

C-CHANGE
CANADA-CARIBBEAN
SSHRC-CRSH Coastal Climate Adaptation Strategies

"C-Change"
*Managing Adaptation to
Environmental Change in
Coastal Communities:
Canada and the Caribbean*

Dan Lane, University of Ottawa

People in Places
Coastal CURA Conference, Halifax

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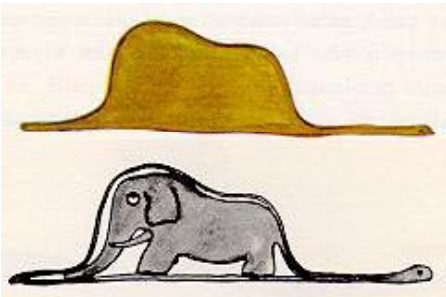


Be very afraid!

Le Petit Prince (1943)
Antoine de Saint-Exupéry


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 **THE UNIVERSITY OF THE WEST INDIES**
AT ST. AUGUSTINE, TRINIDAD AND TOBAGO

 École de gestion
TELFER
School of Management

 **C-FOAM**
Canadian Fisheries, Oceans, and Aquaculture Management

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1. Program
2. Team
3. Communities
4. Storms
5. Vulnerability
6. Adaptive Strategies
7. Decision support
8. Communication

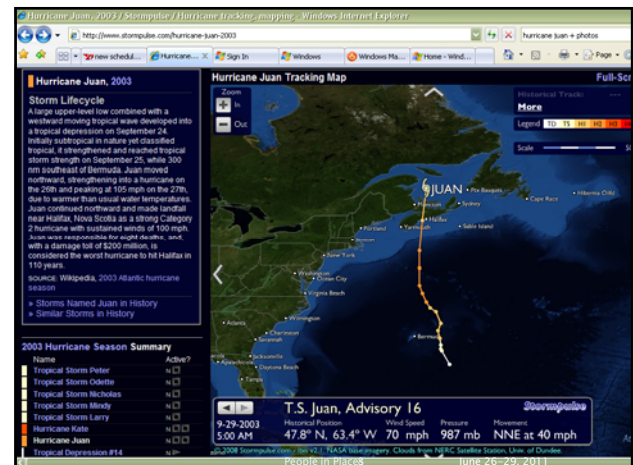
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1. Research Program

- Community adaptation
- Storm surge and sea level rise
- Enhance coastal community preparedness

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Halifax 2003

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C-Change Objectives

Community	University	Joint
Establish alliances	Develop academic alliances	Identify vulnerabilities
Strengthen institutional arrangements	Collaborate on global research	Mobilize knowledge and innovation
Establish long-term linkages	Develop new curricula	Build capacity
Prepare community action plans	Develop impact scenarios	Prepare adaptation action plans

People in Places June 26-29, 2011 10

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People in Places June 26-29, 2011 11

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2. C-Change Team

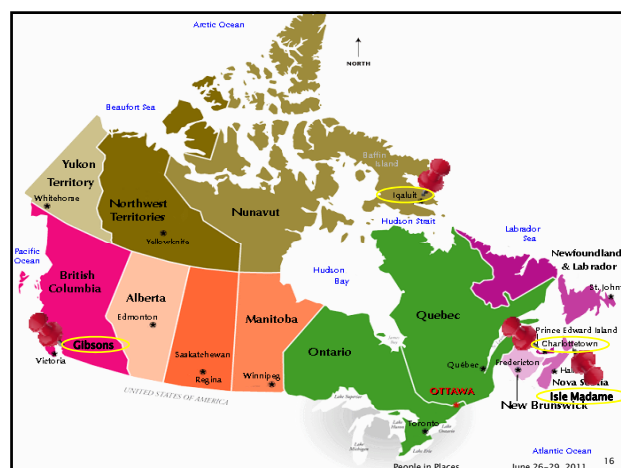
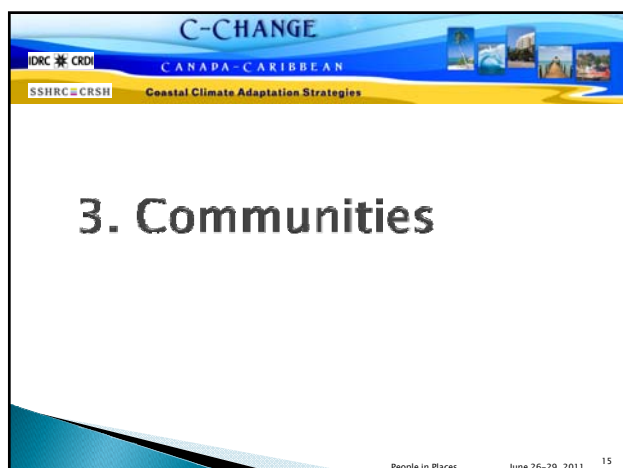
- Co-applicants (Canada, Caribbean)
 - UWI (Trinidad & Tobago)
 - UNB, UBC, MUN, UOttawa
- Community Partners
- Collaborators
- Administrators
- Student researchers

