



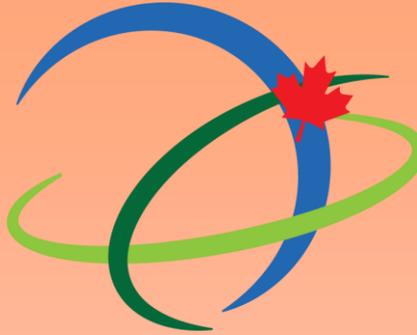
# **SuRF Canada Update**

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**Convegno sul tema:**

**SURF Italy Day – La sostenibilità delle bonifiche**

**Ferrara, 20 Settembre 2013**



# Outline of the Presentation

- History of GSR
- Definitions – Green vs. Sustainable
- SuRF Canada Origins
- Drivers and Barriers
- Mission
- Accomplishments and Objectives
- The current Canadian Context

# Evolution of Green and Sustainable Remediation (GSR)

- 2002 - CLARINET (« Contaminated Land Rehabilitation Network for Environmental Technologies ») in Europe, publishes *Sustainable Management of Contaminated Land: An Overview*
- 2006 - Sustainable Remediation Forum (SURF) formed
- 2007 - Creation of SURF UK as part of the existing organisation CL:AIRE: Contaminated Lands: Applications in Real Environments
- 2008 - NICOLE (« Network for Contaminated land in Europe ») in Europe
- 2009 – EuroDemo+ (« European Platform for Demonstration of Efficient Soil and Groundwater Remediation ») in Europe;
- 2008 - US EPA launched Green Remediation Website
- 2009 - SURF White Paper Published
- 2009 - Creation of SURF Australia
- 2010 EPA Revised Green Remediation Strategy
- 2010 ASTM International started developing a standard guide for Green and Sustainable Site Assessment and Cleanup
- 2011 National Research Council “Green Book” and EPA studying Sustainability
- 2011 – The ITRC (Interstate Technology & Regulatory Council) published *Green and Sustainable Remediation: A Practical Framework*.
- 2011 Creation of SURF Canada
- 2012 ISO started working on a proposal for a International Standard that will provide guidance on sustainable remediation
- 2013 ASTM publishes new standard to address sustainable aspects (environmental, economic and social) within cleanup projects

# Green Remediation

- Def: Practice of considering all environmental effects of a cleanup during each phase of the process, and incorporating strategies to maximize the net environmental benefit of the cleanup (U.S. EPA)
- Incorporated in the US EPA's Smart Energy Resources Guide
- Executive order 13123

Source; US EPA, 2008

# **Definition of Sustainable Remediation**

**During a meeting held on May 3, 2012 parallel to the RPIC FCS National Workshop, the SuRF Canada's definition of sustainable remediation was finalized.**

**Sustainable remediation considers the environmental, social and economic impacts of a project to ensure an optimal outcome, while being protective of human and environmental health, both at a local level and for the larger community (SuRF Canada, 2012).**

<b>Organization</b>	<b>Founded</b>	<b>Main Objective</b>
SuRF (US)	2006	Promote the use of sustainable practices during the entire remediation process.
SuRF-UK	2007	Develop a framework to embed balanced decision making in the selection of the remediation strategy to address land contamination as an integral part of sustainable development.
SuRF-Australia	2009	Encourage the adoption of the principles of sustainable remediation in addressing contaminated land and groundwater
SuRF-Brazil	2010	Promote approaches and practices that achieve better, more balanced outcomes in our remediation and management of contaminated sites
SuRF- Canada	2011	Give systematic consideration to the three dimensions of sustainability (social, economic and environmental), in decision-making about rehabilitation and management of contaminated sites
SuRF Italy	2012	Constitute a permanent table for the discussion, at a national level, between the actors involved in the management and remediation of contaminated sites, to define and apply shared procedures and approaches about the sustainability of interventions.



