ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

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ISCO & THE ISCO NEWSLETTER

The ISCO Newsletter is published weekly by the International Spill Control Organisation, a not-for-profit organisation supported by members in 45 countries. ISCO has Consultative Status at IMO, Observer Status at IOPC Funds and is 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 IMO, UNEP, EC and other organisations.

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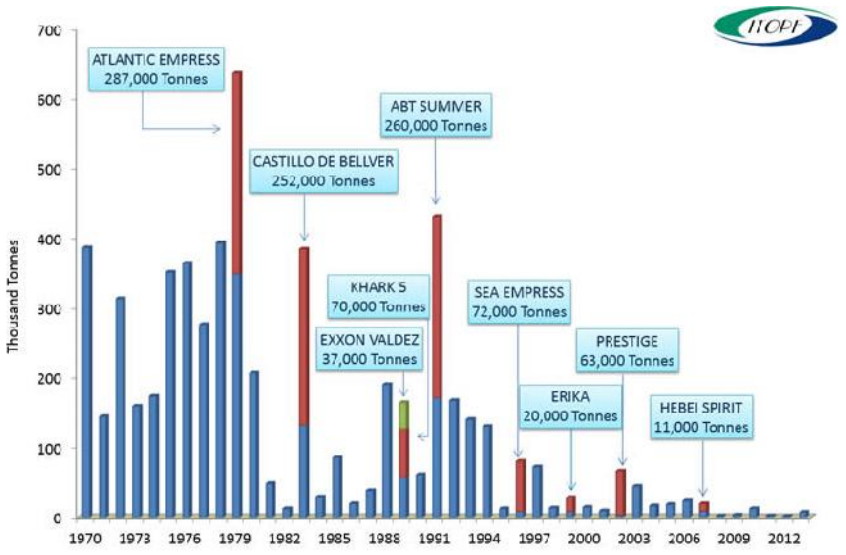
International news

ITOPF: DOWNWARD TREND IN SPILLS IS MAINTAINED DESPITE BLIP



Quantities of oil spilt >7 tonnes (rounded to nearest thousand), 1970-2013
(Download a PDF of the graph)

January 14 - ITOPF's tanker spill statistics released today showed a slight increase in the number of large spills from tankers in 2013 compared to the previous two years but the downward trend is maintained.

Although the volume of oil spilt is also up on the last two years, the total quantity spilt so far this decade is only a sixth of that spilt for the same period in the previous decade.

Three oil spills of 700 tonnes or more occurred last year with one incident accounting for the vast majority of the total. In October the MT YONG WIN 3 reportedly capsized and sank spilling an estimated 5,000 tonnes of diesel oil. Two other incidents resulted in a spill of about 1,000 tonnes of fuel oil and 800 tonnes of bitumen respectively.

These incidents illustrate the unpredictability of spills and the importance of preparing to respond to the range of oils involved.

Further information is available on our statistics page. http://www.itopf.com/

EUROPE: REMPEC RELEASES UPDATED CONTACT INFORMATION FOR THE REGIONAL MARINE POLLUTION RESPONSE CENTRE FOR THE MEDITERRANEAN SEA (REMPEC)

Download the updated information sheet http://www.rempec.org/

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Incident reports

IRISH COASTGUARD ASSISTS STRICKEN TANKER

Photo: The tanker, Hellesport Charger lost her main engines around 1pm today approximately 100 miles west of Loop Head and is drifting in Force 7 winds and six metre swells towards the Irish coast.

January 12 - The Irish Coastguard has begun an operation to assist a stricken chemical tanker with 15,000 tonnes of caustic soda on board after the ship lost power off the West coast of Ireland this afternoon.

The tanker, Hellesport Charger lost her main engines around 1pm today approximately 100 miles west of Loop Head and is drifting in Force 7 winds and six metre swells towards the Irish coast.

The ship which is registered in the Marshall Islands in the Pacific, was on its way from Corpus Christi in Texas in the western Gulf of Mexico to Aughinish in the Shannon Estuary when it lost power. *The Irish Times* Read more [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

January 14 – Update: The Defence Forces of Ireland reports that the LÉ Aisling reached the disabled MV Hellespont Charger early Tuesday and the chemical tanker is currently under tow by the tug Thrax to the Shannon estuary. The vessels are expected to arrive in port at between 5-6 pm later today. *gCaptain* Read more

Incident reports (continued)

CANADA: DERELICT TUG BOAT SINKS OFF SQUAMISH COAST

January 14 - The Coast Guard was on scene in Howe Sound Tuesday, after a tug boat sank this morning off the coast of Squamish.

The ship is believed to be named "Elf" and had reportedly been docked there for a few years and was operational.

According to the Squamish Streamkeepers Society, four boats have sunk in the last month.

Squamish RCMP say all resources are being pulled to contain the environmental impact, as oil is leaking from the boat.

