5th Premiam Conference

Pollution Response in Emergencies: Marine Impact Assessment and Monitoring

Promoting best practice in an international context

22nd June 2020, Room E107/E108 RAI, Amsterdam

The Premiam Conference in 2022 will take place as an integral part of the Interspill 2022 Conference and Exhibition. The Premiam conference provides a forum for scientists, regulators, environmental advisors, responders and other professionals working in the field of marine oil/chemical spill monitoring and impact assessment to share experience, best practice and knowledge with the wider marine emergency response community. The Premiam initiative aims to disseminate best practice in the application of science to spill scenarios and to promote excellent cooperation and communications in achieving effective post-spill monitoring. The 5th Premiam Conference will bring together an excellent programme of speakers to consider best practice scientific approaches, emerging spill threats and to put this in an international context.

@Premiam_Spill

Programme

08:30-09:00 **Registration/Exhibition Open**

09:00-10:30 **Special Plenary** – Keynote Speaker (part of wider Interspill event)

10:30- 11:00 **Break**

Session 1: **Developments & innovation in Post-spill Environmental Monitoring**
Chairperson: Mark Kirby

11:00 – 11:10 **Premiam Introduction** – Mark Kirby, Cefas

11:10 – 11:30 **Common challenges and opportunities for post-spill monitoring across multiple ecosystem receptors** Georgios Kazanidis, JNCC

11:30 – 11:50 **Interdisciplinary approach on the immediate effects of short-lived oil spills on marine microbial biota** Corina Brussaard, NIOZ

11:50 – 12:10 **Future application of marine autonomous systems – Linking response and environmental monitoring** Rob Holland and Liam Harrington-Missin, OSRL

12:10 – 12:30 **Assessing and monitoring the impacts of a hidden legacy of pollution from potentially polluting wrecks** Freya Goodsir, Cefas

12:30 – 14:30 **Lunch Break – Exhibition Open**

Session 2: **Emerging Issues – implications for monitoring and impacts**
Chairperson: Mark Kirby

14:30 – 14:50 **Post spill monitoring and assessment: preparedness is key**
Suzanne Ware, Cefas

14:50 – 15:10 **Trends in Fuel & Cargo types – Very Low Sulphur Fuel Oils – Implications for impacts and monitoring** Will Griffiths, IMO

15:10 – 15:30 **Microplastics: Monitoring and Emergency Response**
Alex McGoran, Cefas

15:30 - 16:00 **Back to the Future: Examining the History of Oil Spills to Anticipate What Lies Ahead**
Gary Shigenaka, NOAA

16:00 – 16:30 **Break**

Session 3: **The International Context**
Chairperson: Mark Kirby

16:30 – 16:50 **Common challenges faced in implementing effective environmental monitoring: an international perspective** Miguel Patel, ITOPF

16:50 – 17:10 **Integration of post-incident monitoring and impact assessment into spill management systems - an international perspective** Peter Taylor and Rob Cox, IPIECA

17:10 – 17:30 **The UK as Part of International Post Spill Emergency Response – The Role of Defra International Programmes** Dr Suzanne Ware, Cefas

17:30 – 17:50 **The Wakashio an example of the potential of Tier 3 Scientific Support and Monitoring**
Matthew Sommerville, Independent Oil Spill Consultant

17:50 – 18:00 **PREMIAM CONFERENCE Wrap-up**
Mark Kirby, Cefas

18:00 **Close**

PREMIAM Chair

Mark Kirby
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Mark entered the role of Science Services Director in 2017 with responsibility for the delivery and development of Cefas' key scientific facilities including laboratories, aquaria, workshops, the research vessel. He has been at Cefas for over 30 years with a scientific background in ecotoxicology and over 30 peer reviewed publications. Mark is a nationally and internationally recognised expert in the field of emergency response and marine impacts and is a key advisor to UK government in the field. He chairs the Premiam steering group overseeing a UK wide initiative to promote best practice in science and management of post-spill environmental monitoring.

The Wakashio an example of the potential of Tier 3 Scientific Support and Monitoring

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Starting in 1983 as a ship engineer before moving into R&D at Warren Spring Laboratory and a decade making deliberate spills at sea and on beaches. In 1997 he joined Briggs and the new response base in Azerbaijan before returning to UK to support establishment of bases around the globe and moving on to work for Seacore/NRC, and in 2007 OSRL as their first Technical Advisor. In 2010 he joined Aramco Overseas Company in the Netherlands developing the incident support capability for all incident outside the USA or Saudia Arabia. Before joining the International Oil Pollution Compensation Funds as Director Head of Claims Department managing compensation payments. In 2014 he moved on to Shell's newly forming Oil Spill Expertise Centre as the Regional Response Manager Europe, Middle East and Africa before in 2015 returning to his own company Spectrum Spill Services