**What about  
SuRF  
Canada ?**

# SuRF Canada beginnings

- Discussions between government and industry began in December 2010 to set up a Canadian professional network to discuss and promote sustainable remediation
- The first workgroup meeting was held in Toronto in May 2011 with representatives from industry, provincial and federal government and academia
  - Defined the SuRF Canada mission statement
  - Defined short, medium and long term objectives for the group
- The 2<sup>nd</sup> workgroup meeting held in Kingston in June, a 3<sup>rd</sup> meeting held in Banff in October 2011, 4<sup>th</sup> in Toronto in May 2012 and a 5<sup>th</sup> in March 2013 in Montreal
- “What is SuRF” document created

## SuRF Canada - Mission

***« To establish a Canadian network group to promote sustainable remediation that aims to give systematic consideration to the three dimensions of sustainability (society, economy and environment), in decision-making about rehabilitation and management of contaminated sites. The network will bring together public and private organizations and launch an information and awareness initiative in Canada. »***

**Why ?**



# Drivers

## Sustainable Remediation

### Environment

- By-products of remediation activities
- The finite availability of resources
- Permafrost zones

### Social

- Knowledgeable stakeholders/shareholders
- Local sustainability plans/programs
- First Nations

### Economic

- Shareholder value of positive corporate image
- Calculating the true cost of the remediation

SuRF Canada

**How ?**



# How?

- Understand the barriers (and drivers) to sustainable remediation in Canada
- Understand/communicate the value of sustainable remediation
- Perform, document and communicate case studies
- Examine the policies and initiatives that promote sustainable remediation in Canada and make recommendations for further integration/synergies
- Network nationally and internationally with wide range of professionals (industry, government, academia)

*This is what SuRF Canada is currently doing*

# SuRF Canada

- Committees created for Outreach, Planning, Technical Initiatives and Group Structure, and Website
- Planning conference or sustainable remediation workshops and presentations
- Membership up to over 100 members
- Website created [www.surfcanada.org](http://www.surfcanada.org)
- Paper on “Sustainable Remediation in Canada” currently in peer review process prior to publication

**SURF Canada**  
The Sustainable Remediation Forum

*What is SURF?*

**Remediation projects often come with a hidden cost: the impact of the clean-up itself.**  
Cleaning up a contaminated property often requires the consumption of substantial energy, water, other natural resources; the emission of greenhouse gases; and the substantial disposal of wastes. It may also have social and economic impacts to the proponent and the community. Understanding the benefits and impacts of a remediation project allows for a more holistic approach to site remediation decision-making.

**To address these challenges, a group of environmental professionals organized the Sustainable Remediation Forum (SURF).**

SURF has been meeting internationally since 2006 to advance sustainable clean-up practices and develop a vision, framework, and metrics to help bring sustainability to the environmental remediation industry. In Canada, we have taken the first steps towards organizing a similar group.

**Other International SURF Agencies:**

- SURF US
- SURF Brazil
- SURF Italy
- SURF UK
- SURF China
- SURF Australia

**Benefits of Membership**  
The practice of sustainable remediation is gathering world-wide momentum. By joining SURF, you establish partnerships and build relationships with a wide variety of remediation stakeholders: industry and agency peers, customers, clients, academia, technology vendors, and the public.

One of the goals of SURF is to facilitate discussions and sharing of “lessons learned” in environmental footprint reduction. You’ll have access to members who are helping to shape green and sustainable remediation guidance and assessment tools.

Participation in SURF activities demonstrates:

- Environmental Stewardship
- Employee involvement and accountability
- Stakeholder engagement
- Commitment to a leadership role in sustainable remediation practices
- Alignment of business and sustainability objectives

**The mission of SURF Canada is**  
To establish a Canadian network group to promote “sustainable remediation” that aims to give systematic consideration to the three dimensions of sustainability (social, economic and environmental), in decision-making about rehabilitation of and management of contaminated sites. The network will bring together public and private organizations and launch an information and awareness initiative across Canada.

