

**CHAIR**

**Transat Chair  
in Tourism**

**ESG UQÀM**

# Analysis of Socioeconomic Impacts and Adaptation to Climate Change by Quebec's Tourism Industry

**(Innovative Tourism Research)**

International Conference on Tourism, Climate Change and Sustainability

Presented by : Stéphanie Bleau

September 14<sup>th</sup> 2012

Bournemouth , UK

# Project Coordination

Transat Chair in Tourism, ESG UQAM

## In collaboration with



CONSORTIUM SUR LA CLIMATOLOGIE RÉGIONALE  
ET L'ADAPTATION AUX CHANGEMENTS CLIMATIQUES

[www.ouranos.ca](http://www.ouranos.ca)

**Ouranos Consortium on Regional Climatology and Adaptation  
To Climate Change (RAC-Québec)  
University of Waterloo (IC3)**

**WATERLOO | ENVIRONMENT**

## Partners

Ministry of Tourism, Société des établissements de plein air du Québec (Sépaq)

Sector-based associations: skiing, golf, camping, snowmobiling

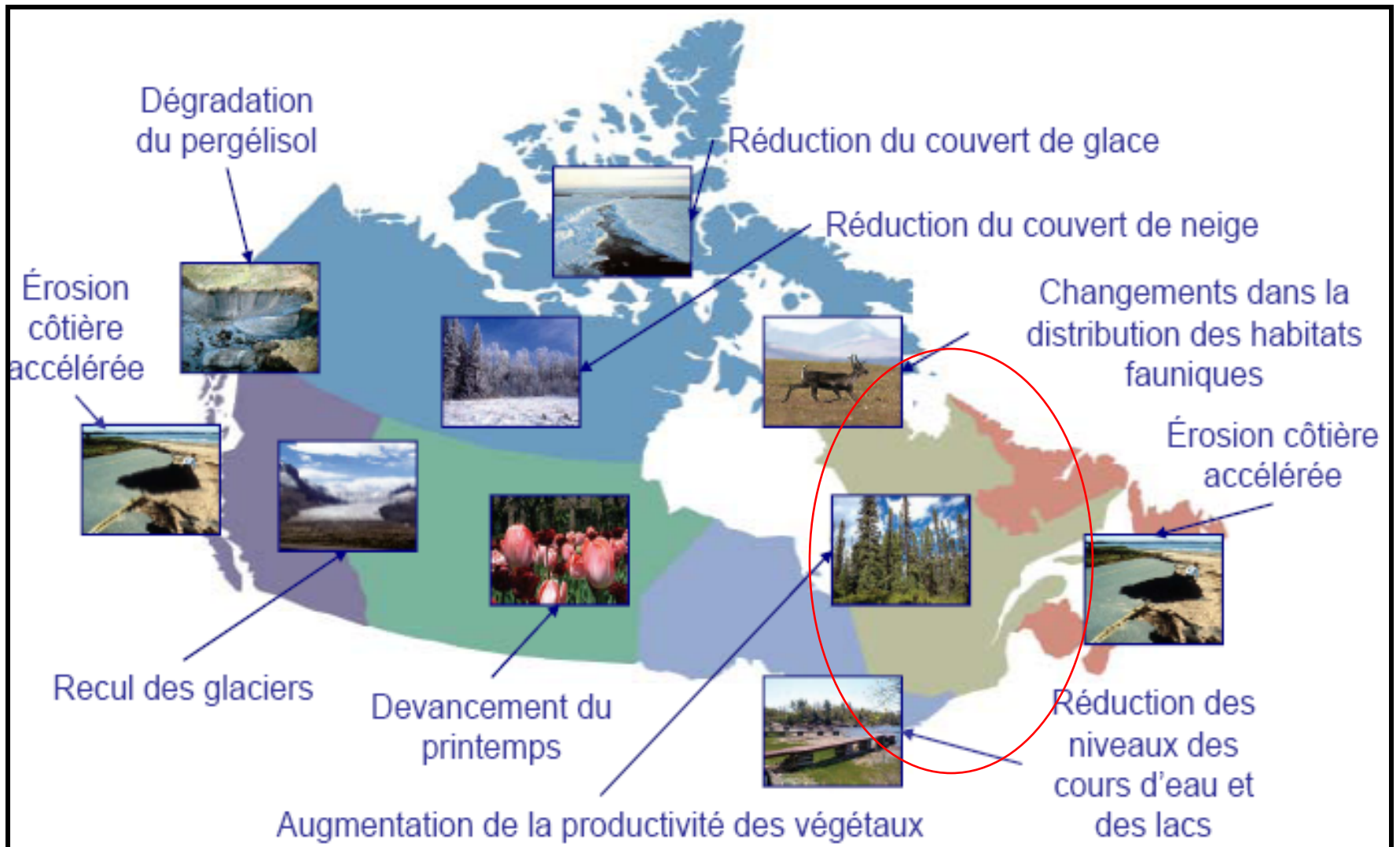
Tourism associations: Eastern Townships and the Laurentians, and 3 CLD (Laurentians)

