AB Background Soil Metals and Salinity Database and Analysis Tool

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InnoTech is pleased to present an overview of two 'digital tool' projects supported by PTAC and developed in collaboration with partners and subject matter experts.

Salinity and certain metals are the most common naturally elevated parameters in Alberta. Key members of industry, environmental consultants and regulators have identified a need for more effective identification of background salt and metals concentrations as one of their highest priorities. The current methodology for identifying background concentrations is resource intensive, in that determining what is 'background' often require multiples field visits. The approach is also subjective, in that it relies on the environmental professional's(s)' understanding of regional and local variables that may influence background soil quality. We are advancing an opportunity to leverage existing data to create this geodatabase through a data driven process, validated by environmental professionals. This dataset will be leveraged with predictive mapping technologies to create relevant spatial predictions of background soil quality salinity and metals parameters in soil. In this presentation we will provide an overview of the Alberta Background Soil Quality System components, our approach, and opportunities for collaboration.

InnoTech is also collaborating with Statvis in developing a digital, web-based guideline calculator that will centralize data and standardize the processes used to develop both generic and risk-based endpoints. The calculator will support users in identifying the correct application of Tier 1 guidelines for screening purposes and the derivation of risk-based Tier 2 Site-Specific Remediation Objectives (SSROs). The calculator will not only help practitioners to develop appropriate guidelines, but will also provide extensive 'help text' to support correct interpretation; connect users with guidance documents; and, ensure that future site assessments are designed to gather the information and data needed to most effectively develop risk-based guidelines.

Simone Levy

Simone Levy is a researcher with InnoTech Alberta whose goal is to support development of innovative approaches for the assessment, remediation and reclamation of land and water affected by industrial activities. Key focus areas include: improving process efficiency in addressing upstream oil and gas liabilities in Alberta; soil handling and remediation; risk assessment; accidental release prevention and management; and, program development to guide multi-stakeholder innovation initiatives. Her work also includes development, validation and optimization of remediation and reclamation technologies using unique testing facilities and multi-disciplinary expertise available at InnoTech Alberta.

Paul Fuellbrandt

Paul Fuellbrandt has cultivated an increasing specialization in developing and executing attainable closure plans for contaminated sites over the last 20 years. The motivation for this work is drawn from a desire to return as much land to productive use as possible. To that end, he co-founded Statvis Analytics Inc. to develop user-friendly software tools to understand and communicate environmental data. He also co-founded Precision Liability Inc. to provide a cost-efficient process to eliminate environmental liability for the benefit of his clients and the land.