTIC PELLETS ON SHIPS



The IMO is advancing efforts to ensure the safe transport of plastic pellets transported on ships, which can cause damage to the marine environment if released into the sea.

Meeting from 19 to 23 February at IMO Headquarters in London, IMO's Sub-Committee on Pollution Prevention and Response (PPR 11) agreed draft recommendations for the carriage of plastic pellets by sea, along with draft guidelines for cleaning up plastic pellet spills from ships.

The draft recommendations for the carriage of plastic pellets by sea in freight containers include the following actions:

Plastic pellets should be packed in good quality packaging which should be strong enough to withstand the shocks and loadings normally encountered during transport. Packaging should be constructed and closed to prevent any loss of contents which may be caused under normal conditions of transport, by vibration or acceleration forces.

Transport information should clearly identify those freight containers containing plastic pellets. In addition, the shipper should supplement the cargo information

with a special stowage request requiring proper stowage.

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## INTERNATIONAL NEWS (CONTINUED)

Freight containers containing plastic pellets should be properly stowed and secured to minimize the hazards to the marine environment without impairing the safety of the ship and persons on board. Specifically, they should be stowed under deck wherever reasonably practicable, or inboard in sheltered areas of exposed decks.

These recommendations, which aim to prevent a spill of pellets occurring, will be submitted for urgent consideration and approval by the Marine Environment Protection Committee at its next meeting in March 2024 (MEPC 81). IMO / [Continue reading](#) See also articles in [Marine Link](#) and [Hellenic Shipping News](#)

## WORLD UNITES AT UN ENVIRONMENT ASSEMBLY TO COMBAT 'TRIPLE PLANETARY CRISIS'

February 26 - The latest meeting of the "world's parliament on the environment" opened in Nairobi, Kenya, on Monday with a clear call for stronger global action to address the "triple planetary crisis" of climate change, nature loss and pollution.

More than 7,000 delegates from 182 countries are scheduled to take part in the sixth session of the United Nations Environment Assembly (UNEA-6) which runs through Friday.

Delegates are convening in the Kenyan capital as climate change intensifies, a million species face the risk of extinction, and pollution remains among the world's leading causes of premature death. UN org / [Read more](#)

## ISCO NEWS

### APPOINTMENT OF CHAIR AND VICE-CHAIR

At the February 15 meeting of the ISCO Council it was agreed that Mr Rupert Bravery will be the Chairman of the post-transition ISCO and that Dr Larissa Montas will be the Vice-Chair of the organisation.

Introductory profiles of the new appointees will be published here soon.

A press release about the transition process and its implications for ISCO members is under preparation.

## REGIONAL NEWS

The latest News and Press Releases collated from websites of Regional Organisations on ISCO's checking list. To add a website to this list please send the link to [john.mcmurtrie@spillcontrol.org](mailto:john.mcmurtrie@spillcontrol.org)

## ADRIATIC : FINAL CONFERENCE OF PROJECT 'NAMIRS'

February 23- From 19th to 20th of February 2024, ATRAC was a part of the final conference in project 'NAMIRS' that was held in Trieste. Alongside ATRAC, this conference was attended by all other project partners (Central European Initiative Executive Secretariat, Italian Coast Guard Headquarters, Ministry of Sea, Transport and Infrastructure of the Republic of Croatia, Administration of the Republic of Slovenia for Civil Protection and Disaster Relief, University of Ljubljana Faculty of Maritime Studies and Transport Portorož, and National Institute of Oceanography and Applied Geophysics – OGS). ATRAC held a presentation on all of the training courses that were done during the duration of the project, including the training courses 'At-sea Response' and 'Shoreline Clean-up' that ATRAC held in Trieste, Koper, and Rijeka. ATRAC / [Source document](#)

## EUROPE: COMMISSION INVESTS OVER €233 MILLION IN STRATEGIC ENVIRONMENT AND CLIMATE PROJECTS ACROSS EUROPE

February 22 - Today, the Commission is investing over €233 million in twelve new Strategic Projects across Europe under the

## REGIONAL NEWS (CONTINUED)

LIFE programme to support the implementation of the EU's environmental and climate ambitions under the European Green Deal. These Strategic Projects are expected to mobilise substantial additional funds from other EU sources, including agricultural, structural, regional and research funds, as well as from national governments and private sector investment.

The funding awarded to these twelve Strategic Projects will support Bulgaria, Czechia, Ireland, Spain, France, Italy, Lithuania, Austria, Poland and Finland to reach their national environmental and climate targets as they ramp up their contributions to the EU's green transition. EC / [Read more](#)

### BALTIC - HELCOM 50TH ANNIVERSARY CELEBRATIONS ONLINE ON 25 APRIL

Save the date! We are happy to invite the entire extended HELCOM family to join online the 50th anniversary celebrations of the Helsinki Convention and HELCOM. Latvia, currently holding the Chairmanship of HELCOM, will host the celebration event on 25 April 2024 in Riga, starting at 14:00 (CET), with many special guests. HELCOM / [Read more](#)

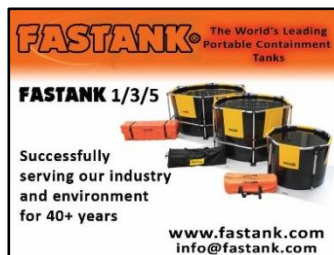
### EAST ASIA - PROCEEDINGS OF PEMSEA NETWORK OF LEARNING CENTERS (PNLC) BACK - TO - BACK EVENTS

February 28 - The document contains the proceedings of three back-to-back activities that were conducted in Seoul, Republic of Korea from 31 October to 3 November 2023. PEMSEA / [Read more](#)

## NEWS FROM AROUND THE WORLD

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### AUSTRALIA: AMSA - HAVE YOUR SAY—ON OUR PERFORMANCE AS A REGULATOR

Our focus is on delivering better practice regulation so we can support safe vessel operations, and combat marine pollution. Each year we assess our regulatory performance against six areas set out in the Australian Government's Regulator Performance Framework AMSA / [Read more](#)

### BRAZIL: AWARD-WINNING WRITER PARTICIPATES IN IBAMA'S ANNIVERSARY EVENT

February 28 - The award-winning writer from Pernambuco Michelyny Verunschck opened, on Friday (23), the series of lectures by writers within the program that marks Ibama's 35th anniversary. IBAMA / [Read more](#)

### CANADA: PIPELINE PREDICAMENTS: A SHOWDOWN OF ENVIRONMENTAL LIABILITY IN ALBERTA'S COURT OF APPEAL

February 26 - When the polluter pays for the clean-up costs of a pipeline leak, can they then turn around and seek to recover these costs from the parties responsible for installing the pipeline decades before? That was the issue facing the Alberta Court of Appeal in Paramount Resources Ltd v Grey Owl Engineering Ltd, 2024 ABCA 60.

