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Rousseau, M. Z.; Cornick, S. M.

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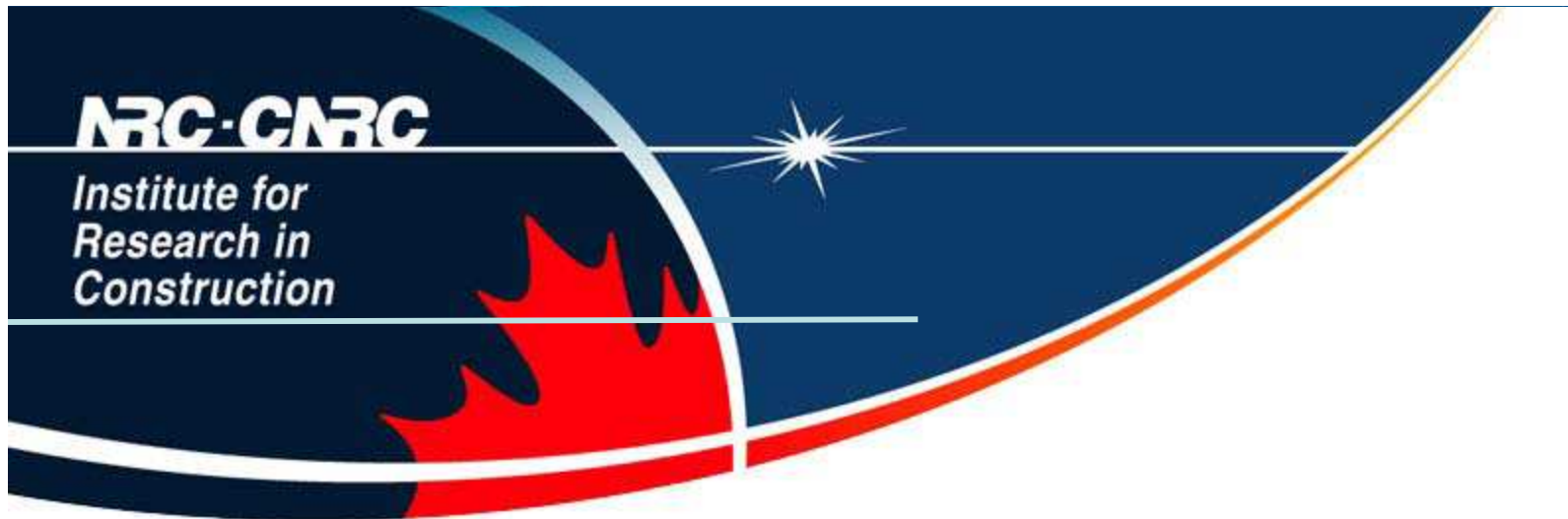
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NRC CONSULTATION- PERD 079 Project

High Performance Wall Assemblies for Extreme Climates

**Madeleine Rousseau and Steve Cornick
Feb. 2007**



National Research
Council Canada

Conseil national
de recherches Canada

Canada



Agenda

- **8h15** :Opening remarks, welcome and introduction
 - Description of the project
 - Result of the field survey
 - Issues of priority in housing in the territory
 - Review, discussion and prioritization of wall assemblies of interest for evaluation
- **11h45** : Wrap up, action items and follow-up



Objectives of Consultation

- for NRC: to benefit from the experience of northern building communities regarding requirements and performance of building envelopes, and other factors of prime importance
- For the building community: to propose wall assemblies that could be included in an evaluation spanning several aspects of performance (energy, moisture control and environment impact)



Outcomes

NOW

- a list of promising wall assemblies for evaluation
- a extended network of parties involved in northern building envelope performance
- a better understanding of critical conditions and issues for northern construction, performance and durability of buildings

LATER (1-2 years)

Better understanding of how resilient evaluated wall assemblies can be for different climate severities (indoor and outdoor) and construction flaws

Seminar on the findings



Project Objective

Develop & evaluate energy efficient & durable wall assemblies for extreme outdoor & indoor climates

