

Protected Areas and Climate Change in Canada

Challenges & Opportunities for Adaptation

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Overview of Report/Presentation



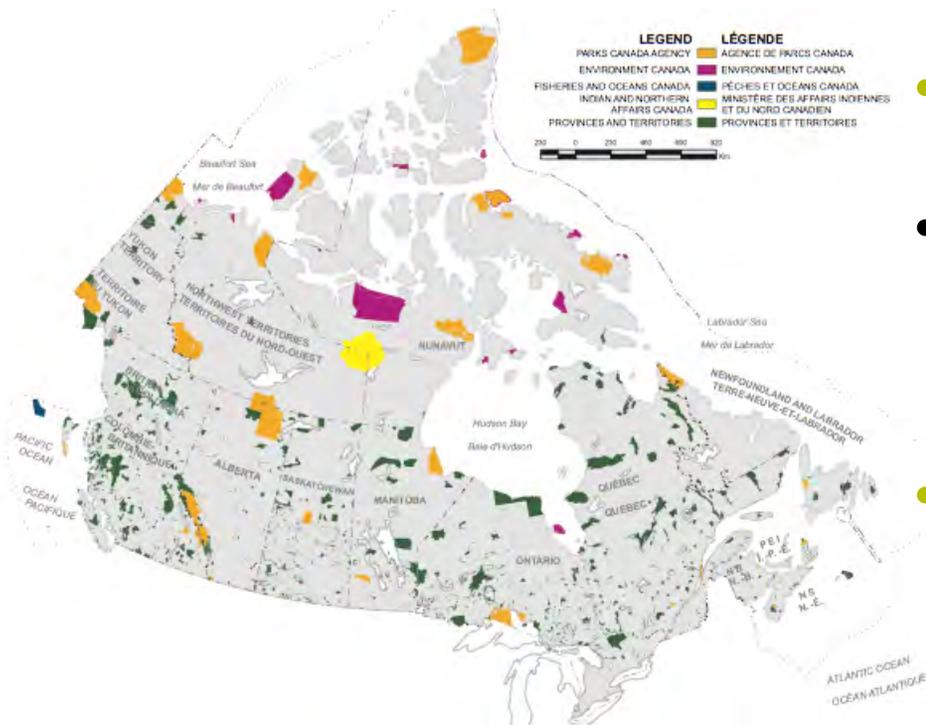
- Details climate change impacts and implications for PAs
- Reports on issues, needs and constraints facing PAs agencies
- Reports on case work on select jurisdictional activities and initiatives
- Offers provisional thinking on issues and mitigation and adaptation strategies regarding critical aspects of policy, planning and management for PAs
- Available at: www.ccea.org

