

Review of Interagency Coordinating Committee on Oil Pollution Research (ICCOPR) 2022-2027

Research and Technology Plan

Committee

Kenneth Lee

Chair

Dr. Kenneth Lee is the National Senior Science Advisor for Oil Spill Research, Preparedness and Response for Fisheries and Oceans Canada (DFO). His previous positions include being the Director of Oceans and Atmosphere, CSIRO-Australia and Director of DFO's Centre for Offshore Oil, Gas and Energy Research (COOGER). A specialist in microbial ecology (Ph.D., U. Toronto) and a recognized expert in oil spill response measures, Dr. Lee chaired the Royal Society of Canada's Expert Panel on the Behaviour and Environmental Impacts of Crude Oil Released into Aqueous Environments. He has served on three NAS/NAE/NAM Committees on the effects of the Deepwater Horizon oil spill on ecosystem services; Arctic oil spill response; and the use of chemical oil dispersants. Dr. Lee recently received the 2021 Legacy Award from the Pacific States/British Columbia Oil Spill Task Force. He was awarded DFO's "Prix d'Excellence" twice and recipient of the Government of Canada's Federal Partners in Technology Transfer Leadership Award for the development and application of oil spill countermeasures.

Adriana Bejarano

Member

Dr. Adriana C. Bejarano is a Senior Ecotoxicologist with Shell Oil Company where she is a Subject Matter Expert on issues related to dispersants and oil toxicity. Prior to joining Shell, she provided scientific support to the U.S. Coast Guard through NOAA's Emergency Response Division (ERD) on issues related to oil and chemical spills. She also developed damage assessment metrics for several spills and coordinated early-restoration planning following the Deepwater Horizon oil spill. Dr. Bejarano is an environmental scientist whose research has focused on the development of predictive models and the integration of scientific knowledge into user-friendly tools for use in oil spill preparedness and response. Through NOAA/ERD, she led improvements to the design and capabilities of the Chemical Aquatic Fate and Effects (CAFE) database, a tool that supports spill response and planning, which in 2016 received the Environmental Product Award by the North American Marine Environmental Protection Association. She holds a B.A. in Marine Biology from Universidad del Valle, Colombia, and a M.S. in Marine Science and a Ph.D. in Aquatic Toxicology from the University of South Carolina. She served as a NASEM committee member for the consensus report "Evaluation of the Use of Chemical Dispersants in Oil Spill Response".

Michel C. Boufadel

Member

Dr. Michel Boufadel is Distinguished Professor of Environmental Engineering and Director of the Center for Natural Resources at the New Jersey Institute of Technology, in Newark, New Jersey. Dr. Boufadel's expertise is the study of the fate and transport of chemicals, especially in offshore environments. His work includes the remediation of the Exxon Valdez oil spill and assessment of oil fate in the environment following the Deepwater Horizon oil spill. Dr. Boufadel has more than 200 refereed articles in publications, such as Marine Pollution Bulletin, NATURE geosciences, Proceedings of the National Academy of Science, and Environmental Science and Technology. He is currently Editor-in-Chief for Marine Pollution Bulletin of Elsevier, and Editor of Forum articles in the Journal of Environmental Engineering, American Society of Civil Engineers. He holds a PhD and an MS in Chemical Engineering from the University of Cincinnati.

Abbas Firoozabadi

Member

Dr. Abbas Firoozabadi is a Distinguished Research Professor of Chemical and Biomolecular Engineering at Rice University. Previously he has taught at Imperial College London, Yale University, Tokyo University and Peking University. His current research focus includes CO₂ Sequestration, Hydraulic Fracturing by Water and CO₂, CO₂ Viscosification for widespread use, flow assurance, topics of thermodynamics, higher-order subsurface flow simulations, and flow assurance. He has been awarded the SPE/AIME Anthony Lucas Gold Medal. Firoozabadi is a member of US National Academy of Engineering (NAE). He has a PhD from Illinois Institute of Technology and has conducted post-doctoral research at the University of Michigan.

Kurt Hansen

Member

Mr. Kurt Hansen is a consultant with Hansen Spill Response Research LLC. He retired in 2018 after 35 years as a Federal Employee involved with Research and Development. He has continued to be involved in various projects and also with abstract and paper reviews for the International Oil Spill Conference and the Arctic and Marine Oil Spill Program in Canada. He is a licensed Professional Engineer in the State of Connecticut.