For only the second time, the Court of Appeal considered s. 218 of the Environmental Protection and Enhancement Act and whether limitation periods should be extended in the context of environmental pollution claims. Mondaq / [Read more](#)

### CANADA: GOVERNMENT INVESTS IN INDIGENOUS COMMUNITIES TO ENHANCE COMMUNITY-BASED MARINE RESPONSE CAPACITY AS PART OF THE OCEANS PROTECTION PLAN

February 23 - Today, the Minister of Fisheries, Oceans, and the Canadian Coast Guard, the Honourable Diane Lebovillier, announced \$3.6M in funding for nine communities through the renewed Indigenous Community Boat Volunteer Program under the second phase of the Oceans Protection. Canadian Coast Guard / [Read more](#)





### NEW ZEALAND INVESTS \$6 MILLION IN COASTAL CLEANUP TO COMBAT CLIMATE THREATS

February 23 - In a decisive move to safeguard its coastal communities and ecosystems, the New Zealand government has unveiled a significant environmental initiative, pledging over \$6 million to address the looming threats posed by four historic landfill sites. Nestled in the vulnerable coastal regions of Gisborne, Southland, Canterbury, and Nelson, these sites have been earmarked for urgent remediation. The announcement, made by Minister for the Environment Penny Simmonds

at the BlueGreens Forum in Northland, underscores a proactive approach to mitigating the risks of erosion and contamination exacerbated by climate change and extreme weather events. BNN / [Read more](#)

### HOW NIGERIA IS USING NATURE-BASED SOLUTIONS TO ADDRESS ENVIRONMENTAL, ECONOMIC CHALLENGES – SALAKO

February 27 - Minister of State for Environment, Dr. Iziaq Salako on Monday in Nairobi said Nigeria is a strong advocate of nature-based solutions, which offer a cost-effective way to address global environmental, economic, climate and societal challenges. He said this at the Side event of the sixth session of the United Nations Environment Assembly (UNEA-6) Side Event, on Intergovernmental Consultations on Nature Based Solutions: “Moving forward with the recommendations” Authority / [Read more](#)

### NIGERIA: AS SHELL PLANS TO SELL ITS NIGERIAN OIL INTERESTS, ACTIVISTS ASK ABOUT POLLUTION CLEAN UP

February 28 - When the British petroleum giant Shell PLC announced last month that it would sell off its Nigerian oil interests, locals were left wondering if the deal would undermine efforts to clean up the mess the oil company has left in their homeland, a vast river delta now choked with pollution. OCCRP / [Read more](#)

### PHILIPPINES: JOINT STATEMENT BY IOPC FUNDS AND SHIOWNERS’ CLUB ON ANNIVERSARY OF PRINCESS EMPRESS INCIDENT

February 27 - 28 February 2024 marks one year since the Princess Empress sank in rough seas off the coast of Naujan, Oriental Mindoro whilst carrying 800 000 litres of fuel oil as cargo. This caused pollution damage to the coast of Mindoro island, which later extended to additional areas south of the island.

The Philippines is a Party to both the 1992 Civil Liability Convention and the 1992 Fund Convention. The IOPC Funds has therefore been working in close cooperation with the insurer of the Princess Empress, the Shipowners’ P&I Club, since the incident occurred. This has included opening a joint Claims Submission Office (CSO) and the organisation of mobile claims collection centres to facilitate the submission of claims for compensation by those affected in remote areas.

The Club and the IOPC Funds have issued the below update on the latest situation with regards to claims for compensation. IOPC Funds / [Continue reading](#)

### SRI LANKA: STRENGTHENING SRI LANKA’S PREPAREDNESS TO RESPOND TO OILED WILDLIFE EMERGENCIES



February 26 - The UK government's Ocean Country Partnership Programme (OCP) team share updates on oiled wildlife response



training recently delivered in Sri Lanka.

JNCC and Cefas, through the UK's Ocean Country Partnership Programme (OCP), have recently supported the delivery of oiled wildlife response training for 30 frontline responders across Sri Lanka in collaboration with the Government of Sri Lanka and delivered by the South African Foundation for the Conservation of Coastal Birds (SANCCOB). [Marine Science / Read more](#)

### **UK: NORTH SEA'S DECAYING PIPELINES: A LOOMING ENVIRONMENTAL THREAT**

February 27 - Over time, oil and gas pipelines, often neglected or forgotten, can corrode and leak, introducing hazardous substances into the water. They can cause a range of issues, from physiological stress to genetic damage in fish and other sea creatures. Such contamination can lead to a decrease in biodiversity and can disrupt delicate marine ecosystems. [EHN / Read more](#)

### **USA: TEXAS HAS MORE CHEMICAL EMERGENCIES THAN ANY OTHER STATE AND THEY'RE DISPROPORTIONATELY AFFECTING LATINO COMMUNITIES**

February 22 - The database reported that Texas had 49 incidents in 2023, with the Houston-Galveston area accounting for 26 of them. Texas has 1,558 facilities that handle hazardous chemicals, which is also more than any other state, according to the EPA. Some of the chemicals at these facilities may sound familiar. Ammonia, mercury or lead can cause respiratory distress, skin irritation and harm to internal organs, and lead is also linked to cancer. But other less-known substances found in the U.S. Environmental Protection Agency's Toxic Release Inventory database are equally – if not more – dangerous. [EHN / Read more](#)

### **USA: WHOI SEA GRANT COMMITS \$1.7 MILLION TO ADVANCING RESEARCH IN COASTAL AND MARINE SCIENCE**



February 16 - Woods Hole, Mass -- Woods Hole Oceanographic Institution Sea Grant announces funding for five new research projects that address pressing coastal issues in and around Massachusetts, including eelgrass restoration, sewerage's impact on water quality, contaminants of emerging concern in watersheds, collaborative data collection with fishermen, and homeowners' perceptions of flood risk. [WHOI / Read more](#)

### **USA: BIDEN-HARRIS ADMINISTRATION ANNOUNCES OVER \$1 BILLION TO START NEW CLEANUP PROJECTS AND CONTINUE WORK AT 100 SUPERFUND SITES ACROSS THE COUNTRY**

February 27 - Today, Feb. 27, 2024, the U.S. Environmental Protection Agency announced a third and final wave of more than \$1 billion for cleanup projects at more than 100 Superfund sites across the country as part of President Biden's Investing in America agenda. This funding is made possible by the President's Bipartisan Infrastructure Law and will launch new cleanup projects at 25 Superfund sites and continue other cleanups at over 85 Superfund sites.



