Circumpolar Protected Areas Monitoring
Workshop report and supporting document to the Circumpolar Biodiversity Monitoring Program (CBMP) Arctic Protected Areas Monitoring Group
CAFF Designated Agencies:

- Directorate for Nature Management, Trondheim, Norway
- Environment Canada, Ottawa, Canada
- Faroese Museum of Natural History, Tórshavn, Faroe Islands (Kingdom of Denmark)
- Finnish Ministry of the Environment, Helsinki, Finland
- Icelandic Institute of Natural History, Reykjavik, Iceland
- Russian Federation Ministry of Natural Resources, Moscow, Russia
- Swedish Environmental Protection Agency, Stockholm, Sweden
- United States Department of the Interior, Fish and Wildlife Service, Anchorage, Alaska

CAFF Permanent Participant Organisations:

- Aleut International Association (AIA)
- Arctic Athabaskan Council (AAC)
- Gwich’in Council International (GCI)
- Inuit Circumpolar Conference - (ICC) Greenland, Alaska and Canada
- Russian Indigenous Peoples of the North (RAIPON)
- Saami Council


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Introduction

The “CBMP: Circumpolar Protected Areas Monitoring Workshop” was held on March 28 – 30, 2011 in Girdwood (Alaska) United States. The goal of the workshop was (i) for selected protected area experts and practitioners to discuss relevant arctic protected areas issues and opportunities for coordinated approaches to biodiversity monitoring, (2) to review the provide opportunity for all Arctic Council country and permanent participants to share key monitoring considerations for the group to address; (3) and provide direction and enhancements to the draft protected area discussion paper in preparation for the development of an arctic protected area monitoring framework.

The workshop gathered over 25 participants from all the arctic council member countries with particular expertise in arctic protected areas management and biodiversity monitoring and data management. The following is a summary of the presentations and discussions that took place during the three days, as well as the key findings and priorities for action that emerged.

Pre-workshop work

On February 22 and 27, 2011, members of the workshop and PA steering committee were invited to attend two webinar sessions for Arctic Council member states to present an overview of their respective national protected area monitoring programs and capacity. The one exception, Russia's representative Mikhail Stishov, presented the current state of protected areas monitoring and information at the workshop itself.

The webinar sessions allowed many of the ‘formal presentations’ and ‘information lectures’ to be shared and completed prior to the workshop, thus providing more time for breakout sessions and discussions. The results of the webinar sessions and related presentations were available from CBMP offices and websites.

Lastly, a draft discussion paper was circulated to all workshop participants. Much of the workshop reflected comments, discussion and debate on various aspects of the discussion paper content and structure.

Welcoming Remarks

Geoff Haskett, Regional Director, United States Fish and Wildlife Service Alaska

Geoff highlighted the complex network of protected areas in the Alaska region (including number of protected areas, their size, species diversity and status) and explained how this was not unique to Alaska, and something challenging all Arctic countries. The status of ownership and responsibility of those protected areas and some of the challenges associated with managing such vast and remote land areas were shared (eg. ownership, decision making and needs of stakeholders).

The USFWS is dealing with pressures facing protected areas in Alaska (e.g. climate change) and challenges of developing ‘systems’ to address perceived changes (resource constraints, etc.). The current mission of the U.S. Fish and Wildlife Service, to work with others in partnership to conserve, protect and enhance fish, wildlife, and plants and their habitats is being realized along the lines of the concept of Landscape Conservation Cooperatives or LCC’s. Continued development of international protected area partnerships is an opportunity to improve our understanding of the regional and circumpolar changes that are being observed.
Overview of the Circumpolar Biodiversity Monitoring Program (CBMP) and Arctic Protected Area Monitoring Scheme

Michael Svoboda, CBMP Program Officer

Arctic biodiversity is under growing pressure from both climate change, resource development and other anthropogenic stressors, requiring both managers and users to have access to more timely and complete biodiversity data. Yet existing monitoring programs remain largely uncoordinated, lacking the ability to effectively monitor, understand and respond to biodiversity trends at the circumpolar scale. The maintenance of healthy Arctic ecosystems is a global imperative as the Arctic plays a critical role in the Earth's physical, chemical and biological balance. Maintaining the health of Arctic ecosystems is also of fundamental economic, cultural and spiritual importance to Arctic residents, many of whom maintain close ties to the land.

