

NEWS

ISSUE 872 | 16 JANUARY 2023

0 0

THE NEWSLETTER OF THE INTERNATIONAL SPILL RESPONSE COMMUNITY

info@spillcontrol.org | www.spillcontrol.org

ISCO & THE ISCO NEWSLETTER

The International Spill Control Organization, a not-for profit organization dedicated to raising worldwide preparedness and co-operation in response to oil and chemical spills, promoting technical development and professional competency, and to providing a focus for making the knowledge and experience of spill control professionals available to Intergovernmental, Governmental, NGO's and interested groups and individuals

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

ISCO EXECUTIVE COMMITTEE

President, Secretary General & Vice-Presidents

- Acting President Interim Executive IE)
- Mr Neil Marson, Secretary General (UK)
- Mr John McMurtrie, VP and Editor (UK)
- Ms Mary Ann Dalgleish, VP M'ship (USA)

Secretariat (Core Management Team) Individuals marked with * are members of IE

| Mr John McMurtrie* | (UK) |
|---------------------------------------------|-------------|
| Ms Mary Ann Dalgleish * | (USA) |
| • Captain Bill Boyle | (UK) |
| • Mr John Wardrop * | (Australia) |
| • Mr Marc Shaye | (USA) |
| Mr Michael Watson | (UK) |

Other Executive Committee Members

| • Mr Kerem Kemerli | (Turkiye) |
|---------------------------------------|-----------|
| • Mr Dan Sheehan | (USA) |
| Mr Matthew Sommerville | (UK) |
| Ms Helena Rowland | (USA) |
| Ms Larissa Montas | (USA) |
| • Capt. D C Sekhar | (India) |
| • Dr Mervyn Fingas | (Canada) |
| Ms Jane Delgado | (USA) |
| Mr Carlos Sagrea | (Panama) |
| | |

COUNCIL (NATIONAL REPRESENTATIVES)

an)

nds)

rica)

| Mr John Wardrop | (Australi |
|--------------------------------------------|-----------|
| Mr Elkhan Mamedov | (Azerbaij |
| Dr Merv Fingas | (Canada) |
| • Captain D. C. Sekhar | (India) |
| Major Ben Benny | (Israel) |
| Mr Sanjay Gandhi | (Kenya) |
| Mr Dennis van der Veen | (Netherla |
| Mr Carlos Sagrera | (Panama |
| • Mrs Fatima B. Shaik | (South Af |
| Dr Ali Saeed Al Ameri | (UAE) |
| Dr Timothy Gunter | (USA) |
| • Mr Flavio P. de Andrade | (Brazil) |
| • Mr Kerem Kemerli | (Turkiye) |

HEADLINE INTERNATIONAL NEWS

PLEASE CLICK ON THE BANNER BELOW FOR MORE INFORMATION



ITOPF PUBLISHES TANKER SPILL STATISTICS FOR 2022



Number of medium (7-700 tonnes) and large (>700 tonnes) tanker spills, 1970 -2022

January 12 - Data from ITOPF shows that seven oil spills of more than seven tonnes were recorded from tanker incidents in 2022. This brings the decade average to almost six, which is on a par with the 2010s and a dramatic reduction from the numbers reported in earlier decades, as illustrated above.

Three of the seven incidents in 2022 resulted in spills greater than 700 tonnes (classified as 'large' spills). Two of these incidents occurred in Asia and one in Africa. They resulted in the release of crude, bitumen and fuel oil into the marine environment¹

The four other incidents (classified as 'medium' spills) involved spills of fuel oil and diesel.

The total volume of oil lost to the environment from tanker spills in 2022 was approximately 15,000 tonnes; more than 14,000 tonnes of which was lost in the three large incidents. This figure is higher than the previous three years but remains a fraction of the 2.95 billion tonnes of crude oil and petroleum products that are transported by sea each year.²

ITOPF has recorded tanker spill statistics over the last 50 years and in this time, despite

ISCO AMBASSADORS

(Members with special responsibilities in specified geographical areas) Carlos Sagrera Latin America (Spanish speaking) Matthew Sommerville UK London John Noble UK London & South'ton Wu Yue China

MEMBERSHIP OF ISCO

ISCO'S FACEBOOK GROUP

Benefits of Membership Online Membership Application Form

YOU ARE INVITED TO JOIN THE ISCO DISCUSSION GROUP ON LINKED-IN

Linked in

LINKEG Click on the link below – https://www.linkedin.com/groups/4016064/

Click on the

link https://www.facebook.com/groups/38852831284243 1

WHATSAPP GROUP FOR STUDENTS, TRAINEES & APPRENTICES

Here is the link for joining this group – <u>https://chat.whatsapp.com/KMxdW7IEal79namyNIbV</u> aq

ADVANCE YOUR CAREER BY GAINING PROFESSIONAL RECOGNITION

Professional recognition is a visible mark of quality, competence and commitment, and can give you a significant advantage in today's competitive environment. All who have the relevant qualifications and the required level of experience can apply for Professional Membership of ISCO. The organization offers independent validation and integrity. Each grade of membership reflects an individual's professional training, experience and qualifications. You can apply for MEMBERSHIP (MISCO) or FELLOWSHIP (FISCO)

About Professional Membership Professional Membership Application Form



HEADLINE INTERNATIONAL NEWS (CONTINUED)

some annual fluctuations, the number and volume of oil spills from tankers has dropped dramatically. These numbers are stabilising at a low level, with the reduction being driven by positive change from the shipping.

1 To note, the oil spill that occurred off the coast of Callao, Peru in January 2022 has not been included in these statistics as the source of this incident remains under investigation.

2 Source: Review of Maritime Transport 2022 | UNCTAD <u>htt</u>

https://www.itopf.org/

ISCO NEWS

DATE OF POSTPONED 2022 AGM

The delayed AGM is now scheduled to take place at 8 pm GMT / 3 pm EST on Thursday 15^{th} February 2023.