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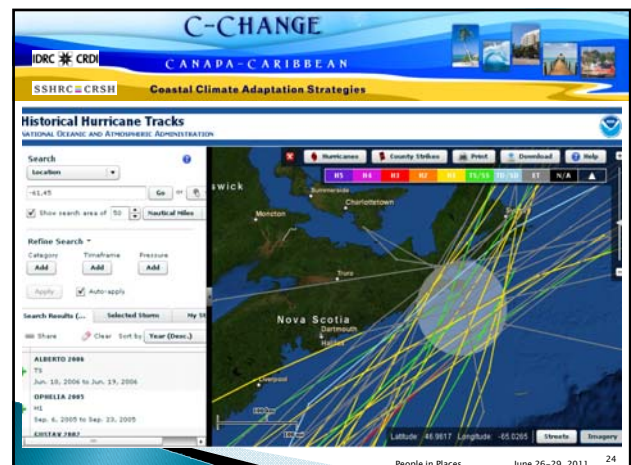
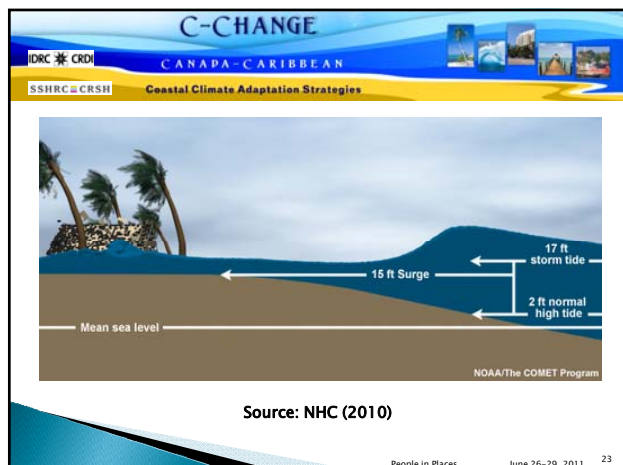
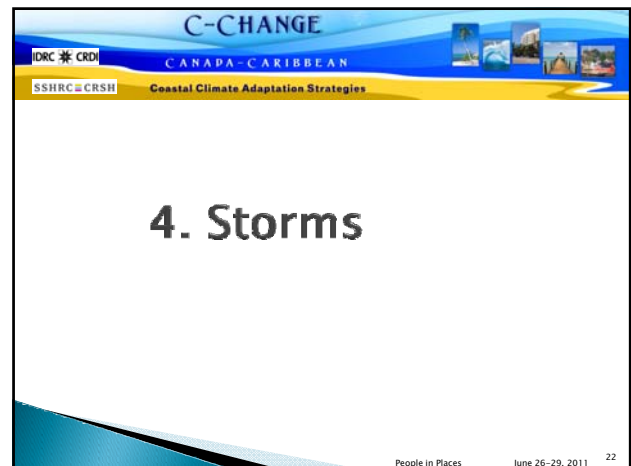
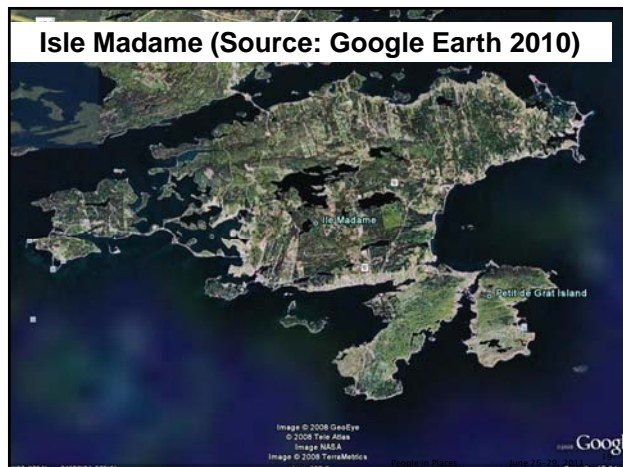