To meet these challenges, the Circumpolar Biodiversity Monitoring Program is working with partners to harmonize and enhance long-term Arctic biodiversity monitoring efforts in order to facilitate more rapid detection, communication and response to significant trends and pressures.

The Arctic’s size and complexity represents a significant challenge towards detecting and attributing important biodiversity trends. This demands an integrated, pan-Arctic, ecosystem-based approach that identifies trends in biodiversity, and also identifies underlying causes. It is critical that this information be made available to generate effective strategies for adapting to changes now taking place in the Arctic - a process that ultimately depends on rigorous, integrated, and efficient monitoring programs that have the power to detect change within a ‘management’ time frame.

Towards this end, the CBMP is facilitating an integrated, ecosystem-based approach to monitoring through the development of five Expert Monitoring Groups representing major Arctic themes (Marine, Coastal, Freshwater, Terrestrial). Each group will function as a forum for scientists, community experts and managers to promote, facilitate, share, and coordinate research and monitoring activities to facilitate improved and cost-effective monitoring that has a greater ability to detect and understand significant trends in Arctic biodiversity.

In addition to the establishment of the ecosystem-based Expert Monitoring Groups, the CBMP is establishing a Pan-Arctic Protected Areas Monitoring Group (PAPAMG), recognizing that Protected Areas represent important, existing platforms for the implementation of pan-arctic, coordinated biodiversity monitoring.

Working with these partners, the main objective is to identify a small suite of biodiversity measures that would be common across the Arctic and implemented in the same way by each protected area’s responsible agency. Ideally, the efforts will primarily be focussed on existing monitoring program. This pan-Arctic set of measures will allow coordinated reporting of biodiversity in arctic protected areas and provide a broader context to regional changes being experienced, thereby assisting protected areas managers in understanding changes within their own protected areas.
Plenary working group session

Defining Success: Key objectives and targets to consider for a protected area monitoring framework and an emerging circumpolar network of protected area practitioners

Donald McLennan, Senior Science Ecologist, Parks Canada, Canada
Erik Hellberg, Swedish Environmental Protected Agency, Sweden

The coordination of the circumpolar arctic protected areas may provide significant benefits for participating members. Needless to say, the vision and objectives of such a network would need to establish useful targets early on. The purpose of this session was to promote momentum and identify commonalities between participants for collaborative approaches in further developing the protected areas conversation.

The discussion and ‘brainstorming’ session raised various points regarding the coordination, monitoring scheme, reporting targets, and data management issues. The major points that emerged from the plenary discussion from the morning of Day One are summarized below.

**What would represent success for this group? (during the workshop and beyond)**

Coordination

- More clarity is welcome on common objectives of this group. Clarify key questions we are trying to answer.
- Clarification of how this PA group can support/coordinate with CBMP Expert Monitoring Groups and other networks; SAON; etc.
- Common understanding of ‘who is monitoring what’
- Clarify terminology, sometimes we use the same words, and mean different things, and sometimes, we use different words to mean the same thing.
- PA can be an indicator, and inside PA’s there are more indicators, themes etc.
- Need to agree on what it is this group needs to focus on in terms of indicators it sees as most relevant, be they national parks, Natural 2000 sites, need to as a group on a short list that we agree we are going to monitor.

Monitoring scheme

- Understanding the questions and the monitoring regime needed to provide rigorous answers is important. Understanding what decision support products (tools) are needed can streamline focus of the group and help target which indicators to use.
- Identify some meaningful monitoring elements that can be shared, and that address critical aspects of change currently underway and expected in the arctic.
- Some countries are looking for common measures for monitoring within protected areas, some discussion as to best practices or systems may be welcomed.
- Consider if the protected areas meet the conservation needs of the arctic.
- Consider questions - are the protected areas well managed, and are there enough PA’s within the shifting landscape.