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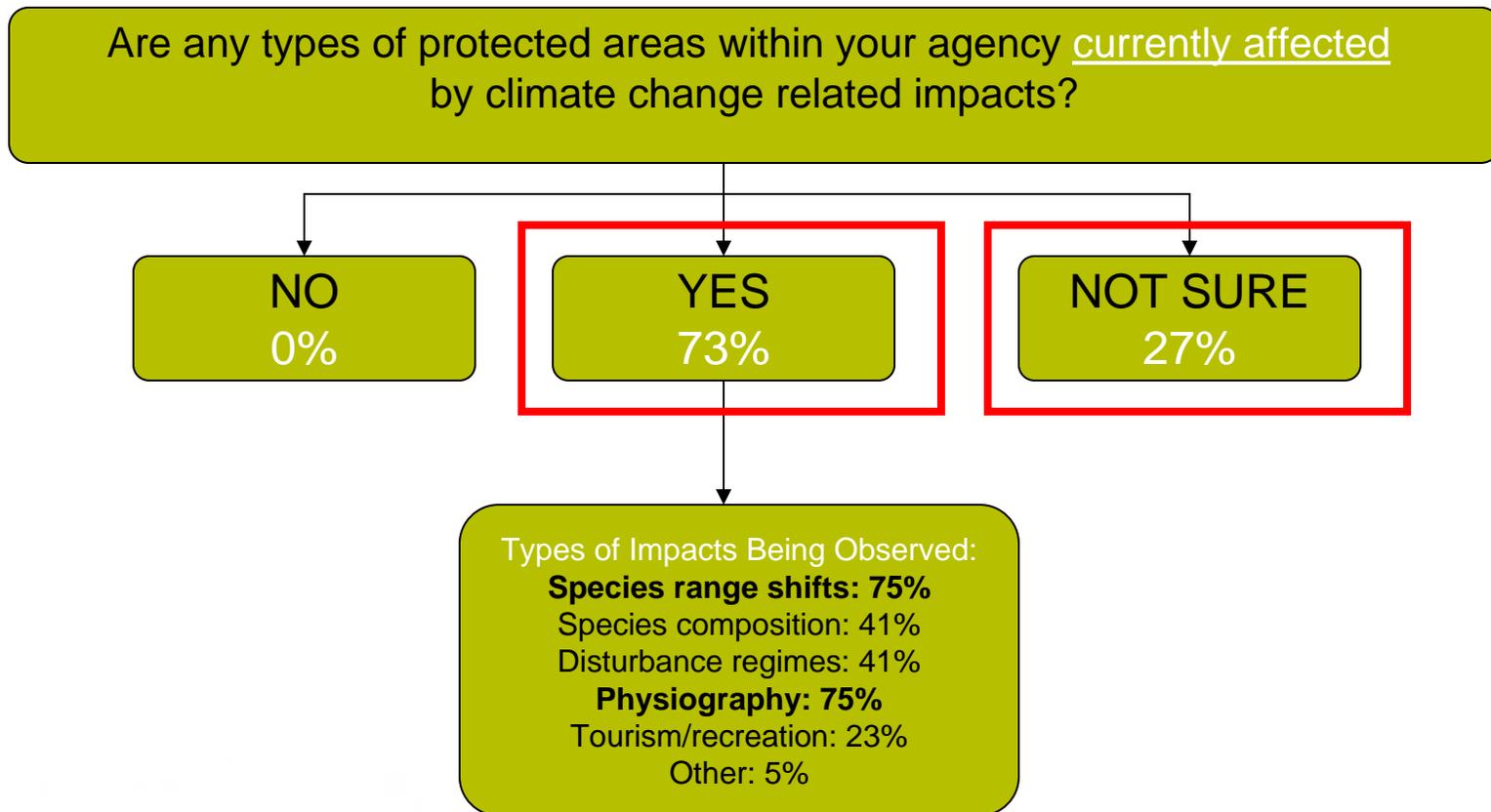


Canada's Protected Areas in Context

- Over 4,850 sites protecting 9.92+% of Canada's terrestrial land base
- 0.12% of Canada's oceans are protected
- Serving many regional, national and international conservation objectives, including *CBD* & *RAMSAR*
- Canada's most recent report to *CBD* (2009) concluded that *"efforts to maintain and enhance resilience of the components to biodiversity are poorly understood or getting worse"*



