

#### ISCO & THE ISCO NEWSLETTER

The International Spill Control Organization, a not-forprofit 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 Organisationand observerStatus at International Oil Pollution Compensation Funds

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#### **INTERNATIONAL NEWS**

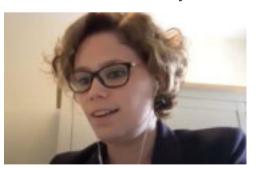
### 5<sup>TH</sup>SESSION OF THE UNITED NATIONS **ENVIRONMENT ASSEMBLY**

22-26 FEBRUARY 2021, NAIROBI, KENYA-Theme: Strengthening Actions for Nature to Achieve the Sustainable Development Goals. UN Environment / Read more

## NORTHAMERICA RAMPS UP **COLLABORATION TO SUPPORT** SUSTAINABLE DEVELOPMENT GOALS

January 27 - In partnership with MIT Solve, the World Environment Center, and the United Nations Associations in Canada and the United States, UNEP North America convened over 400 North American stakeholders across the Major Groups to explore how nature can be used to help tackle the simultaneous crises of climate change and biodiversity loss. The consultations involved diverse stakeholders, including NGOs, the private and public sector, governments, and youth. They ran from May to October 2020. Results of the consultations are captured in the report Strengthening Actions for Nature in North America: Regional Inputs for UNEA-5. UNEP / Read more

### WOMEN ENGINEERS WORK TO RESTORE THESOIL, WATER, AND SKIES



In the picture: Dr. LaPat-Polasko

January 26-In climate crisis lies the opportunity to heal our damaged environment. Women in bioremediation, civil, and aerospace engineering are up to the challenge, and sparking a new generation's sense of wonder and engagement in what happens next.

Many years ago, a young marine biologist wrote a letter to famed explorer, ocean conservationist, and Renaissance person Jacques Cousteau, asking if she might study with him. He said yes, and she spent a life-changing four months studying the effects of pollution on marine life in the Mediterranean Sea.

Since then, Laurie LaPat-Polasko, Ph.D., has branched into civil and environmental engineering, microbiology, and genetic engineering and has traveled the world, developing sustainable ways to clean up water and soil through microbial bioremediation. Currently vice president and national director of bioremediation for Matrix New World Engineering, she sees the sheer scope of the damage caused by

#### **MEMBERSHIP OF ISCO**

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Online Membership Application Form

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<u>About Professional Membership</u> Professional–membership application form

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#### **INTERNATIONAL NEWS** (CONTINUED)

chemical pollution — and offers hope and action to address it.

"To get microbes to biodegrade a contaminant, we need to understand what's critical to their environment that will let them perform certain metabolic reactions," Dr. LaPat-Polasko said. "Biochemistry and enzymes decide whether something can be biodegraded. But a lot of contaminated sites lack some of the major nutrients that allow bacteria to biodegrade substances. Just like we need nitrogen and phosphorus to make our ATP enzymes, bacteria need the same key nutrients.

"Now we have the tools to find very specific microbes that we know have the enzyme that biodegrades a certain contaminant, be it plastics or something else, and then we can look for that gene. So when we have the gene and the enzyme that codes it, we can take samples and see if that gene is present in the soil population."

Dr. LaPat-Polaskopointed out the exponential growth of knowledge in the decades since her early experience with the ExxonValdez oil spill. "It's just like how DNA research and CRISPR revolutionized genetics," she said. "Now we can actually engineer microbes to make them work faster and better. SWE / Read more

## EAST ASIAN SEAS -NATIONAL STATE OF OCEANS AND COASTS (SOC) REPORTS NOW AVAILABLE

January 18-To complement the actions of the High Level Panel for a Sustainable Ocean Economy, PEMSEA is pleased to announce that its National State of Oceans and Coasts (SOC) Reports are now available for downloading.

The SOC Reports show that the East Asian Seas region has made great progress in promoting sustainable and inclusive ocean economy, particularly in valuing ocean assets, defining blue economy (see the ChangwonDeclaration), protecting ocean health, addressing the ocean-climate nexus, improving ocean governance, and harnessing ocean finance, ocean science and innovative technologies.

The relevant documents can be accessed below -

National State of Oceans and Coast Reports The SOCReports showthat the East Asian Seas region has made great progress in promoting sustainable and inclusive ocean economy, particularly in valuing ocean assets, defining blue economy (see the ChangwonDeclaration), protecting ocean health,

addressing the ocean-climate nexus, improving ocean governance, and harnessing ocean finance, ocean science and innovative technologies.

Cambodia Indonesia

RO Korea

• •

Singapore Thailand

Timor-Leste

**Philippines** 

The Reports also present key developments in emerging industries and innovations that see the EAS region transition away from a conventional economy in the ocean to a sustainable, inclusive and resilient blue economy. As a valuable monitoring tool, the SOC Reports recognize the efforts made by countries at the regional and national levels to assess and manage their coastal and ocean resources, and advocates partners and collaborators to periodically update the data, link the findings with their blue economy initiatives, as well as share the lessons learned in developing the SOCs through interagency and multisectoral processes. PEMSEA / Read more

# FURTHER DELAYS FOR UN INSPECTION OF DECAYING FSO OFF WAR-TORNYEMEN

January 28-The long-delayed UN Mission to inspect and begin the work of stabilizing an abandoned FSO sitting off the coast of Yemen has yet again been delayed with the UN expressing more concern that they might miss the opportunity to address what they have called "a ticking time bomb."

UN spokesman Stephane Dujarric told reporters during his daily briefing on January 27 the that UN had encountered some delays beyond their control due to "international shipping." While those issues have now been resolved, other logistic concerns remain. They are continuing discussions with the Houthi factions that control the area of Yemen near the Ras Issa oil terminal. The FSO Safer is anchored off the west coast of Yemen in the Red Sea. The Maritime Executive / Read more

#### NEWS REPORTS FROM AROUND THE WORLD

# CANADA: ONLINE TRAINING ON MARITIME EMERGENCY RESPONSE, ORGANISED BY THE GOVERNMENT OF QUEBEC

January 29 – At the invitation of the Ministère de l'Environnement et de la Lutte contre les changements climatiques, Government of Quebec, Canada, the IOPC Funds participated, in collaboration with twelve other organisations, in a two-week online training event on maritime emergency response.