## NEWS FROM AROUND THE WORLD (CONTINUED)

Thousands of contaminated sites exist nationally due to hazardous waste being dumped, left out in the open, or otherwise improperly managed. These sites can include toxic chemicals from manufacturing facilities, processing plants, landfills and mining, and can harm the health and well-being of local communities in urban and rural areas. EPA / [Read more](#)

### USA: NOAA OR&R WEEKLY REPORTS

February 26 – Please click on the links below to read the latest reports.

#### **Marine Debris Leadership Academy Spanning Boundaries to Tackle Marine Debris in the Tijuana River Watershed**

On February 6, the NOAA Marine Debris Program (MDP) published “[The Marine Debris Leadership Academy: Spanning Boundaries to Tackle Marine Debris in the Tijuana River Watershed](#)” with the help of our long-term partners, the [Tijuana National Estuarine Research Reserve](#)(link is external), [California State Parks](#)(link is external), and [Southwest Wetlands Interpretive Association](#)(link is external).

#### **OR&R Attends GOMCON 2024 to Support Gulf of Mexico Collaboration**



The Gulf of Mexico Conference (GOMCON), led by the Gulf of Mexico Alliance, brings together coastal scientists and stakeholders in state and federal government, academia, non-profit, and private sectors to discuss current Gulf research and collaborate on new opportunities. This year, GOMCON took place in Tampa, Florida from February 19-22. Emphasizing the intersection of science, policy, and management, GOMCON included sessions on themes that are important to ecosystem and community resilience as well as restoration and natural resource management.

#### **NOAA Attends One Cool Earth Watershed Week for California Students**

On February 13, the NOAA Marine Debris Program participated in One Cool Earth Watershed Week at Santa Rosa Academic Academy. Students, educators, and a staff member from the office of United States Representative Jimmy Panetta (CA-19) joined to celebrate. This week-long event was a cross-school campaign to promote watershed messaging and display the connection between Central California watersheds and the Pacific Ocean.

#### **New Publication Released on Potential Population-Level Impacts of Oil Spills on Pacific Herring**

Published in early February, a new publication, “Potential population-level impacts of future oil spills on Pacific herring stocks in Puget Sound(link is external),” reports on research carried out by OR&R’s Assessment and Restoration Division and the Northwest Fisheries Science Center to model the responses of Puget Sound Pacific herring stocks to simulated oil spills.

#### **NOAA’s Disaster Response Center Gets A Cool Update**

The NOAA Gulf of Mexico Disaster Response Center (DRC) received a much-needed facelift in February. The DRC has updated its outdated heating/ventilation/air conditioning (HVAC) system with a new cooling tower.

### USA: ALASKA EX, VIGILANT GUARD EMERGENCY RESPONSE EXERCISES TO TEST STATE’S ABILITY TO RESPOND TO CATASTROPHIC EVENT

February 28 - Approximately 350 participants will engage in a full-scale, all-hazards disaster response exercise, known as Alaska EX

## NEWS FROM AROUND THE WORLD (CONTINUED)

and Vigilant Guard 24-2, in the communities of Anchorage, Cordova, Kenai and Valdez, March 4-8, with some elements happening later in the year. Local First Media Group / [Read more](#)

## NEWS FROM ISCO MEMBERS

Corporate Members of ISCO can by submitting news about new products and services in the “News from ISCO Members” section of the ISCO Newsletter. This is a free facility for Members. Given that the ISCO Newsletter has a large and highly targeted readership in over 60 countries, it’s a cost-effective way to promote your company. If you have some news you would like to share with readers of the ISCO Newsletter, send it to [John.McMurtrie@spillcontrol.org](mailto:John.McMurtrie@spillcontrol.org) Members who would like to place a regular advertisement in the ISCO Newsletter can also benefit from preferential discounted rates. For more info please contact Mike Watson at [mike@mwadigital.com](mailto:mike@mwadigital.com) He will be happy to help you.

## AQUA-GUARD CO-FOUNDER TO SLEEP ON THE STREET ONCE AGAIN IN SOLIDARITY WITH AT-RISK-HOMELESS YOUTH.

On February 29th, Aqua-Guard Co-Founder Nigel Bennett, his wife along with Team IMPACT will brave the cold to sleep on the streets, showing solidarity with at-risk youth and supporting Covenant House Vancouver's mission to provide essential services, safety, food, and shelter. See more: at <https://aquaguard.com/news/aqua-guard-co-founder-to-sleep-on-the-street-once-again-in-solidarity-with>

## RECENT INTERESTING PEER-REVIEWED OIL SPILL PUBLICATIONS

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



*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.*

### 50. A fast energized dispersive guided extraction of polycyclic aromatic hydrocarbons for risk-based seafood monitoring after an oil spill.

de Melo A.P.Z., Molognoni L., Daguer H., de Oliveira T., Hoff R.B., Barreto P.L.M.  
(2024) *Microchemical Journal*, 196, art. no. 109714,  
DOI: 10.1016/j.microc.2023.109714

**ABSTRACT:** After the 2019 oil spill disaster on the Brazilian coast, the demand for polycyclic aromatic hydrocarbons (PAH) analysis in seafood samples increased. The aim of this study was to develop an advanced method of energized dispersive guided extraction (EDGE) and quantification of PAH by liquid chromatography coupled to tandem mass spectrometry with atmospheric-pressure chemical ionization source (LC-APCI-MS/MS). The developed method was validated in terms of selectivity, working range (1.25 – 20.0  $\mu\text{g kg}^{-1}$ ), matrix effect (relative errors > 20%, precision (CV < 30%), accuracy (77 – 128%), limits of detection (0.9 – 1.25  $\mu\text{g kg}^{-1}$ ) and quantification (1.25 – 5.00  $\mu\text{g kg}^{-1}$ ), and decision limit (2.9 – 7.8  $\mu\text{g kg}^{-1}$ ). This method was applied to 238 samples to consolidate the first official Brazilian monitoring of PAH in seafood. PAH were quantified in 15% of samples, with concentrations up to 69.3  $\mu\text{g kg}^{-1}$ . The carcinogenic compound B[a]P was present in 4% of samples, with concentrations up to 42.7  $\mu\text{g kg}^{-1}$ . The health risk of seafood consumers was assessed using the margin of exposure (MOE) approach. Despite this, the risk assessment indicated that the disaster was of low concern to human health (MOE > 10.000). This new method increased laboratory throughput and was successfully applied to different types of samples, supporting monitoring of seafood after the disaster.