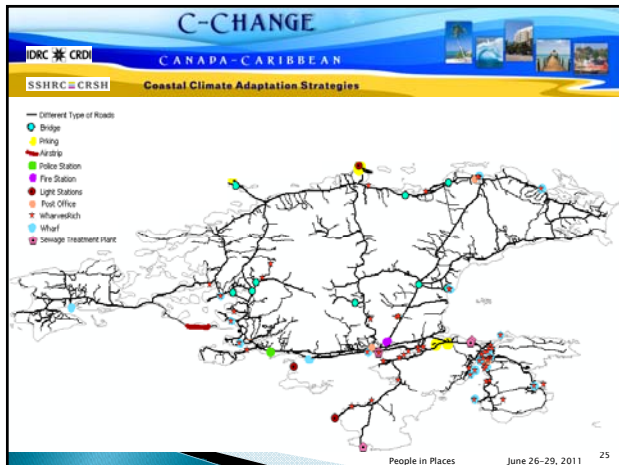
People in Places Participants

- ▶ Kaitlin Fahey
 - Administrator and Research Assistant
- ▶ Sahar Pakdel
 - MSc candidate (Systems Science)
- ▶ Hooman Mostofi
 - MSc candidate (Systems Science)
- ▶ Titus Tienaah
 - M.Sc. Geodesy and Geomatics



Dimension	Sub-categories
Environmental	Topography, Land and Marine Use, Natural Resources, Climate
Economic	Employment, Industry, Property, Occupation, Revenues, Earnings
Social	Population, Health, Language, Education, Communications
Cultural	Places, Groups, Events

