Working Group Notes

We publish here summaries prepared from the notes submitted by the Chairs of working groups established towards the end of the workshop. The intent was to seek reaction from the participants. A set of possible questions was provided to the groups as an initial basis for discussion—although these were not necessarily to be followed closely, nor did that occur.

Proposed Questions:

1) What is your view of the evidence for climate change? What are the major research needs and why?

2) What are the major planning needs for climate change in Ontario's parks?

3) What should be the priorities?

4) Who should have responsibility for addressing them, according to what timetable?

5) What interactions should occur with what organizations and groups in making decisions, in particular how should the public be involved in planning for overall policy and in planning for specific parks and park regions?

6) What role can the universities play in addressing planning needs and approaches?

Our editing has been guided by the desire to bring out the main points made in the Working Group Notes so as to provide highlights and further food for thought by readers.

Editors

Working Group 1:

Maggie Bowman	**Susan Grigg**
Pauline Haarmeyer	**Brian Huis**
Tracey Snarr	**Christine Vance**
Charlene Vantyghem	**David Welch**

1. Emphasis, Capacity, Priority?

- From the park level, this is the first opportunity to be exposed to an academic perspective.
- All types of stresses at parks. Climate change needs to be put in context, integrated with other monitoring.
- Fairly complex and huge.

What steps can someone take at park level?

- Research: we don't know what the effects are.
- Data rescue.
- Funding issue (not available; e.g., research plots)
- Assume most impacts are negative, but for some species changes could be positive.
- If we focus only on representation, then SAR (Species at Risk) may need to re-evaluate whether it's positive or negative.

Solution: have enough parks filled in to have adequate areas protected.

Set strategies at corporate level before trying to tackle at park level.

- Need policy in place to adapt to climate change.
- Set goals to implement green technologies.
- In Parks Canada—main office provides examples (house-in-order concept discussed by David Welch).
- Specific actions are up to the park.
- Involves fair amount of work at clerical level and software level to be able to report it.

Some actions can occur at grassroots level (save money, be able to do our jobs better; e.g., turn off lights and monitors when away from desk)

Monitoring, top-down direction:

- Good link to climate change.
- Educate operationally (tell others what you are doing)
- We can control our operations.

- e.g., parks could only buy wood from certified forest products.

Investigate developing a formal environmental management system. Parks Canada environmental management system has two approaches.

Identify your own issues that you can deal with through operations.

Climate change has not been identified as a priority within Ontario Parks; but after this workshop, a feeling exists that it should be.

2. What Do Park Managers Need?

- Planners need to develop a template or statement for each park.
- Management plans
- Begin by giving corporate recognition to climate change.
- Need data to make decisions.
- More information could lead to stronger policies. What is already out there?
- Identify gaps—where do we need more data?
    - raw primary data (often appears in journals)
    - secondary data (useful to managers to make decisions)
    - tertiary (public information to make decisions)

May not need raw data. Could get highly reliable scientific sense of what's in each park without having a monitoring station in each park.

Exception: e.g., Eastern Prickly Pear Cactus. Site-specific monitoring needs to be done.

- Get direction on what species are likely to be of concern.
- For managing parks, the indicators may be more site specific.
- Develop indicators and measures through main office for direction at park level.
- Work with public to collect information.
- Look for partnerships.
- Take advantage of all the data being collected.
- Make information easier to access and easier to use at all different levels.
- Stand-alone system versus integrate.

Parks Canada

- Information by park (X_2 CO_2 scenario; 2050 and 2090 timeslots; 3–4 model/emission scenarios).
- Information on precipitation and temperature seasonally and annually.
- 2–3 page narrative based on existing literature .

- Other tools also now exist, online.
- Free to register.
- Download Canadian maps with a variety of information (projected widespread impacts, projected temperature/precipitation, etc.).

Consider developing an overview at provincial scale of potential/projected changes and create a summary for each park.

Assign someone to follow and report on policy/science interface.

Need a professional network for routine information trading.

Encourage staff to look at climate change at park/manager level, as well as visitation, revenues, and other current priorities.

3. System Plans?

- Systems plans have served a good purpose, perhaps now need some adjustment.

Work on infilling and connecting:

- Infilling in Southern Ontario – lots of private land (do not have luxury of Crown land).
- Do not worry if there is more than one nature reserve in a particular ecodistrict.
- Ecodistrict boundaries, adjusted based on Bill Crin's work.