### 51. Exposure of farmed fish to petroleum hydrocarbon pollution and the recovery process: A simulation experiment with tiger puffer *Takifugu rubripes*

Liao Z., Cui X., Luo X., Ma Q., Wei Y., Liang M., Xu H.  
(2024) *Science of the Total Environment*, 913, art. no. 169743,  
DOI: 10.1016/j.scitotenv.2023.169743

**ABSTRACT:** Petroleum hydrocarbon (PH) pollution threatens both wild and farmed marine fish. How this pollution affects the nutrient metabolism in fish and whether this effect can be recovered have not been well-known. The present study aimed to evaluate these effects with a feeding trial on tiger puffer, an important farmed species in Asia. In a 6-week feeding trial conducted in indoor flow-through water, fish were fed a control diet (C) or diets supplemented with diesel oil (0.02 % and 0.2 % of dry matter, named LD and HD, respectively). Following this feeding trial was a 4-week recovery period, during which all fish were fed a same normal commercial

feed. At the end of the 6-week feeding trial, dietary PH significantly decreased the fish growth and lipid content. The PH significantly accumulated in fish tissues, in particular the liver, and caused damages in all tissues examined in terms of histology, anti-oxidation status, and serum biochemical changes. Dietary PH also changed the volatile flavor compound profile in the muscle. The hepatic transcriptome assay showed that the HD diet tended to inhibit the DNA replication, cell cycle and lipid synthesis, but to stimulate the transcription of genes related to liver protection/repair and lipid catabolism. The 4-week recovery period to some extent mitigated the damage caused by PH. After the recovery period, the inter-group differences in some parameters disappeared. However, the differences in lipid content, anti-oxidase activity, liver PH00 concentration, and histological structure still existed. In addition, differences in cellular chemical homeostasis and cytokine-cytokine receptor interaction at the transcriptional level can still be observed, indicated by the hepatic transcriptome assay. In conclusion, 6 weeks of dietary PH exposure significantly impaired the growth performance and health status of farmed tiger puffer, and a short-term recovery period (4 weeks) was not sufficient to completely mitigate this impairment.

## **52. Soil Microbiome in Conditions of Oil Pollution of Subarctic Ecosystems**

Melekhina E.N., Belykh E.S., Kanev V.A., Taskaeva A.A., Tarabukin D.V., Zinoviyeva A.N., Velegzhaninov I.O., Rasova E.E., Baturina O.A., Kabilov M.R., Markarova M.Y.  
 (2024) *Microorganisms*, 12 (1), art. no. 80,  
 DOI: 10.3390/microorganisms12010080

**ABSTRACT:** The present study aimed to investigate the recovery of soil quality and the bacterial and fungal communities following various recultivation methods in areas contaminated with oil. Oil spills are known to have severe impacts on ecosystems; thus, the restoration of contaminated soils has become a significant challenge nowadays. The study was conducted in the forest–tundra zone of the European North-East, where 39 soil samples from five oil-contaminated sites and reference sites were subjected to metagenomic analyses. The contaminated sites were treated with different biopreparations, and the recovery of soil quality and microbial communities were analyzed. The analysis of bacteria and fungi communities was carried out using 16S rDNA and ITS metabarcoding. It was found that 68% of bacterial OTUs and 64% of fungal OTUs were unique to the reference plot and not registered in any of the recultivated plots. However, the species diversity of recultivated sites was similar, with 50–80% of bacterial OTUs and 44–60% of fungal OTUs being common to all sites. New data obtained through soil metabarcoding confirm our earlier conclusions about the effectiveness of using biopreparations with indigenous oil-oxidizing micro-organisms also with mineral fertilizers, and herbaceous plant seeds for soil remediation. It is possible that the characteristics of microbial communities will be informative in the bioindication of soils reclaimed after oil pollution.

## **53. The content and composition of organic compounds in the bottom sediments of the Norilsk-Pyasina water system one year after the accidental spill of diesel fuel**

Nemirovskaya I.A., Glyaznetsova Y.S.  
 (2024) *Marine Pollution Bulletin*, 199, art. no. 115990,  
 DOI: 10.1016/j.marpolbul.2023.115990

**ABSTRACT:** One year after the emergency diesel fuel spill in Norilsk, hydrocarbon concentrations in bottom sediments of the Norilsk-Pyasina water system decreased. However the average concentrations of hydrocarbons in surface sediments decreased in the same sequence ( $\mu\text{g/g}$ ) as in 2020: the mouth of the Ambarnaya R. ( $835, \sigma = 1788$ ) > Bezymyanny Cr.–the Daldykan R.–the Ambarnaya R. ( $306, \sigma = 273$ ) > the Pyasina R. ( $23, \sigma = 20$ ) > the Pyasino Lake ( $12, \sigma = 8$ ). Concentrations decreased due to degradation of low molecular weight hydrocarbons. The content of polycyclic aromatic hydrocarbons in 2021 also changed in a smaller range ( $0\text{--}1027 \text{ ng/g}$ ) than in 2020 ( $0\text{--}3865 \text{ ng/g}$ ). Petroleum origin of polycyclic aromatic hydrocarbons in the sediments of the Ambarnaya R. (including the mouth), Bezymyanny Cr. and the Daldykan R. is confirmed by the dominance of alkylated naphthalene homologues in their composition. Hydrocarbons accumulation in some layers of the sedimentary column is caused not only by the spill of diesel fuel, but also by the organic matter from the surrounding swamps, from wetlands and floodplain lakes, as well as by the burial of the surface layer by the 2021 flood.

