

## **The changing role of environmental risk assessment in Newfoundland**

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Risk assessment is commonly applied for rational decision-making in most business areas (e.g., financial, legal, marketing, production, asset performance, and catastrophic event consequences). Within the industrial sector, formal risk management based on quantitative risk assessment has developed to an advanced level as a result of high financial

risks associated with care and control of contaminated sites, and there has been increasing shareholder, public, and regulator scrutiny. Environment risk assessment is one implementation of the universal risk assessment methodology. It evaluates health risks posed to specific human and ecological receptors due to potential exposure to known

hazards. Fundamental risk analysis methods are described, along with various industrial and environmental risk management tools and techniques. Conversion of risk assessment outputs into forms actually useful to non-technical corporate users is described. In the past, environmental risk management has focussed on removing a hazard. Presently, risk reduction measures include limiting receptor exposure to a hazard, which in some cases may be left in place. There is already a shift of regulator expectation away from the concept

of largely unattainable pristine cleanup to a more rational stance of acceptable risk reduction. In the future, we see improved government and private sector partnering in the development and implementation of risk approaches for sites contaminated by the wide range of common contaminants (e.g., petroleum hydrocarbons, PAHs, metals, PCBs, pesticides). This, coupled with effective risk communication, should lead to greater public confidence in site remediation efforts and the general state of the environment.