

Enviro-Actions Model: A Preventive Management Tool for Industrial Port Areas of the World



Julie Carrière, Eng. Ph.D.¹ and Elliot Dreujou, Ph.D.²

¹Centre for Industrial Port Expertise (CEIP), Northern Institute for Research in Environment and Occupational Health and Safety (INREST), Sept-Îles, Quebec, Canada

²Centre for Industrial Port Expertise (CEIP), Northern Institute for Research in Environment and Occupational Health and Safety (INREST), Sept-Îles, Quebec, Canada

Research studies have shown that anthropogenic activities can impact the environment. It is essential to understand how environmental stressors may influence ecosystems and biodiversity, especially in industrial and/or port areas where many activities are cooccurring. It is imperative that decision-makers have access to scientific support adapted to their specific needs, allowing them to ensure the preservation of ecosystems, as well as the health of communities and workers. Considering that the majority of industrial port areas are located close to urban areas, a management model integrating near real-time data becomes essential.

Twenty years ago, impacts of industrial development in industrial-port areas, attracted little attention from the population. Nowadays, social acceptability requires transparency and communication of environmental information involving actors with a neutral point of view and a scientific credibility. In this context, INREST has developed a preventive environmental management tool, the “Enviro-Actions Model”, that integrates collection and transmission of data in near real-time as well as the transmission of alerts to stakeholders at different levels. These Enviro-Alerts allow environmental management to act in a prevention mode rather than after possible perturbations have occurred. The model is being implemented in Quebec (Canada), in the Port of Sept-Îles, the largest mineral port in North America and the second among Canadian ports in terms of annual volume of operations, and in the Port of Saguenay and Rio Tinto Saguenay. With successful deployments since its creation, the Enviro-Actions Model is proposed to several harbour administrations supporting proactive ecological management within a vast network of collaborators.

Biography:

Dr. Carrière is a chemical engineer with a Ph.D. in chemical engineering. She holds the position of Executive Director of the Nordic Institute for Research in Environment and Occupational Health and its division, the Centre for Industrial Port Expertise, since 2013. She is described as a scientist, researcher, entrepreneur and businesswoman who inspires the younger generation to pursue science studies and take action to preserve the ecosystem. Julie is considered a pioneer in the development of management tools focused on environmental prevention in industrial and port areas. Dr. Carrière has developed the Enviro-Actions model aimed at preventive environmental management.