Keep database up to date and identify gaps

- Gap analysis (perhaps bring in a theme on climate change; if there are new landform vegetation units update them and incorporate them into identification of new gaps).
- No need to radically change direction, we are always adapting and finding new alternatives.
- Accept there will be change, and accommodate it.

When identifying species to monitor, incorporate climate change considerations.

Do we intervene? Or do we say it is evolution?

Broad database—is broader species diversity changing and what are the possible measures (e.g., invasive species)?

4. Role of Strategic Planning?

- Provide us with top-down direction.
- Integration of plans is difficult, but good to try.
- Linkages are desirable.

- Show parks and protected areas on maps to see size, shape, buffers, and other patterns and where the gaps are.

Find big picture examples that already exist; keep them current, including changes due to climate change, and disseminate occasionally.

Strategic planning may not occur specifically because of climate change, it is one more stress but can be brought into the package and filtered down to park level

- Promote landscape-level analysis.
- Promote acquisitions, easements, and the like.
- Park activities/operations (e.g., prescribed burns).
- Remember to take climate change into consideration.

5. Communications?

Park Visitors

- Have someone write an article for park tabloids to public (e.g., CPAWS, Parks Canada pamphlet, Ministry of Education).
- "Hop To It" was well received.
- Need to introduce people to the issue.
- What may be most successful in long run is when we interpret it to children, who then put their parents onto it.

Staff development

- Workshop such as today.
- Part of the audience for publications.
- When read park management plans, if we incorporate message it filters to park operations.
- How do we convince people it is another thing we should be considering?
- How to get buy in at individual park level that is cost effective?
- Ties in to top plan and support.

Working Group 2:

Tim Bellhouse	**Peter Brand**	**Bill Crins**
Paul Gray	**Mike Green**	**Jim Murphy**
Dan Paleczny	**Dan Scott**	**Mark Taylor**
Don Tyerman		

1. Emphasis, Capacity, Priority?

Philosophical Question

- Change—relative to other issues?
- One of many stresses on parks.
- Climate change is a 'key' trend.
- Little emphasis at 'park' level on climate change.

Beyond Our Capacity

- Separation of responsibility.
- Planning policies to address climate change.
- Enable discussion.
- Proactive planning (design/engineering) of park projects (e.g., infrastructure).

Real Priority

- Concern about extreme weather events.
- Ice storms.
- Tornadoes.
- But not a tangible concern.
- Greater integration of policies at the ground level.

2. What Do Park Managers Need?

- Increasing information at all levels.
- Revisions to 'Blue Grey' Book and their key documents.
- Reviews and update PPA/OP policies.
- Science ('Applied Approach.').
- NGOs (greater advocacy/collaboration).
- Governments need to engage the public more than in the past.

- Need 'policy' models.
- Evaluation/criteria to determine positive/negative effects.

3. Park Systems Plans?

(Are they obsolete? Process versus Feature Representation)

Think about adapting ecoregion mapping to reflect what is known of climate change.

- Planning process must incorporate new info/res.
- Developing options in system plans to adapt to change.
- What do we need at a park level, system level?
- Ecosystem community.
- How do we undertake adaptive management at each level?

4. Role of Strategic Planning?

- Ecosystem-based approach—collaboration at many levels for a common vision.
- Must be 'dynamic' process.
- 5–20 year planning levels.
- 'Strategic' plan for Ontario Parks with a climate change component.
- NGOs—Facilitate ecosystem-based approach to planning—
  Yukon to Yellowstone, Algonquin to Adirondacks.
- CPAWS (Canadian Parks and Wilderness Society).
- CCEA (Canadian Council on Ecological Areas)—'Natural Working Groups,' e.g., Climate Change.

5. Communications?

- Training workshops.
- Website content – messages on climate change.
- Curriculum-based on climate change.
- Merchandising.
- Leverage funds from NGOs, government, Canadian Parks
  Council for climate change communications.
- Level of awareness of park visitors about climate change
  (identify the appropriate mediums to educate).
- Local-level participation/interaction – Conservation Authorities, watershed level.
- Sharing information on economic impacts (e.g., winter tourism).
- Kyoto is not enough.
- Change is not all bad.