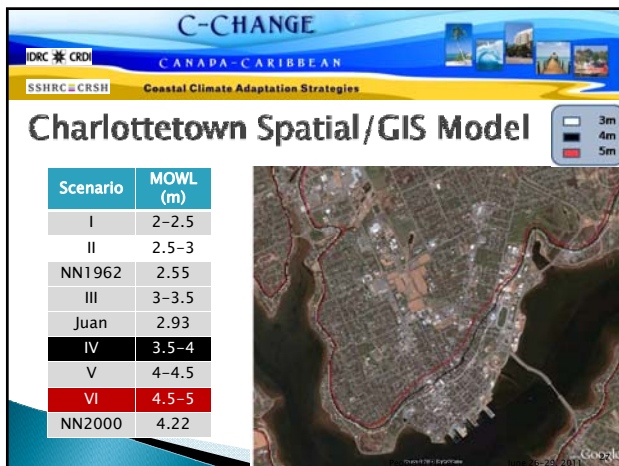




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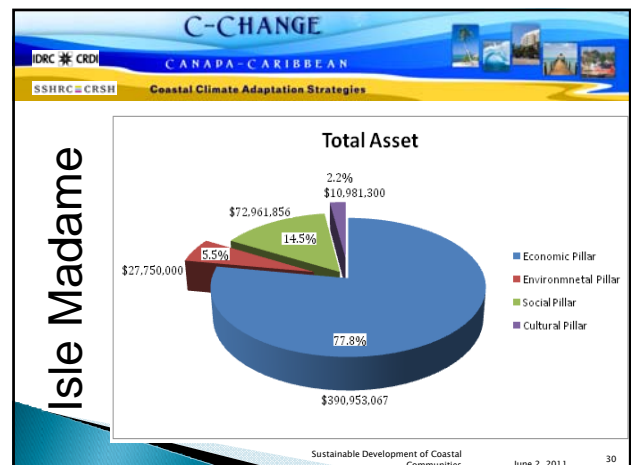
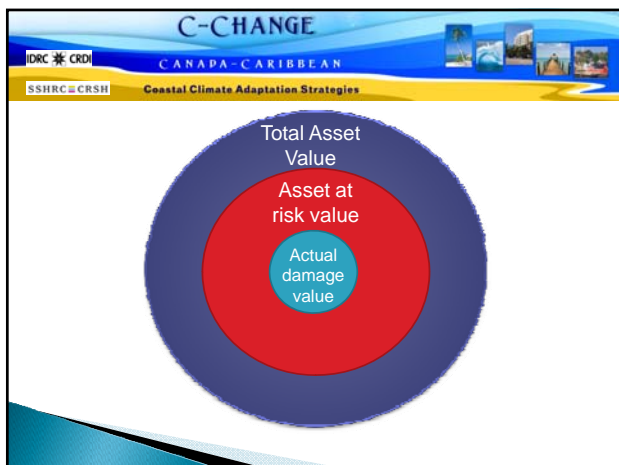
Charlottetown Historical Storms

- ▶ 'No Name 2000' [January 21, 2000]
 - Estimated damage: \$20 million
 - Speed: N/A Wind: 70 kph Pressure: 945 mb
 - Maximum Observed Water Level: 4.22 m
- ▶ Juan [September 28, 2003]
 - Media reports: 8 deaths, \$100-\$200 million damage
 - Speed: 59 kph Wind: 120 kph Pressure: 982 mb
 - Maximum Observed Water Level: 2.93 m
- ▶ 'No Name 1962' [April 4, 1962]
 - \$300,000 reported damage
 - No empirical storm data available
 - Maximum Observed Water Level: 2.55 m



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5. Vulnerability

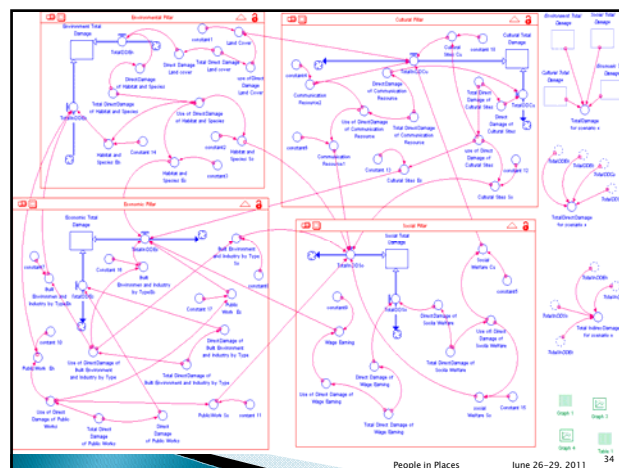
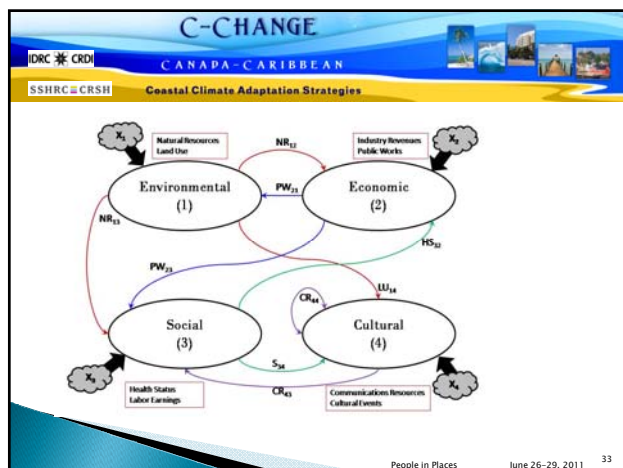
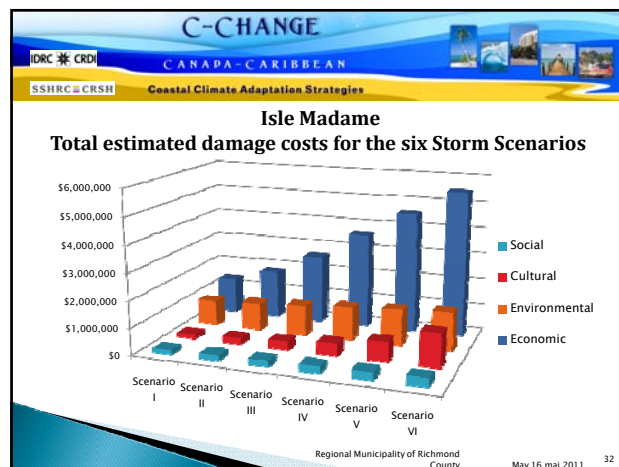