It will be a remote meeting carried out using a Zoom platform. A link for joining the meeting will be circulated to members by email nearer to the date of the meeting.

All members in good standing (membership fees paid up-to-date) and honorary members (Hon.FISCO) are entitled to vote.

Votes should be submitted as soon as possible and no later than the end of the day after conclusion of the AGM. The voting results will be communicated to members as soon as practicable.

The Agenda, Meeting Papers, Addendum and Vpoting Form were circulated to members by email on 10th January 2023.

Any Member who has not received these documents should alert the Secretariat by email to info@spillcontrol.com to request that a copy be sent.

Members are invited to submit details of any additional matters that they would like to be discussed at the AGM. Such submissions should be sent by email to the Secretariat at info@spillcontrol.org in advance of the date of the AGM.

NEXT ISCO VOLUNTEERS & MEMBERS ZOOM MEETING

The monthly meeting for January 2023 will be on Thursday 26th January. More details will be circulated to members later.

NEW MEMBERS OF EXECUTIVE COMMITTEE ANNOUNCED

Helena Rowland, Larissa Montas, Carlos Sagrera, Jane Delgado. Capt. D. C. Sekhar, and Dr Merv Fingas have been co-opted as new members of ISCO's Executive Committee with immediate effect.

These new appointmets formally recognise and empower members who are actively helping ISCO in various ways as well as to obtain expressions of interest from younger members who are willing to give some time and effort. EC members are consulted on various ISCO matters and contribute to decision-making processes. Some members of the EC also act as members of the ISCO Secretariat which deals with day-to-day management matters.

The EC is permitted to quicky invite and co-opt new EC members with their appointments usually confirmed at a following AGM. Members of the EC serve for a period of three years and thereafter may seek re-election.

INTERNATIONAL & REGIONAL NEWS

REVIEWING ACHIEVEMENTS OF 2022

Click on links below to read press releases from featured organisations

https://www.unep.org/news-and-stories/story/2022-year-environmentalmilestones

https://www.thegef.org/newsroom/news/2022-review

https://response.restoration.noaa.gov/2022-accomplishments-year-review-1

INTERNATIONAL & REGIONAL NEWS (CONTINUED)



EMSA: NEW PROCUREMENT PROCEDURE FOR INTERMEDIATE STORAGE VESSEL (NORTH / BALTIC SEA)

January 10 - In order to strengthen its response capacity network EMSA announces the launch of a procurement procedure to contract new Intermediate storage vessel(s) in the North and Baltic Seas. More details are provided in the procurement section.

GLOBAL HORIZON SCAN REVEALS THE 15 ISSUES THAT ARE EXPECTED TO IMPACT MARINE AND COASTAL BIODIVERSITY CONSERVATION IN THE NEAR FUTURE

January 11 - Marine and coastal habitats are experiencing unprecedented environmental change – with some of the drivers of change due to overlooked and emerging issues in the areas of resource-exploitation, new-technology and ecosystem issues.

This study assembled a panel of 30 experts – including scientists, policymakers and conservation practitioners –to identify issues that are likely to significantly impact the functioning, and conservation, of marine and coastal ecosystems in the next 5–10 years.

The well-known drivers of marine and coastal changes are overexploitation, climate change, and pollution – but there are also emerging issues that are poorly understood, with potential to impact marine and coastal ecosystems. This study identifies and raises awareness of these little-known issues to catalyse further research – enabling identification of any resultant positive or negative impacts. The researchers highlight that it is especially important to identify these issues during the <u>UN Decade of Ocean Science for</u> <u>Sustainable Development</u> (2021–2030)

Informing the wider public and policymakers of potential threats to marine and coastal biodiversity benefits our oceans and society by instigating a precautionary approach and promoting conservation management actions designed to prevent or mitigate possible risks. Some of the emerging issues identified in this study could have unintended negative impacts, if not dealt with appropriately in time. European Commission / Read more

New advertising opportunities available within the ISCO Newsletter

Why Advertise?

With a dedicated readership, the ISCO Newsletter is sent to nearly 3000 invested individuals once a week.

This loyal readership continues to find value in the ISCO Newsletter since it started more than 17 years ago.

Advertising in the newsletter gives advertisers direct access to highly motivated and niche audience of senior business people and decision makers.





What is the ISCO Newsletter?

ISCO's weekly newsletter is focused in international, regional and national news that is of interest to professionals, companies and organisations involved in oil and chemical spill control and the emerging field of CBRN incident response.

Through the Newsletter and its other activities, ISCO is disseminating information on new developments – technical advances, legislation, events and other matters that affect the international spill response community.

To receive a copy of the new media pack please contact spillcontrol@mwadigital.com

NEWS REPORTS FROM AROUND THE WORLD

Editor: Many of these reports are gleaned from news provided on the websites of Environment Agencies and other national organisations, some of which are not being well maintained. ISCO does not have the resources to monitor multiple social media platforms. Your editor is grateful to those organisations that directly send him their national news reports of interest to the spill response community.

CANADA: MULTI-PARTNER RESEARCH INITIATIVE - CALL FOR PROPOSALS

The deadline for submission of proposals under the Open Call for funding under Natural Resources Canada's Multi-Partner Research Initiative to 11:59PM (PST) on January 22, 2023 (Sunday).

January 11 - Under Canada's Oceans Protection Plan, the Multi-Partner Research Initiative (MPRI) is a five-year, \$30.3 million program to advance Canada's science-based scientific knowledge and decision-making in oil spill response. The objective is to minimize the environmental impacts of spills in marine (offshore and nearshore) and coastal freshwater environments.

Natural Resources Canada (NRCan) will provide funding to support collaborative research networks that:

- increase knowledge of the impacts of oil spills on organisms;
- develop new cleaning technologies and techniques;
- support science-based decisions that will minimize environmental impacts and increase habitat restoration;
- create engagement and training opportunities for the next generation of oil spill scientists and responders (e.g., students and young professionals);
- engage oil spill responders and decision-makers to ensure the practical applicability of the research;
- planning activities for program synthesis and information transfer;
- Solicit active Aboriginal participation, where appropriate.