He has intended numerous incidents including the Vicuna, Sea Empress, Aragon, Rosebay, Seki, Braer, Aegean Sea, BP Trent, Prestige, Erika, Hebei Spirit Exxon Valdez, and the Wakashio

Back to the Future: Examining the History of Oil Spills to Anticipate What Lies Ahead

Gary Shigenaka
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Gary Shigenaka is a marine biologist with many decades of experience in environmental science. He recently retired from a long career with NOAA (U.S. National Oceanic and Atmospheric Administration), where he specialized in field assessment of coastal status and trends for spill response. He currently holds the title of *Scientist Emeritus* with NOAA's Office of Response and Restoration.

Gary's career was dedicated to scientific support for oil and chemical spill response with NOAA's Emergency Response Division in Seattle. Gary was part of the early scientific mobilization for the 1989 *Exxon Valdez* oil spill in Alaska, and monitored long-term effects through 2013. He worked the 2010 *Deepwater Horizon* oil spill from the forward command post, focusing on a wide range of biological issues. His resumé of other domestic spill responses includes most major U.S. incidents. International responses and research initiatives have taken him to Canada, Chile, Japan, Spain, and Bangladesh.

Gary taught many spill science and shoreline assessment classes sponsored by NOAA. He also managed research initiatives on chemical dispersants, *in-situ* burning, Arctic response, and the history of oil spills; and was technical editor for several of NOAA's biological response guides. For 15 years, he represented the U.S. Department of Commerce on the Regional Response Team, which coordinates response and planning across state boundaries in the Pacific Northwest and the Canada-U.S. border. Gary currently serves on the Science and Technical Committee of the Oil Spill Recovery Institute; and provides scientific advice to the Islands Oil Spill Association (local response organization based in northern Washington State), and to Nuka Research and Planning LLC.

Common challenges faced in implementing effective environmental monitoring: an international perspective

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Miguel Patel joined ITOPF as a Technical Adviser in October 2011. He has a degree in Zoology and a Master's Degree in Environmental Management, with research experience in ecotoxicology, population dynamics and habitat restoration.
Since joining ITOPF, Miguel has attended numerous ship-source pollution incidents internationally, including spills of bunker fuel, crude oil, HNS and solid bulk cargoes. As part of ITOPF's technical advisory role, Miguel has provided assistance on clean-up techniques, environmental monitoring and claims and compensation following spills in Europe, Africa, South America and Asia. He has also participated in numerous oil spill exercises, drills, inter-governmental workshops and conferences internationally.
Miguel is ITOPF's lead on Environmental Damage and heads up the organisation's internal Training & Education Functional Group.

Post spill monitoring and assessment: preparedness is key.

The UK as Part of International Post Spill Emergency Response – The Role of Defra International Programmes.

Dr Sue Ware
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Sue is the Cefas Monitoring Group Manager. During her 18 year career with Cefas, she has worked on benthic ecological indicator development and has also provided advice to the regulator on Environmental Impact Assessments (EIAs) and Environmental Statements (ES). Sue is also a co-chair of the ICES Working Group on Marine Protected Areas (WGMPA) and advises on the MPA implementation cycle in both the UK and international domain, supporting the '30 by 30' initiative. Sue is also part of the Cefas Emergency Response Team and is the PREMIAM Monitoring Coordination Cell (PMCC) chair for England

Interdisciplinary approach on the immediate effects of short-lived oil spills on marine microbial biota

Prof. Dr. Corina Brussaard
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Prof. Dr. Corina Brussaard is senior research team leader at the NIOZ - Royal Netherlands Institute for Sea Research and holds a special chair in Viral Ecology at the University of Amsterdam. As biological oceanographer she studies the ecology of marine microbes. Brussaard has developed several key methodologies, amongst which rapid detection and enumeration of aquatic viruses using flow cytometry. Her research demonstrates quantitative importance of viruses as mortality agents for microorganisms, in particular phytoplankton, and the subsequent consequences for biogeochemical cycling. She has a keen interest experimentally studying the effects of (global climate change induced) alterations in environmental conditions on virus-host interactions. Brussaard was asked to join the EU-project 'FACEiT', where she also organized the fieldwork that included an experimental oil spill (in collaboration with the Dutch oil responders from Rijkswaterstaat Zee en Delta).
Brussaard is a Fellow of the American Academy of Microbiology, served as president of the International Society for Viruses of Microorganisms (ISVM), is editor of FEMS Microbiology Reviews, and member of the advisory committee for Earth Sciences of the Dutch Science Foundation, domain Science.

