The “International Produced Water Conference: Environmental Risks and Advances in Mitigation Technologies” was held in St. John’s, Newfoundland, Canada, on October 17–18, 2007, and brought together international stakeholders of the offshore oil and gas industry (scientists, environmental managers, regulators, industry and other non-governmental organizations) to share their concerns, knowledge and expertise on the discharge of produced water at sea. In particular, this conference enabled Canadian scientists to present and discuss the latest findings of environmental effects monitoring and research programs conducted by industry and government (e.g. Environmental Studies Research Funds – ESRF, Program of Energy Research and Development – PERD) for both regulatory compliance and the improvement of policies and regulations. Following the meeting, a decision was made by the conference sponsor, ESRF, to publish a book highlighting the major scientific findings that would assist in the decision-making process related to oil and gas exploration and development, both in Canada’s frontier lands as well as globally.

The chapters cover a wide range of topics including:

- chemical composition and characterization,
- fate and transport in the environment,
- biological effects,
- monitoring technologies, and
- predictive modelling, and risk assessment and management.

The chapters cover the major scientific findings reported by the participants of the conference. In addition, a number of additional presentations were added to cover other recent scientific findings of interest identified by the conference session chairs and participants. Controversial papers were not avoided, in order to bring emerging issues of concern forward for discussion and evaluation for additional research. It is our hope that this collection of scientific manuscripts will aid in our evaluation of the potential impacts of produced water and the development of mitigation strategies and regulations to ensure the protection of our marine environment.
We take the opportunity to dedicate this publication to one of our colleagues and the author of a chapter in this volume: the late Maynard G. Brandsma. We hope that the research and information contained herein, on various aspects of produced water, forms a fitting memento to his memory.

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