



Tuesday, April 26, 2016
Stream 3B - Stakeholder and/or Aboriginal Engagement
Location: Level 3, Salons 6&7

3:30 pm – 3:50 pm

Innovative Use of a Sustainability Tool and Challenges for Stakeholder and Aboriginal Engagement on a Complex Remediation Project

Stefano Marconetto¹ and Stella Karnis²

¹*Golder Associates Ltd.*

²*Canadian National Railway*

The objective of the presentation is to share benefits and challenges in the innovative use of a sustainability tool to improve stakeholder engagement on a complex remediation project.

Abstract

GoldSET-CN was initially developed by Canadian National (CN) and Golder Associates Ltd. (Golder) as a tool to integrate sustainability principles as part of project planning and design. Through continuous upgrades and refinements, GoldSET-CN is now becoming a broader and more comprehensive decision-support system that allows users to make objective, informed project decisions in the context of environmental protection, social acceptability, technical performance and financial considerations. For the first time since its development, GoldSET-CN was interactively used as a stakeholder engagement tool for a remediation project at a remote site along a former CN rail line in Canada.

The site is located on a rail corridor which is bordered on each side by water (wetlands) and is impacted by metals due to a historic derailment. The project started in 2006 and included various stages of environmental site assessments, biological surveys, risk assessment as well as remediation bench and pilot testing to deal with impacts in soil, sediment, surface water and groundwater at the CN site and nearby Crown land. The project is currently in the full-scale remediation design.

GoldSET-CN was leveraged to engage with regulators and the Crown (adjacent property owner) to better understand the project challenges and to select the preferred remedial option. These project stakeholders were directly involved in the selection and evaluation of GoldSET indicators. They appreciated the transparency of the process as well as the opportunity to provide feedback and witness the impact of their feedback on the overall evaluation of the remedial options. Aboriginal engagement was conducted via information sessions before and after the pilot scale remediation to openly discuss benefits and challenges of the remediation as well as direct Aboriginal involvement in the project. Visualization tools were developed with Golder's MediaLab to convey technical information to the stakeholders less familiar with remediation projects. Through this process, the First Nations and the other stakeholders gained an improved understanding of the project challenges. This interaction helped CN to build trust with them with the objective of ultimately reaching a practical solution for the site and allowed for a more streamlined approach to stakeholder engagement.



4:00 pm – 4:20 pm

How Can We Improve Stakeholder Engagement in International Regions?

James K. Henderson¹ and Lais Trento²

¹*DuPont Corporate Remediation Group*

²*University of Western Ontario*

The objective of the presentation is to discuss needed improvement in stakeholder engagement practices in the international regions.

Abstract

A preponderance of the world's population, and of its environmental problems, resides in the developing regions: Africa, Asia-Pacific, Latin America, and the Middle East. Significant progress in the remediation of contaminated lands is being made in these areas, which have benefited from the benchmarks provided by the experience of Europe and North America. However, each region exhibits unique cultural, socio-economic and environmental features, which, in the worst case, nullify the benefits of remediation. Of particular concern is ineffective stakeholder engagement, given that the most disproportionately impacted in these regions are often those most ill-equipped to understand complex environmental issues.

The ISO working group (TC190/SC7/WG12) has defined sustainable remediation as the: “elimination and/or control of unacceptable risks in a safe and timely manner whilst optimising the environmental, social and economic value of the work”. The premise is that the risk assessment has concluded that remediation is necessary and the remediation process to be implemented should deal with the risk in a manner that is cognisant of the net environmental, social and economic impacts of the remediation.

The sustainable remediation community has a significant role to play in improving stakeholder education and engagement internationally. In many affected areas, stakeholders are predisposed to respond favorably to the tenets of sustainability, given strong societal connections to the environment, but they do not have the benefit of decades of awareness of contamination issues, as is commonly the case in Europe and North America. This produces misunderstandings with respect to sustainable remediation, which in the worst case, can be wrongly perceived by some parties as a euphemism for a “do-nothing” approach. This is a travesty of the paradigm and of the work of many around the world.

Engagement approaches learned in the established remediation markets can and should be used as a starting point internationally, but achieving effective involvement requires understanding of each local context. Several international case studies demonstrate that what is commonly applied in North America and Europe may not be effective elsewhere. Additionally, recommendations on how the global remediation community can achieve more effective engagement, thus ensuring sustainable outcomes are achieved, regardless context-specific differences. This begins with ensuring local stakeholders are epistemologically empowered to engage in informed and meaningful dialogues about deciding how an area should be remediated.

4:30 pm – 4:50 pm

Evaluating the Sustainability of Remediation Strategies at the Järpen Site with Stakeholders – A Case Study

Jenny Norrman¹, Lars Rosén¹, Yevheniya Volchko¹, Tore Söderqvist², Frida Franzén²

¹*Chalmers University of Technology*

²*Enveco Environmental Economics Consultancy*

The objective of the presentation is to showcase the lessons learned from a case study where the Sustainable Choice of REmediation (SCORE) tool was applied to evaluate economic, ecological and social sustainability for remedial strategies for an industrial site in Sweden together with stakeholders.

Abstract

Sustainable Choice of REmediation (SCORE) is a multi-criteria decision analysis tool developed for evaluating economic, environmental and social sustainability of remediation strategies at contaminated sites, relative to a reference alternative. In the SAFIRE (Sustainability Assessment For Improved Remediation Efficiency) research project, SCORE is applied and evaluated in real cases, with stakeholders and the intention to evaluate whether such sustainability assessment influences the efficiency and effectiveness of the remediation project.

The first SAFIRE case study site is the Järpen industrial site, situated in the municipality of Åre, Northern Sweden. The site has been an industrial area since about the 1880's and the municipality intends to continue to use the site as an industrial area post remediation.



The contamination source is the filling material in the area, which has a high content of As, Cd, Cu, Pb and Zn, and has caused contamination in soil, groundwater, surface water and sediment. The goal of the remediation is to reduce the negative effects on surface water, organisms in surface water and sediments, and humans at the industrial site.

The remediation project in Järpen is publicly funded and is a partnership between the Environmental Department and the Planning Department at the Åre municipality. The Swedish Geological Survey acts as project leader and hold prime responsibility for the remediation at the site.

The SCORE tool was applied in the project to compare and evaluate the potential remedial strategies, with input from and together with stakeholders. The social sustainability was evaluated with selected stakeholders in a workshop, the economic sustainability was evaluated by means of a cost-benefit analysis with input from stakeholders, and the ecological sustainability was evaluated together with consultants and the project leader. Feedback from stakeholders on their views of what is efficient or effective in remediation projects was collected before the SCORE analysis, and feedback on the process, the SCORE tool and its input into the decision process is collected after the SCORE analysis.

The lessons learned from this case study will provide insights that will feed into the work of future case studies and improve the process of applying SCORE, as well as the SCORE tool itself.