

## AMAP report to the meeting of Senior Arctic Officials (Tromsø, April 12-13, 2007)

Prepared by the AMAP Board

### **1. Status of Oil and Gas Assessment**

#### **a. Timeline and Funding**

As previously reported to SAOs, the scope of the assessment considerably expanded during the course of the process, resulting in increased workload on the expert group responsible for delivering the assessment, and a large increase in the size of the reports being prepared. The assessment has also been hampered by late, or lack of delivery of promised (national) contributions that are critical to completing the assessment. The expected contribution from Russia has, however, now been received and is being incorporated in the assessment. Based on this, the WG have approved a revised timeline for the production of the OGA (see Annex 1).

These factors have resulted in accumulated delays of more than 18 months in the process to deliver the scientific assessment relative to the original plan. They have also increased costs associated with continued engagement of experts (mainly national in-kind contributions), and increased workload necessitating a prolonged engagement of persons working on the report publication activities (overview report author, editors, graphical production and layout staff). The larger size of the chapters has also increased estimates of costs for printing reports.

Increased financial support (in particular from Canada, Norway and the Nordic Council of Ministers) that has been provided to date, or is anticipated based on applications submitted, is still expected to cover most of the production work. The remaining deficit in the revised budget is expected to be covered by subscription by the Arctic countries (and other stake-holders) for copies of the reports, to be delivered at cost price. Countries have been asked to submit (non-binding) pre-orders for numbers of copies of the reports they would like to receive.

#### **b. Presentation options**

The plan for delivery of the results of the scientific assessment includes presentation, if possible, at appropriate venues in North America, Europe and Russia. Several possible events are under consideration (see entries in timetable). The WG agreed in March to develop plans for presenting results at the Arctic Frontiers Conference (Tromsø, January 2008) and to discuss further the options for the other events, including the Arctic Energy Summit, when more information is available concerning the status of planning of this conference.

It would also be appropriate to develop a 'communications strategy' for the OGA. This has not yet been discussed by the WG, and is not currently included in the budget for delivery of the assessment.

## **2. Presentation to SAOs of Acidification and Arctic Haze Assessment Results**

A short presentation of the results of the AMAP Acidification and Arctic Haze Assessment was prepared in the expectation that AMAP would be requested to make such a presentation at the 2006 Ministerial meeting. It is proposed that this presentation should be made to the SAOs at their meeting in April.

## **3. Development of Coordinated Monitoring with CAFF**

### **a. Greenpaper**

In response to ongoing discussions between AMAP and CAFF of how best to achieve coordination of the AMAP chemical/biological effects monitoring and CAFF biodiversity monitoring programmes, the AMAP and CAFF WGs are preparing a 'Greenpaper' with recommendation to SAOs, for delivery at their next meeting.

### **b. National submissions of current projects supporting the CMP**

Most countries have provided an overview of how AMAP and CAFF monitoring activities are coordinated at the national level, including descriptions of relevant monitoring programme/projects that combine chemical/biological and biodiversity monitoring.

## **4. Collaboration with other WGs**

### **a. Health collaboration with SDWG**

Activities re ongoing to try to better coordinate human health activities being initiated under AMAP, SDWG and also IPY. Some questions have arisen over the use of the significant funding that Russia had announced in connection with the SDWG human health project.

A first informal meeting has been held between representatives of the AMAP human health expert group and health experts from SDWG, the Barents region health group, EU/ND and IUCH with the aim of establishing a process to better coordinate and harmonize human health initiatives in the Arctic and Barents regions. The discussion on process and strategy initiated at this meeting will be continued at future meetings, including the AMAP human health expert group meeting in Lofoten and the IUCH meeting in Banff.

### **b. Collaboration with ACAP**

AMAP has received a request from US-EPA for advice on how AMAP monitoring might be used to evaluate and document the effectiveness of ACAP projects. AMAP will consider this in relation to future work. Targeted monitoring studies involving trend-monitoring and results of human blood monitoring close to areas of project implementation (to distinguish improvements due to local actions from the general patterns of environmental contamination) were identified as possible options.

AMAP has noted that ACAP projects to date have focussed very much on Russia; the ACAP mercury and BFR projects reflect the need for ACAP to address pollution sources in other countries to a greater extent (including sources in non-Arctic areas of Arctic countries).

### **c. Collaboration with PAME**

In follow-up to earlier discussions, PAME have agreed to prepare a more detailed request on the types of national (pollution) experts that they would like AMAP to nominate for possible involvement in the Arctic Shipping Assessment.

The development of the Norwegian led initiative (involving both SDWG and PAME) concerning a 'Project on Implementation of Integrated, Ecosystems-based Oceans Management in the Arctic' was discussed by the AMAP WG. The AMAP Chair was requested to discuss with the Chairs of PAME and SDWG the need for greater consultation on planned initiatives that were likely to involve overlap with AMAP.