Integration of post-incident monitoring and impact assessment into spill management systems - an international perspective

Peter Taylor
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Peter Taylor spent six years in environmental research and consultancy, prior to specializing in oil spill preparedness and response activities for the last 30 years. Projects have included oil spill environmental monitoring, contingency planning, training and simulation exercises, alongside providing guidance during spill response. He has worked in over 50 countries.
Mr. Taylor has been supporting IPIECA's promotion of effective oil spill contingency planning around the world since 1998, working closely with the International Maritime Organization (IMO) and other international organizations.

Rob Cox
Technical Director
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Rob Cox is a freelance consultant and for the past twenty years was Technical Director of IPIECA in London, managing, inter alia, the IPIECA Oil Spill Group, including, during his tenure the IPIECA-IOGP Joint Industry Project formed following the 2010 Deepwater Horizon incident. Prior to IPIECA, Rob had over twenty-five years of international petroleum industry experience including fifteen years field experience in environmental aspects of refining, retail marketing and shipping as an expatriate with Caltex (now Chevron) in Africa, the Middle East and the United States.
Rob holds a Bachelor's degree in Chemistry and Biochemistry from the University of Dundee in Scotland and a Postgraduate Diploma in Environmental Practice from Farnborough College of Technology in England.

Microplastics: Monitoring and Emergency Response

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Alex McGoran is a microplastics scientist at Cefas, specialising in microplastic interactions with biota. Her role within the Cefas Marine Litter team is to investigate and monitor microplastic pollution, supporting the delivery of several projects relating to national and international marine litter assessment and monitoring, as well as assisting in the setup of other microplastic laboratories and training staff in microplastic extraction techniques. She completed her PhD in 2022 at the Natural History Museum, London in partnership with Royal Holloway University of London. Alex's PhD focussed on microplastic accumulation in an estuarine food web and assessed the effectiveness of combined monitoring of micro and macroplastics.

Common challenges and opportunities for post-spill monitoring across multiple ecosystem receptors

Dr Georgios Kazanidis
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Dr Georgios Kazanidis serves as Offshore Industries Advice Manager at the Joint Nature Conservation Committee (JNCC). Dr Kazanidis leads the provision of high quality, evidence based and pragmatic nature conservation advice to regulators and industry. He also supports the provision of environmental information and advice in the event of pollution incidents. Before joining JNCC Dr Kazanidis served as a Post-Doctoral Research Associate and Scientific Project Manager at the H2020 ATLAS and iAtlantic projects. Through his work in these projects Dr Kazanidis advanced knowledge about the impacts of human activities and climate change in offshore ecosystems in the northeast Atlantic.

Future application of marine autonomous systems – Linking response and environmental monitoring

Rob Holland
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Rob holds BSc and PhD qualifications in Marine Biology and has over 30 years' experience ranging from academic research, teaching, consultancy and the last 20 years in the oil spill response industry. Rob has worked at OSRL since 2003 and has delivered a wide range of spill response preparedness projects for OSRL members globally including oil spill response plans, capability reviews, exercises, training, spill support and secondments.

Rob currently sits in OSRL's global Technical Department and is responsible for the development of new and novel techniques and approaches to spill response which includes the application of marine autonomous systems.

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Trends in Fuel & Cargo types – Very Low Sulphur Fuel Oils – Implications for impacts and monitoring

Will Griffith
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Will Griffiths is a Marine Biologist with an MSc in Marine Science, Policy and Law. He spent 8 years at Oil Spill Response Limited (OSRL), the largest industry-funded cooperative which exists to respond to oil spills wherever in the world they may occur. He has experience responding to oil spills across Europe, Africa, Asia and the Middle East, from managing beach cleanup operations and offshore response to providing incident management support to private companies as well as governments. In addition to response, Will also has extensive experience supporting preparedness activities, developing contingency plans, delivering training, and conducting preparedness reviews. In 2022, Will left OSRL to take up a position as a Technical Officer at the International Maritime Organisation, a specialised agency of the United Nations. In this position he assists international governments with issues pertaining to the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC 90).

Assessing and monitoring the impacts of a hidden legacy of pollution from potentially polluting wrecks

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Freya Goodsir is a Senior Marine Research Scientist working for the Centre for Environment, Fisheries and Aquaculture Science (CEFAS). She has more than ten years' experience in leading and publishing scientific research relating to risk and impact of human activities on the marine environment, including both in combination and cumulative effects assessments. Freya leads the science and methodological development for on-site environmental surveys, as well as environmental desk-based assessments towards assessing the risk posed by shipwreck and other sources of pollution in the marine environment. Working in this topic area Freya has developed a true passion for underwater maritime heritage and the drive to achieve tangible environmental benefits.