Global News Read more Another report and video (*CBC News)* [Thanks to Gerald Graham of World Ocean Consulting]

USA: WEST VIRGINIA CHEMICAL SPILL FOLLOW-UP

January 16 - Federal health officials on Thursday defended their recommended 1-part-per-million threshold for acceptable levels of "Crude MCHM" in West Virginia drinking water, but also said they continue to gather data on the chemical's potential health impacts. "This is a dynamic and evolving event," said Dr. Vikas Kapil, chief medical officer for the U.S. Centers for Disease Control and Prevention's National Center for Environmental Health. Charleston Gazette Read more

Incident reports (continued)

January 17 - Freedom Industries, the company that fouled thousands of West Virginians' water with a chemical leak into the Elk River last week, filed for Chapter 11 bankruptcy Friday. Charleston Gazette Read more

January 18 - Utilities are reviewing safety plans after a chemical spill tainted a West Virginia treatment plant that hadn't updated its assessment in 12 years, before a company began storing coal-cleansing chemicals nearby. The 2002 Source Water Assessment Report for the West Virginia American Water Co. plant in Charleston listed the risk as high from industrial sites along the Elk River. There's no sign it was updated to account for Freedom Industries Inc., which bought and converted a facility that had stored gasoline into a site for storing the coal-cleaning chemical that leaked Jan. 9, forcing 300,000 people to stop using their water. *Bloomberg News* Read more

January 19 - West Virginia authorities on Saturday completely lifted a 10-day-old ban on the use of tap water that was imposed after a chemical spill contaminated drinking water, but they advised pregnant women to continue using alternative water. *Reuters* Read more

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USA: LEAK IN NAVY FUEL TANK RAISES CONCERNS ABOUT WATER CONTAMINATION IN HONOLULU

January 16 - The U.S. Navy confirmed Thursday that one of its massive underground tanks near Pearl Harbor has a leak and may have spilled up to 20,000 gallons of aviation fuel, raising concerns about potential drinking water contamination.

The Navy began investigating the possibility of a leak at the historic Red Hill Underground Fuel Storage Facility on Monday after officials noticed a discrepancy in the tank's fuel levels and later discovered a 3 foot wide wet spot on a nearby concrete wall. Tests confirmed that the fuel soaking the wall matched that in the tank. *Honolulu Civil Beat* Read more

Other news reports from around the world

USA: RECENT NEWS REPORTS

January 14: New regulations for oil on rail cars to come in 2015

Regulations that could force oil companies to use stronger rail cars to move crude likely will be ready in 2015, according to a schedule released Tuesday by the U.S. Department of Transportation. *Fuel Fix* Read more

January 15: U.S. to Require Vessel Response Plans for Non-Tank Vessels

Regulations that could force oil companies to use stronger rail cars to move crude likely will be ready in 2015, according to a schedule released Tuesday by the U.S. Department of Transportation.

Non-tank vessels are vessels other than tank vessels. Tank vessels are generally defined as those constructed or adapted to carry oil in bulk as cargo or as oil cargo residue.

The NTVRP Rule updates, and aligns with, the existing IMO and US MARPOL Annex I requirements for a Shipboard Oil Pollution and Emergency Plan (SOPEP), eliminating the need to prepare two separate oil spill response plans. *The Maritime Executive* Read more

January 15 - Company in West Virginia spill cited in issues at second site

State inspectors have cited the company whose spill contaminated the water supply for 300,000 West Virginians for five violations at a second facility where it is storing chemicals, and they say Freedom Industries might have to relocate its materials again because of a lack of a secondary containment plan.

State inspectors found the violations Monday at a Nitro site where Freedom Industries moved its coal-cleaning chemicals after Thursday's spill, according to a state Department of Environmental Protection report. Inspectors found that, like the Charleston facility where the leak originated, the Nitro site lacked appropriate last-resort containment to stop chemical leaks. *Deseret News* Read more

January 19 – Detroit gas storage tanks leak as fund intended to help flows elsewhere

Contamination from more than 9,000 leaking underground petroleum storage tanks in Michigan has awaited cleanup for years, as a gasoline regulatory fee intended to fund such work was diverted by state lawmakers to plug general fund budget holes over the past decade. The fee, 7⁄8-cent on every gallon of gasoline imported into or sold in Michigan, was originally levied in 1988 to create the Michigan Underground Storage Tank Financial Assurance Fund, or MUSTFA. Its purpose was to assist gas station owners and operators with the high costs of removing a leaking underground storage tank and cleaning up related contamination. *Detroit Free Press* Read more

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Other news reports from around the world (continued)

CANADA: RECENT NEWS REPORTS

January 13 - Northern Gateway overshadows Ottawa's marine-safety project

The federal government has launched a major new project, known as the World Class Initiative, which is intended to make Canada's waters safer from shipping accidents and gain the social licence needed to increase marine transportation of oil and gas.

But the primary initial focus of that project may surprise people. It's aimed at Douglas Channel, the long, narrow inlet that leads to Kitimat, which at this point is not a major petro shipping route. *The Globe & Mail* Read more [Thanks to Gerald Graham of World Ocean Consulting]

January 14 - Kinder Morgan says enhanced spill-response will increase oil recovery at sea, but opponents skeptical

Photo: The industry-funded Western Canadian Marine Response Corp. maintains a fleet of boats and equipment, including barges, to help transfer equipment and hold recovered oil. Kinder Morgan is proposing to increase the organization's spill-handling capacity because of a sixfold increase in oil tanker traffic from its $5.4-billion pipeline expansion

Environmentalists dispute application, say it misses key issue of sediments binding with, sinking oil

Nearly two-thirds of the oil in a major tanker spill would be recovered in the Gulf Islands area within four days, according to computer modelling carried out for Trans Mountain $5.4-billion pipeline expansion.

That's far greater than the figures cited by the tanker industry's own organization, and more than twice as much as the best recovery estimate in a recent B.C. government-commissioned study.

The scenario, outlined in Kinder Morgan's 15,000-page project application filed last month with the National Energy Board, is meant to show potential cleanup results for its proposed increased spill-response capacity. It is based on a major spill of 104,000 barrels of oil — about 40 per cent the size of the 1989 Exxon Valdez spill on the Alaska coast.