Reporting targets

- When assessing arctic protected areas, need to focus on a current need such as the condition of protected areas and their biodiversity, not just amount of the designated area.
- The paradigm between certain EU approach to protected areas and other jurisdiction is quite distinct, which largely stems from the different approach to biodiversity conservation and monitoring. We need to consider how best to integrate the two paradigms to produce useful products for all jurisdictions. Discuss what role protected areas can play for circumpolar biodiversity monitoring.
- How can we reorganize the information/data we have now to inform other decisions?
One of the first activities in undergoing such an exercise was the crafting a discussion paper to consolidate and that facilitates the development of an Arctic Protected Areas Monitoring Scheme. The participants review the draft discussion paper section by section in plenary session highlighting the key areas still needing feedback and engagement from the participants and PA steering committee.

Currently, it is suggested that the key pieces are in place and the task left is to chose what monitoring components that are currently being monitored can be compiled/ reported on together. Understanding that the CBMP EMGs may inform further other monitoring options, this group can quickly generate a short list of possibilities for EMG’s to consider/ build on to explain the effects of change and explain the impacts of change.

It was anticipated that the background paper would form the foundation of a process that would involve two workshops to initiate the process and begin defining a small suite of biodiversity parameters (framework) that could be implemented/ reported on in a standard fashion across arctic protected areas.

<table>
<thead>
<tr>
<th>Key background paper activities</th>
<th>Status</th>
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<tr>
<td>Summarize current and projected issues facing Arctic Protected Areas</td>
<td>Completed</td>
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<tr>
<td>Identify existing Protected Areas in the Arctic, their location, status and monitoring capacity</td>
<td>Completed</td>
</tr>
<tr>
<td>List existing and/or planned biodiversity monitoring in these Arctic Protected Areas</td>
<td>One country dataset missing</td>
</tr>
<tr>
<td>Identify opportunities for a set of common parameters to be implemented across arctic protected areas (what existing biodiversity elements are broadly monitored? Are there existing parameters that are being monitored across broad regions in the Arctic?)</td>
<td>Drafted</td>
</tr>
<tr>
<td>Identify criteria for choosing a small set of parameters</td>
<td>Completed</td>
</tr>
<tr>
<td>Identify and describe a suite of candidate parameters that could be implemented on a circumpolar level, using existing monitoring capacity and considering existing mandates</td>
<td>Drafted</td>
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</table>
During the morning and afternoon of Day 2, participants broke into three working groups to increase discussion engagement on various topics related to the development of a protected areas monitoring scheme. The major points that emerged from the working group sessions are summarized below.

1.0 Review important stressors, threats, and drivers vis a vis Arctic Protected Areas (section four of discussion paper)

- Loss of Traditional knowledge (diminished involvement of northern peoples/ communities) in management and decisions) threatens the northern management framework.
- Climate change undermines idea of protected areas, new policy may be needed – no longer possible to maintain species, systems, and so on. The notion of ecological integrity is called into question.
- Changing ecological regimes (eg. Wildfire cycles are changing ie. tundra and forest fire cycles; changing hydrological cycles).
- Resource extraction development and related infrastructure pressures are growing. Oil and gas, roads, minerals, hydro power projects, community growth, new communities all increase the human foot print in the north, as well as related activities – (e.g., mechanized access/ all terrain vehicles ) for personal use.
- Invasive species (northern pike) or endemic southern species moving north increasing user conflicts.
- Access brings uncertainty. Shipping land expansion increasing risk of accidents and vectors of migration (for disease, parasites, and southern species) as well as increased tourism.

1.1 How can existing data be most useful and flexible to protected area managers, CAFF, and others? Consider what assessments could be generated, what reporting opportunities should be targeted, what decision support tools are needed, other…

- Data needs to be accessible and interoperable to improve chances of making most use of the data.
- Monitoring programs should consider standardization of methods and data archiving format to increase ability to use data at the circumpolar scale.
- Providing access to an international body of expertise focused on Protected Areas is a basis for developing common procedures, by comparing protected areas on the landscape. By considering ‘what makes them different’ may increase conservation resource.
- Protected area managers do need more access and engagement with local knowledge access. The circumpolar context (beyond National scope) will be interesting to see how the network could benefits the managers. Key for data usefulness is that it is comparable, from other EMG data, and it is relevant at the circumpolar scale, and at the stressors and drivers that are listed are reported on.
- Protected areas network may want to consider linkages with AMAP and other pollution sensor or environmental monitoring programs beyond biodiversity to increase understanding observed changes.