Ana Cuesta, Claims Manager, provided an introduction to the legal framework of the international liability and compensation regime for oil pollution damage and Chrystelle Collier, Claims Administrator, presented on the practical aspects of claims for compensation.

The online training took place between 18-29 January 2021 and was attended by 75 environmental emergency agents from the Ministry of the Environment. IOPC Funds / Read more

# CANADA: GOVERNMENT OF CANADA PARTNERING WITH LENNOX ISLAND FIRST NATION TO ENHANCE MARINE SAFETY IN PRINCE EDWARD ISLAND

January 29 – Through the Oceans Protection Plan, the Government of Canada is working in partnership with Indigenous coastal communities to improve marine safety and responsible shipping to protect Canada's marine environment.

As part of this \$1.5 billion plan, in 2017the Canadian Coast Guard launched the Indigenous CommunityBoat Volunteer Pilot Program. Under this program, communities are provided with funding to purchase boats and equipment to enhance their marine safety capacity as members of the Canadian Coast Guard Auxiliary.

Today, the Minister of Fisheries, Oceans and the Canadian Coast Guard, the Honourable Bernadette Jordan, announced that a new search and rescue boat for LennoxIsland First Nation on Prince Edward Island has been received. The Canadian Coast Guard provided \$209,190 for the purchase of the boat and related equipment. Through new equipment and training, Canadian Coast Guard Auxiliary members are better equipped and prepared to respond to marine emergencies, helping to enhance the safety of their communities and the surrounding waters and coasts. Canadian Coast Guard / Read more

#### CROATIA: TRAINING COURSE "BASICS OF ACCIDENTALMARINE POLLUTION"

January 25 – On January 21–22.2021, ATRAChelda two-daytraining course "Accidental Marine Pollution", which is in line with the 1st level of the IMO OPRC course model. The course was attended by twelve employees responsible for field cleaning operations from the companies "Dezinsekcija d.o.o." from Rijeka and "Ciklon d.o.o." from Zadar, two of the leading companies for the protection of the sea and the marine environment.

Participants were given insight into the behavior and properties of spilled oil at sea, the impact of pollution on the environment and the economy, the steps of the initial intervention, health and safety at the site, and response methods and specialized equipment used to remove pollution. ATRAC/ Read more

## INDONESIA: BALI'S BEACHES BURIED IN TIDE OF PLASTICRUBBISH DURING MONSOON SEASON



January 5 – Bali's famous beaches are being strewn by plastic rubbish in what experts say is becoming an annual event thanks to monsoon weather, poor waste management and a global marine pollution crisis.

Authorities are strugglingto keep up with the tide of rubbish washing up on beaches at Kuta, Legian and Seminyak, where about 90 tonnes of rubbish was collected on Friday and Saturday.

Wayan Puja, from the Badung area's environment and sanitation agency, said: "We have been working really hard to clean up the beaches, however the trash keeps coming. Every day we deploy our personnel, trucks and loaders." The Guardian / Read more

### INDONESIA: MICROPLASTICS POLLUTERIVERS ON JAVA ISLAND

January 21-The high concentration of microplastics detected in the Bengawan Solo and Brantas rivers on Indonesia's Java Island is

not only affecting the aquatic life but poses threat to human health as well, according to the Ecological Observation and Wetlands Conservation (Ecoton) study.

Bordered by the Indian Ocean on the south and the Java Sea on the north, with a population of over 141 million, Java constitutes 56.7% of the Indonesian population and makes it the world's most populous island.

The Ecoton research team took water samples from seven locations in Bengawan Solo River, representing the upstream, middle, and downstream segments from August–October2020. After testing them, the research team found the microplastics contamination in the upstream part of Ngawi regency at 76 particles per 100 liters. The quantity of microplastic pollutants increased in the downstream area and was found 115–119 particles per 100 liters in the north coast of East Java province. Yeni Safak / Read more

## NIGERIA: DUTCH COURT ORDERS SHELL NIGERIA TO PAY DAMAGES FROM OIL PIPFI INF I FAKS

January 29 – A Dutch court has ordered Royal Dutch Shell Plc's Nigerian unit to compensate for oil spills in two villages over 13 years ago. Shell Nigeria is liable for damages from pipeline leaks in the villages of Oruma and Goi, the Hague Court of Appeals said in a ruling Friday. The amount of compensation will be decided later. The court also ordered the Nigerian unit and its Hague-headquartered parent company to build better warning systems so future leaks can be quickly detected.

"We continue to believe that the spills in Oruma and Goi were the result of sabotage. We are therefore disappointed that this court has made a different finding on the cause of these spills and in its finding that" Shell's Nigeria unit is liable, Shell said in a statement. Insurance Journal / Read more

# POLAND: GERMAN WWII SHIPWRECKS OFF POLISH COASTPOSE FINIRONMENTAL THREAT

January 29 – WWII German shipwrecks lying off the Polish coast pose an environmental threat, the German Foreign Ministry has told the Polish Press Agency (PAP), but removing them risks the "spontaneous release of hazardous material."

At least 100wrecks have been classified by Poland's Mare Foundation, an organisation established to protect marine ecosystems in the Baltic, as a "high priority" because they contain significant amounts of fuel that poses a threat to the natural environment.

One vessel of particular concern is the Franken. The ship went down with 2,700 tonnes of oil, plus its own fuel, after being attacked by Soviet aircraft in 1945. Most of the ship's storage tanks are believed to be intact. If the tanks were ruptured during a salvage operation, hundreds of tonnes of oil could spill out, potentially contaminating water and beaches in the vicinity of Gdańsk Bay. Poland In / Read more

# SOUTH AFRICA: HARMFUL PLASTIC NURDLES FIND PRIDE OF PLACE IN BUILDING INDUSTRY



January 28 – A silver lining has emerged from an environmental disaster that struck Cape Town last year when a ship lost a container with a massive consignment of tiny plastic pellets.