The findings, however, provide few assurances to environmentalists, who doubt that volume of oil could be recovered. *The Vancouver Sun* Read more [Thanks to Marc K. Shaye, HonFISCO, Member of ISCO Executive Committee]

January 15 - Canada reviews fate of diluted bitumen in water

Diluted bitumen, a heavier blend of Canadian oil, sinks in salt water when mixed with sediment but otherwise floats like conventional oil, a federal study says.

An 80-page report published by Environment Canada, the Department of Fisheries and Oceans and Natural Resources Canada reviewed the fate of crude oil in saltwater. It assessed two grades of diluted bitumen and found they both floated on saltwater when water was free of sediment.

"When fine sediments were suspended in the saltwater, high-energy wave action mixed the sediments with the diluted bitumen, causing the mixture to sink or be dispersed as floating tarballs," the report said. *UPI* Read more Related report in the *Calgary Herald* [Thanks to Gerald Graham of World Ocean Consulting for both links]

[Note from Editor: The link for downloading the Federal Report can be found in the Publications Section of this issue of the ISCO Newsletter]

January 15 - New spill recovery data improves best estimates

Environmentalists dispute result, point to limitations of model - Nearly two-thirds of the oil in a major tanker spill would be recovered in the Gulf Islands area within four days, according to computer modelling carried out for Trans Mountain's $5.4-billion pipeline expansion.

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oil - about 40 per cent the size of the 1989 Exxon Valdez spill on the Alaska coast.

The findings, however, provide few assurances to environmentalists, who doubt that volume of oil could be recovered. *The Vancouver Sun* Read more [Thanks to Gerald Graham of World Ocean Consulting]

January 16 - Ewart: Federal report doesn't settle dilbit debate

Photo: Stephen Ewart is the Calgary Herald's Energy and Economics editor and columnist. Photograph by: Gavin Young, Calgary Herald

Diluted bitumen definitely floats in sea water ... except when it sinks.

And it sinks ... apart from the times when it doesn't.

The seemingly contradictory conclusions from the federal government's technical report on marine spill behaviour for dilbit are bound to reinforce the steadfast opinions of both the proponents and opponents of shipping big volumes of oilsands crude from Canada's West Coast.

"It's not all that conclusive," acknowledged oil-spill expert Gerald Graham of Victoria, B.C. "There's still a debate going on and it will continue to go on."

The recently released report emerged from a federal commitment last year to develop a "world-class tanker safety system" to boost public support for new pipelines and marine terminals to move oil from Alberta through B.C. and onto Asia by ocean-going tankers.

The publication of the 88-page report on the critical issue of whether diluted bitumen will sink in sea water was a far cry from the big media events that accompanied Ottawa's original commitment to marine safety last March or the report from the Tanker Safety Expert Panel in December that addressed oil-spill preparedness and response. *Calgary Herald* Read more [Thanks to Gerald Graham of World Ocean Consulting]

January 16 - Protesters follow Harper through his B.C. tour

Photo: Protesters gather near the gates of Brentwood College School in Mill Bay, B.C., where Stephen Harper spoke on Jan. 7. –Bill Vinton (Photo)

"It wouldn't be B.C. without it," said Prime Minister Stephen Harper as the two sign-wielding protesters were taken off the stage in their catering uniforms. The incident transpired on Jan. 6, during Harper's talk at the Vancouver Board of Trade, but it wouldn't be the last time that Harper was met with dissent during his tour of the west coast. Protesters also flooded the road leading to Harper's talk to Conservative party supporters at Brentwood College School in Mill Bay.

The security issue, highlighted by two Vancouver Board of Trade protesters, had many people talking, but the group of Mill Bay protesters feel there is something else that should be addressed: increased traffic in the Douglas Strait could increase the risk of a spill. *The Martlet.* Read more [Thanks to Gerald Graham of World Ocean Consulting]

January 18 - B.C. groups ask court to block approval of Northern Gateway pipeline

Environmental groups and First Nations argue review panel made decision on "insufficient" evidence.

A long-expected stampede to the courts has begun as environmental groups and First Nations seek to block Enbridge Inc's proposed $7.9-billion Northern Gateway megaproject.

Four similar actions filed in the Federal Court of Appeal in Vancouver on Friday ask the court to block Prime Minister Stephen Harper's government from approving Enbridge's application to construct a pipeline from northern Alberta to Kitimat on the B.C. coast. *The Vancouver Sun* Read more Related reports in *CTV News* and *Straight.com* [Thanks to Gerald Graham of World Ocean Consulting]

January 18 - Hibernia's Oil Leak 600 Times Bigger Than First Thought

The Chief Conservation Officer (CCO) for the Canada-Newfoundland Labrador Offshore Petroleum Board (C-NLOPB) received

notification on Friday from Hibernia Management and Development Company Ltd. (HMDC) that the estimated volume of oil leaked from the platform's Northern Offshore Loading System (OLS) is far greater than what was initially reported earlier this month.

Photo: Hibernia, the world's largest offshore platfom, one that is able to withstand the impact of a one million ton iceberg. The field is located in the Grand Banks, 315 kilometers east-southeast of St. John's, Newfoundland and Labrador. Image: ExxonMobil

On 1 January, HMDC reported that the Hibernia platform leaked 10 liters of crude oil from their OLS however, HMDC now estimates that upwards of 6,000 liters were spilled during a connection attempt on 18 December 2013. HMDC has also reported that the leak stopped on January 1, 2014.