Priority sectors for this call for proposals - NRCan is currently seeking proposals for integrated, multidisciplinary and multi-partner research networks that will address one or more of the following priority themes and topics. Please refer to the application guidelines for a detailed description of each theme and priority sector. See the Submit an application section to obtain your copy. Government of Canada / <u>Read more</u>

INDIA: MUMBAI: BMC GEARING UP TO RESTORE LAKES & FRESHWATER BODIES, TAKES UP RESTORATION OF DINGESHWAR TALAV

January 9 - The BMC has undertaken a pilot project to restore lakes and other freshwater bodies in the city which are getting polluted by the ingress of waste and sewage. The civic body will soon start the bio-remediation process at Shri Dingeshwar talav at Charkop in Kandivali (West). The lake area will also get a jogging track and an open-air gymnasium. Free Press Journal / <u>Read more</u>

UK: SINGLE-USE PLASTIC CUTLERY AND PLATES TO BE BANNED IN ENGLAND

January 9 - Single-use items like plastic cutlery, plates and polystyrene trays will be banned in England, the government has confirmed. It is not clear when the ban will come into effect but it follows similar moves by Scotland and Wales.

Environment Secretary Thérèse Coffey said the move would help protect the environment for future generations. Campaigners welcomed the ban, but called for a wider-ranging plastic reduction strategy.

Similar bans have already been made in Scotland, while single-use plastic straws, stirrers and plastic stemmed cotton buds were already banned in England in 2020. BBC News / <u>Read more</u>

USA: WEEKLY ROUND-UP OF NEWS AND INFORMATION FROM NOAA OR&R

January 13 – Please click on the links below to download and read the latest news reports from NOAA OR&R

DuPont Delaware River Superfund Site Settlement Proposed for Restoration

On Dec. 20, 2022 a settlement was proposed to resolve claims related to the hazardous waste pollution from the du Pont de Nemours and Company (Dupont Hay Road) site on the Delaware River in Wilmington, Delaware. Of the total settlement of \$1,071,755.84, \$808,500 is proposed for restoration activities and \$263,255.84 will be allocated to the natural resource trustees for reimbursement of their natural resource damages assessment costs.

Opportunity to Provide Input on Restoration for the Pipeline P00547 Oil Spill in Southern California

The public is invited to two virtual meetings to learn about efforts to assess the impacts of an October 2021 oil spill and solicit input for potential restoration actions. The meetings, scheduled for Jan. 25, 2023, will be hosted by state and federal trustee agencies for natural resources impacted by the Pipeline P00547 oil spill off the coast of Huntington Beach in Southern California.

U.S. Coast Guard Representatives Tour NOAA's Western Regional Center

On Dec. 13, after a busy fall season of incident response, members of the Incident Management Division of U.S. Coast Guard Sector

NEWS REPORTS FROM AROUND THE WORLD (CONTINUED)

Puget Sound visited the NOAA Western Regional Center in Seattle.

<u>6 Polluted Waterways Slated for Restoration</u>

In 2022, NOAA helped to recover over \$114 million from polluters to restore six waterways following oil spill and industrial pollution incidents in Hawaii, Louisiana, New Jersey, Pennsylvania, and Texas.

USA: OR&R - A LOOK BACK ON THE YEAR IN EMERGENCY RESPONSE



Above: John Tarpley, regional operations branch chief for NOAA's Office of Response and Restoration Emergency Response Division, collects an oil sample at Playa Cavero near Lima, Peru. Image credit: NOAA

January 12 - By Doug Helton, Office of Response and Restoration - Within the Office of Response and Restoration, the Emergency Response Division provides scientific expertise and services to the U.S. Coast Guard on everything from running oil spill trajectories that 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.

At the end of each year, we reflect on the response events and activities we supported. In 2022, we provided scientific support to the Coast Guard and other federal responders for a wide range of scenarios — remotely when possible, and on-scene when needed.

Our first call of 2022 came on Jan. 9. The Coast Guard Sector New York notified the NOAA scientific support coordinator that a 45foot sport fishing vessel, the Time Out, broke loose from its mooring and grounded on Sandy Hook National Seashore in New Jersey. The last incident of the year was a crude oil spill at the Ingleside Terminal in Corpus Christi, Texas on Dec. 27. We provided oil trajectory products and identified resources at risk to support the response.

During 2022, we provided scientific support for 148 new incidents, and continued support to several events that happened in previous years. Responses in 2022 included 122 oil spills, nine chemical spills, and 18 other incidents — such as severe storms, marine debris, and whale carcass drift requests. In total, staff prepared over 2,200 new incident reports and documents

While 2022 was not quite a record for us, it was certainly a busy year, especially with the continuing restrictions of COVID-19. Most of our responses are in the U.S., but we also provided support for a number of international incidents, including in Canada, Cuba, Peru, and Aruba. OR&R / <u>Continue reading</u>

PEOPLE IN THE NEWS

USA: BSEE NAMES NEW SOURCE CONTROL SUPPORT COORDINATOR



Photo courtesy of BSEE

January 5 - The Bureau of Safety and Environmental Enforcement announced today the selection of James Fletcher as BSEE's first Source Control Support (SCS) Coordinator.

Fletcher, a petroleum engineer with more than 12 years of experience at BSEE, will provide technical assistance and regulatory expertise regarding source control activities in the event of an oil spill on the Outer Continental Shelf.

BSEE / Read more

UAE NAMES OIL COMPANY CHIEF TO LEAD UN'S COP 28 CLIMATE TALKS

Photo courtesy of ADNOC

January 12 – Sultan al-Jaber, CEO of the Abu Dhabi National Oil Co, will preside over the next round of global climate talks in Dubai.