The Centre for Regenerative Design and Collaboration decided the pellets, known as nurdles, which have beached along parts of SA's coastline, must not end up in landfill sites.

Instead the centre has introduced another solution to the excessive amounts of nurdles being found along oceans and rivers: turning them into building material called RESIN8. CRDCCEO Brett Jordaan said: "It is very important that people know the extent of this spill, which is massive.

"It is estimated that up to 174 metric tons of nurdles

were spilt. That will release millions and millions of these plastic pellets onto our shorelines for years to come. They are all over our beaches every day. It is worse than an oil spill and a massive environmental disaster." Times Live / Read more

### USA: BIDEN TAKES DAY ONE ACTION TO PROTECTARCTIC LANDS AND WATERS

January 22 – Just hours after being swom into office, President Biden took a number of monumental actions to protect public lands, address the climate crisis and combat systemic racism, including an executive order that places a moratorium on all oil and gas activity in the Arctic National Wildlife Refuge.



Photo: The Hulahula River runs from Alaska's Brooks Range to the cArctic Refuge's coastal plain, which is the calving ground of the Porcupine Caribou Herd.

Biden's action was met with great enthusiasm, particularly by many Gwich'in and Iñupiat peoples who have depended on and protected the refuge for thousands of years and rely on the caribou and other resources in the refuge to sustain their communities and cultures.

The executive order also reinstated President Obama's withdrawal of most of the Arctic Ocean and parts of the Bering Sea from oil and gas drilling—an order that had been reversed by the Trump administration. Protecting offshore areas from the threat of a major oil spill benefits not only marine species such as fish, seals and bowhead whales, but the coastlines of sensitive lands like the Arctic Refuge, too. Wilderness / Read more

#### **USA: BIDEN WANTS TO TRIPLE PROTECTEDLANDS**

January 28 – Biden took the next leap in pursuing his climate agenda Wednesday, signing the latest in a spate of environment-focused executive orders. One of the most ambitious goals buried in the order he put forward is to conserve nearly a third of US land and ocean waters by 2030.

Currently, only 12 percent of the country's land and 26 percent of its oceans are protected, according to a **2018report** by the Center for American Progress. This was achieved by **slowly expanding** protected areas over the past few decades — until former President Trumptook office. In his first year, his administration dramatically shrank two Utah monuments, Bears Ears and Grand Staircase—Escalante — the largest removal of federal land from protection in US history, according to the **New York Times**. Now the Biden administration will have to quickly reverse course to meet the new goal. Vox / Read more

# USA: GEORGIA -PHOTOS: SALVORS BEGIN THIRD CUTTHROUGH THE HULL OF THE GOLDEN RAY

January 28 – On Wednesday, salvors began the third cut through the hull of the grounded ro/ro Golden Ray in St. Simpons Sound, Georgia. The plan calls for separating the ship into eight sections, using a heavy stud-linkanchor chain to cut transversely through the vessel and its automotive cargo.

The third cut will pass through the vessel's engine room and may have a heightened risk of petroleum release. In a months-long effort before the operation, the salvage team installed an environmental protection barrier around the work site to contain as much oil and debris from the vessel as possible. A small flotilla of chartered spill response boats are on hand to clean up oil within the barrier and any that might escape. The Maritime Executive / Read more

# USA: PHILADELPHIA -IN A REFINERY'S ASHES, HOPE FOR AN END TO DECADES OF POLLUTION

January 28 – From the Passyunk Avenue Bridge in South Philadelphia, the view to the southeast is dominated by a massive oil refinery that once produced more petroleum products than any other on the U.S. East Coast. But the complex is now permanently closed because of a catastrophic explosion and fire in June 2019, and the subsequent bankruptcy of its former owner, Philadelphia Energy Solutions. This vast tangle of pipes, tanks, and smokestacks forms a bleak industrial landscape

on some 1,300 acres adjoining tightly packed residential neighborhoods only three miles from downtown Philadelphia.

The refinery, which began operating in 1870,was notorious as the largest single source of air pollution in the city, and for years it was blamed by nearby residents — many of them Black and poor — for high rates of asthma and cancer. They have also accused successive owners of excluding them from decisions that could affect their lives, and of providing few jobs to the surrounding community — important concerns for environmental justice, which seeks to ensure that low–incomeand minority communities are not subjected to environmental conditions like poor air quality.

Now that the site has been purchased by a developer that plans to turn it into a giant logistics center rather than restarting a refinery, residents of the so-called fence-line communities — including Grays Ferry, Point Breeze, and Eastwick — are cautiously welcoming the sale as the chance to clean up a notorious source of pollution and build a more positive relationship with their industrial neighbor. Yale Environment 360 / Read more

#### USA: MINNESOTA -DULUTH SEDIMENT CLEANUP DEAL INKED

January 28 – The U.S. EPA and Minnesota Pollution Control Agency have signed a \$16 million project agreement to remediate contaminated sediment in the "ponds behind Erie Pier," two backwater ponds surrounded by shallow marsh wetlands in Duluth, Minnesota.

The project will remediate approximately 45,000cubic yards of contaminated sediment in the two ponds, located near the Duluth–Superior Harbor in the St. Louis River Area of Concern (AOC).

The sediment is primarily contaminated with PCBs, PAHs, mercury and chromium. The remediation project will consist of dredgingall contaminated sediment in the project area, temporarily storing and dewatering the sediments on site, disposing of the dewatered sediments at an off-site landfill, placing approximately 6-inchesof clean cover material over the dredged area, and revegetating the remediated site.