Hibernia is the world's largest offshore structure and is located 315 kilometers from St. John's, Newfoundland in 80 meters of water. The field is operated by ExxonMobil. *gCaptain* Read more

TRINIDAD & TOBAGO: PETROTRIN OIL SPILL PROBE UNCOVERS FUEL RACKET

Petrotrin yesterday claimed it had made a major breakthrough in the probe into the cause of the oil spill along the south-western peninsula, saying it had terminated a supervisor believed to have been involved in the sabotage of its operations. The state-owned company claimed the employee, who was said to be a senior Oilfield Workers' Trade Union (OWTU) representative, was fired after he was found to have been involved in the illegal sale of oil to a company which was doing contract work for Petrotrin.

Sources said Petrotrin has evidence that the former employee was engaged in siphoning oil at the company's Pointe-a-Pierre operations on December 17 when something went wrong, resulting in the first oil spill. The subsequent spills, the company believes, were deliberately done as a diversion. In the employee's termination letter, which the T&T Guardian received a copy of, Petrotrin claimed to have had information that he had received payoffs for sale of the illegal oil. *Trinidad & Tobago Guardian* Read more

BP / MACONDO NEWS

January 15 - Second adverse ruling for BP over oil spill

Despite the setback on Friday night from an appeals court ruling that rejected some of its arguments, BP will continue the fight against what the company considers unjustified compensation awards over the oil spill that took place in 2010 in the Gulf of Mexico.

This is the second adverse ruling for BP related to the blast, the largest-ever U.S. offshore oil spill that killed 11 workers and released an estimated four million barrels of oil into the gulf. *FIS World News* Read more

January 15 - Analysis: BP's Oil Spill Settlement Challenges May Backfire

A year after agreeing to a multi-billion dollar settlement with victims of the 2010 Gulf oil spill, BP is aggressively challenging terms of the deal in a legal strategy that could backfire with the judge who will rule on the company's potentially hefty federal fines.

The British oil giant has pushed for multiple reviews by the 5th Circuit Court of Appeals, complaining the claims system approved by the U.S. District Judge Carl Barbier is overpaying for damages from the country's worst offshore disaster.

BP now wants the appeals court to permanently halt all payments to people who cannot prove their losses were directly caused by the spill. The company says it should only pay for what it agreed to when the settlement was signed. But Judge Barbier says BP is contradicting its own earlier positions when it originally drafted the settlement terms.

"The question of interpretation only arises in this case because of an ambiguity," said Joseph Lavitt, a professor at the University of California, Berkeley School of Law. *The Maritime Executive* Read more

January 18 - BP oil spill deal attracts slick lawyers

Should an adult escort service have received $173,000 in compensation because of the Deepwater Horizon oil spill?

BP certainly doesn't think so, and it is attempting to stop the payments, arguing companies have received "hundreds of millions of dollars" under a settlement agreement without proving the 2010 disaster in the Gulf of Mexico cost them business.

The 2012 settlement agreement is now in turmoil as the London-based oil giant wages an aggressive campaign in the courts and the news media. *TheStar.com* Read more

People in the news

EGYPT: ISCO CORPORATE MEMBER, IEMS, APPOINTS NEW TECHNICAL MANAGER

Shehab El-Deen Ahmed Nour El-Deen Fahmy Ismael is now Technical Manager at International Environmental and Marine Services (IEMS). In his new position he is responsible for ensuring that all technical activities are adequately planned and that technical services including the technical support for response activity is managed and balanced in accordance to capacity and the needs and expectations of IEMS, clients and employees. Shehab is a graduate of Ain Shams University and has been involved in oil spill response operations since 2009. He has participated in most of the yearly National Oil Spill Exercises in Egypt since 2002

The IEMS Emergency Management Team "EMT" is comprised of qualified, highly trained individuals capable of managing tiers 1 and 2 responses with effective and efficient support to tier 3 response. http://iemseg.com/home

SINGAPORE: DANIEL CHAN APPOINTED AS OSEC RESPONSE SPECIALIST AT SHELL

Daniel Chan began his Merchant Marine Career as a Deck Officer Cadet in January 1993 with NOL. Before this he served as an Officer on board the American Eagle Tanker fleet where he Served as a Senior Officer on board before joining Oil Spill Response Ltd.

During more than 4 years at OSRL he gained extensive experience in response operations.

Science and technology

SOAKING UP CRUDE OIL SPILLS WITH POLYMER MESH MAGNETIC NANOPARTICLES, HYDROCARBON POLYMER - A FOLLOW-UP TO LAST WEEK'S ARTICLE

Researchers at Texas A&M University have developed a non-toxic sequestering agent - iron oxide nano particles coated in a polymer mesh that can hold up to 10 times their weight in crude oil - a material that can safely soak up leftover oil, not captured using conventional mechanical means. As reported in the ACS Nano scientific journal, the nano particles consist of an iron oxide core surrounded by a shell of polymeric material - a simple poly(acrylic acid)-block-polystyrene that possesses both hydrophilic (poly(acrylic acid)) and hydrophobic (polystyrene) groups. This amphiphilic copolymer interacts with both the aliphatic hydrocarbons and aromatic components present in crude oil. Cross-linking the polymer makes the shell more stable in aqueous environments while maintaining the crude oil loading potential. To simulate an actual oil spill, the Texas A&M team weathered a sample of crude oil to match the conditions of the Deepwater Horizon spill. When the nano particles were dropped in the oil-water mixture, they immediately changed color from light tan to black as they soaked up the oil. When the nano particles were full they floated to the top, making for easy recovery by a conventional magnet, not only from a test vial but also in the ocean. A magnet was held to the side of the vial, nano particles collected at the glass, and the water was poured off, leaving the crude oil behind inside of the particles. Sonication in ethanol releases the oil from the swollen polymer matrix, causing the nano particles to return to a light tan. And although spectroscopic changes were observed after washing, the nano particles absorbed the same amount of oil during a second trial. In other words, the system is completely reusable. The next step will be creating an enhanced version that is biodegradable; as it stands, the existing particles could pose a threat if not collected once they've accomplished their duties. According to Karen Wooley, the principal investigator of the work, the project is still in the early stages. "But the fact that [our nano particle system] can capture 10 times its weight in crude oil is such a promising first result that I think they have significant potential," she said.