2.0 How could the Protected Areas Group fit/ link and coordinate with the various pieces monitoring biodiversity (EMGs, CAFF, expert networks)

- The larger opportunity for the growing number of CBMP components and initiatives is to
consider a comprehensive CBMP workshop that has all groups together and breakouts on their own. This would at least enshrine an annual opportunity for co-chair and co-EMG program coordination and information ‘cross-pollination’ / sharing.

- The Protected Areas Group is a key ‘intersection’ of arctic monitoring programs. There is an opportunity to clearly ‘map’ the linkages of the group with all the other programs (SAON, AMAP, CAFF, etc…)
- The two tiered approach - developing a network prior to the establishment and completion of the EMGs is confusing. CBMP needs to herd the processes and bring them under ‘one approach’.
- CAFF has a lot of opportunity for coordination between goals of creating a protected areas network linked to the EMGs while not all EMGs have been established.
- EU habitat directive is/ has an example of coordinated/ standardized definitions. This challenge should be addressed early as the group is about to grow. Habitat model for EU system may be a good model in general for CAFF/ CBMP to consider. Sometimes simple data that we can collect is the most useful, and can increase our power to detect change.

2.1 Strategic opportunities (time limited) vs long term

- The network/ group products may essentially promote need for changing / adjusting protected areas size/ location to enhance conservation opportunities and reporting in a changing arctic.
- In the short term – contribution to other multilateral international agreements. No such group exists reporting exclusively to other international agreements. Consider linkages to ABA or CBD despite timelines. The opportunities for financing through sound data and strong linkages to other monitoring programs should be considered.
- Opportunity in the long term to compare and contrast health of PA ecosystems versus elsewhere.
- Protected areas are often designated, usually resources or some people that are there, some sort of infrastructure, that does not exist outside the PA’s.
- Integrating categories, eg. Caribou monitoring and analysis in different jurisdiction. EU example, standardized categorization that may have to come from or in conjunction/ discussions with EMG’s - to help coordinate and speak the same language.

2.2 What should be avoided

- Avoid redundancies and duplication between EMGs and other initiatives. This issue is prevalent as several EMGs have not completed their work and the group is considering developing and promoting a monitoring framework. As such there are lots of opportunities for duplication.
- Avoid exploring monitoring, assessments and report that are not grounded in some reporting framework and need. Going off in own direction uncoupled with a program outcomes should be avoided.
- With the amount of variability and uncertainty in the arctic, a small suite of useful and easily analyzed indicators should be considered a priority. Avoid using indicators with high variability rates.
- Avoiding ad hoc or not standardized monitoring programs that are difficult to integrate for analysis will save a lot of time and resources at the reporting part of the monitoring cycle.

2.3 Other considerations the PA group should address (TEK, citizen science, local knowledge, other PA monitoring data sources)

- Local knowledge does not have many champion examples of how to integrate into biodiversity monitoring in a meaningful / ongoing prescribed way. Although it may provide insight of
the importance of various habitats at different life history stages for a species, it is difficult to describe examples of continued application and use. The need for applied examples cannot be understated.

- There is a somewhat real friction between scientist and applied monitoring. Need to bridge that gap with communication or involvement.
- There are costs with acquiring and using TEK. Need examples to understand how best to apply that knowledge to facilitate funding from this groups perspective.
- National Parks in Canada are co-managed, and require that State of the Parks Reports has a TEK section, and report the perspective of the condition of the land from our Native partners.
- When monitoring and reporting on arctic ecosystems one should also factor in the people who are living there. Often people are ignored in the whole discussion. Still difficult to see community aspect being considered.
- Example from Europe of grazing areas for ranchers in PAs. This highlights need to define protected areas, activities within them, and what are the pressures that we are subsequently reporting on. Consider more detail than IUCN PA scale?