The cleanup will reduce toxins in the "benthic" or bottom dwelling community in the ponds, reducing the contaminants in the macroinvertebrates which live in the pond sediment and provide an important food source for fish. Dredging Today / Read more

# USA: THE PFAS PROBLEM AND THE TRANSITION TO THE BIDEN ADMINISTRATION: LOOKING BACK AND SETTING THE STAGE FOR 2021

January 28 – PFAS regulation is one of the hot environmental topics and a key issue to watch during this next year. In this series of posts, V&E will address the increasing regulatory attention concerning a group of chemicals known as PFAS and the potential impacts this may have on affected industries. Often referred to as "forever chemicals," per– and polyfluoroalkyl substances ("PFAS") are synthetic chemicals that have been widely used across the United States for several decades.

In this post, we'll address the recent PFAS regulations and guidance and look ahead to what may change in 2021.

During his election campaign, President Biden pledged to address PFAS in a number of ways and it is likely that 2021will continue to see regulatory activity. Even without the change in administration, PFAS is an issue of widespread public concern, crossingthe aisle and bipartisan support for action has grown in recent years. As we discussed previously, President Biden's pick to lead the EPA — Michael Regan — has a reputation for his knowledge and experience on PFAS, and we expect him to play an active role as the federal government decides how to address these forever chemicals. Lexology/Read this article

#### USA: LATESTNEWS REPORTS FROM NOAA OR&R

January 29 - Please click on the links below to read the attest News Reports from NOAAOR&R

#### NOAASupporting International Emergency Preparedness in the Arctic

An upcoming virtual international response exercise will help improve U.S. and international preparedness for major spills in the Arctic.

The U.S. is a member of the Arctic Council and participates in Arctic Council working groups, including the Emergency Prevention Preparedness and Response (EPPR). From February 9–23,2021,the next phase of the Arctic Guardian exercise, a hypothetical collision between a cruise ship and an oil tanker, will take place. This follows a Table–TopExercise held last fall. The exercise will continue into April 2021.

#### Marine Debris Program Presents to University of Hawaii at Hilo Marine Debris Course

On January 20, the NOAA Marine Debris Program's (MDP) Pacific Island Regional Coordinator, Mark Manuel, provided a virtual presentation to the University of Hawaii at Hilo (UH–Hilo) Marine Debris in the Pacific senior–undergraduatecourse.

#### OR&R Presents at NOAAGreat Lakes Regional Collaboration Team Meeting

On January 28, Charles Grisafi, Southeast Regional Preparedness Coordinator, represented OR&R's Disaster Preparedness Program (DPP) as a guest speaker at a NOAA Great Lakes Regional Collaboration Team meeting.

Marine Debris Program Participates in Scripps-RadyOcean Plastic Pollution Challenge

On January 15th, the Scripps-RadyOcean Plastic Pollution Challenge kicked off its 6-monthaccelerator program focused on identifying effective, evidence-based approaches to curb the flow of plastic into the California Coast.

#### YEMEN: UN INSPECTION ON YEMENI TANKER CANCELED

January 29 – A United Nations mission to inspect a long-abandonedfuel tanker off the coast of Yemen, which threatens to rupture and cause a massive oil spill, has been pushed to March, the body said.

"We've hit a few delays with international shipping that were beyond our control and had some back and forth on signing documents, which has now been resolved," UN spokesman Stephane Dujarric told reporters. "For now, we think we can get there by early March. From our side we are doing everything possible to stick to that timeline and deploy the mission," he said. Manila Times

#### **ISCO NEWS**

### JANUARY 2021 ZOOM MEETING WAS WELL ATTENDED

At least 25 members and guests participated in the meeting. Committee member, Dan Sheehan, writes "I thought we had a productive discussion. There was a wide ranging discussion concerning the mission, goals, and objectives of the organization. As well as proposals concerning how to advance both short term and long term goals".

During our online AGM and last week's Zoom meeting participants proposed many initiatives to grow ISCO's membership and enhance its value to members and and other interested parties. In no particular order, matters discussed included -

Ш	Policy on plastics pollution	Ш	ISCO – Leadership, roies & responsibilities
	Policy on flood incidents		Membership platform for info sharing
	Marketing issues		Banking matters
	Mission statement updating		ISCO Council - members / responsibilities
	Policy on non-marine spill response		ISCO relationships with governmental agencies
	Membership, with emphasis on next generation		ISCO relationships with other international organisations
	Maximising benefit of Linked-infacility		ISCO relationships with national environmental groups

During the meeting several participants stated their willingness to act a volunteers in helping to follow through with further development of ideas and proposals with a view to determining forward actions.

The Secretariat is now in dialogue with meeting participants with a view to forming a "Way Forward Group" to develop a road map for moving forward in the next phase of ISCO's development.

The next Zoom meeting will include progress reports and may also address other issues. This meeting is scheduled for - **Thursday** 25<sup>th</sup> February at 1400EST and 1900GMT or Friday 26<sup>th</sup> February at 0600AEDT (or the equivalent date and time in your own time).

### JOINING ISCO GROUP ON LINKED-IN- A CLARIFICATION FROM THE SECRETARIAT

LinkedIn Groups provide a place for professionals in the same industry or with similar interests to share their insights and experiences, ask for guidance, and build valuable connections. ISCO is in regular receipt of requests from individuals wishing to join the International Spill Control Organisation's Linked-inGroup and, in most cases these requests are approved.

ISCO and other members of this linked-in group post news and other items of shared interest on the group's linked-inpage.

However, it should be understood that joining the ISCO linked-ingroup is <u>not</u> the same thing as becoming a Member of the International Spill Control Organization. Becoming a Member of ISCO can only be done by making application using the form at <a href="https://spillcontrol.org/membership-application-form/">https://spillcontrol.org/membership-application-form/</a>

Full membership of ISCO confers many benefits and you should view these at https://spillcontrol.org/benefits-of-membership/

Members can also access the ISCO website Members' Area where they can find news about our meetings and lots of useful technical information and articles. Access to the Members' Area is only available to members in good standing but, upon joining, you will be given a link for you to self-register to enable your access.