The United Arab Emirates has named a veteran technocrat who both leads Abu Dhabi's state-run oil company and oversees its renewable energy efforts to preside over the upcoming United Nations climate negotiations in Dubai.



Aljazeera / 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 50 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 <u>John.McMurtrie@spillcontrol.org</u>

BRIGGS MARINE CELEBRATES 50 YEARS OF NAVIGATING THE MARINE INDUSTRY



As Briggs Marine celebrates its 50th anniversary, the marine and environmental company looks at the highlights from the last 5 decades, reflects on its growth and provides an insight into what lies ahead.

The company, headquartered in Burntisland, Scotland, initially became involved in the marine industry in the 1970's when Robin Briggs established the company to provide workboats to assist with marine based construction works around Scotland's coast.

Fast forward 50 years and the landscape looks entirely different. Whilst Briggs Marine remains a family-owned business, the fleet now boasts over 30 vessels and the company's service offering encompasses port and vessel management, cable installation and repair, diving and salvage services, heavy moorings and Aids to Navigation (AtoN) management, as well as oil spill response services.

During the 1980's Briggs identified an opportunity in the Environmental Services market and by 1987 had invested in an oil spill response vessel and established "Briggs Environmental Services".

Oil Spill Response Services include:

Full Service, Tier 1,2 & 3 Marine Pollution Response Asset procurement, commissioning & maintenance Simulation and exercise management Global deployment logistics Land based pollution response Land and water remediation Hazardous and noxious substances containment and recovery Waste management Equipment hire Sorbent sales and after care

Consultancy Services include:

Environmental Sensitivity Mapping/ GIS Oil Pollution Emergency Plans Oil Spill Modelling Shoreline Protection Strategy Plans Stakeholder Consultation and Management

https://www.briggsmarine.com

SCIENCE & TECHNOLOGY

ICE MAKES OIL SPILLS HARDER TO DETECT, EASIER TO CONTAIN

January 9 - "People imagine that the risk is greater with a spill under ice, but there's actually a lot of cases in which it might be helped by ice," said Douglas Bessette, the lead author of a 2021 study in the Journal of Great Lakes Research that examined that problem.

There hasn't been much attention paid to oil's behavior in icy, freshwater conditions, so the study explored that, said Bessette.

It also surveyed the public to gauge its perception of risks posed by a petroleum pipeline that crosses under the Straits of Mackinac — a major shipping channel — located between the Upper and Lower peninsulas.

The ice can contain the oil, making for an easier cleanup — but it's harder to detect, the researchers said. The study was prompted when a freighter's anchor struck and dented the pipeline in 2018. The Mining Journal / <u>Read more</u>

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.

11. Emergence of hydrocarbon-degrading bacteria in crude oil-contaminated soil in a hyperarid ecosystem: Effect of phosphate addition and augmentation with nitrogen-fixing cyanobacteria on oil bioremediation

Nejidat, A., Meshulam, M., Diaz-Reck, D., Ronen, Z. (2023) International Biodeterioration and Biodegradation, 178, art. no. 105556, DOI: 10.1016/j.ibiod.2022.105556

ABSTRACT: Hyperarid hot deserts impose limiting conditions for microbial activity, thus delaying crude oil biodegradation resulting from accidental spills. This study examined the emergence of oil-degrading bacterial species in the soil of a hyperarid area in the southern Negev desert, Israel, which was exposed to a major oil spill. Amplicon sequencing of the 16S rRNA gene showed dominance of the phyla Proteobacteria and Actinobacteria in both contaminated and control soils. Significant differences were seen in the abundance of the phylum Firmicutes. Classes Actinobacteria, Gammaproteobacteria and Bacilli dominated the oil-contaminated soil. Bacterial species capable of degrading aromatic and aliphatic oil constituents were isolated from the contaminated soil. Contaminated soil microcosms were amended separately with nitrogen, phosphorus, or nitrogen-fixing cyanobacteria (NFC) biomass; the highest reduction in total petroleum hydrocarbons was observed in the phosphorus-supplemented soil. The abundance of alkB gene, encoding alkane monooxygenase, increased significantly in the control, NFC and phosphate treatments, but not in the nitrogen treatment. However, nahA abundance (coding for naphthalene dioxygenase) was only considerably increased with the phosphorus amendment. While nitrogen amendment via NFC bioaugmentation is a sustainable and novel biostimulation method, phosphorus amendment significantly accelerates the biodegradation of crude oil under extremely arid conditions.

12. Bitumen processing reduces diluent content of pipeline-transportable products and can mitigate impacts of spills into various water types

Hounjet, L.J., Xin, Q., McDonald, R. (2023) Fuel, 331, art. no. 125826, DOI: 10.1016/j.fuel.2022.125826

ABSTRACT: Diluted bitumen (DB) consists of viscous bitumen that is blended with light, hydrocarbon-based diluent, so that it can flow through transmission pipelines from production sites to upgraders and refineries. However, diluent usage incurs substantial expense and occupies pipeline capacity. To minimize diluent usage, bitumen "partial upgrading" processes are being developed to generate processed bitumen products (PBPs) that contain less diluent than DB while meeting pipeline transportation specifications. In this work, bitumen was subjected to six different partial upgrading processes, involving visbreaking and/or solvent deasphalting. Processed bitumen types were then blended with minimal diluent such that the resulting PBPs met specifications for density and viscosity. Bitumen that was visbroken then solvent deasphalted met these specifications without dilution. Diluent also contains acutely toxic, volatile, and water-soluble components that are released into the environment when DB is spilled. Although the aquatic behaviour of DB has recently been investigated in response to growing public concern, little is known about that of various PBPs, and such information is needed to help mitigate spill impacts. In response to this need, PBPs were independently mixed with

RECENT INTERESTING PEER-REVIEWED OIL SPILL PUBLICATIONS (CONTINUED)

fresh and salt waters in the presence and absence of fine-grained mineral sediment. The PBPs prepared by solvent deasphalting with a high pentane-to-feed ratio alone or after visbreaking formed relatively unstable floating water-in-oil emulsions. Conversely, PBPs prepared by visbreaking alone or after low-ratio solvent deasphalting produced highly stable emulsions having higher water contents. These results can inform recommendations and policies for transporting Canadian oil sands bitumen products, and the development of strategies to prevent, prepare for, and respond to their spillage based on product quality.