### **d. Collaboration with EPPR**

AMAP and EPPR have previously engaged in a cooperation on mapping/GIS initiatives. Information being compiled for the OGA is of potential relevance with respect to EPPR proposals to update their maps of resources at risk from oil spills. This will be followed up in discussions between AMAP and EPPR. There is an intention to hold a workshop on mapping/GIS initiatives when a suitable opportunity arises. A number of AC observers and parties external to the AC that have provided data to AMAP or assisted in AMAP GIS activities also having expressed an interest in being involved in such an activity.

## **5. Status of developing projects in Russia**

The proposed Siberian Hydrology project has received considerable interest from within the GEF organizations (UNEP and UNDP) however the funding application has been stalled pending internal reorganization of the GEF funding arrangements. As soon as these rearrangements are completed the project application will be resubmitted, with a decision on whether to submit the application through UNEP or UNDP. Roshydromet has agreed to support the project with an in-kind contribution of 1 million Rbls; the GEF application amounts to a further 1 million USD, with additional funding being sought from the Russian Regions. The project is part of the follow-up to the Lena River project and ACIA. RAIPON will also be involved in the Siberian Hydrology project.

The UNEP review of the PTS project was very favourable. In connection with PTS follow-up and ACAP related projects aimed at disposal of stocks of banned chemicals and PCB-containing wastes, the implementation of these projects, and provision of GEF funding to support these projects is dependent on Russia ratifying the Stockholm Convention – efforts to secure Russian ratification of the Stockholm Convention are continuing.

An agreement with the Russian Ministry of Defence has been reached concerning the proposed project for clean-up of contaminated sites on Franz Josef Land. Russia has allocated some 300000 USD for this work and NEFCO has allocated 200000 Euro. The project is due to be initiated in the summer of 2007. An environmental committee under NATO have also expressed an interest in this work, however this would need to be considered further within Russia.

Based on funding from Canada, Norway and NCM, mercury monitoring at Amderma has been continued through 2006, but funds are now required to prolong this monitoring activity. After Alert and Ny-Alesund, Amderma now represents the third longest (Tekran-based) mercury monitoring time-series in the Arctic. Funding is also

being sought to extend the monitoring to include POPs, and to implement these measurements also at other sites in northern Russia (including Tiksi and/or Pevek and/or Lavrentiya) to cover possible pathways of contamination from China and other countries in East Asia.

## **6. Development of a Sustained Arctic Observing Network (SAON)**

At the 2006 Arctic Council Ministerial Meeting, Ministers urged all Member countries to maintain and extend long term monitoring of change in all parts of the Arctic. Furthermore, they requested AMAP to cooperate with other AC Working Groups, IASC and other partners in efforts to create a coordinated Arctic Observing network that meets identified societal needs.

Initial discussions within a 'SAON initiation group' (including AC/AMAP, AOSB, CLiC/WMO, IASC, IASSA, IPY and NSF) were held in Tromsø in January. The 'SAON initiation group' is now being expanded to include representatives of FARO, IPS and ISAC. The proposed IPY COMAAR has also been subsumed under the SAON initiative. As the next step, plans have been developed to bring together relevant parties at a SAON workshop in November 2007. This workshop will further elaborate plans for a SAON that:

- aims to establish a network – not an organization – based on existing observation systems;
- recognizes national priorities the fact that 'super (climate monitoring) sites' are not an appropriate for all countries;
- based on an understanding of what the SAON data will be used for - how and by whom - will aim to improve data flow from the existing networks;
- will document how it will enhance the current situation (i.e. improve the current networks)

Funding is identified as the key issue to implementing a SAON, and the practical realities in obtaining commitments for long-term provision of funding remain the greatest obstacle to a SAON; linking existing networks will not necessarily improve this aspect of the problem.

## **7. Collaboration with IPY activities**

Arctic countries plans for IPY implementation are now becoming clearer. Many of the proposed IPY projects with a focus on contaminants and (with the exception of Canada) human health, have not received funding, and AMAP would like to investigate possibilities to 'recover' some of the potential offered by some well developed and endorsed (if not funded) IPY contaminants-related projects. This includes asking national IPY committees to look into opportunities afforded during IPY cruises to collect samples from locations that are otherwise not covered by monitoring programmes, to be stored for future analysis of contaminants.

IPY climate (change)-related projects are expected to make a large contribution to future AC assessments addressing this subject, including adaptation aspects. Through involvement of AMAP experts and through coordination in IPY planning and

implementation at the national level, AMAP is reasonably well coordinated with IPY activities.

AMAP has held discussions with the International Programme Office of the IPY regarding plans for future synthesis of IPY information and results, including arrangements for co-sponsoring possible symposia and conferences.