#### **NEWS FROM ISCOMEMBERS**

### MIKA PIRNESKOSKI, CEO OF LAMOR HAS RELEASED A NEW YEAR ADDRESS

January 28 – In his letter to customers and friends Mika was pleased to advise that Lamor was to be chosen as one of the winners for <u>Business Finland's Competitive Bidding for Growth Engine</u>. The goal of Lamor's growth engine project is to reduce the amount of waste in water. He also announced that Lamor is currently looking for new resources as well as partners to help achieve the goal of creating a one-billion-euroecosystem. The first target market will be the utilization of plastic waste from water bodies and recycling them to achieve a maximumvalue add for the recycled waste. <u>Download and read Mika Pirneskoski's address</u>

#### AN INTRODUCTION TO SPACE MISSIONS



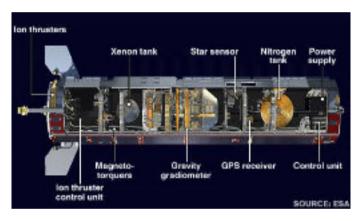
Anarticle by Jesús Lucero Ezquerro, Collaborator in Earth Observation – B. Eng. Aerospace Engineeringat T.U. Madrid – MSc. in Astronautics & Space Engineeringat Cranfield University. Mr Ezquerro is a member of staff at ISCO Corporate Member, Orbital Earth Observation Solutions, based in Valencia, Spain. The company uses a network of radar and optical satellites to provide the most comprehensive picture of marine pollution events and artificial intelligence tools to develop value–added analysis. Its service portfolio includes unprecedented capabilities as the production of relative thickness distribution maps using high resolution optical satellites

After the previous introduction we will see the different elements of a space mission, which are:

$\sqcap$ S	pace	segr	nent

- ☐ Application
- ☐ Orbit
- ☐ Launch
- ☐ Ground segment
- Operations
- ☐ Communications

We are going to analyse the fundamentals of space missions and the subsystems which are necessary for the correct development of the spacecraft.



Interior of a satellite.

The first of the subsystems and the most crucial, as it is the motivation for the mission, is the payload. It can be rather scientific, to study physical elements of space; astronomical, to observe space objects; Earth Observation, to watch Earth; and telecommunications, for the transmission of information.

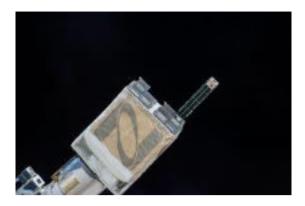
The next subsystem is structures, whose missions is to support and secure all the equipment, since the assemblyon Earth, during the testing, transportation, orbit and launch. Being the latter one the most critical time, as the satellite is highly stresses to g-forceswhen accelerating and getting into orbit. To have a better understanding of a launcher distribution and structure the following website can be visited to know the components, stages and materials of a rocket: <a href="https://www.arianespace.com/vehicle/ariane-5/">https://www.arianespace.com/vehicle/ariane-5/</a>



Launch of Ariane 5 from French Guiana.

#### **CONTRIBUTED ARTICLE** (CONTINUED)

Despite being Ariane 5 a good solution for setting satellites in orbit, it is possible to put smaller satellites in orbit with more efficient and cheaper solutions that require less resources. Such as cubesat deployments, like the dispenser that can be found on the International Space Station (ISS) of the following image.



ISS Nanorack ejecting two cubesat into orbit.

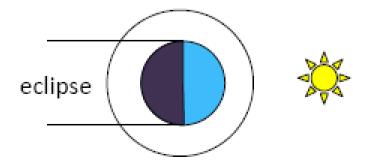
Multiple smaller satellites can also be launched with the same rocket, by allocating them in a central structure and following a synchronized system for deployment once in orbit. This way the cost per kilogram of launch is reduced.



Soyuz envelope with four satellites to be launched simultaneously.

Then it is the electrical power subsystem, its mission is to generate, adjust, store and energy to the payload and subsystems.

There must be multiple sources in case one stops working, for example in an eclipse or a malfunction. For that reason, there should be batteries to store the energy during the dark periods, to avoid the satellite from shutting down.



When the satellite is in the shadowit must continue operating.

#### **CONTRIBUTED ARTICLE** (CONTINUED)

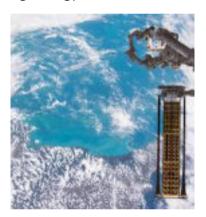
For producing such energy multiple sources can be used, like solar photovoltaic, the most common one; radio-isotope reactor, where the decay of material produces heat; nuclear reactor, where nuclear fission produces heat; and finally fuel cells, where chemical energy is converted into electricity.

To compare with the power of some spacecraft we will compare it with some home appliances, like a portable computer, that would need around 45 Watts, or a dishwasher, which has a power of 1,500Watts. One satellite could produce up to 5,900Watts from solar panels and the ISS is able to produce 100,000Watts to satisfy its power requirements.



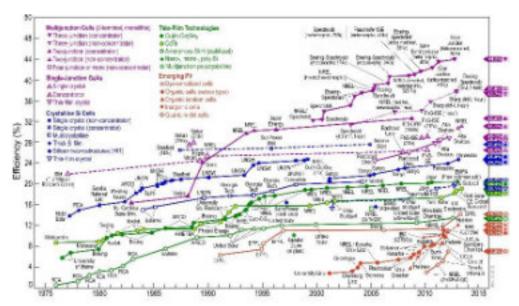
Objects and the power they require.

Closely related to the electric subsystems is the mechanical subsystem, that is able to deploy bigger surfaces than the satellite area with solar panels, so the energy input can be greater. Thus, it is key that the mechanical subsystemwork in order for the rest of the satellite to have enoughenergy.



Unrolled flexible solar panel.

In the next figure it can be appreciated the evolution of efficiency of electric batteries, decreasing the amount of weight necessary for the same performance, allowing that weight to be used for more payload, more sensors and less necessary fuel for putting it in orbit.



#### **UPCOMING WEBINARS**

Postings for publication in this section should be sent to the Editor - john.mcmurtrie@spillcontrol.org

#### UPCOMING WEBINAR FROM ISCOMEMBER OSRL

**February 4** – One Year On: What Have We Learned? Properties of Low Sulphur Fuel Oils. 1400GMT Duration: 1.5 hours This webinar is our second on the topic of Low Sulphur Fuel Oils. This seminar comprises two presentations:

Firstly, Paul Gunter on behalf of OSRLwill talk about the properties and characteristics of Low Sulphur Fuel Oils based on actual data collected throughout 2020.