Créneau d'excellence Tourisme de villégiature quatre saisons

# RATIONALE

- Climate change is affecting the biosphere, hydrosphere and cryosphere in Canada (ex: unstable ice or shorter ice season (Bonsal et al, 2006; Ouranos, 2010; Arcticnet compendium, 2010).
- Seasonal Recreation & **OUTDOOR NATURE BASED ACTIVITIES** (Scott & al, 2008; 2007) are affected by CC.
- Unreliable weather and changing patterns can increase vulnerability of summer (**golf, camping, parks**) & winter recreation resource ; **snowmobiling, alpine ski, cross country** (Ouranos, 2010; Bourque et Simonet, 2008).
- Business opportunities and risks may arise from CC modifications. Impacts could be encountered in businesses across Quebec and it's southern regions «**the Eastern Townships and Laurentian regions**».
- Need to determine the extent of CC impacts on seasonal tourism businesses

# THE CURRENT SITUATION (climate & trends)

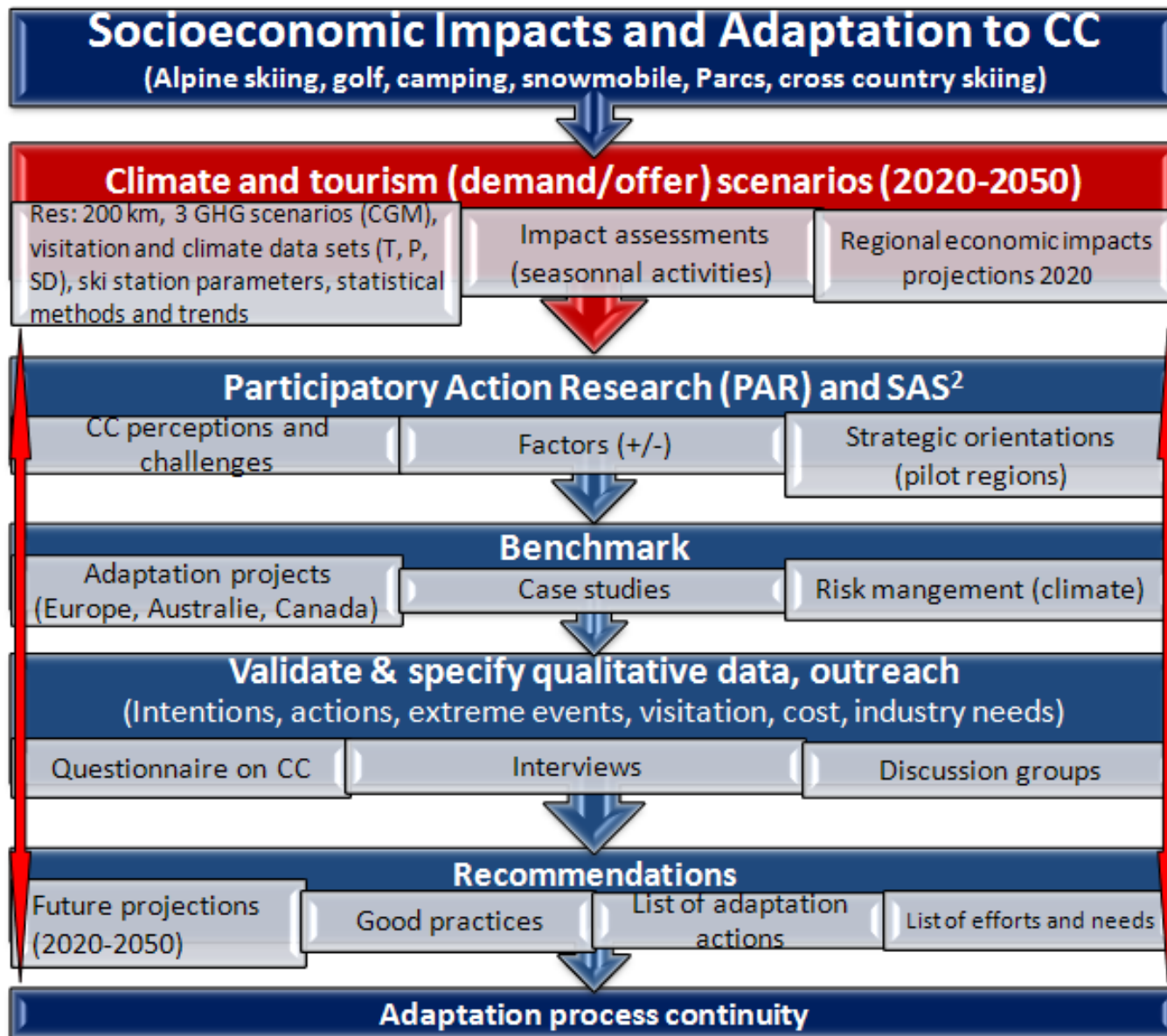




# OBJECTIVES

- 1- Assess the potential extent and impact by using visitor projections for 2020-2050 horizons on outdoor & recreation activities (ski, golf, camping, x-cross country, snowmobiling and Provincial Parks).
- 2- Describe the economic impacts under different climate scenarios for 2020-2050 and how these may affect regional tourism dynamics.
- 3- Assess climate risk management perceptions and practices by the tourism industry.
- 4- Identify relevant adaptation strategies (measures) for outdoor tourism and recreation sector of Québec.
- 5- Determine recommendations to fully engage tourism stakeholders in Quebec, leading to appropriate adaptation strategies and measure (regional/local).

# METHODOLOGY (adaptation process)



# METHODOLOGY (adaptation process)

## Participatory (community-based) action research (PAR) for adaptation.

- Project or program planning and evaluating
- Learning
- Problem solving
- Social engagement in complex settings involving multiple stakeholders

## Workshops (sectors/regions)

Social analysis system (SAS2)

Tools & processes

## Advantages:

- Accessible to beginners
- Flexible and adjustable
- New approach to educational, community and public engagement.