An experimental product - Enviro-BondÂ® polymer, demonstrates how polymers are used to control and cleanup oil spills on our oceans. This polymer is a hydrocarbon polymer (oil-based) that contains a porous internal structure. The major components of oil are attracted to this polymer because their nature is quite similar. The polymer attracts and absorbs the oil within its pores, encapsulating it and preventing its release. Once the particles are "full" of oil, they adhere to one another and form a semi-solid mass that can be handled and disposed easier. Enviro-Bond is ideally suited for water cleanup because it is hydrophobic and its density is lower than the density of water, therefore the polymer particles float at the oil-water interface. The gelled material should be recycled at an automotive service center, should be kept away from heat and open flame.

Even though this polymer absorbs oil, it is not considered a super-absorbing material. Super-absorbers must be capable of absorbing 25 times their weight in liquid in order to be classified as a super-absorber. It is considered a "hydrocarbon stabilizer" instead. Scientists are describing what may be a "complete solution" to cleaning up oil spills -- a superabsorbent material that sops up 40 times its own weight in oil and then can be shipped to an oil refinery and processed to recover the oil. Their article on the material appears in ACS' journal Energy & Fuels. T. C. Mike Chung and Xuepei Yuan note that their solution is a polymer material that transforms an oil spill into a soft, solid oil-containing gel. One pound of the material can recover about 5 gallons of crude oil. The gel is strong enough to be collected and transported. Then, it can be converted to a liquid and refined like regular crude oil. That oil would be worth US$15 when crude oil sells for US$100 a barrel. "Overall, this cost-effective new polyolefin oil-SAP technology shall dramatically reduce the environmental impacts from oil spills and help recover one of our most precious natural resources," the authors said. *Plastemart.com* Read more

Cormack's Column

In this issue of the ISCO Newsletter we are printing No. 159 in a series of articles contributed by Dr Douglas Cormack.

Dr Douglas Cormack is an Honorary Fellow of ISCO. As the former Chief Scientist at the British Government's Marine Pollution Control Unit and head of the UK's first government agency, the Warren Spring Laboratory, Douglas is a well known and highly respected figure in the spill response community. He is the Chairman and a founder member of the International Spill Accreditation Association

CHAPTER 159: KNOWLEDGE ONLY INITIATIVES

Further to this knowledge-acceptance/belief-rejection initiative as outlined in article 158, we know that self-styled interested parties debate possible adjustment of one or other belief-consensus in respect of removal/non-removal of cargo, of sheltered/exposed locations for such removal, of dispersant use/non-use at sea, inshore or onshore, of recovery/non-recovery at sea, inshore or onshore, and of recycling/ disposal of recovered materials; that coastal-state administrations go along with whatever belief-consensus is thus reached day-by-day; that knowledgeable persons who may be present are obliged to go with the belief-consensus unless they are able to oppose it with a belief in compensation being unforthcoming were a consensus to be judged unreasonable in retrospect; that neither states nor the knowledgeable have yet definitively differentiated the reasonable from the unreasonable by the reality-evaluation which definitively differentiates not only the knowledge/belief dichotomy but also those of truth/falsehood, wisdom/folly, right wrong and good/bad; and that any refusal of compensation is thus attributed to unreasonableness as yet undefined by the claimants, the fund providers or the public.

However, as to the likelihood of achieving universal acceptance of this knowledge-only initiative, we know that those to whom it is presented never fail to understand its potential benefits, never argue against it, nor ever flatly deny it; that at worst they describe it as politically unacceptable or politically incorrect; that in thus coupling knowledge with incorrectness, they make the error of failing to couple incorrectness with the politics of marine incident response; that in correcting this error they would position themselves to contrast political belief in general with the apolitical reality-validated knowledge which is craftsmanship, science, technology, and the knowledge-content of our traditional behaviour codes thus definitively differentiated from their various belief-contents by the reality-evaluation which is the sole converter of belief to either positive or negative knowledge.

Again, when the IOPCF secretariat seeks to calm panic by reference to the availability of compensation, it unconsciously encourages the belief that all and every belief-only response action or the consequences of all and every belief-only prohibition of knowledge-only response action is entitled to compensation; and that even those which in retrospect are seen to be excessive and indeed pointless should be compensated as arising from excusable panic.

In contrast, this initiative intends to show that knowledge is the only antidote to belief-only panic; that the costs of belief-only actions and the costs arising from belief-only prohibitions, ought not to be compensated; and that the costs of all knowledge-only actions which give rise to quantifiable benefits ought to be compensated within Fund limits. As to objections to the retrospective nature of compensation assessments, this initiative intends to show that post-action and post-prohibition assessments must be retrospective.

As to compensation claims for commercial loss, this initiative intends to show such to be a straight-forward matter of retrospective comparison with documented pre-incident profit levels according to existing guidelines, these losses having arisen through no fault of the claimant. As to claims made by member states for costs incurred in their responses, this initiative intends to show that admissible costs are those incurred only in respect of the knowledge-accepting/belief-rejecting contingency plan as incident-specifically implemented, and as reported in submission of the compensation claim which itself arises from no fault of the claimant; but that costs incurred by the claimant's acceptance of beliefs rejected by the knowledge-only contingency and incident-specific plans, are self-inflicted and as such are ineligible for compensation.