13. Forensic Analysis of Residual Oil along Abu Ali Island, Saudi Arabia

Michel, J., Nixon, Z., Cotsapas, L., Zengel, S., Weaver, J., Fravel, H., Bambach, P. (2022) Journal of Marine Science and Engineering, 10 (12), art. no. 1877, DOI: 10.3390/jmse10121877

ABSTRACT: Extensive asphalt pavements have persisted along >25 km (km) of shoreline on Abu Ali Island, on the Arabian (Persian) Gulf coast of Saudi Arabia, reportedly stranding as a result of the 1983–1985 Nowruz oil spills. A study was conducted in October 2020 to support development of a remediation plan. Cross-shore transects were surveyed at 100 m intervals and 1434 shovel test pits were dug to determine oil type, thickness, and depth of burial. Oiling of any description was observed at 76% of the pits. Using 15 diagnostic biomarker ratios, only 5 of the 94 oiled samples from Abu Ali Island in 2020 likely contain other oils. Data on historical spills were identified from the literature. Based on chemical biomarker data for potential source oils in the northern Arabian (Persian) Gulf, the diagnostic ratio for the biomarkers 18a-22,29,30-Trisnorneohopane (Ts) and 17a(H)-22,29,30-Trisnorhopane (Tm) for the 94 samples only matched one Iraq crude oil. No large individual spills of Iraq crude oil were identified in the literature or spill databases, although releases of both Kuwait and Iraq crudes were reported for the 1991 Gulf War oil spills. However, oil residues from Abu Ali did not match most prior samples of Saudi shoreline oiling from the Gulf War oil spills, which largely consisted of spilled Kuwait crude. Though we cannot definitely conclude that the majority of the residual oil on Abu Ali Island delineated during the 2020 survey is oil from the Nowruz oil spills, because there is no source oil from these spills, we use a weight of evidence approach to say that it is highly likely that the majority of the residual oiling is from the Nowruz spills.

14 The Effect of Accidental Spill of Diesel Fuel in Noril'sk on Hydrocarbon Concentrations and Composition in Bottom Sediments

Nemirovskaya, I.A., Glyaznetsova, Y.S. (2022) Water Resources, 49 (6), pp. 1027-1039. DOI: 10.1134/S0097807822060100

ABSTRACT: Abstract: Studying bottom sediments of the Norilsk–Pyasina water system (July 29–August 13, 2020) showed that water pollution caused by an accidental spill at HPP-3 PJSC "MMC "Norilsk Nickel" on May 29, 2020, had propagated downstream the river over 31 km and had not reached Lake Pyasino and, the more so, the Kara Sea. The mean concentration of aliphatic hydrocarbons in sediments decreased in the series, $\mu g/g$: the mouth of the Ambarnaya R. (1914, σ = 3428) > the Bezymyannyi Cr.–the Daldykan R.– the Ambarnaya R. (1000, σ = 1351) > the Pyasina R. (27, σ = 17) > Lake Pyasino (15, σ = 6). The composition of aliphatic hydrocarbons in bottom sediments did not correspond to the hydrocarbon composition of diesel fuel even in the most heavily polluted regions because of transformations of alkanes. The concentrations of polycyclic aromatic hydrocarbons also rapidly decreased with the distance from the pollution source (from 3865 to 56 ng/g). At the same time, naphthalene (indicator of petroleum origin of hydrocarbons) accounted for 46–53% of the total. Naphthalene dominated in precipitation not only in the Ambarnaya and Daldykan rivers, but also the Norilka R. and the mouth of the Pyasina R., which may be due to other sources of soil pollution (erosion of coastal deposits, spent barrels of petroleum, oil, and lubricants, water transport, etc).

15. Temporal chemical composition changes in water below a crude oil slick irradiated with natural sunlight,

Roman-Hubers, A.T., Aeppli, C., Dodds, J.N., Baker, E.S., McFarlin, K.M., Letinski, D.J., Zhao, L., Mitchell, D.A., Parkerton, T.F., Prince, R.C., Nedwed, T., Rusyn, I. (2022) Marine Pollution Bulletin, 185, art. no. 114360, DOI: 10.1016/j.marpolbul.2022.11436

ABSTRACT: Photooxidation can alter the environmental fate and effects of spilled oil. To better understand this process, oil slicks were generated on seawater mesocosms and exposed to sunlight for 8 days. The molecular composition of seawater under irradiated and non-irradiated oil slicks was characterized using ion mobility spectrometry-mass spectrometry and polyaromatic hydrocarbons analyses. Biomimetic extraction was performed to quantify neutral and ionized constituents. Results show that seawater underneath irradiated oil showed significantly higher amounts of hydrocarbons with oxygen- and sulfur-containing by-products peaking by day 4–6; however, concentrations of dissolved organic carbon were similar. Biomimetic extraction indicated toxic units in irradiated mesocosms increased, mainly due to ionized components, but remained <1, suggesting limited potential for ecotoxicity. Because the experimental design mimicked important aspects of natural conditions (freshly collected seawater, natural sunlight, and relevant oil thickness and concentrations), this study improves our understanding of the effects of photooxidation during a marine oil spill.