Climate Change Impacts in Canada's Parks and Protected Areas Network



Action on the Ground

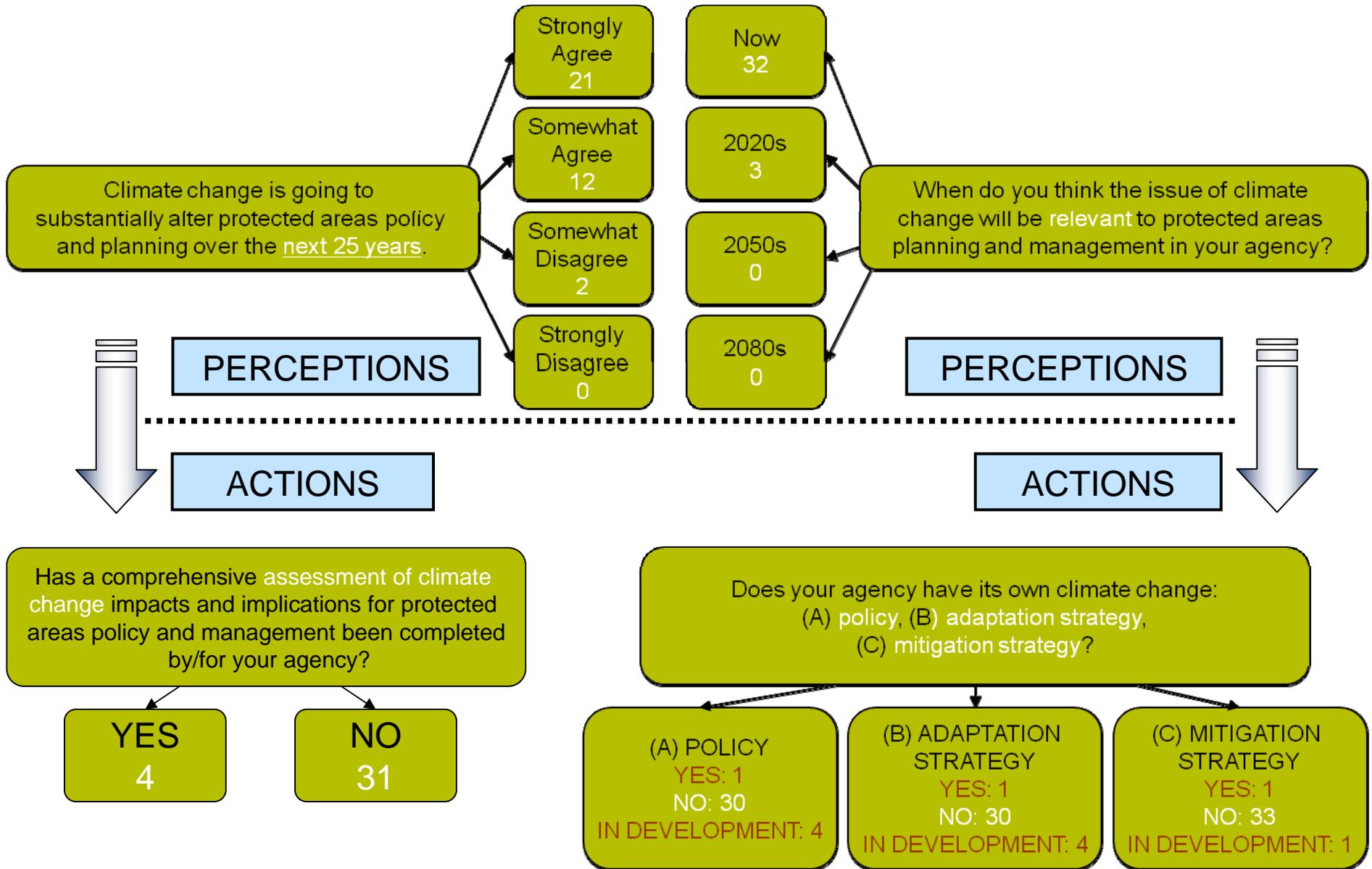


- Case studies revealed that some progress is being made (e.g., Parks Canada, Ontario Parks, B.C. Parks, NCC) “*business-as-usual adaptations*”
- Other agencies have adopted a “*laissez-faire*” or reactionary approach
- No adaptation strategy has been implemented by any jurisdiction
- Adaptation occurring independent from and regardless of a coordinated national approach
- Lack of information, resources, and scientific capacity to deal with the issue

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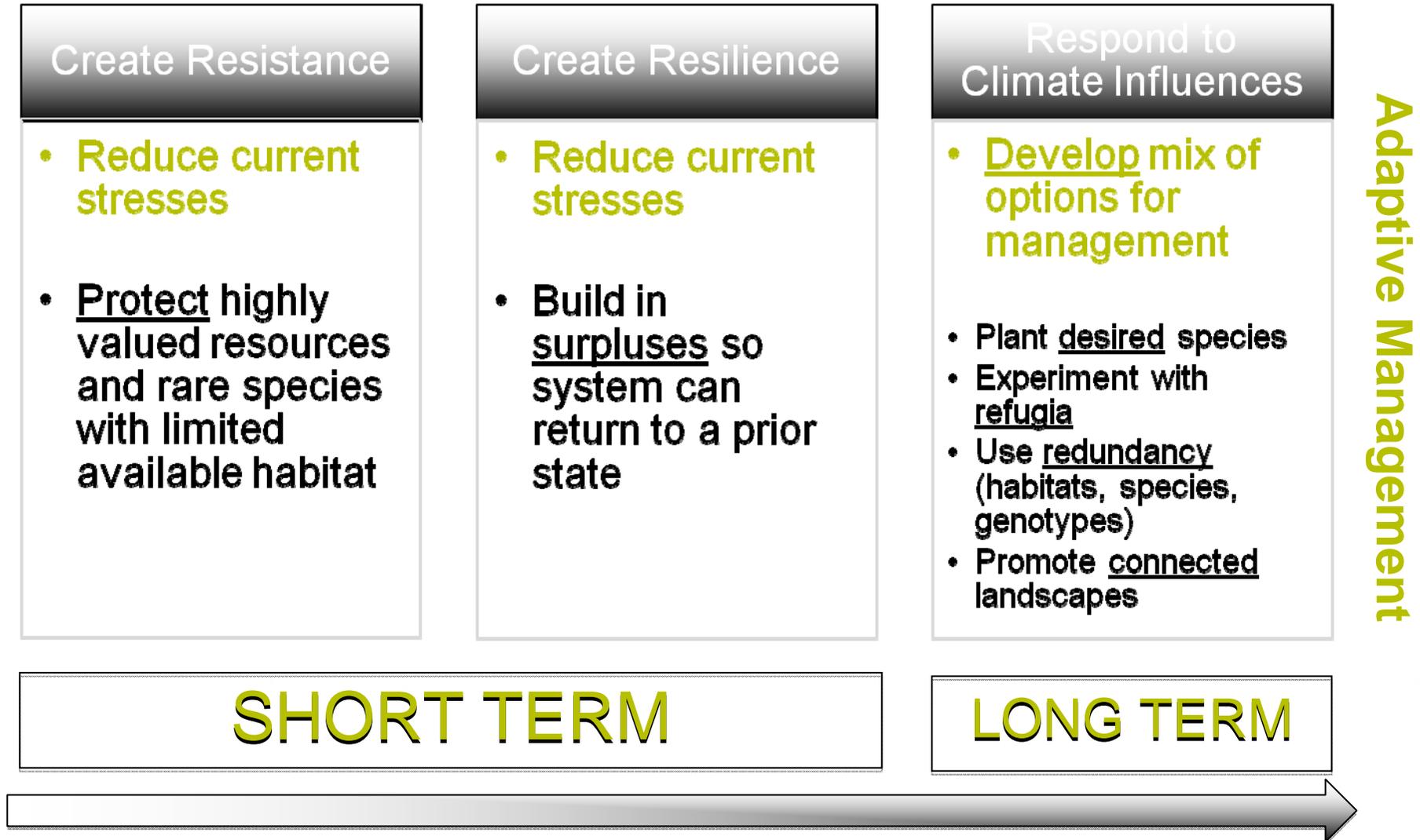
The Disconnect