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Isle Madame Assets at Risk by Storm Scenario(\$000s)

Storm Scenario	I	II	III	IV	V	VI
Environmt	\$12,540	\$12,594	\$12,648	\$12,702	\$12,756	\$12,810
Economic	\$43,711	\$46,646	\$49,976	\$53,157	\$56,388	\$59,499
Social	\$1,246	\$1,382	\$1,519	\$1,678	\$1,817	\$1,953
Cultural	\$7,196	\$7,196	\$7,196	\$7,761	\$7,761	\$7,761
Total	\$64,694	\$67,819	\$71,339	\$75,299	\$78,723	\$82,024

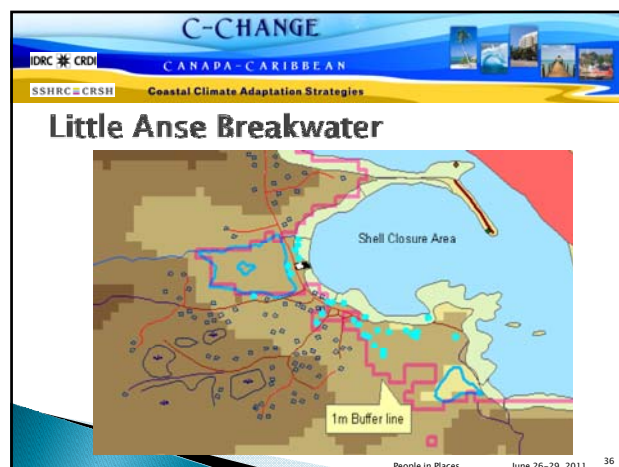
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6. Adaptive Strategies

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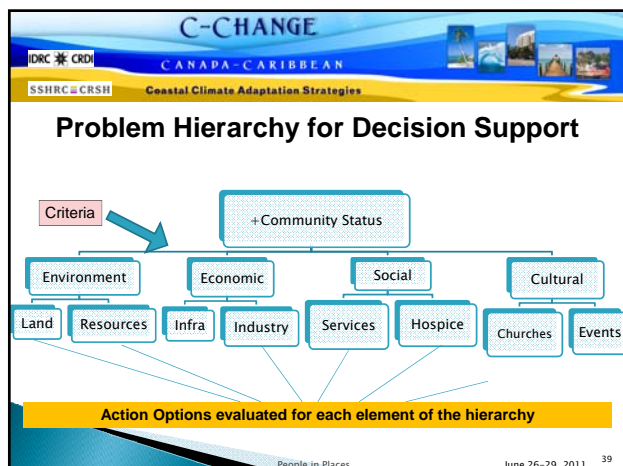
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Adaptation Strategies

1. **Protect/Attack**
 - New breakwater arm (\$5.1M)
 - Close gap (\$4.6M)
2. **Defend/Accommodate**
 - Rehab the breakwater (\$1.7M)
 - New road (\$1.8M)
3. **Retreat**
 - Move people/houses (\$2.4M)