“If you don’t include TEK the knowledge is incomplete.”
- James Scott

3.0 Coordination opportunities with Expert Monitoring Groups

On the second day, Joseph Culp (Chair, CBMP: Freshwater Expert Monitoring Group) presented the design and status of the Freshwater Expert Monitoring group. The presentation highlighted the goals of the EMG to (i) improve understanding of the international status/ trends and scientific understanding of freshwater ecosystems, (ii) to provide input to national / international management decision and reporting, and (iii) pursue a collaborative approach to achieve key strategic opportunities for biodiversity monitoring in the arctic.

4.0 Review of draft Background Paper: Arctic Protected Areas Monitoring Scheme Table 13 and Table 14

Break out groups were asked to review and comment on the structure and content of the discussion paper’s table 13 and 14 as they applied to the various country situations. The enhancements were discussed in plenary session on day 2 and 3 and notes guided David Livingstone’s next discussion paper draft.
The CBMP: Circumpolar Protected Areas Monitoring Workshop assembled over 25 experts for a lively dialogue about the opportunities and challenges that a circumpolar network would need to consider. During the three days of structure discussion, the groups focus shifted from how to organize and coordinate the group with all the other ‘related’ monitoring programs in the arctic to the technical work of reviewing and identifying key aspects that a circumpolar protected areas monitoring framework would need to consider and address.

Participants repeatedly stressed the importance of ensuring the program is coordinated with the other CBMP ‘components’ (eg. EMG’s and networks), and the need to have strong linkages to protected area only reporting and monitoring needs. In the coming months the CBMP will work with the group to complete a monitoring framework and support the members establishing a clear longer term vision for the group beyond CBMP’s core biodiversity monitoring focus.

### Table 2
**Summary of post workshop timelines related to the workshop, discussion paper, and drafting the final Protected Areas Monitoring Framework**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Personnel</th>
<th>Date</th>
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<tbody>
<tr>
<td>Draft workshop report: Include draft Terms of Reference</td>
<td>Donald McLennan, Michael Svoboda, Bård Øyvind Solberg, Erik Hellberg</td>
<td>April 15</td>
</tr>
<tr>
<td>Review of Draft workshop report</td>
<td>Steering committee</td>
<td>mid May</td>
</tr>
<tr>
<td>Final workshop report</td>
<td>All</td>
<td>early June</td>
</tr>
<tr>
<td>Draft discussion paper circulated</td>
<td>CBMP</td>
<td>April 10</td>
</tr>
<tr>
<td>Next draft for discussion paper</td>
<td>David Livingstone</td>
<td>end May</td>
</tr>
<tr>
<td>Discussion paper circulated to workshop participants</td>
<td>CBMP</td>
<td>June 30</td>
</tr>
<tr>
<td>Final Discussion/ Background paper</td>
<td>David Livingstone</td>
<td>early July</td>
</tr>
<tr>
<td>Draft PA monitoring framework document</td>
<td>Drafted and finalized by SC, and circulate to network</td>
<td>end of July</td>
</tr>
</tbody>
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## Appendix 1

### List of workshop participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Country</th>
<th>Email address</th>
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<td>Livingstone, David</td>
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<td>McLennan, Donald*</td>
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<td>York, Geoff</td>
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</table>

*represents workshop steering committee members (special thanks to Robert Winfree, National Parks Service, USA who was unable to attend the workshop).*
Appendix 2

Draft Terms of Reference

I. Goals and objectives

A. Goals

▶ To promote, facilitate, coordinate and harmonize common components of Arctic protected areas monitoring activities among circumpolar countries
▶ To improve ongoing communication amongst and between Arctic protected areas practitioners to facilitate more rapid update of best monitoring practices and new technologies and techniques
▶ To provide a coordinated means to report on the condition of pan-Arctic protected areas in a time of rapid and accelerating ecological and anthropogenic change.
▶ To organize a network of pan-Arctic scientists that can advise CAFF and speak with one voice to address identify and address emerging issues for protected areas, e.g., adequacy of existing protected areas systems in a changing world,

B. Objectives

▶ To identify a small common, standardized suite of biodiversity measures that could be monitored and reported across the Arctic
▶ To develop an implementation approach to the standardized monitoring that specifies key needs such as data management, analysis and reporting approaches, and an institutional framework for implementing the standardized monitoring.