16. Diclidophora merlangi (Kuhn, 1829) Krøyer, 1838 (Monogenea: Diclidophoridae) as an indicator of hydrocarbon pollution in the North Sea

Sue, H., MacKenzie, K., Ives, S.C., Pert, C.C., Jones, C.S (2022) Marine Pollution Bulletin, 185, art. no. 114268, DOI: 10.1016/j.marpolbul.2022.114268

ABSTRACT: This study presents the results of analyses of data on infections of 2646 whiting Merlangius merlangus with the monogenean Diclidophora merlangi. All fish were caught in the North Sea and off the north coast of Scotland in 1990, 1993 and 1995. The aims were to analyse these data in relation to the locations of whiting sampling stations and oil installations active at that time, and to evaluate the results in terms of D. merlangi as an indicator of hydrocarbon pollution. Mean abundance of D. merlangi increased significantly with increasing proximity to the nearest oil field, with an accelerated rate of increase within approximately 2 km of the oil field. Age of oil field and whiting length showed no significant effect on parasite abundance, but there was a small difference between years. The results support those of previous studies in demonstrating the value of monogeneans as indicators of hydrocarbon pollution.

17. Human influence on bottlenose dolphin (Tursiops truncatus) strandings in the northern Gulf of Mexico

Carmichael, R.H., Hodanbosi, M.R., Russell, M.L., Wingers, N.L. (2022) Frontiers in Environmental Science, 10, art. no. 951329, . DOI: 10.3389/fenvs.2022.951329

ABSTRACT: Human activity affects marine mammal stranding rates in two major ways; through human interaction (HI) that may lead to mortality and through search and response efforts that enable carcass detection. To better quantify the combined effects of these interacting human influences, we analyzed strandings for bottlenose dolphins (Tursiops truncatus) in the northern Gulf of Mexico (nGOM), an area of high cetacean strandings. To identify hotspots of human influence, we first determined the number of total and HI-related bottlenose dolphin strandings normalized to shoreline length in each nGOM U.S. state, which represent major response areas. To estimate the effects of response effort on stranding numbers (for HI and non-HI strandings), we used the Deepwater Horizon oil spill (DWHOS) as an established benchmark to compare periods of lower (pre-spill) and higher (post-spill) response effort. Strandings in Alabama waters were used as a case study to detail spatial and temporal variation due to human influences during the 39-year period of retrospective study. We found an increase in strandings from Louisiana through Alabama following the DWHOS. Non-oil related HI strandings increased in total number in AL, and they increased as a proportion of total strandings in Alabama (16%) and the Florida panhandle (12%). The increase in HI-related strandings in Alabama was driven by mortality of many types, but particularly fishery interactions and cases of apparent intentional harm. The Alabama case study clearly detected lower stranding numbers during periods of low or intermittent response coverage. Our findings are consistent with an overall increase in stranding numbers due to a combination of increased stranding occurrence and response effort following the DWHOS. Importantly, we provide evidence that HI-related standings increased independently from the DWHOS, with ongoing increases in at least one hotspot (Alabama). These findings provide a first step to parsing out different effects of human influences on stranding data for a common coastal cetacean. Our approach establishes baselines for future damage and recovery assessments, identifies areas where resources can be focused for management and education, and highlights the power of response and monitoring agencies to positively influence stranding datasets.

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

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

CERTIFICATE IN MARITIME ENVIRONMENTAL MANAGEMENT – LLOYD'S MARITIME ACADEMY

Understand environmental issues and related management matters in the maritime sector

TRAINING COURSES (CONTINUED)

Course commences 25th January 2023 | (VIP CODE: TT01) <u>Click here for course content</u> | <u>Click here for Fee information</u> | <u>Click here to view course homepage</u> <u>Click here to apply - £ GBP</u> | <u>Click here to apply - \$ USD</u>

CERTIFICATE IN MARINE POLLUTION & MANAGEMENT – LLOYD'S MARITIME ACADEMY

Online, 12 weeks, Starts 15th March 2023 Visit website for more info

CERTIFICATE IN ALTERNATIVE FUELS – LLOYDS MARITIME ACADEMY

Online, Starting 25 April 2023 Delivered by digital learning over 14 weeks. Visit website for more info

UPCOMING EVENTS

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

To see <u>ALL</u> 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 <u>John.mcmurtrie@spillcontrol.org</u>

NEWLY ADDED TO THE UPCOMING EVENTS PAGE

• UK & Ireland Spill Association Webinar: Assessment of the Environmental & Health Risks associated with Macro and Micro Plastic to assistin clean-up end point determination, 18th January, 1500 GMT

RECENTLY ADDED TO THE UPCOMING EVENTS PAGE

- Tiered Preparedness & Response (TPR) Seminar Series, "Subsea Response Readiness", Thur. 18th January, 1400 GMT, Andy Myers (60 min.)
- Tiered Preparedness & Response (TPR) Seminar Series, "Bridging Response to Research", Tues. 24th January, 1400 GMT, Rob Holland & Rhea Shears, (60 min.)
- Webinar from ALGA Consultation on Validation of PFAS Soil Treatment Technologies, 19th January 2023
- Canada 45th Technical Seminar on Environmental Contamination & Response, Edmonton, Alberta, 4-6 June, 2023
- Norway NOSCA Seminar 2023, Bodo, Norway, 20-24 March, 2023
- USA Clean Waterways Conference & Exhibition, Denver CO, 11-13 April 2023
- European Maritime Day, Brest, France, 24-25 May, 2023
- UK: Hazmat 2023 Conference, 24-25 May 2023
 - Australia SPILLCON 2023 Conference & Exhibition, 11-15 September 2023

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

MESSAGES FROM EVENT ORGANISERS

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

NOSCA will arrange the next NOSCA Seminar in week 12/23 (20-24.03.23) in Bodø/Norway. The seminar will focus on following topics:

- Early warning, remote sensing technologies
- Subsea dispersion
- Experiences from recent incidents

- Technology transfer: From traditional oil spill prevention to combat marine litter
- Observation of OKEA's large scale exercise "Draugen"