Secondly, and continuing the spirit of collaboration, Silje Berger from the Norwegian Coastal Administration (NCA), with the input and support of CEDRE, will talk about the ongoing major projects that the NCA is currently coordinating on Low Sulphur Fuel Oils. Our intention through this ongoingwebinar series is to continue to promote and facilitate a constructive exchangeof information, to raise awareness and promote best–practices throughout our industry. More info and registration

For more info on the OSRL seminars please visit

https://www.oilspillresponse.com/news--media/events/?utm\_medium=website&utm\_source=email&utm\_campaign=covid-19%20member%20update&utm\_content=link%20to%20website&utm\_term=covid%20update,%20covid-28

#### WEBINAR FROM ALGA: WASTE: ADDRESSING THEREGULATORYMAZE

Thursday,February 11, 2021.11:00 AM -12:00 PM AEDT. Waste management of contaminated soils is an essential skill for any contaminated site professional. It is a complex area, where getting it wrong can cost millions. This is an introductory webinar for a series of detailed seminars dealing with waste issues. This webinar will cover:

- Why it is important to manage your wastes as a contaminated site professional
- Some traps for the unaware
- Waste definitions Australia focus some state differences
- Basic waste classifications NSW and Victoria examples provided briefly
- Recycling, disposal and treatment cost comparisons
- Options for management of contaminated soils from on-site to treatment and disposal

A short Q&A session will follow. More info and registration

#### RECOGNITION TRAINING FOR STRUCK-BYAND CAUGHT-IN-BETWEEN HAZARDS

Advice on webinar received from Marc K. Shaye Hon.FISCO, Member of ISCO Executive Committee.

Information on this event was published on Page 11 of ISCO Newsletter 769(Link at https://spillcontrol.org/newsletters/)

#### ONLINE TRAINING COURSES

#### INCIDENT COMMAND TRAINING FROM SPILLCONSULT ONLINE TRAINING PORTAL

For information on these courses, please visit <a href="https://spillconsult.learnupon.com/store">https://spillconsult.learnupon.com/store</a>
Details of these courses were published on Page 7 of ISCO Newsletter 769(Link at <a href="https://spillcontrol.org/newsletters/">https://spillcontrol.org/newsletters/</a>)

#### ENERGY INSTITUTE - FIVE ONLINE TRAINING COURSES FOR OFFSHORE WORKERS

The Energy Institute has announced the availability of currently available short online environmental training courses for offshore workers. Details of five currently available training courses were published on Page 10 of ISCO Newsletter 770. (Link at <a href="https://spillcontrol.org/newsletters/">https://spillcontrol.org/newsletters/</a>)

#### FMPIRE FGYPT-OIL SPILL RESPONSE -1 DAY FOUNDATION COURSE

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

More info For ISCO members and readers a 50% discount is available until 31 March 2021. Using the code: ISCO 50

#### TRAINING COURSES FROM CHEMICAL WATCH

П	THE PRACTICAL	GUIDE TO	<b>ECOTOXICOL</b>	OGYAND T	HEENVIRONMENT	<ul><li>More</li></ul>	info
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☐ THE BASICS OF REACH REGULATION - More info

#### **UPCOMING EVENTS**

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

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

If an event title is not printed in blue ink it is not hyperlinked to the event website. This may be because the website is not yet available or because the link for the website has not yet been given. If you want to request the addition of an event please contact the Editor.

For more information click on Title of Event					
COUNTRY	2021	TITLE OF EVENT	LOCATION		
VIRTUAL EVENT	February 2-4	Sustainability Leaders Forum 2021	Online		
VIRTUAL EVENT	February 8-9	The JOIFF Industrial Fire & Hazard Management Virtual Conference & Exhibition 2021	Online		
VIRTUAL EVENT	February 22-23	5 <sup>th</sup> Session of the U.N. Environment Assembly	Online		
VIRTUAL EVENT	February 22–26	Ninth Technology Workshop for Oil Spill Response	Online		
VIRTUAL EVENT	March 2-4	International Symposiumon Plastics in the Arctic and Sub-Arctic Region	Online		
MALTA	March 10	Regional Meeting of National Experts on the Post- 2021Mediterranean Strategy for Prevention of and Responseto Marine Pollution from Ships	Online		
VIRTUAL EVENT	March 22-26	IMO Sub-Committee on Pollution Prevention and Response(PPR)	Online		
VIRTUAL EVENT	March 23	CEDRE Information Day on Containers	Online		
USA	May 9	APICOM GM Meeting	New Orleans LA		
VIRTUAL EVENT	May 10-13	International Oil Spill Conference (IOSC 2021)	Online		
VIRTUAL EVENT	May 20-21	European Maritime Day	Online		
MALTA	May 25-27	Fourteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)	Valetta		
UAE	April 6-7	HSE Forum UAE 2021	Dubai		
VIRTUAL EVENT	April 8	IMO CouncilMeeting	Online		
VIRTUAL EVENT	June 8-9	Environment Analyst Global Business Summit 2021	Online		
VIRTUAL EVENT	June 8–10	43rd AMOP Technical Seminar on Environmental Contamination and Response	Online		
USA	June 8–10	Elastec Spill Workshop 2021	Carmi, IL		
USA	June 28-30	Clean Pacific Conference & Exhibition	Seattle, WA		
USA	September 7-10	Hazmat Emergency Response Workshop	Sacramento, CA		
USA	Sept. 13-15	Clean Waterways Conference & Exhibition	Louisville, KY		
USA	Nov. 16-18	Clean Gulf Conference & Exhibition	San Antonio, TX		
BAHREIN	Nov. 28-30	International Conference & Exhibition on Spills, Clean Seas & Environment	Bahrein		

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

#### MESSAGES RECEIVED FROM EVENT ORGANISERS

# 43RD AMOP TECHNICALSEMINAR ON ENVIRONMENTAL CONTAMINATION AND RESPONSE

On behalf of Environment and Climate Change Canada, we are announcing that the 43rd AMOP Seminar will be a virtual-only format Seminar.