Working Group 3:

Jennie Aikman **Kirsty Dickson**
Mark Shoreman **Hank Van Luit**
Geoff Wall

1. What role should strategic planning play in responding to climate change?

- Consider the definitions of parks (i.e., municipal, provincial, national).
- The impacts seem to be consistent (lower water levels, changes in vegetation) then use those models to develop similar approaches.
- We should all be using similar approaches to deal with the impacts.
- Scope/scale come into play; global issue – global planning at ecosystem level not park level.
- How do we as park managers deal with this at park level?
- Benchmark monitoring and reporting.
- Small pieces of representation.
- What is strategic planning?
- Long-term planning versus how can we create protected areas?
- Parks will still be representative of how the ecosystem has changed.
- Strategic planning—'what if' scenarios—cooling, warming.
- Emphasis on natural processes still important.
- We have to control the human system impacts.
- Consider climate change in context of land-use planning in the far north.
- Protected areas will be larger in size.
- Parks cooperative agreements use strategies, development strategies.
- Considering the greater park ecosystem—this is critical to protect values from adjacent/external influences.
- Create potential parks/reserves.
- Planning in too short timeframes.
- Strategic planning done at global level where individual governments don't have the control or influence that they have right now.
- Strategically looking at economic impacts of not considering climate change.
- Countries, such as China, create nature reserves partly for protection and partly as development strategies (deal with desertification, climate change).
- Need to buy into climate change and variability; need to understand variability now.
- It's best to consider those two words together especially politically—climate change and variability.
- Need to be building our emergency response procedures/processes especially at park level.

- Do we want to plan for ecosystem change or specific ecosystems?
- Why do we have restoration projects?
- Why do we write recovery plans for SARS (Species at Risk)?
- Biggest role is educating public on what we can do to make the difference.
- Relate primary values to the economy, social growth.
- Encourage natural processes (they change) versus do we want to loose species (SAR), do we try to deal with that?
- Interconnected areas.
- Understanding/awareness for park users.
- Showing specific/real time examples; highly visual.
- Need to understand that global climate change might not seem so bad for us (Virginia climate) but other places in the world will come to rely more heavily on us.
- Need the broader framework.
- Build in long-term vision statements (50–100 year).
- Faith in humanity—we will be able to adapt, or will we outpace our ingenuity?
- The role for North America is to not allow history to repeat itself in other countries; provide resources to them.
- As wealth of people increases, we have ability to think about nature.

2. What forms should climate change communications take?

Park visitors

- Don't cause crisis or scare them; no doom and gloom.
- Common messaging approach, thrust between agencies (major issue) comes back to strategic planning.

Policy Development

- Caught up in short-term issue management.
- Ministry of Natural Resources has pulled back; they used to be more into outreach.
- Provide direction to develop programs.
- Canadian Accord on Climate Change for Protected Areas—where all agencies that manage protected areas are signatories to the Accord—it can be bottom up as opposed to top down.
- Who—science sector (CCEA, CPAWS, Parks Canada).

Staff Development

- Message is good message but not being directed from higher levels.

- Move communication/authority to work with local municipalities/local planning boards.
- Need to let people know what the impacts are.
- Tourism with a message.
- We don't always demonstrate through our own actions.
- Greening our own operations.
- Using our examples in interpretation.
- Value in using a survey on climate change with our own visitors.
- Need to use our partners (friends, cottagers groups).
- Develop a canned program—link to our campsite 24 to promote ideas for outreach.
- Implement through zone NHE strategies.

Working Group 4:

Chris Lemieux

Robin Reilly

Ellsworth LeDrew

Bob Davidson

1. Are we placing too much emphasis on climate change?

- No. Ontario Parks is moving in the right direction. The important question is where and what do we respond to first?
- Communication—seen as a high priority. Specific things that are observable and that people and visitors can relate to.
- Educational Modules spread around at different parks. Fire ecology and Quetico; dune building at Pinery, they indicate observable impacts.
- Capacity—some parks have capacity, others do not (objectives in management plans, no staff at many parks). Rethink management plans with climate change considerations.
- Capacity at upper level—more opportunity lately to set up monitoring program.
- Capacity to do public consultation, development, and review of management plans, not there.
- Review of Legislation—1954—Integration of ecological integrity, environmental management, and climate change. Policy and public opinion allows Ontario Parks to move forward.
- Field staff have to move towards resource management and facilities management—problem of "profit" focus.
- Indicators—tools needed in management plan.
- Focus is on time is too short or narrow in management plans.
- Climate change just one of several issues in environmental management—long way from making it a priority at the park level—NOT at integration phase.