**Progressive learning, decision making and adapting to CC together**



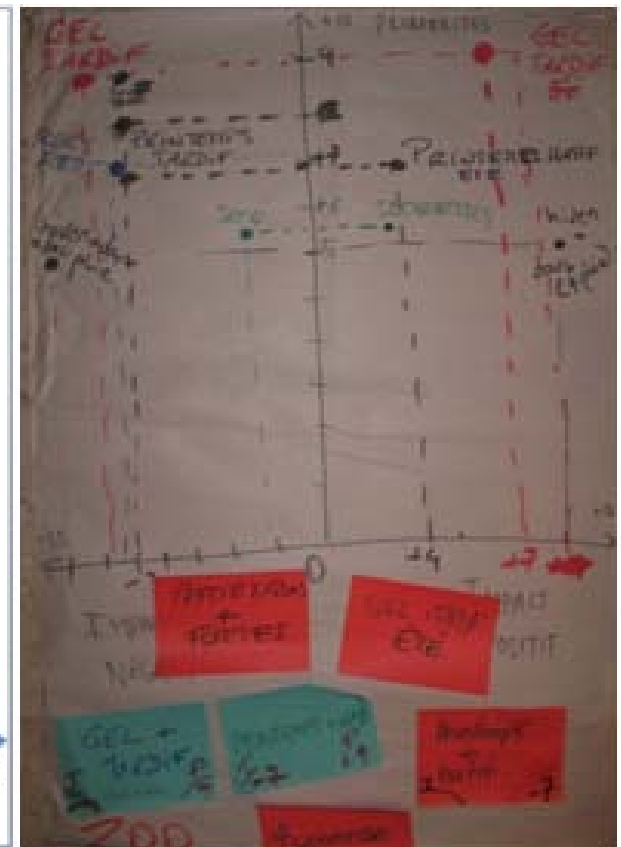
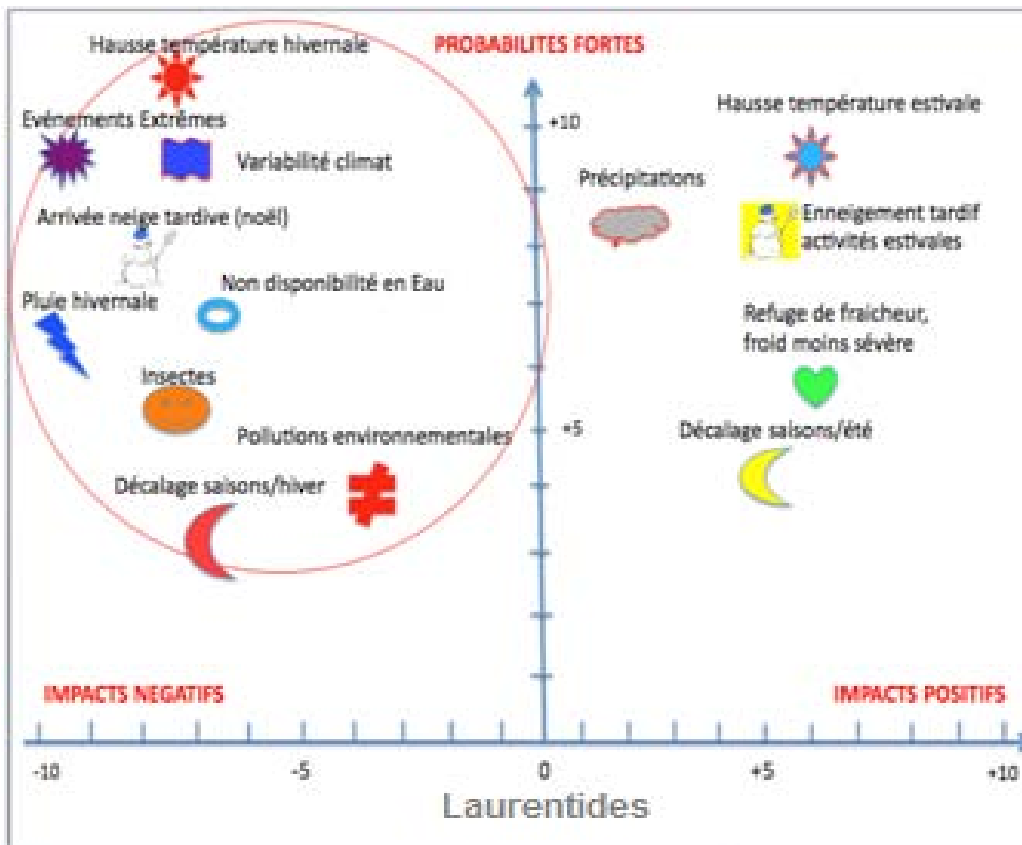
# RESULTS: Regional perceptions

## SAS 2 : Cartesian graph

### Purpose :

understand climate change perceptions through different probabilities & weight of impact (+/-) on seasonal products

(Computerized version on the left versus drawn on the right)



# RESULTS : Sectors perceptions

**SAS2 : Force field analysis (degree of control)**

**Cross - country skiing & snowmobiling**

**Purpose :** understand factors that contribute to a problem and those that counteract it.

**Goals :** maintain activities and economic growth



## Counteract -

Late snow in early season, recurring freeze & thaw cycles

Winter precipitation (rain), thermal variability (more complex operations)

Energy (fuel costs), snowmobile \$\$, Investments & maintenance

**Media communication of weather**

Lack of expertise (manage \$\$, equipment)

New real estate development (limit access to slopes & trails)

Communication & image

## Contribute +

Regulations (land) = improved user coexistence

Demographic increase & regional economic spinoffs (hotels, shops, etc.)