Barriers to Adaptation

- “priorities are not focused on climate change... lack of staff and financial resources for dealing with climate change are the main capacity issues”
 - “only one person is focusing on climate change in the agency and is self-appointed!”
 - “we don’t have the confidence in science’s ability to predict a suitable time frame what issues will emerge... therefore, issues will likely have to be addressed as they emerge”
 - “we are barely able to cope with day to day issues regarding our protected areas... understaffing is a problem... a national strategy we could feed off would be useful”
- **94%** of Canada’s PA agencies conceded that they **do not have the capacity necessary** to move forward; desire for more research on cc issues, especially potential impacts on biological systems and adaptation strategies

What Can Protected Areas Managers Do?



Selected Recommendations

To Enhance Resistance, Resilience, and Respond to CC



Retain and Enhance Ecological Representation as the Foundation Construct



Retain Ecological Integrity as the Functional Imperative/*Institutionalize Ecosystem Management*



Design Across Multiple Scales to Enhance Complexity and Resiliency/*Innovations in Design/Governance*



Recalibrate Management Objectives (in line with Adaptive Management)



Use PAs as Sources of Knowledge/*Communicate Change*



Lead by Example

Rising to the Challenge

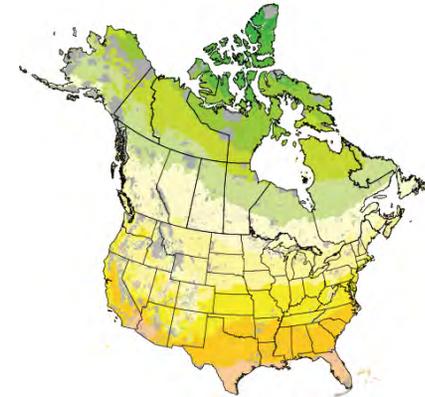
“Individual commitment to a group effort – that is what makes a team work, a company work, a society work, a civilization work.”

Vince Lombardi, 1913-1970

- **Establishment of Protected Areas and Climate Change (PACC) Panel**

- **Develop a PACC Adaptation Strategy**

- Establish a Vision
 - Chart a Course for Action (and Timeline)
 - Develop Legal and Policy Framework
 - Broad PA/sectoral representation



- Any corporate vision for climate change must include a mission to work with others to conserve, protect and enhance natural heritage areas for the continued benefit of Canadians

- **Inclusive of PA Fraternity:** *Adaptation Declaration* to begin process of sustained commitment to adapt and mitigate climate change

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A Call To Action (an Outline)



2010 International Year of Biodiversity

- Protected Areas are Significant Reservoirs of Biodiversity
- Protected Areas are a National Legacy and a Public Trust
- A Critical Challenge for this Generation
- Climate Change is Implicating *All* Protected Areas
- Protected Areas Help to Mitigate Climate Change
- A Comprehensive Coordinated Approach is Essential
- Strategy Could be Adopted as Canada's Contribution to IYB 2010

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12 Core Principles to Guide (any) PACC Strategy