Thus, claims arising from prohibition of cargo/bunker transfer in safe-havens, of dispersant-use, of *in situ* decanting of collected free and demulsified water, and of all such processing at other than approved sites, ought not to be eligible for compensation.

Thus, this initiative is intended to avoid belief-only panic by creating a knowledge-only approach to limit the release of oils/HNS to sea and shore by cargo/bunker transfer; to predict incident-specific fates and effects of releases and the outcomes of responses thereto; to facilitate the reporting of outcomes and the submission of claims for compensation; and thus to conserve the compensation Funds. It is also intended to update the contingency plan with any new knowledge acquired from successive incidents, and thus to perpetuate its updated use despite inevitable staff changes.

In addition, it is intended to commend this approach directly to response contractors for their cost-effective interaction with state customers, to state customers through the IMO, and to the IOPCF and IGP&I secretariats for their direct interaction with state customers. Let us therefore look forward to 2014 as the Year of the Initiative.

1 The *Rational Trinity: Imagination, Belief and Knowledge*, D.Cormack, Bright Pen 2010 available at www.authorsonline.co.uk
2 *Response to Oil and Chemical Marine Pollution*, D. Cormack, Applied Science Publishers, 1983.
3 *Response to Marine Oil Pollution - Review and Assessment*, Douglas Cormack, Kluwer Academic Publishers, 1999.

Contributed article

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THE SPRES PROJECT: OIL SPILL PREVENTION AND RESPONSE AT LOCAL SCALES

In the past few decades the number of accidental oil spills affecting the Atlantic coast of Europe has led to a growing concern regarding oil spill preparedness and response. In particular, coastal spills result in most damage in sheltered bays and tidal inlets, where oil becomes concentrated. Semi-enclosed bays and inlets are also often the home of major ports, which themselves represent high hazard areas for oil pollution.

Recent major oil spill accidents (Erika, 1999; Prestige, 2002; Deepwater Horizon, 2010) highlighted the limitations of the authorities to respond effectively to a crisis of this nature. The lack of operational oceanographic forecasting systems and transport models at the regional scale was identified as significantly limiting the effectiveness of the response. Such operational systems provide realistic predications of oceanographic variables, including currents, which are the major determinant in the tracking and forecasting of oil spill trajectories. It is clear that further effort is needed in developing local systems that can aid emergency response to an oil spill threat.

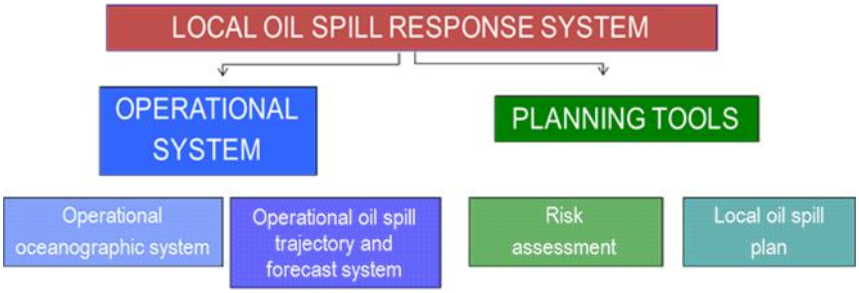

Figure 1. SPRES Project main objectives and deliverables

To fulfil the environmental and safety at sea legislation, and to prevent, prepare for, and respond to oil spills, two complementary approaches exist (Figure 1):

1. Planning tools to promote an integrated and sustainable oil spill response capability.
2. Operational oceanography systems that provide real-time forecast of oceanographic variables and oil spill trajectories.

Both approaches are usually based on monitoring and numerical (hydrodynamic and transport) models. Most institutions with response obligations are not in a position to undertake such modelling without specialist input: transnational cooperation through the EU INTERREG IVB (Atlantic Area) project funding programme sought to fulfil such needs via the SPRES- Oil spill prevention and response at local scales– project, led by modelling experts Environmental Hydraulics Institute, University of Cantabria, Spain ("IH Cantabria").