Mild seasonal weather (snow),  
↓ T winter extremes

Technological advances, equipment

Sustainable development of trails

Diversification (activities, hotels, packages)

Increase of well being and demand (cross country skiing)

# RESULTS : Adaptation strategies, evaluation & feasibility

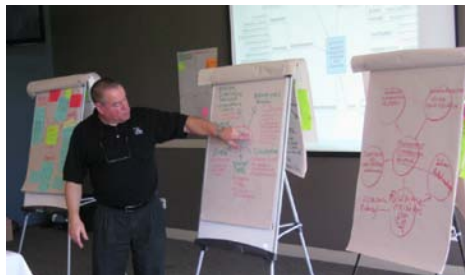
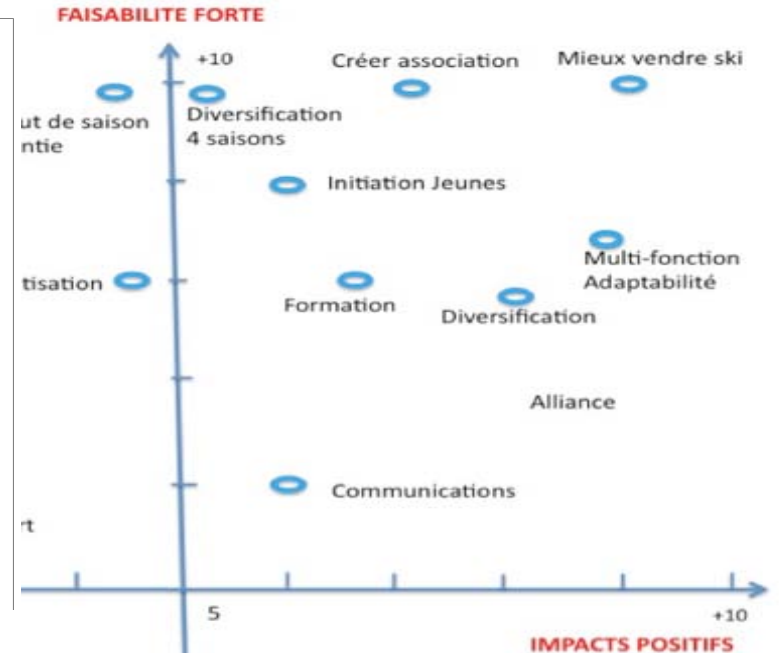
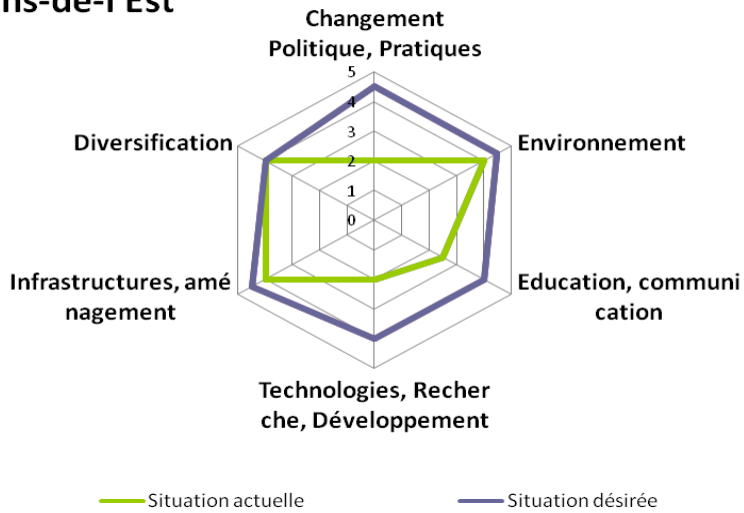
## SAS2 : Socratic Wheel