• Standardization project

Price: NOK 16.500 incl. hotel accommodations and all local transports. Please register by Dec 31, 2022 by using the link below (payment by Paypal) or send an email to <u>info@nosca.no</u> Our main topic will be "Tomorrow's challenges and solutions within oil spill response". Beside of two conference days, the seminar participants will be able to observe the large scale exercise "D1H" which will be carried out by NOFO and OKEA. For more information and registration please read <u>https://www.nosca.no/nosca.seminar/</u>

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

Clean Waterway takes place at the Hilton Denver City Center Hotel in Denver, CO, on April 11-13. <u>More News re conference & abstract submission</u> <u>Registration</u> <u>Introduction to the Planning Committee</u> <u>EXHIBIT SPACE AND SPONSORSHIPS ARE AVAILABLE Agenda.</u>

CROATIA: ADRIASPILLCON 2023, OPATIJA, 16th - 18th MAY, 2023

ADRIASPILLCON 2023 will be held in Opatija, Croatia, between 16 and 18 May 2023 and is being organized by ATRAC - Adriatic training end education centre for accidental marine pollution preparedness and response, with the support of the Ministry of Maritime Affairs, Transport and Infrastructure. The Conference website is currently being finalized. Among the organizations that support the Conference (i.e. IMO, REMPEC, EMSA, IOPCF, ITOPF, CEDRE, etc.). Watch this space for more information.

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 / <u>Seminar Information</u>

AUSTRALIA: BRISBANE - SPILLCON 2023: 11-15 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/

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 <u>CLEAN GULF</u> <u>Conference & Exhibition</u>. 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. With the end of the year quickly approaching, now is a great time to use any leftover marketing funds and invest in your business for 2023! Contact Renie Mayfield at 720-289-7008 or <u>rmayfield@accessintel.com</u> to secure your exhibit space or sponsorship.

USA: IOSC 2024 CALL FOR PAPERS AND POSTERS REMINDER

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.

Click on <u>https://ssl.linklings.net/conferences/IOSC/</u> to visit the submission site. Then, select the "Create an Account" tab at the top of the page to begin your submission. All submissions are due April 24, 2023.

CONTRACTS, TENDERS AND BUSINESS OPPORTUNITIES

INTERNATIONAL OPEN TENDER NOTIFICATIONS

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

OTHER OPPORTUNITIES: USA & EUROPE

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

JOB VACANCY

USA: DIRECTOR, NATIONAL SPILL CONTROL SCHOOL

TAMU-CC is a dynamic university designated as both a Hispanic-Serving Institution (HSI) and Minority-Serving Institution (MSI) with approximately 11,000 students from 47 states and 54 foreign nations. We employ over 1,400 full-time and 2,000 part-time Islanders

JOB VACANCY (CONTINUED)

(including students/GAs). The University attracts highly talented faculty and staff and offers an array of undergraduate and graduate degrees, including doctoral programs. As a member of the Texas A&M University System, TAMU-CC benefits from a range of resources, increased visibility and influence, and opportunities to collaborate in mutually beneficial ways with peers across member institutions and associated agencies.

TAMU-CC's beautiful campus is located on a 240 acre island on Corpus Christi Bay and was ranked #1 College by the Sea by Best College Reviews. Our natural setting is enhanced by its modern, attractive, and state-of-the-art classroom buildings and support facilities. From our generous benefits package and professional development opportunities, to our retirement programs and our commitment to service excellence, the Island University is an engaging and rewarding place to work.

For more information and details on how to apply, please visit -

https://tamus.wd1.myworkdayjobs.com/en-US/TAMUCC External/job/Corpus-Christi-TX/Director--National-Spill-Control-School R-056071

LINKS FOR DOWNLOADING AND READING 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 Menbers ISCO provides a listing of publications that may be of interest to our community. This page provides details and links for downloading more than 40 publications most of which can be accessed at no cost. ISCO depends on regular receipt of updated URL links for listed publications. If these are not received, relevant entries will be discontinued.

INCIDENT REPORTS

USA: KANSAS - UPDATES ON KEYSTONE OIL SPILL

January 10 - EPA, pipeline operator reach deal to clean up Kansas spill



Above : Keystone Pipeline oil spill clean-up efforts at Milepost 14 in Washington, County, Kansas on December 30, 2023. Photo courtesy of TC Energy

The Environmental Protection Agency announced Monday that it has reached an agreement with a pipeline operator to clean up a spill that dumped 14,000 bathtubs' worth of crude oil into a rural Kansas creek. KWCH / <u>Read more</u>

INCIDENT REPORTS (CONTINUED)

January 11 - Testing shows decreased contaminants in Mill Creek following Keystone spill

The Kansas Department of Health and Environment (KDHE) on Wednesday announced results from the recent water testing on Mill Creek show a decrease in the concentration of contaminants. Additionally, a downward trend in contaminants on the Little Blue River was discovered. KWCH / Read more

INDIA: BOXSHIP TAKES ON SEVERE LIST AT MUNDRA PORT, DUMPING CARGO OVERBOARD

Photo courtsy of Prevailing Shipping & Logistics India

January 8 - On Saturday, a container feeder listed hard over at a pier at Mundra International Container Terminal, dropping a substantial quantity of cargo over the side.

During cargo operations, the vessel Sea Xpress listed hard over to port, dumping about 20 containers into the water.

Broker Prevailing Shipping & Logistics India reported that the incident was likely caused by improper ballasting and the outboard orientation of the vessel's cranes. The Maritime Executive / <u>Read more</u>



AUSTRALIA : VICTORIA - ELWOOD AND ST KILDA BEACHES CLOSE AFTER AFTER OIL SPILL

January 9 - Beachgoers are being urged to stay out of the water in Melbourne after vegetable oil polluted two major beaches. Perth Now / <u>Read more</u>

January 9 - The following morning, EPA Victoria shared the results of samples taken from the water, which revealed that the spill was simply vegetable oil, most of which was palm oil. The harvesting of palm oil is known to be rather environmentally destructive compared to other vegetable oils, and has made the palm oil industry a controversial one. Green Matters / Read more

SOUTH CHINA SEA: CARGO SHIP DISAPPEARED IN SOUTH CHINA SEA, EPIRB FOUND

January 9 - Cargo ship DAI CAT 06 on Jan 9 is reported missing in South China sea, no communications during last 10 days. Last AIS position is dated Jan 3, South China sea, 120 nm NE of Singapore. Ship's Emergency Position Indicator Radio Beacon (EPIRB) was found some 30 nm NW of Pemangkat, Indonesia, Borneo, in the evening Jan 8.