## **54. Delineation of LNAPL plumes in a clay-rich site in Gyeongsangnam-do Province, South Korea: integration of geophysical survey data with borehole data and soil sampling information**

Kim B., Joung I.S., Yu H., Jeong J., Song S.Y., Son J.-S., Yu Y., Shin J., Jo H.Y., Kwon M.J., Nam M.J.  
 (2024) *Environmental Monitoring and Assessment*, 196 (1), art. no. 47,  
 DOI: 10.1007/s10661-023-12202-9

**ABSTRACT:** To effectively delineate the spatial distribution of oil contaminant plumes, geophysical methods indirectly measure the physical properties of the subsurface and can provide spatial information and images on a large scale, as opposed to traditional direct methods such as borehole drilling, sampling, and chemical analysis, which are time-consuming and costly. However,



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

interpreting geophysical responses over non-aqueous phase liquid (NAPL)-contaminated sites is not straightforward due to inconsistent responses from biodegraded oil contaminants. In this study, we performed multi-geophysical surveys including seismic refraction, ground-penetrating radar, electrical resistivity tomography (ERT), and induced polarization (IP) surveys, to locate NAPL-contaminated zones in a clay-rich site. To reduce ambiguity in discriminating between oil contaminants and clay layers, we first figure out the geological structure of the site by interpreting geophysical data incorporating with borehole data. The ERT data highlighted the heavily contaminated regions in the unsaturated zone but were less distinctive below groundwater levels. Conversely, IP responses revealed potential hotspots within the clay layers, extending beneath the groundwater. Considering the 3D geological model, NAPL-contaminated zones are properly delineated through interpretation of ERT and IP data together with path and velocity borehole data, and the contaminant source zone was properly estimated within the site.

### 55. Spatial infiltration and redistribution of light crude oil in heterogeneous water-bearing soil layers under different hydrogeological processes

Pan Y., Yang T., Tong S., Yang J., Jia Y., Yang N., Zhang M.  
(2024) *Environmental Monitoring and Assessment*, 196 (2), art. no. 214,  
DOI: 10.1007/s10661-023-12218-1

**ABSTRACT:** Two physical models were used to simulate the infiltration and redistribution process of light crude oil after leakage in a heterogeneous soil layer following water level variation and rainfall. Migration fronts and redistribution characteristics of oil during gravity seepage, water level variation, and rainfall were obtained using charge-coupled device (CCD) camera shooting and cyan–magenta–yellow–black (CMYK)-based gray analysis, which were employed efficiently and at a low cost. Then, the influencing factors and migration mechanisms were examined. Finally, the soil water and oil contents were measured to verify the simulation results. The results are as follows: (1) the geologic lens and fine–coarse interface can intercept oil, resulting in a local highly contaminated area. (2) The crude oil infiltration varied greatly with the different soil types and initial water contents. Within a certain range, the higher the initial water content is, the higher the lateral and vertical infiltration speeds. (3) The oil redistribution process was dominated by vertical infiltration under the condition of water level variation or rainfall, but oil–water displacement and the capillary pressure caused some oil to move horizontally near the geologic lens and fine–coarse interface. (4) Water level variation resulted in a synchronous rise or fall of the oil accumulation area, but rainfall caused it to move up. (5) Water level variation and rainfall imposed a certain influence on the periodic accumulation and release of crude oil in heterogeneous soil, especially in the presence of geologic lenses and lithologic interfaces.

### 56. Assessing the Presence of Petroleum Hydrocarbons in the Punta Carnero Estuary (Ecuador)

Veloz-Zambrano E., Chavarría J., Pulido-Calvo I.  
(2024) *Water, Air, and Soil Pollution*, 235 (2), art. no. 126,  
DOI: 10.1007/s11270-024-06938-4

**ABSTRACT:** Chronic hydrocarbon spills are a threat to coastal ecosystems, and their impact on the water quality along watercourses should be characterised to medium long term in order to assess the risk and define cost-effective and sustainable remediation strategies. For this purpose, a methodology for the measurement of total petroleum hydrocarbons (TPH) on a spatio-temporal scale was designed, implemented and validated in the Punta Carnero estuary, in the Santa Elena province, western Ecuador, which is affected by hydrocarbon pollution. The selection of monitoring stations was made according to the different inflows along the water system corresponding to the different anthropogenic activities in the area, in order to assess whether the effluents involve critical levels of pollution. Measurements of hydrodynamic, environmental and vegetation cover parameters were also carried out to assess their possible variations as a consequence of the impact of the spatio-temporal TPH concentrations. An increase in hydrocarbon concentrations was observed from 2013 to 2021. Mean annual TPH levels were above the maximum allowable limit for the protection of aquatic and other wildlife in estuarine waters according to the Ecuadorian regulation for environmental quality. An increase in mangrove tree cover could contribute to an exponential decrease in contamination levels. The methodology used in this study may support the quantifying of TPH content in future applications, which is a priority task for the restoration of degraded ecosystems.

## SCIENCE & TECHNOLOGY (

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### TINY ROBOTS COULD CLEAN UP MICROPLASTIC POLLUTION

In a proof-of-concept study, microscopic self-propelled devices found and broke down microplastic particles. New research published in *ACS Applied Materials & Interfaces* shows a way to promote their deterioration, at least in water, with technology on an even

## SCIENCE & TECHNOLOGY (CONTINUED)

smaller scale: microrobots. When added to water along with a bit of hydrogen peroxide, the bacterium-sized devices glom onto microplastic particles and begin breaking them down. Scientific American / [Read more](#)

### BREAKTHROUGH CATALYST INNOVATES ENVIRONMENTAL CLEANUP, OFFERING HOPE AGAINST TOXIC POLLUTANTS

Researchers from Zhejiang University have unveiled a novel catalyst that shows exceptional prowess in degrading persistent organic pollutants. This catalyst, composed of vanadium-based components and nitrogen-doped biomass carbon, holds great promise for sustainable environmental cleanup efforts. BNN Breaking / [Read more](#)

### CONTAMINATION OF GROUNDWATER BY PETROLEUM HYDROCARBONS: IMPACT OF FUEL STATIONS IN RESIDENTIAL AREAS

Anthropogenic factors such as leakages from fuel storage facilities contribute to the release of petroleum hydrocarbons into groundwater. Following the proliferation of fuel stations in residential areas, this research assessed physicochemical parameters, salinity, and levels of total petroleum hydrocarbons (TPH) in groundwater sources within selected residential areas. Science Direct / [Read more](#)

## TECHNICAL SUPPORT

### KNOWLEDGE FOR ACTION IN PREVENTION & PREPAREDNESS - IMAROS 2 - IMPACTS AND RESPONSE OPTIONS REGARDING LOW SULPHUR MARINE FUEL OIL SPILLS.