- 1- Use the cartesian graph results
- 2- Recognize strategic orientations (plenary session)
- 3- Brainstorm on potential adaptation actions

## SAS2 : Floor mapping

Snowmobiling & cross-country skiing  
Proposed sector based adaptation actions

### Axes Stratégiques Cantons-de-l'Est

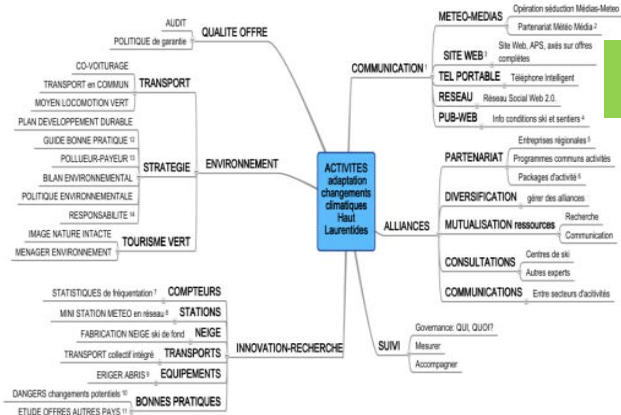


# From knowledge to action

## From workshops to 1st drafted orientations

### Proposed sector-based adaptation actions

### Regional strategic orientations for adaptation action



(Literature review)



- 1- Communication, education
- 2- Social and environmental responsibility
- 3- Research, development, innovation, technology
- 4- Diversification
- 5- Development & infrastructure
- 6- Practice and policy modifications, climate fund
- 7- Maintaining the quality of products

Mind Map

### Regional discussion groups & personalized approaches

**Eastern Townships** = integrate adaptation into the renewed tourism association management plan: assets (mountain destination & diversification)

**Laurentians** = mobilize water users and form a cross-sectoral committee ; include adaptation in an existing or new project (DD & CC) (e.g., ecotourism park, ski resort or multi-function destination).

## **RESULTS : sectoral needs towards real applications**

### **How we can help the tourism industry in the future ?**

- **Informative web portal on CC impacts and adaptation initiatives (mitigation)**
- **Business training & education**
- **Guide (understating of CC & good practices)**
- **Incentives to innovation**

**Adaptation process leading to enhanced resilience of seasonal practices**

# CONCLUSION

- 1- Impossible to address climate change without considering all the challenges
- 2- Climate is not the determinant factor of growth & disruptions in operations
- 3- The tourism regions must consider the diversity of products offered to evaluate vulnerability (supply) in order to make adaptation decisions.
- 4- More tourism sectors and stakeholders must be mobilized
- 5- In a regional perspective, the industry must adopt a collective attitude towards climate change adaptation.
- 6- Research needs to involve (outfitters, ski, camping, parks) in participatory action research (PAR) workshops to develop a regional approach and encourage sector-based adaptation actions.

# CONTRIBUTIONS

- First study of its kind in Quebec with visitation data (1998-2008) for the tourism industry
- Better knowledge of climate dynamics, tourism issues, adaptation solutions of involved parties
- Regional approach & strategic orientations for ongoing work in a collaborative manner (adaptation)
- Comparable techniques, knowledge transfer, social engagement and industry outreach (**Toolbox**)
- Tourism and climate projections of impacts on tourism visitation, revenues, snowmaking and season length
- End of project (october 2012), tourism actors want to continue the adaptation process initiated

**CHAIR**

**Transat Chair  
in Tourism**

**ESG UQÀM**

**Thank you !**

**Questions**

**[bleau.stephanie@uqam.ca](mailto:bleau.stephanie@uqam.ca)**

**Impacts and adaptation to climate change  
(Tourism, northern and maritime environments)  
Transat Chair in Tourism  
Montreal's School of Management  
Université du Québec à Montréal (UQAM), Canada**