The positive news for the entire world is that vaccinations have begun, including here in Canada. While we collectively recognize this is a significant milestone, we have many more months of Covid-19restrictions to international travel, non-essential travel and in-person gatherings or events. Some Provinces in Canada have returned to a full shutdown and even further restrictions on international travel have been enacted.

The current conditions has made us re-evaluate how best to host the seminar; we believe conditions are not in place to have an in-

#### MESSAGES RECEIVED FROM EVENT ORGANISERS (CONTINUED)

person Seminar and it is unlikely to improve by June 2021. We have, therefore, decided that the best course of action is to proceed with the 43rd AMOP Seminar as a virtual forum. Out of respect, we wanted to let you know as early as possible of this change.

AMOP will remain a 3-daySeminar. Our intention is to host the virtual AMOP June 8-10,2021. To best accommodate time zones, we are looking at a 10:00 ET to 15:00 ET as a workable block of hours with 2, or even 3, simultaneous sessions. Our traditional speaker's schedule is therefore being revised. For the 43rd AMOP, each presentation will be limited to 20-minutes (which includes questions).

A registration fee of \$50 will be applied to cover the cost of the AMOP Proceedings and charges to ship the Proceedings out. The Proceedings will be prepared and sent out following the Seminar.

Thankyour for your patience and support as we navigate through these uncharted waters together, knowing we still aim to produce the high-quality and valuable event that everyone has come to expect and rely upon.

We extend sincere wishes to you and your respective families for a better 2021, with a return to some normalcy!

#### natalie.jones@canada.ca

**AMSA Update** 

Tel.: 613-991-1114 Fax: 613-991-9485

Technical Seminar Website: <a href="https://www.canada.ca/en/environment-climate-change/services/science-technology/arctic-marine-oilspill-program.html">https://www.canada.ca/en/environment-climate-change/services/science-technology/arctic-marine-oilspill-program.html</a>

Site Web du Colloque Technique : <a href="https://www.canada.ca/en/environment-climate-change/services/science-technology/arctic-marine-oilspill-program.html">https://www.canada.ca/en/environment-climate-change/services/science-technology/arctic-marine-oilspill-program.html</a>

#### CONTRACTS. TENDERS AND BUSINESS OPPORTUNITIES

### INTERNATIONAL OPEN TENDER NOTIFICATION SERVICE

This is a subscription service. Have a look to see examples of open tenders.

#### OTHEROPPORTUNITIES: USA & EUROPE

USA – Government solicitations are frequently posted in Technology Innovation News Survey and US EPA Tech Direct.

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

See "Links for other publications" for links to download current issues of these publications. Readers are welcome to post tender invitations in this section.

Latest News from the Australian Maritime Safety Authority

Current issue

#### LINKS FOR DOWNLOADING AND READING OTHER PUBLICATIONS

<u>ATRACNewsletter</u>	News from the Adriatic Training and Research Centre	October 2020
AUSMEPA Bulletin	News from the Australian Marine Environment Protection Assoc'n	Summer 2020
BIMCO Bulletin	Marine and shipping-relatednews from BIMCO	December 2020
Newsletter from George Holliday	News and commentary on HSE issues from George Holliday	Free on request
<u>Cedre Newsletter</u>	News from Cedre in Brittany, France	November 2020
EMSA Newsletters	News from the European Maritime Safety Agency	Current issue
Environmental Expert	Environmental News from Environmental Expert	Current issue
<u>GDACSNewsletter</u>	Daily alerts for natural disasters - earthquakes, floods, typhoons, etc.	Free on request
GEF Newsletter	Monthly Newsletter from the Global Environment Facility	Subscription
GESAMP	Group of Experts on the Scientific Aspects of Marine Environmental Protection	n Latest news
GISEA Quarterly Newsletter	News from Global Initiative for South-East Asia	Q3 2020
IMO News Magazine	News from the International Maritime Organization Au	tumn/Winter 2020
IMO Publishing Newsletter	New and forthcoming IMO publications	September 2020
ITOPF Ocean Orbit	News magazinefrom ITOPF with interesting spill resonse articles	October2019
JOIFF Catalyst Newsletter	Int'l Organisation for Industrial Hazard Management	Q4 2020 issue
Maritime Executive Magazine	Often contains articles of interest to the spill response community	Current issue
MEDNEWS	News from UNEP Mediterranean Action Programme	02 / 2020
MOIG Newsletter	News from the Mediterranean Oil Industry Group	January 2020
NCECNewsletter	News from the National Chemical Emergency Centre	December 2020
Navigate Response	Global crisis communications network for shipping & marine	Current issue
NOAA OR&R	Weekly round-upof news from NOAA's Office of Response & Restoration	Latest issue
Oceanbuzz	Newsletter giving news on the Ocean Technology Industry	Current issue
OCIMF Newsletter	News from the Oil Companies International Marine Forum	Current issue

#### LINKS FOR DOWNLOADING AND READING OTHER PUBLICATIONS (CONTINUED)

**OHMSETT Gazette** Oiled Wildlife Loa **OSPAR Newsletter PEMSEA Newsletter** 

Pollution Online Newsletter

Salvage World

Sea Alarm Foundation Newsletter

Society of Maritime Industries

Spill Alert

TechnologyInnovation News Survey

The Maritime Advocate

**USA EPA Tech Direct** 

Water Pollution & Flood News

WestMOPoCo

Oil Spill Response Research & Renewable Energy Test Facility Quarterly Bi-annual Newsletter from Tri-State Bird Rescue & Research Protecting & Conservingthe N.E. Atlantic and its resources Healthy oceans, people and economies in the East Asian Seas News for pollution prevention & control professionals Quarterly Newsletter of the International Salvage Union Oiled wildlife Preparedness and Response news from Sea Alarm News from the UK's maritime engineering and business services sector.