He spent the last 20 years as a civil employee as the lead researcher for oil spill response at the US Coast Guard Research and Development Center. He managed projects dealing with response in fast currents, in-situ burn, response for submerged oil and response to oil in ice among others. He participated in ICCOPR meetings and in the development of documents at the International Maritime Organization (IMO) during this time. He is a member of: American Society for Materials and Testing (ASTM), Committee F20 Hazardous Substances and Oil Spill Response, American Society of Mechanical Engineers (ASME), International Spill Control Organization (ISCO) and National Society of Professional Engineers (NSPE).

Mr. Hansen has a BS in Mechanical Engineering from the University of Delaware and an MS in Ocean Engineering from the University of Rhode Island. His Master's Thesis was titled "An Interactive Computer Oil Spill Model"; which modeled spill and cleanup scenarios in Narragansett Bay and Block Island Sound.

Sergio D. Kapusta

Member

Dr. Sergio Kapusta (PhD, PE, MBA) is President of Fractionation Research, Inc., a not-for-profit R&D organization focusing on distillation and separation and funded by members' fees. He is also Professor at Rice University Center for Engineering Leadership and Director of the Rice Energy and Natural Resources Initiative. He retired from the Royal Dutch Shell group in 2015 as Chief Scientist, after a 30 year career in the energy business covering research, engineering, operations, strategy and senior management. Dr. Kapusta has extensive knowledge and practical experience in leading large research organizations, particularly in the areas of engineering, materials, process safety, and asset integrity. He has received distinction awards from the National Association of Corrosion Engineers (NACE), Society of Petroleum Engineers (SPE), and the American Institute of Chemical Engineers (AIChE). He holds a Ph.D. in Chemistry, Chemical Engineering from Rice University, a Ph.D. Professorship Habilitation in Mechanical Engineering & Materials Science from Technische Universität Clausthal in Germany, as well as an MBA from the Jones Business School at Rice University.

Jacqueline Michel

Member

Dr. Jacqueline Michel is the President of Research Planning, Inc., which she co-founded in 1978. She is also an Adjunct Faculty in the School of the Earth, Ocean & Environment at the University of South Carolina. Dr. Michel is an internationally recognized expert in oil and hazardous materials spill planning and response with a primary focus in the areas of oil fates and effects, non-floating oils, shoreline cleanup, alternative response technologies, and natural resource damage assessment. Much of her expertise is derived from her role, since 1978, as part of the Scientific Support Team to the U.S. Coast Guard provided by the National Oceanic and Atmospheric Administration Office of Response and Restoration. Under this role, she is on 24-hour call and provides technical support for an average of 50 spill events per year. She leads shoreline assessment teams and assists in selecting cleanup methods to minimize the environmental impacts of the spill. She received the Distinguished Alumni Achievement Award, 2002, from the College of Science and Mathematics, University of South Carolina, where she received a Ph.D. in 1980. She is a Lifetime Associate of the National Academies, was on the Oceans Studies Board at the National Academies for 2001-2005, and has served on six National Academies committees.

Debra Payton

Member

Ms. Debra “Debbie” Payton is currently working as a re-hired annuitant for the Department of Interior as a Natural and Cultural Resources RSF. Since August of 2018 she has been supporting recovery efforts in Puerto Rico. She previously served as the Chief of the Emergency Response Division of the National Oceanic and Atmospheric Administration’s Office of Response and Restoration. She served for 38 years in NOAA’s emergency response program as an oceanographer, modeler, supervisor, manager and eventually Chief. She also served as the Vice Chair of the Interagency Coordinating Committee on Oil Pollution Research (ICCOPR) from 2011-2013 and was the Department of Commerce representative to the National Response Team (NRT) from 2011-2015.

Ms. Payton has provided support to hundreds of oil and chemical spills during her career. Major spill responses include the IXTOC1, Alvenus, Arco Anchorage, Presidente Rivera, World Prodigy, Exxon Valdez, New Carissa, T/V Westchester, the Persian Gulf oil spills associated with Desert Storm and Operation Iraqi Freedom and, the MC-252 (Deepwater Horizon) well blowout. In addition, she was engaged in supporting several non-spill incidents such as Hurricanes Katrina, Rita, Isaac and Superstorm Sandy; debris issues associated with the 2011 Japanese tsunami; and modeling support for several downed aircraft. She has engaged in several preparedness planning activities in coordination with Federal, State and local governments as well as industry. Her primary support area was trajectory forecasting and modeling for both water and air.

She is a University of Washington graduate with a Bachelors in Applied Mathematics and a Masters in Civil Engineering; both degrees with a focus on hydrodynamics. She has received honors and medals for her work on specific spill responses as well as her contributions to the CAMEO suite of software to support chemical emergencies.