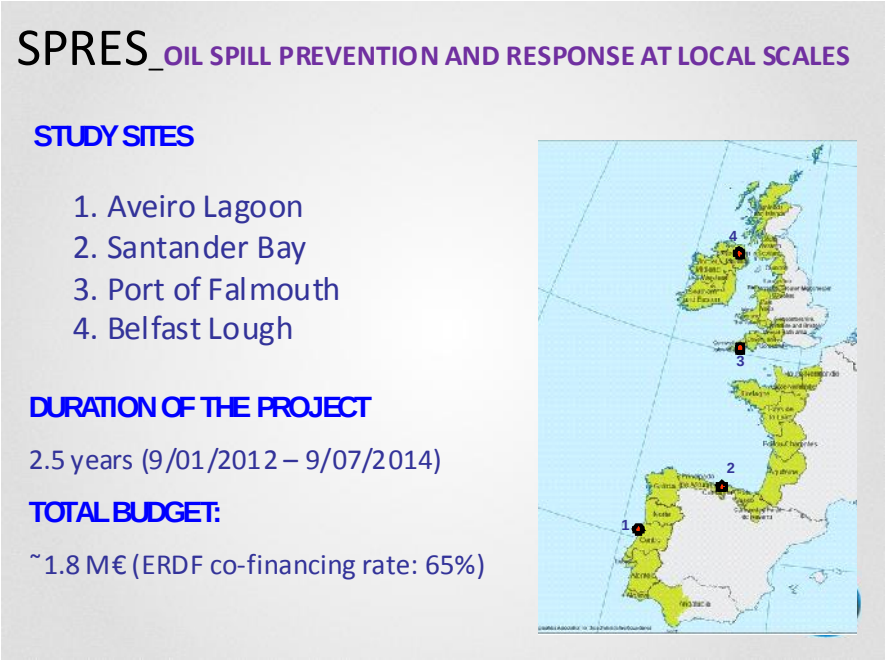

Figure 2. SPRES Project sites

The SPRES project involves eight partners across four countries (Portugal, Spain, France and the UK) and a further ten associate partners including port authorities and organisations with response obligations. Four study sites were selected to trial the development of high resolution operational oceanographic systems to allow high resolution oil spill modelling and risk assessment systems: Aveiro Lagoon, Santander Bay, Port of Falmouth and Belfast Harbour (Figure 2). Each of these sites represents an important port, with the oceanographic modelling challenges of being semi-enclosed bays or tidal inlets.

The main expected outcomes of the project are:

- A set of high resolution operational oceanographic systems in several estuaries and ports. These systems will provide daily forecast of sea level, currents, temperature and salinity.
- Oil spill modelling systems coupled with the aforementioned operational systems ready to be used at these local scales in case of pollution threat.
- A Geographical Information System (GIS)-based risk assessment system for each of the chosen sites.
- A local oil spill response plan for each of the chosen sites.

Case example of Belfast Harbour

Oil spill models are composed of mathematical formulations to represent oil transport and fate processes (advection due to current and wind, spreading, emulsification, evaporation, dissolution, etc.). In Belfast Lough, a computationally-fast model has been applied, known as "TESEO" (Abascal et al., 2007), which is derived from a two-dimensional Lagrangian transport model and simulates oil movement forced by winds, currents and tides. The forcing variables are derived from operational systems that downscale oceanographic and meteorological predictions, which are used to generate high resolution currents data via a DELFT-3D hydrodynamic model set up for the Lough.

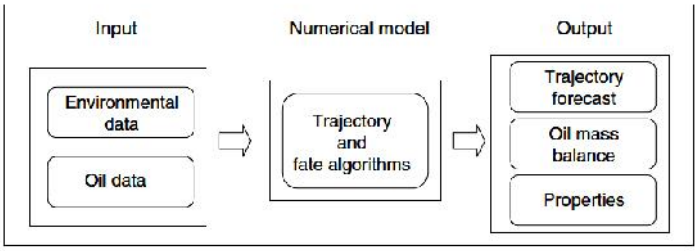

Figure 3. TESEO oil spill model modules, as applied by SPRES in Belfast Lough

TESEO consists of three main modules (see Figure 3): input, numerical model and output. In the input module, environmental data (i.e. wind, waves, and surface currents) as well as oil data are introduced. The spill data, including oil type and all the information required to establish the spill scenario (location, time, volume released, etc.), are defined by the user. The numerical module is made up of a series of algorithms that represent the transport and fate of oil spilled in the marine environment. Finally, the output module provides the oil-spill trajectory forecast, the oil mass balance and the oil properties evolution. This information is presented in the form of easily and quickly interpreted maps as a tool to help in the response planning process.

Figure 4. Example of oil spill trajectory from high resolution model in development for Belfast Lough

Contributed article (continued)

The specific properties and behaviour of oil types transported and used in Belfast Lough have been tested in laboratory conditions by project partner CEDRE, and the results incorporated into the TESEO model. Calibration and validation of the DELFT-3D model used sea level, salinity, temperature and currents data gathered by the Agri-Food and Biosciences Institute (AFBI, Belfast). Validation exercises of TESEO oil spill trajectories for specific scenarios (e.g. Figure 4) are ongoing through a close working partnership with Belfast Harbour; the first test of the model was in August 2013 during an oil spill exercise in which 200 oranges were released off Oil Berth 4 within the Port. Results so far have provided additional confidence in the model, which is vital for stakeholder uptake of the final SPRES products. In addition, the outputs of the model are being used to check the potential effectiveness of existing booming strategies in the Harbour, so that booming plans may be underpinned by science.

The risk assessment systems for the study sites have been undertaken though GIS mapping of shoreline types and physical, ecological and economic factors that would affect the impact of an oil spill, and the feasibility of clean-up operations. This is coupled with hazard information derived from running many oil spill scenarios which identifies high risk areas. Both the operational oil spill simulator and the site risk information will be accessible via a web portal with a map-based interface for key emergency responders and institutions in the area.

Reference:

Abascal, A.J., Castanedo, S., Gutierrez, A.D., Comerma, E., Medina R., Losada, I.J., 2007. TESEO, An Operational System for Simulating Oil Spills Trajectories and Fate Processes. In: Proceedings, ISOPE-2007: The 17th International Offshore Ocean and Polar Engineering Conference, vol. 3. The International Society of Offshore Ocean and Polar Engineers (ISOPE), Lisboa (Portugal), pp. 1751–1758.