Quarterly Newsletter from UK & Ireland Spill Association News from US EPA - Contaminated Site Decontamination

Maritime News from Sandra Speares

Remediation of contaminated soil and groundwater Monthly round-upsof UK & Worldwide Spill and Flood News

Western Mediterranean Region Marine Oil & HNS Pollution Co-operation

Autumn 2020 lanuary 2021 End of year 2019 Current issue Current issue Current issue Current issue October 2020 December 2020 Dec.1-15, 2020 Current issue January 1, 2021 Free on request November 2020

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

#### **INCIDENT REPORTS**

### NIGERIA: BAYELSA OIL SPILL: GOVT, NOSDRA OFFICIALS VISIT AFFECTED COMMUNITY, LAUNCHINVESTIGATION

January 24 – Officials of the Bayelsa State government have led some environmentalists, officials of the Ministries of Minerial Resources and Environment and National Oil Spill Detection and Response Agency (NOSDRA) to the site of the recent oil spill in Koluama, Southern Ijaw Local Government Area of the state.

According to the government officials, the visit was to assure the affected communities of government's efforts to ascertain the source of the spill, extent of the spill and its effects on the livelihoods of the people. The oil spill happened on January 16 near Funiwa offshore facilities, off the Atlantic coast. Sahara Reporters / Read more

#### VIETNAM: OIL SPILL FROM MINH NAM 07 IN THEWATERS OF KYNINH



Photo: The hull ruptured in half and was identified as the main cause of the oil spill.

January 25 -At about 7:00 am this morning (25/1), a fisherman in Tam Hai 2 village (Ky Ninh commune) while fishing was discovered in the anchorage of Minh Nam 07 vessel with oil spills on the sea surface. Received the news, Ha Tinh Maritime Port Authority, Border Guard Command Vung Ang-Son Duong Border Gate, Ky Anh Town CHQS Board, Ky Ninh Border Checkpoint (Ky Khang Border Guard Station) and local authorities quickly organized coordination to approach the scene.

According to the initial comment, the oil spill was caused by the hull of Minh Nam 07 which was badly damaged for a long time, cracked in half, when the rising tide

dragged the remaining oil in the compartment to the sea. The amount of oil around the hull area is about 100m. Currently, functional forces are organizing to implement measures to respond to oil spills such as cranking floats, picking up oil with specialized tools to prevent oil spills. Bao Han Tinh / Read more

#### NORTH PACIFIC: MEGA CONTAINER SHIP MASS CONTAINERS LOSS

January 27 -Many drifting containers reported seen at 1630UTCJan 26 in North Pacific SE of Tokyo, understood lost by container ship MSC ARIES, which crossed the position where containers were seen (22 45N 15143E), and after that, turned north, understood to avoid further losses. Maritime Bulletin / Read more

### USA: MARYLAND -HAZMAT TEAM RESPONDS TO FUEL/OIL LEAK IN SOLOMONS

January 27 - On Monday, January 25, 2021, around 8:28 a.m., a call was dispatched to report of a possible HAZMAT situation in the Solomons Harbor in the area of Back Creek in Solomons, MD. Crews from St. Mary's and Calvert County arrived on the scene to discover a mixture of diesel fuel, gasoline, and oil in the water, with an odor of gasoline in the air. SM News / Read more

#### USA: NEW YORK- "BLACK MAYONNAISE" SPILL IN GOWANUS CANAL

The Environmental Protection Agency said that a barge carrying 850 tons of muck dredged from the canal — turned black by decomposing plants, animal carcasses and liquid tar — became partially submerged while it was moored in the Gowanus Bay off Brooklyn on Monday. The agency said that it believes the "bulk of the sediment" remained within a container on the barge and that it was confident that the incident did not pose a health risk. New York Times / Read more

#### FOR YOUR INFORMATION

- In the Maritime Bulletin, Mikhail Voytenko regularly advises on vessel abandonments, groundings and sinkings several every week but, unless there is an immediate and significant release of oil or chemicals, spillages are not reported. Within our "Incident Reports" section we alert you to spills if reported in The Maritime Bulletin But it's quite likely that some of Mikhail's other reports relate to incidents that have potential to cause pollution. You can see all his incident reports by visiting <a href="https://www.maritimebulletin.net/">https://www.maritimebulletin.net/</a>
- ISCO does not buy or make use of contact lists offered by data vendors. We do not send out unsolicited promotional mail to ISCO newsletter subscribers. We will only send you the ISCO Newsletter if you are a Member or have subscribedor given your contact information to ISCO. If you would like to receive the ISCO Newsletter you can subscribe online at <a href="www.spillcontrol.org">www.spillcontrol.org</a> If at any time you decide you do not want to continue receiving the Newsletter you should click on the "unsubscribe" button at the foot of the covering letter sent out with each issue of the ISCO Newsletter.

#### AND NOW FOR A DASH OF HUMOUR ...

#### SERIOUS LOCK DOWN ADVICE

Everyone PLEASE be careful because people are going crazy from being locked down at home! I was just talking about this with the microwave and the toaster while drinking my Pepsi, and we all agreed that things are getting bad. I didn't mention any of this to the washing machine, because she puts a different spin on EVERYTHING!! Certainly couldn't share with the fridge, cause he's been acting cold and distant! In the end, the iron straightened me out! She said the situation isn't all that pressing and all the wrinkles will soon get ironed out! The vacuum, however, was very unsympathetic...

told me to just suck it up! But the fan was VERY optimistic and gave me hope that it will all blow over soon!

The toilet looked a bit flushed but didn't say anything when I asked its opinion, but the front door said I was becoming unhinged and the doorknob told me to get a grip!! You can just about guess what the curtains told me: they told me to "pull myself together!" We will survive!!

Pass it on - gotta keep the humour! 👄 😃 😷



"Personally, I worry that, with everyone wearing masks, readers won't be able to tell who in the cartoon is speaking."

Members and readers are invited to send contributions to the Editor. We could all be doing with something to cheer us up.

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