Ship accidents can result in oil spills, causing time consuming and costly response operations. Successful oil spill response, using adequate equipment and methods, may reduce the impacts on environment and affected coastal communities. In recent years a new generation of fuel oils, LSFOs, are posing new risks and challenging oil spill responders. The proposed project is based on identified gaps in response technology and methods identified by the IMAROS project. The current project proposal is focused on two main challenges: Civil Protection Knowledge Network / [Continue Reading](#)

## 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://www.cedre.fr/en/content/download/10912/file/CalendrierFormation2023\\_EN.pdf](https://www.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 & WORLDWIDE – AMBIPAR GROUP <https://ambipar.com/uk/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)
- CANADA - CONTAMINATED SITES HEALTH & SAFETY REFRESHER (8-HOUR HAZWOPER) – FROM ECONEXT – [MORE INFO](#)
- ONLINE - LLOYDS MARITIME ACADEMY – CERTIFICATE IN MARINE POLLUTION PREVENTION & MANAGEMENT. Starts on 14<sup>th</sup> March 2024 - <https://email.informaconnect.com/q/12ErXbQNGaNK08lQrkPeg62v/wv>

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

## UPCOMING EVENTS

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



## UPCOMING EVENTS (CONTINUED)

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](mailto:John.mcmurtrie@spillcontrol.org)

The listings below give only very basic details – To get access to all information visit <https://spillcontrol.org/upcoming-events/>

### MARCH & APRIL 2024

- WEBINAR – ALGA – “1-4 Dioxane, A Water Contaminant of Emerging Concern, 7 March 2024, 12.00 – 1.00 pm AEDT
- PORTUGAL – Economist – “11th Annual World Ocean Summit & Expo”, Lisbon, 11-13 March 2024
- USA – Conference & Exhibition – Clean Waterways – April 9-11, Cincinnati, Ohio
- TUNISIA – MOIG TRAINING COURSE – IMO Level 3, 22-25 April 2024, South Hammamet
- UK – IOPC Funds Meeting of the Governing Bodies, IMO London. 29 April to 2 May

### MAY 2024 Onwards

- USA – International Oil Spill Conference & Exhibition, 13-16 May 2024, New Orleans, Louisiana
- USA – AHMP – EHS HAZMAT SUMMIT, 14-17 July, 2024, Kansas City, Missouri
- CANADA – International Conference on Environmental Pollution & Remediation, Montreal, 5-6 August 2024
- GERMANY – “14<sup>th</sup> International Conference on Environmental Pollution & Remediation”, Berlin, August 25-27, 2024
- SPAIN & ONLINE – “14<sup>th</sup> International Conference on Environmental Pollution & Remediation, Barcelona, August 25-27, 2024
- UAE - SPE International Health, Safety, Environment, and Sustainability Conference and Exhibition 10–12 September 2024, Abu Dhabi, United Arab Emirates
- USA – Elastec River Spill Workshop, Carmi, Indiana, 8-10 October 2024
- UK – Water, Waste & Environmental Monitoring – 9-10 October 2024, NEC, Birmingham, UK
- CHINA – 8<sup>th</sup> East Asian Seas Congress, Xiamen, 6-8 November 2024

### SOME OTHER INFORMATION

- IOPC Funds has released a calendar of its upcoming events – to view, click on <https://iopcfunds.org/news-events/events/>
- Econext has released a programme of upcoming courses and webinars. This can be viewed at [https://econext.myvirtualcampus.co/product-category/webinars/?orderby=date&mc\\_cid=9c2c758fcd&mc\\_eid=6a430f153](https://econext.myvirtualcampus.co/product-category/webinars/?orderby=date&mc_cid=9c2c758fcd&mc_eid=6a430f153)
- Recordings of past ExxonMobil OSR Knowledge Transfer Webinar Recordings – [Access and Download](#)
- UK & Ireland Spill Association Alternative Marine Fuels and their Implications For Spill Response Webinar is [available to watch on YouTube](#). All six of UK & Ireland Spill Association’s Webinar Series on the Wakashio Spill are also available to watch. [More info](#)

## INTERESTING NEW PRODUCT

### AI-POWERED ROBOTIC ZERO-EMISSION VESSEL TRANSFORMS WATER POLLUTION CLEANUP

The battery-powered workboat has been exclusively designed for tasks like floating garbage collection, foam recovery, and oil spill response, particularly in congested inland and coastal waters, per Lloyd’s Register. It also shows the potential for managing water hyacinth infestations, carrying out bathymetric surveys, and cargo deliveries. Marine Insight / [Read more](#)

## UPDATES FROM EVENT ORGANISERS

### USA: CLEAN WATERWAYS 2024 – REGISTRATION OPEN - CLICK ON LINKS BELOW

Check out the 2024 CLEAN WATERWAYS Digital Conference Program! - A full, printable program is now available for this year’s CLEAN WATERWAYS Conference, taking place April 9-11 at the Duke Energy Convention Center in Cincinnati, OH. Check out all that we have planned for the upcoming CLEAN WATERWAYS event! [READ MORE](#)

The exhibit hall at this year’s CLEAN WATERWAYS Conference, April 9-11 in Cincinnati, will feature an array of companies showcasing the latest technologies, services, and equipment for incident prevention and response in the inland environment. You will find consulting services, incident management services, new technology for response, equipment for inland response, GIS products, toxicology, remediation, oil spill removal organizations, and containment boom manufacturers... just to name a few! [READ MORE](#)

## UPDATES FROM EVENT ORGANISERS (CONTINUED)

[CLEAN WATERWAYS Conference](#), April 9-11 in Cincinnati, OH. We are accepting exhibit/ sponsorship applications and registration is open.

### [DISCOUNTS](#)    [DIGITAL PROGRAMME](#)

Registration has officially opened for the 2024 CLEAN WATERWAYS Conference, taking place at the Duke Energy Convention Center in Cincinnati, OH, April 9-11.

[Registration information](#) April 9-11, 2024, Cincinnati, OH – “Incident Prevention & Response for Inland Regions & Waterways”

[View the website](#) The CLEAN WATERWAYS program is developed by a government/industry-based committee of approximately 50 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

## USA: REGISTRATION NOW OPEN FOR IOSC 2024

[International Oil Spill Conference \(IOSC\)](#) in New Orleans, May 13-16, 2024

Click on links for updated info – [EMERGING LEADERS PROGRAM](#)   [EDUCATIONAL SPONSORSHIPS PROVIDE PRIME VISIBILITY AND IMPACT](#)   [COMPLETE PROGRAM](#)   [FILM FESTIVAL & PHOTOGRAPHY CONTEST](#)

**Take your 2024 International Oil Spill Conference (IOSC) to the next level by adding access to our day 1 Short Courses\* to your registration! Register today to secure your seat as these sessions will fill up quickly.**

To qualify for a discounted registration rate, you MUST reserve a room at an [IOSC Hosted Hotel](#). Your room must be booked by the Hosted Hotel cutoff date to receive the discounted rate. Please note that each hotel has their own cutoff date. IOSC will perform an audit on the housing block on April 15. Those that have not booked within the block by the respective hotel cutoff date will have their registration rate changed to reflect the difference.