The ship with 5 crew and cargo of iron rods was en route from Lumut Malaysia, to Kuching, Borneo, Malaysia. Malaysian authorities search for disappeared ship's traces, alarming all ships in the area. Maritime Bulletin / www.maritimebulletin.net

JAPAN: DESTROYER DISABLED AND LEAKING OIL AFTER HITTING ROCK



Photo courtesy of US Navy

January 10 - One of Japan's Murasame-class destroyers, the JS Inazuma, hit a rock while on sea trials off the coast of Japan disabling the ship and causing an oil spill. Reports are that the vessel is unable to move but that none of the sailors aboard were injured or are in any immediate danger. The Maritime Executive / Read more

CHINA: VIDEO: EXPLOSION BREAKS CHINESE TANKER IN TWO

January 12 - Chinese media is carrying a video of a search and rescue

operation off the northern coast that is getting wide play on social media. The domestic tanker was torn apart by an explosion splitting the vessel in two just forward of the accommodation block. SAR officials are reporting that two crew members are missing but that 15 were successfully evacuated from the ship.

Local media reports are indicating that a fire of unknown origin broke out aboard the 10,500 dwt tanker named Hong Pu 6. The tanker, which was 394 feet long was sailing with only ballast between, which could mean the cargo tanks could have contained toxic, highly explosive vapors that could have been the cause of the explosion. The Maritime Executive / Read more

NEW ZEALAND: OIL SPILL AT SOUTH CANTERBURY BEACH BEING INVESTIGATED

January 12 - It was estimated 10 to 20 litres of oil was discharged from a stormwater outlet at Pātītī Point early on Wednesday afternoon. ECan southern zone lead Gina Slee said the regional council launched an immediate response. Star News / <u>Read more</u>

PERU BEACHES REMAIN CLOSED OFF A YEAR AFTER REPSOL OIL SPILL

January 14 - A stretch of beaches to the north of Peru's capital Lima remain closed off to the public while the local fishing port is functioning at half throttle due to a drop in fish numbers a year after a crude oil spill from a refinery operated by Spanish company Repsol. The spill on January 15, 2022, sent 11,900 barrels of oil into the waters of the coast of Ancón and the effects are still felt to this day. La Prensa Latina / Read more

CANADA: ONTARIO - CLEANUP CONTINUES FOLLOWING 'SPILL' NEAR SEAFORTH

January 14 - The cleanup continues following a "mineral oil" spill from a Hydro One substation near Seaforth, earlier this month. Hydro One says a "transformer failure" caused an amount of "mineral oil" to be released into the environment. Exactly how much leaked during the spill, has not be released by Hydro One. CTV News / <u>Read more</u>

INFORMATION FOR ISCO MEMBERS

ABOUT THE ISCO COUNCIL

According to the ISCO Constitution "The ISCO Council is composed of the appointed National Representatives of each country in which there are Members of ISCO. The ISCO Council acts as an advisory and consultative body, assisting the Executive Committee on policy, new initiatives and other matters. Each Member of Council is the primary point of contact between the Membership in the country (or region) represented and the Executive Committee.

The Executive Committee also looks to Members of Council for support in facilitating communications between ISCO and government ministries or agencies, and other national authorities, institutions or bodies in the countries (or regions) represented. Members of Council are expected to promote ISCO's objectives and to encourage growth of ISCO Membership in their countries".

Most Members of ISCO Council have full time occupations and are able to give only a very restricted amount of their time in support of the organisation. Because of this, Council Members are limited in what they can do to help but ISCO owes a big debt of gratitude to its Members of Council for their continuing support.

With ISCO's dependence on membership fees for its funding, recruitment of members is particularly important. Members of the ISCO Committee, ISCO Council and other ISCO Members have all helped in this effort. Over the years individual Members of ISCO Council have helped the organisation in many ways –

- Making recommendations to the Executive Committee on policy and other matters
- Giving practical support to ISCO initiatives that are of benefit to our community
- Acting as a point of contact between ISCO and national authorities
- Organising "in-country" meetings of members
- Helping to grow the organisation by recruiting new members
- Publicising the aims and work of ISCO at national conferences
- Providing member benefits such as discounts on training courses, conference fees, etc.
- Supporting ISCO representation at in-country exhibitions, conferences and forums.
- Representing the organisation at international conferences, IMO and other meetings.
- Contributing to working groups (ISCO, IMO, and others) on projects for improving spill response
- Providing technical articles, case histories, etc. for publication in the ISCO Newsletter
- Sending interesting news reports for inclusion in the ISCO Newsletter

Legal disclaimer: Whilst ISCO takes every care to ensure that information published in this newsletter is accurate unintentional mistakes can occur. No liability for consequences of errors is accepted but, if an error is brought to our attention, a correction will be printed in a following issue of this newsletter. Products and services featured in the ISCO Newsletter and/or the ISCO website, including the International Directory of Spill Response Supplies and Services, have not been tested, approved or endorsed by ISCO. Any claims made by suppliers of products or services are solely those of the suppliers and ISCO does not accept any liability for their accuracy. It should not be assumed that views and opinions expressed in linked reports, articles and other content reflect the views of the organization. Subscription is subject to acceptance of ISCO's Terms and Conditions as published on the website www.spillcontrol.org and your acceptance of ISCO's Data Protection and Privacy Policy.