2. What role should strategic planning play in responding to climate change?

- Current Plan still viable—less emphasis on vegetation in delineation of boundaries.
- Forest management—important to work with neighbours when considering climate change.
- Outreach function—linkages with neighbors, e.g., planting grass to reduce erosion.
- Stewardship Approach—soft stewardship.
- HOW LONG? Things haven't changed in 10 years. Generation—young people moving up in organization. Change in corporate structure needed to incorporate climate change. Let others move the system, grey areas.

3. Are park system plans obsolete?

- No. Need a starting point? What is it?
- Let vegetation change in an adaptive management approach?
- Focus on Education

4. Moving in the right direction?

- Issue of capacity—don't really understand what we're dealing with, largely due to uncertainty.
- Resources—not there to do anything about climate change.
- Embrace environmental management and adaptive management where climate change is integrated.
- Hard to define the context the system is in.
- Receptive to do climate change research—scientists needed to identify research priorities.
- Crisis + knee jerk reactions—immediate threat.
- Problem—scientists tend not to communicate back to Ontario Parks.
- Not an immediate priority.

In Summary

- In general, although not too much attention is being paid to climate change. Ontario Parks seems to be moving in the right direction.
- Communication is key (with specific features, things that are observable and people can relate too).
- Modules spread around at different parks (Quetico, Pinery).
- Build capacity.

Key Points Submitted by Some Participants:

Key points from Brian Huis:

- Context is important—climate change is one more in the extensive list of stressors.
- Research—capacity, availability of resources. Change not all negative. Some species may benefit.
- Re-evaluate—not only about species at risk, representation.
- Integrate statements of climate change. Need DATA to make decisions that will lead to informed decision making— species of concern.
- Access to information—tap into sources not previously aware of.
- System plan is NOT obsolete but needs revision. Good snapshot, benchmark.

Key points from Jim Murphy:

- Question—what stressors are of immediate concern other than climate change?
- Little emphasis by managers on the ground. Need to incorporate climate change into management plans and documents (capacity).
- Proactive planning—specific projects at the park level.
- Priority? Comes off the radar as it is not an immediate threat.
- What needs to be done? Adapt education plans to include climate change in relation to humans in the environment, impacts on park values. Dust off grey and blue book. Need for advocacy and cooperation among groups. Important to evaluate, define criteria.
- Obsolete? No. Need some adaptation. Common elements still in place.
- Look at park management at all levels, support model. Look at climate change from an environmental assessment.
- Education—interpretation program to include climate change at park level. Visitor centres, internet, outreach.

Key points from Robin Reilly:

How Quetico is adapting?

- Climate is considered in stress assessments.
- Use of hybrid cars for transportation.
- Fire policy changed to include 10% more burning.
- Research on extreme events, blow down (900 ha)
- Tree slicing, accurate dating.
- Survey on loon breeding (dates).
- Identifying grasslands at park, pockets of residual grasses, repository species.

- Vegetation mapping is satellite based.
- Inventory on vegetation for vegetation management planning.
- Environment Canada monitoring ice thickness.

Key Points from Bill Crins:

- Climate change signal now strong enough to pull out the warming trend from the shorter term variability.
- Meta-analyses of biotic change support this—birds predictive.
- Sensitivity of Canadian climate enhanced because of dynamics in the cryosphere.
- Frequency and intensity of extreme events will increase.
- Current protected area frameworks may not be adaptable to the rate and extent of the change.
- Wording in existing policies relate to "beyond the historical range," etc. "representation" - policy change needed to adapt to climate change.
- Biome change analysis and fire severity analysis indicate that changes will occur throughout the broader system (national and provincial).
- Implications of climate change relate to protected area framework and system, as well as the users and stakeholders (specifically tourism).
- The hydrological cycle and changes in it are critical in understanding the impacts on ecosystems and use patterns.
- Behavioural adjustments are needed to adequately deal with climate change, in terms of limitations and adaptations of or to the change.
- Communications at all levels are needed to convey the importance and implications of the process—ecosystem services, economic implications.
- Regardless of the details of protected area systems, ecological integrity should be the first priority for protected area management at any point in time, including monitoring and reporting requirements.
- Policy development should attempt to account for uncertainty, change, and variability—it should focus on ecosystem-based approach to management, using an adaptive management design.
- Needs to deal with short-term and long-term change.
- And before new policies are developed and before monitoring programs are designed, we need to ensure what we ask the right questions, to focus our activities and to generate relevant information.
- "Many competing threats share the same solution."
- "It's about civics—the rights and duties of citizens."