For more information, contact one of the primary SURF Canada Contacts below:  
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Website Under Construction

# Events Planning and participation

## **Planning and/or participation of SuRF Canada in the following Events :**

- 2011 FCS Regional Workshop - Sustainable Remediation in Canada, Kingston, May 31- J. 1,
- Remediation Technologies symposium (Remtech), Banff, October 19-21,
- Salon des technologies environnementales du Québec 2012, Québec City, March 13-14,
- 2012 FCS National Workshop ,Toronto, April 30-May 3,
- EMA of BC 2012 Workshop , Vancouver , February 2012
- 2012 37th National CLRA/ACRSD Conference, Sydney, September 26-27, 2012 /
- CSAP Fall PD Workshop, Vancouver, Oct. 10, 2012
- Sustainable Remediation 2012 - Environment Agency Austria, Vienna, Austria, November 14 - 16, 2012
- Americana 2013, Montréal, March 19-21, 2013
- 2013 FCS National Workshop, June 19-21, Halifax

## **Coming Events :**

- 2014FCS National Workshop, details to be determined

**Events  
Planning**

# Objectives – 2012

## Outreach and Planning

-  Diversify membership through information sharing tools (website and social media) and conferences
-  Partner for conferences, workshops and university programs
  -  Use Linked'in to communicate
-  Continue with the monthly calls – more structured
-  Develop provincial and regional leadership and increase provincial government and non-government membership and support (CCME, ESA)

## Technical Initiatives and Group Structure

-  Collaborate on the FCSAP project for the incorporation of sustainability in the FCSAP program
-  Develop definition of sustainable remediation for use
-  Formalize structure as a “non profit”
-  Publish “Sustainable Remediation in Canada” to document current context and current/proposed framework

## Website

-  Create a member only access
  -  Bilingual
-  Post presentations from conferences, agenda for meetings, minutes of meetings, and other pertinent information
-  Quick links to other sustainable remediation websites

# The current Canadian context



# Federal Framework

- The foundation of federal environmental regulation in Canada is the Canadian Environmental Protection Act (CEPA), which has the following eight guiding principles:
  - Sustainable development
  - Pollution prevention
  - Virtual elimination
  - Ecosystem approach
  - Precautionary principle
  - Intergovernmental cooperation
  - National standards
  - Science-based decision making

# Provincial frameworks



# Barriers

- **Regulatory / Policy**
  - The development of standard and consistent sustainable remediation legislation and policies across Canada is hindered by the variability of contaminated site regulations across the provinces and territories.
  - Lack of regulatory tools to provide comfort to decision-makers that the sustainable remediation methods selected today will stand the test of time with respect to regulatory expectations for the protection of human health and the environment.
- **Procurement**
  - Lack of sustainability policies, especially those related to sustainable remediation, in many tendering organizations
  - Lack of incorporation of sustainability metrics into tender documents for remediation; and
- **Communication / Awareness**
  - Uncertainty with respect to how the use of sustainable remediation methods may affect site closure, environmental risk management, and overall environmental liability;

# Barriers

- Communication / Awareness cont'
  - Misconception that sustainable remediation methods are more costly than traditional methods;
- Financial
  - lack of funding programs to support the demonstration and development of sustainable remediation methods;
  - Government and industry accounting preferences that may sway decision-making towards shorter-term, less sustainable remediation methods; and
- Technical
  - Challenges with implementation of some remediation methods in select geographies in Canada – remote areas, extreme cold and permafrost, extreme low precipitation/dessert-like areas;
  - Varying skill levels with respect to fundamental science and methodology available for combining and evaluating disparate measures for social, economic, and environmental metrics – some potentially being qualitative, some quantitative;

**What do our  
members  
think ?**



# SuRF Canada membership

- Academia 10
- Consulting 49
- Government (Federal) 11
- Government (Provincial) 4
- Industry Supplier 8
- Legal 1
- NGO 5
- Land Owner / Industry 14

# SuRF Canada survey

- 11 questions
- 37 respondents (3 regulatory, 3 public sector, 24 service providers, 1 academia, 1 NGO, 5 land owner/industry)
- Break –out sessions during a post Americana meeting
- Respondents are located in 7 Provinces and 1 US State.
- 65% of the responses were from service providers such as consultants, contractors and labs. This ratio is also reflected in the membership.
- These results suggest a need for increasing the diversity of sectors being represented in the membership as well as the geographic distribution of the members.

# 2013-2014 Outreach Plan

Five key areas for 2013-2014 Outreach Plan

- 1) Monthly Newsletter
- 2) Monthly Sustainable Remediation Webinars
- 3) Education and Awareness Series
- 4) Provincial Outreach
- 5) Web-site Content Enhancement

# SuRF Canada

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# Questions ?