II. Administration

A. Membership

The Arctic Protected Areas Monitoring Group will be comprised of members representing all Arctic countries. Each CAFF National Representative can appoint one member. Permanent Participants, CAFF observer countries and observer organizations will be invited to take part in the Arctic Protected Areas Monitoring Group workshops.

This membership will ensure strong and ongoing connections to existing national and international protected area systems.

The members will be expected to serve a term of two years allowing for the completion of the Protected Area Monitoring Scheme. The membership can be modified to add new members if deemed appropriate by the existing Arctic Protected Areas Monitoring Group and sanctioned by the CAFF Management Board.

Arctic Protected Areas Monitoring Group members (Focal Points) are expected to provide relevant information and materials for the development of a background paper, attend planning workshops together with a range of experts representing organizations and geographic areas important to Arctic biodiversity research and monitoring. Each Focal Point should be well positioned to consult within the relevant agencies in their own country and solicit relevant information needed to develop the plan. The Focal Points will be expected to assist with the development of the plan and background paper by identifying current protected areas monitoring plans, approaches and measures currently in use or planned within their own country’s network of arctic protected areas.

Upon completion of the monitoring plan, CBMP in consultation with the Arctic Protected Areas Monitoring Group, shall find a functional organization structure that will be responsible for facilitating and tracking the implementation of the long-term monitoring scheme and for providing ongoing communication and coordination of the monitoring activities.
Whenever possible, connections between the development of an Arctic Protected Areas Monitoring Plan and the development of the CBMP’s ecosystem-based monitoring plans will be made to ensure consistency. A designated member may participate in EMG workshops to ensure consistency and integration and prevent overlap between the developing monitoring schemes.

**B. Coordination**

The CBMP office will be responsible for ensuring coordination (connectivity and compatibility) between the Arctic Protected Areas Monitoring Group and the rest of the Expert Monitoring Groups. This will be accomplished through participation on scheduled Arctic Protected Areas Monitoring Group conference calls and, as needed, conference calls between the CBMP Office and EMG leads. The CBMP will work together with the Arctic Protected Areas Monitoring Group on:

- Overseeing the development of a background paper
- Organizing and facilitating the monitoring workshops
- Organizing and participating in regular planning meetings and conference calls (with at least one week notice for such planned meetings and calls)
- Ensuring at least one membership conference call per quarter
- Communicating regularly with the CBMP office
- Preparing and distributing materials prior to meetings
- Completing appropriate records of meetings and results of workshops
- Ensuring that materials and records are provided to the CAFF Secretariat, and all attendees within 60 days of completed meetings.

The CBMP Office will, in cooperation with the Arctic Protected Areas Monitoring Group, provide state-of-the-art data management, assessment, outreach and communication services.

**C. Workplan**

**Background paper**

- Summarize current and projected issues facing Arctic Protected Areas;
- Identify existing Protected Areas in the Arctic, their location, status and monitoring capacity;
- List existing and/or planned biodiversity monitoring in these Arctic Protected Areas
- Identify opportunities for a set of common parameters to be implemented across arctic protected areas (what existing biodiversity elements are broadly monitored? Are there existing parameters that are being monitored across broad regions in the Arctic?)
- Identify criteria for choosing a small set of parameters.
- Identify and describe a suite of candidate parameters that could be implemented on a circumpolar level, using existing monitoring capacity and considering existing mandates;

Over the next year, the Arctic Protected Areas Monitoring Group will hold one or two workshops focused on reviewing current monitoring programs in place and selecting a suite of standardized parameters to monitor and indicators to report on.

Upon completion of the Protected Areas monitoring plan, the group will continue to track and promote implementation of the monitoring plans and provide an ongoing forum for promoting, facilitating and coordinating Protected Areas research and monitoring.

**D. Decision Making**

Decision-making within the Arctic Protected Areas Monitoring Group is by consensus of the designated official representatives.

**E. Expenses**

Unless there is prior agreement, Arctic Protected Areas Monitoring Group members are responsible for their own travel coordination and expenses.
For further information and additional copies contact:

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