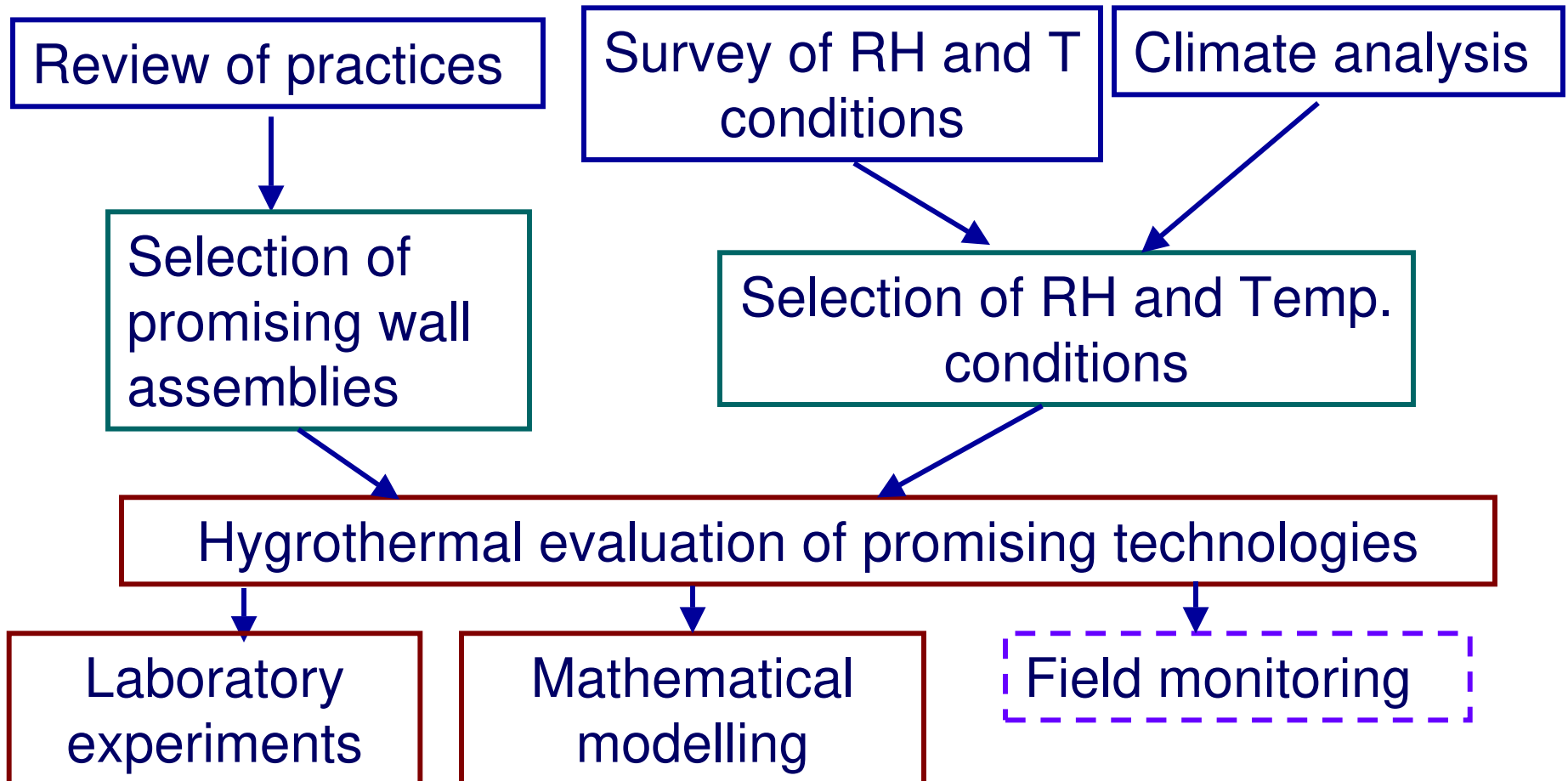


Focus

- Assess heat and moisture performance of wall assemblies in extreme climates
- Northern & northern-coastal regions
- Consideration for environmental impact of the wall assemblies ⇒ min. impact



The Conceptual Approach





Project Team

Mike Swinton

Nady Saïd

Madeleine Rousseau

Steve Cornick

Wahid Meref

Marianne Manning

William Lei

Mike Nicholls

PARTNERS:

CMHC:

Barry Craig

Bill Semple

NRCCan:

Anil Parekh

Charles Zaloum



Task 1 -Survey Concurrent Extreme Indoor & Outdoor Conditions

- IRC consultation with CMHC and NRCan
- 3 locations selected:
 - Coastal climate (cool and wet): Prince Rupert BC
April-May 2005 with Sheltair Group
 - Very cold and dry: Inuvik NorthWest Territory
Nov.-Dec. 2005 with Artic Energy Alliance
 - Cold and dry: Carmacks Yukon Territory
Jan-Feb. 2006 with Sheltair Group