Registration has officially opened for the International Oil Spill Conference (IOSC), May 13-16, 2024 at the New Orleans Convention Center in New Orleans, LA USA.

In order to make it as easy as possible for you to join nearly 2,000 members of the international oil spill response community, IOSC has put together a Justification Toolkit to help you illustrate the value of attending this conference. Use the tools in this kit to explain to your supervisor how attending IOSC will be a smart investment in both your personal career growth and the growth of your organization. [Download the Justification Kit](#)

Meet Dr. Leonard Marcus, IOSC 2024 Keynote Speaker. Join us, May 13 - 16, 2024 in New Orleans, LA for the 2024 International Oil Spill Conference (IOSC) and be inspired by our opening keynote speaker, Dr. Leonard Marcus. [Read about Dr. Marcus](#)

[Why are Sponsorships at IOSC So Valuable?](#) Click to read more

**IOSC** provides a vital forum for professionals from the international response community, private sector, government, and non-governmental organizations to come together to tackle the greatest challenges facing us with sound science, practical innovation, social engineering and imagination.

Mark your calendars and start planning your trip to join over 1,500 attendees from over 50 countries, representing government agencies, contractors, researchers, industry, and other stakeholders as they exchange ideas and lessons learned from actual spill responses and research around the world.

**Learn More about IOSC 2024** Be sure to follow IOSC on [Facebook](#), [Twitter](#), and [LinkedIn](#) for updates and announcements about #IOSC2024. Please contact [registration@iosc.org](mailto:registration@iosc.org) for questions or additional information. Interested in exhibiting or sponsorship? Please reach out to: [exhibits@iosc.org](mailto:exhibits@iosc.org)

## USA: CLEAN GULF CONFERENCE & EXHIBITION 2024

**November 18-20, 2024** George R. Brown Convention Center | Houston, TX

**Last Chance to Submit an Abstract for CLEAN GULF 2024! - This is your last chance to be heard at this year's CLEAN GULF Conference! Submit your abstract for review by Friday, March 1st for your chance to take the stage this November at CLEAN GULF. [Read more](#)**

Registration for the 2024 event will open in April and Exhibit and Sponsorships are already available! Contact Renie Mayfield at 720-289-7008 or [rmayfield@accessintel.com](mailto:rmayfield@accessintel.com) to discuss how you can make an impact on buyers from oil & gas, maritime, rail, environmental companies and regulatory agencies with an Exhibit space or Sponsorship. [More info](#)

Do you have real-world solutions for evolving environmental emergencies? Don't miss your chance to be heard at this year's CLEAN GULF Conference! Submit your abstract for review and your chance to take the stage this November at CLEAN GULF. Abstracts are due by **March 1, 2024**. [More info about submitting abstracts](#).



## INDIA: OIL SPILL INDIA CONFERENCE & EXHIBITION, NEW DELHI, 11-12 SEPTEMBER 2024

In the backdrop of the recent oil spill incident, caused during cyclone Michaung in Chennai's Ennore Creek, it is with a sense of urgency and shared responsibility that we announce that the 7th edition of Oil Spill India (OSI 2024), the region's flagship conference & exhibition on the Oil Spill Prevention, Planning, Preparedness, Response & Restoration industry, will be organised during 11th & 12th September 2024 at Hotel JW Marriott, Aerocity, New Delhi, India. [View the OSI 2024 website](#)

## EUROPE – INTERSPILL CONFERENCE & EXHIBITION – 8-10 APRIL 2025 – ExCeL, LONDON

This internationally respected triennial event (which connects global stakeholders involved in marine oil spill research, prevention, preparedness, response and restoration) will return on 8-10 April 2025 at ExCeL London. <https://www.interspill.org/2025/>

## 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 Federal Contract Opportunities are posted at <https://clu-in.org/Federal-Contract-Opportunities> European Maritime Safety Agency invitations to tender are often posted in The EMSA Newsletter at - <https://www.emsa.europa.eu/newsroom/newsletters.html>

ISCO Members can post requests for submission of invitations to tender for supplies / services in this section.

## LINKS FOR OTHER PUBLICATIONS

### TO VIEW LINKS FOR DOWNLOADING AND READING OTHER PUBLICATIONS PLEASE CLICK ON

<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. This page is managed by Mike Watson [mike@mwadigital.com](mailto:mike@mwadigital.com)

## NEW PUBLICATIONS

### WELCOME TO THE FEBRUARY 2024 E-BULLETIN!



Registration is now open for the triennial summit for the seas of East Asia, the East Asian Seas Congress 2024, which will take place under the theme "Blue Synergy for a Shared Future: One Sustainable and Resilient Ocean". The event is being held in collaboration with the Xiamen World Ocean Week (XWOW) and co-hosted by the Ministry of Natural Resources in Xiamen, China and the Xiamen Municipal People's Government..

The start of the year has seen progress in PEMSEA's projects throughout the region. The Timor-Leste National Project Board for marine plastic pollution has had its inaugural meeting. PEMSEA also met with officials in Singapore to discuss ongoing collaboration, and we share progress from our partners, the Ministry of Environment (MOE) of Cambodia and Preah Sihanouk province, in the sustainable development of the Prek Kampong Smach waterway.