Status Quo – do nothing

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7. Decision Support

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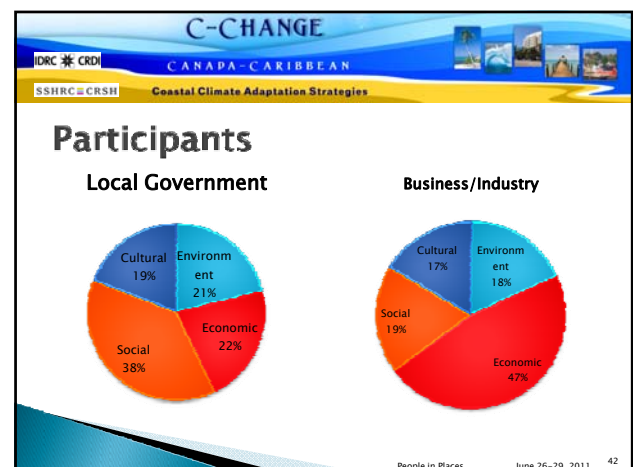
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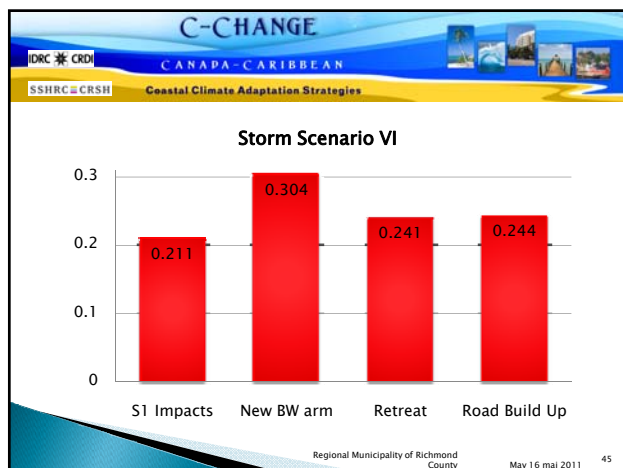
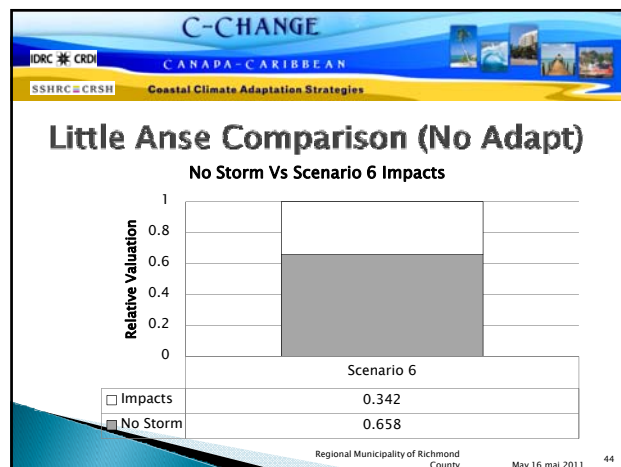
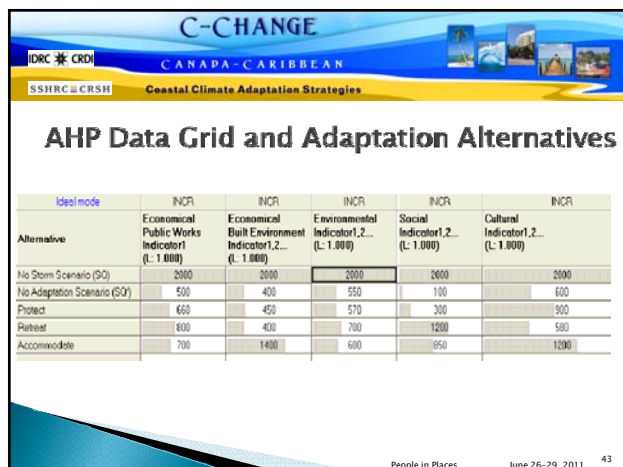
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MCDM + Multiple Participants

1. **Community**: representatives of the community at large
2. **Local Government**: representatives of local (municipal) government
3. **Business/Industry**: community industries
4. **Professional**: professionals providing service to the community, e.g., lawyers, doctors, nurses, engineers, etc.

Regional Municipality of Richmond County May 16 mai 2011 41





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8. Communication

- Electronic
 - Website and Social Network site
- C-CATs - Community liaison groups
- Mapping and Analysis
- Community Workshops
- Graduate students research
- Conferences
- Publications

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Welcome to C-Change

CONGRATULATIONS

C-CHANGE SUPPORTERS

JOIN US ON FACEBOOK!

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C-Change: Managing Adaptation to Environmental Change

Facebook page interface showing posts, photos, and user interactions.

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Thanks

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www.coastalchange.ca
www.facebook.com/coastalchange/



Sustainable Development of Coastal Communities June 2, 2011 49