For further information about SPRES, please go to the SPRES Project Website: www.spresproject.eu

Alternatively, please contact Dr. Sonia Castanedo: sonia.castanedo@unican.es or for further details regarding SPRES work in Belfast Lough, contact Dr. Annika Clements: annika.clements@afbini.gov.uk

Publications

FOR YOUR INTEREST – LINKS FOR RECENT ISSUES OF PERIODICALS

ASME EED EHS Newsletter	News and commentary on HSE issues from George Holliday	Most recent issue
Bow Wave	Sam Ignarski's Ezine on Marine & Transport Matters	Current issue
Cedre Newsletter	News from Cedre in Brittany, France	December 2013
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	January 6 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	January 1 issue
USA EPA Tech News & Trends	Contaminated site clean-up information	May 2013 issue
Technology Innovation News Survey	From US EPA - Contaminated site decontamination	Dec 1-15 2013 issue
Intertanko Weekly News	International news for the oil tanker community	No 3 2014
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	January 2014 issue
IMO Publlshing News	New and forthcoming IMO publications	December 2013
IMO News Magazine	News from the International Maritime Organization	No 4, 2013
Pollution Online Newsletter	News for prevention & control professionals	January 15 issue
EMSA Newsletter	News from the European Maritime Safety Agency	January 2013 issue
JOIFF "The Catalyst"	Int'l Organisation for Industrial Hazard Management	October 2013 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	January 2014 issue
HELCOM Newsletter	Baltic Marine Environment Protection Commission	May 2013 issue
OCIMF Newsletter	News from the Oil Companies International Marine Forum	September 2013 issue
IPIECA eNews	Int'l Petroleum Industry Environmental Conservation Assoc'n	November 8 issue
WMU Newsletter	From the World Maritime University in Malmo, Sweden	December 2013 issue

CANADA: FEDERAL GOVERNMENT TECHNICAL REPORT

Properties, Composition and Marine Spill Behaviour, Fate and Transport of Two Diluted Bitumen Products from the Canadian Oil Sands.

Download the report from Environment Canada Emergencies Science and Technology, Fisheries and Oceans Canada, Centre for Offshore Oil, Gas and Energy Research, Natural Resources Canada and CanmetENERGY

Events

REMINDER: IMO OPRC-HNS TECHNICAL GROUP MEETING IN LONDON

The sixteenth session of the OPRC-HNS Technical Group will be held at IMO Headquarters, from Tuesday, 28 January 2014 to Friday, 31 January 2014 (Session commences at 9.30 a.m. on Tuesday, 28 January 2014)

Events (continued)

UAE DUBAI: OFFSHORE ARABIA CONFERENCE & EXZHIBITION, 3-5 MARCH 2014

This prestigious international Conference & Exhibition is to be held under the patronage of HH Sheikh Mohammed bin Rashid AL Maktoum Vice President & Prime Minister of the UAE and Ruler of Dubai. More info

USA: SCAA ANNUAL MEETING & CONFERENCE

The SCAA Annual Meeting & Conference will be held March 20-21 2014 at the Hilton Crystal City at Washington Reagan National Airport. The Annual Meeting & Conference is open to SCAA members and non-members. A SCAA members-only Capitol Hill Visit will be held on Wednesday, March 19 in conjunction with the Annual Meeting & Conference. More info

Training

USA: EMERGENCY FILM GROUP ISSUE NEW CALALOG

ERG, the providers of Hazmat for Industry & Maritime Safety Training have issued a new calalog. Download here

DISTANCE LEARNING - CERTIFICATE IN MARINE POLLUTION, PREVENTION & MANAGEMENT

Certificate in Marine Pollution, Prevention & Management, which it studied by part-time distance learning over 12 weeks. The course is offered in partnership between Lloyd's Maritime Academy, which specialises in courses for the maritime sector, and IBC Academy with their offshore energy focus.

- This is the only distance learning course that covers the subject of Marine Pollution, Prevention & Management in such detail – delivering required knowledge as well as valuable insights into the critical approaches, processes, key principles, resources and techniques employed in the shipping and offshore oil and gas sectors.
- The course explores all aspects of pollution from maritime operations, including MARPOL compliance, and blends important legal, regulatory and technical information with practical advice.
- The course director, Dr Iliana Christodoulou-Varotsi, brings a wealth of experience to the subject and will be available throughout the course via the online forum which will enable you to ask questions, share experience and network with an international student group.
- On successful completion of the course you'll receive a certificate to acknowledge your study plus investment in continuing professional development (CPD).

Contact for more info: anjali.joshi@informa.com

When you are ready to enrol, please visit our online registration form at www.lloydsmaritimeacademy.com/FLR2456TT81 or complete the attached excel application form and return to me. Please quote the booking code TT81, which will help me ensure that your application is processed as quickly as possible.

Contracts and tenders

EMERGENCY RESPONSE BASIC ORDERING AGREEMENTS (BOAS) TO PROVIDE FOR THE CONTAINMENT, CLEANUP AND/OR TO MITIGATE THE HARMFUL EFFECTS OF OIL SPILLS AND HAZARDOUS SUBSTANCE INCIDENTS

Department of Homeland Security, United States Coast Guard (USCG), Norfolk, VA.
Federal Business Opportunities, FBO-4422, Solicitation HSCG84-14-R-100001.

The USCG Shore Infrastructure Logistics Center seeks to identify sources capable of providing emergency response services for the containment, cleanup, and/or mitigation of the harmful effects of oil spills and hazardous substance incidents on or in waters subject to the jurisdiction of the United States. The primary area of coverage will encompass the entire United States and its territories, including but not limited to Puerto Rico, the Virgin Islands, Guam, the Marianas Islands, and American Samoa. Prospective contractors having the skill and capabilities necessary to perform the stated requirement are invited to provide a letter of interest and capabilities by 4:00 pm ET, January 31, 2014. Firms responding to this notice will receive a solicitation package if their information submittal is complete and USCG determines that they may be capable of successfully performing emergency pollution response. USCG intends to negotiate time-and-material type BOA(s) with contractors selected as a result of this sources sought notice. https://www.fbo.gov/spg/DHS/USCG/FCPMLCA/HSCG84-14-R-100001/listing.html