PEMSEA is closely following the sixth session of the United Nations Environment Assembly (UNEA-6) taking place at this time, as well as developments in external research, such as improved knowledge about the trapping of microplastics in coastal vegetation, the launch of a new satellite that will improve climate modeling, and the slated construction of a new pilot carbon capture plant in Singapore. Pemsea / [Read more](#)



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## INCIDENT REPORTS

### TRINIDAD & TOBAGO OIL SPILL (CONTINUED)

**February 25** - IMA: Oil in Tobago spill is 'diesel-like' Newsday tt / [Read more](#)

**February 27** - Tobago oil spill reaches Bonaire, threatening mangrove and coral ecosystems. Reuters / [Read more](#)

**February 27** - Caribbean Crisis: Oil Spill Threatens Bonaire's Ecosystems, Aruba on Alert. BNN Breaking / [Read more](#)

**February 28** - Ministry of Energy: Hydrographic survey of wrecked barge completed. Newsday tt / [Read more](#)

**March 1** - Netherlands Deploys Armed Forces to Bonaire to Clear Oil from Offshore Spill. BNN Breaking / [Read more](#)

### YEMEN: VIDEO: RUBYMAR'S POSITION IS PRECARIOUS AS SHIP BECOMES POLITICAL PAWN

**February 27** - Dramatic video of the crippled bulker Rubymar appeared on TV news reports in Yemen showing the increasingly precarious state of the vessel 10 days after it was struck by a Houthi-launched missile. Efforts to mount a salvage continue to be hampered by the instability of the region and the competing political interests while some reports suggest at the rate the vessel is settling it could be days before it loses sufficient buoyancy to remain afloat. The Maritime Executive / [Read more](#)

**February 28** - Abandoned at sea, Houthi-damaged ship awaits towing to Saudi Arabia amid oil slick concerns. A vessel impaired in a mid-February Houthi attack offshore Yemen remains abandoned at sea awaiting towing to safe harbor amid growing concerns of an oil spill. The Iran-backed militant group claimed it dealt "catastrophic damage" during a Feb. 18 offensive against the Belize-flagged general cargo vessel Rubymar, which the Houthis said was "at risk of potential sinking in the Gulf of Aden." The tanker's crew abandoned ship. The attack caused "an 18-mile oil slick," the U.S. Central Command said in a social media update on Feb. 24, adding that the tanker is anchored, but taking on water. CNBC / [Read more](#)

**March 3** - In a statement, the government said, Rubymar, a cargo ship, abandoned for over 12 days, after being attacked by the Houthis, has sunk off the coast of Yemen. The British-owned, Belize-flagged ship, carries thousands of tonnes of fertiliser and oil. The government expressed regret over the sinking, warning against a possible major environmental disaster in Yemen's territorial waters. MENAFN / [Read more](#)



## INCIDENT REPORTS (CONTINUED)

### MALAYSIA: JOHOR EXCO: FOUR RIVERS IN PASIR GUDANG FOUND POLLUTED, INCLUDING SG KIM KIM

February 27 - Four rivers around the Pasir Gudang industrial area here have been declared as polluted and requiring frequent monitoring, including Sungai Kim Kim which was involved in the 2019 incident. Johor Health and Environment Committee chairman Ling Tian Soon said the three other rivers were Sungai Tukang Batu, Sungai Perambi and Sungai Buloh, with their pollutions detected by a Johor Department of Environment (DoE) and the Pasir Gudang City Council (MBPG) survey yesterday. Malay Mail / [Read more](#)

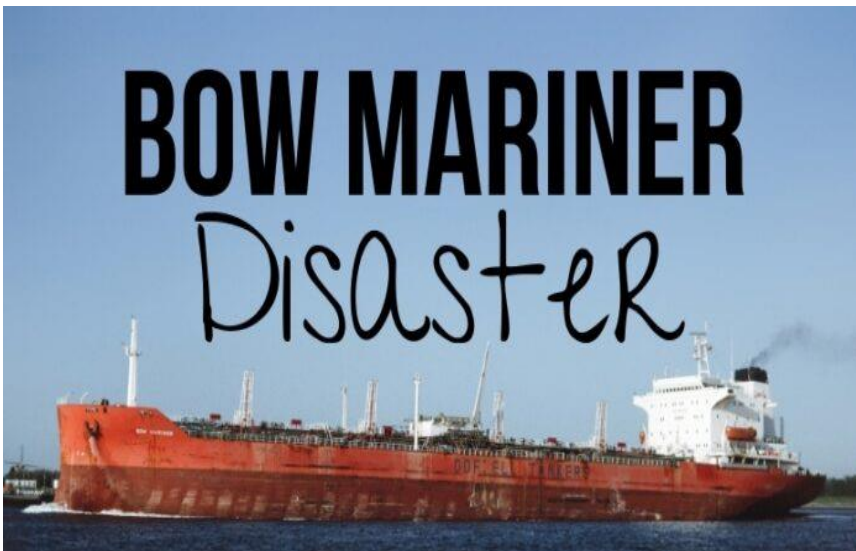
### USA: WASHINGTON - INNOVATIVE CLEANUP EFFORT UNDERWAY TO ADDRESS MAJOR GASOLINE SPILL NEAR CONWAY

February 27 - In the wake of the spill, the scene near Conway quickly transformed into a hub of activity. Emergency teams, equipped with the knowledge and tools to tackle such disasters, descended on the site. Their immediate challenge: to contain the spill and prevent further contamination of the surrounding ecosystem. This initial response set the stage for what would become an innovative environmental recovery effort. The construction of a cofferdam, a temporary enclosure built within water environments to allow for dewatering and the safe execution of recovery tasks, exemplifies the complex strategies employed. This structure, crafted from steel plates along the Hill Ditch, not only serves as a physical barrier but also as a symbol of human ingenuity in the face of ecological adversity. BNN Breaking / [Read more](#)

### USA: TEXAS - GARLAND HAZMAT SPILL STIRS LATEST SAFETY CONCERNS ABOUT I-635/LBJ CONSTRUCTION PROJECT

February 29 - Hazmat crews had to be called out in Garland to clean up thousands of gallons of methanol Thursday morning. The spill happened in the westbound lanes of LBJ Freeway at McCree Road after a big rig flipped. Fox4 News / [Read more](#)

## HISTORY: FLASHBACK IN MARITIME HISTORY: EXPLOSION, SINKING AND FATALITIES ON CHEMICAL TANKER BOW MARINER 28 FEB 2004



++Maritime Cyprus / [Read more](#)

On 28 February 2004, the chemical tanker Bow Mariner caught fire and exploded while the crew was engaged in cleaning residual methyl tert Butyl ether (MTBE) from cargo tank number eight starboard. The "Bow Mariner" was a 570-foot, Singapore-flagged chemical tanker built in 1982, and was managed by a Greek company, Ceres Hellenic Shipping Enterprises Ltd. The tanker was owned by Odfjell USA, headquartered in Houston.

The ship sank by the bow an hour and a half later 45 miles off the coast of Virginia. Of the 27 crew members, six made it into an inflatable life raft and were rescued. The others either died or are missing and presumed dead. The vessel's cargo of 3 million gallons of ethyl alcohol, along with its bunkers, was released into the sea.

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