1. **Adopt a Science Base**
2. **Plan for Multiple Scales**
3. **Work Across Boundaries**
4. **Innovate Novel Approaches**
5. **Establish New Partnerships**
6. **Research and Monitor Effects**
7. **Utilize Adaptive Management**
8. **Build Expertise and Capacity**
9. **Lead Mission by Example**
10. **Communicate Change**
11. **Ensure Public Accountability**
12. **Be Comprehensive in Scope**

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Challenges to Adaptation (Chinks)

- CC drivers largely external to PAs (CO₂ loading, can't be “fixed within”)
- **Uncertainty/lag of CC magnitude/impacts (copious models coupled with local, regional, continental diversity)**
- **Complexity of CC impacts/responses (many non-linear responses, species dropout, alien immigrants, new successional pathways, etc.)**
- **Political hurdles (still slow uptake at political levels, and no evident awareness of political concern for PAs in the big picture)**
- **Lack of resources (\$), Expertise (PACC survey), inadequate human resource policies**
- **Lag time in management responses (no “overnight fixes”, cause/effect of remedial/restoration efforts mid- to long-term)**
- **No real precedent (never have confronted anything of this scale, no “policy analogue”)**
- **Unknown knowns (complexity/uncertainty in the driver’s seat/be cautious)**

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Opportunities (Armour)

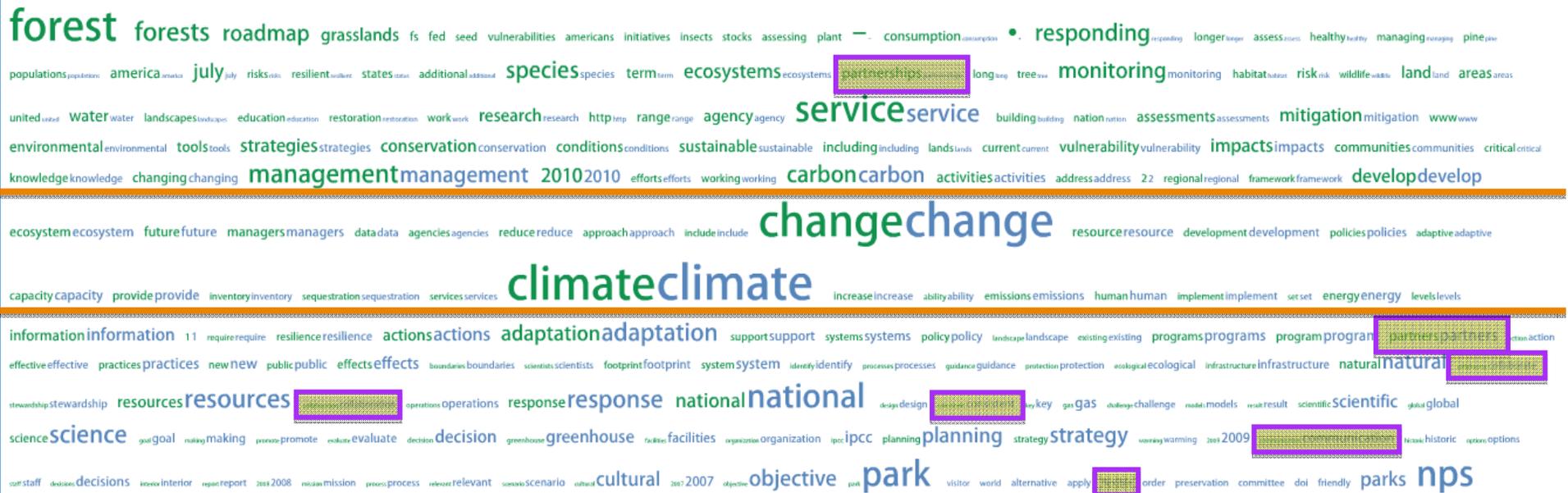
- **Iconic nature of Canadian PAs (should help gain support)**
- **Environmental, social, economic importance of PAs (“do nothing” not an option)**
- **Large constituency of PA/biodiversity proponents (agencies, conservation professionals, ENGOs, public-at-large)**
- **Growing awareness, interest and concern in PA sector (PACC survey)**
- **Desire to collaborate and pool resources (PACC survey)**
- **PA foundation constructs remain valid (i.e., representation, integrity, ecoregional planning, PA/network design principles)**
- **Growing sense of urgency (PACC survey, internationally)**
- **Scale and design of Canada's PA network (already some built-in resilience, persistence, connectivity, etc.)**
- **Some exciting Casework underway (to be shared and built upon) (PACC Survey)... need a common forum**

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USFS & USNPS CC Strategies

Key Terms Comparison



Need to be Strategic & Consistent in our Messaging!

Acknowledgements