## **8. Deliverables to 2009 Ministerial**

### **a. Updated assessment on mercury in the Arctic**

The AMAP mercury expert group has developed a timetable to deliver a planned update assessment on mercury (covering the considerable amount of new information on this subject that has arisen since the last assessment in 2002) in 2011 – under the assumption that the Ministerial meeting schedule will be altered and a meeting held in spring 2011 rather than fall 2010. This means that the assessment will now be considered by the AMAP WG in 2010 rather than 2009. However, taking into account the activities ongoing under UNEP, and UN ECE, the WG have asked the expert group to consider possibilities to deliver specific components (e.g. updated information on emissions) already in 2008/2009.

### **b. Updated assessment on POPs in the Arctic**

The AMAP POPs expert group has developed an assessment timetable whereby they will produce scientific ‘review articles’ (and related fact sheets) on seven topics:

- brominated flame retardants (new information);
- per- and polyfluorinated compounds;
- polychlorinated naphthalenes
- endosulfan;
- current use pesticides;
- effects of POPs;
- dynamics and processes important for transport and accumulation of POPs in the Arctic, use of modeling, and emission estimates for old and new contaminants.

These products will be produced during 2007 and 2008 with a view to joint publication by AMAP and an appropriate scientific journal. Based on these products, and through a series of drafting meetings, a science writer would be engaged to produce a new summary report during 2008 for delivery to Ministers in 2009.

The expert group also plan to prepare data products, in particular products on trends (for both legacy POPs and new POPs) to support work under the UN ECE and UNEP (Stockholm Convention). A trend assessment workshop, similar to that conducted for mercury in 2006, is being planned for late 2007/early 2008, utilising a statistical toolkit that has been specially developed for AMAP.

### **c. Updated assessment on human health issues in the Arctic**

The AMAP human health expert group is currently working on an update assessment on human health in the Arctic that is planned for delivery at the Ministerial meeting in 2009. The first draft of the assessment will be circulated for internal review in May

2007. A Symposium in autumn 2008, linked to the IPY, has been planned together with other international partners.

#### **d. Updated assessment on radioactivity in the Arctic**

The AMAP radioactivity expert group is planning an update assessment of radioactivity in the Arctic that will focus on reassessment of sources and evaluation of actions. This is timely as several international organizations have requested an evaluation of the current situation. The intention is to deliver a series of (5) topic oriented reports that will include monitoring reports. Two or three of these reports will be delivered in 2009 if the work in 2008 proceeds according to plan. A number of ongoing projects will contribute to the 2009 assessments, including: TeNORM concerned with releases of (natural) radioactivity as a result of oil and gas activities. One of the intended reports would address protection of the environment - a follow-up to the re-prioritisation (that was initiated by AMAP and is now adopted by several other agencies and organizations) that recognizes the need for radiological protection of the environment and ecosystems, as opposed to only protection of humans. This also addresses effects of combined exposure to radiation and other contaminants.

The plan is to produce a first draft of some of the topic reports by the end of 2007, with delivery of these to the AC in 2009. A further deliverable will be an 'assessment toolkit'.

## **9. Follow-up to ACIA and additional Ministerial 2009 Deliverables**

### **a. Arctic carbon cycle assessment**

An Arctic Carbon Flux workshop was held in Seattle (February 27-28), co-sponsored by AMAP (together with IASC and CLiC), as an ACIA follow-up activity organized by AMAP under the lead of United States and Sweden. Thirty experts participated in the workshop, and made good progress in developing plans to deliver update products and information on this topic later in 2007 or 2008, including a possible fact sheet to be produced by AMAP. The activity is linked to global work on Carbon Flux and Climate Change.

### **b. Downscaling from global to regional climate models**

An AMAP organized workshop on (statistical) downscaling of modelling will be held in Oslo (May 14-16). An invitation to the workshop has been sent out. The scope and objectives of the workshop include:

- summarizing the present status concerning statistical downscaling and adjustment techniques;
- showing examples where statistically downscaled or adjusted climate descriptions and/or scenarios have been applied in local impact studies;
- outlining a project including downscaling of climate scenarios for a few selected key areas in the Arctic, as well as application of these scenarios in selected pilot impact studies; and
- discussing cooperation with non-Arctic downscaling initiatives.

**c. Synthesis and analysis of IPCC 4 models and reports**

The AMAP WG has requested the AMAP climate expert group to prepare a report that would synthesize Arctic information from the IPCC reports into a single report; the timeline for this product has yet to be decided.

**d. Expert comments on a future Arctic climate assessment**

The AMAP climate expert group have developed a number of proposals on how to proceed with future Arctic climate assessments in follow-up to the ACIA. At the request of the AMAP WG, the expert group are consulting further to assign priorities to the various tasks proposed.

In connection with the planning of (restricted scope) ACIA update reports, the climate expert group have proposed that these be timed for delivery between IPCC assessments, so that they can be used effectively in the IPCC process.

**e. AMAP participation in “reduction of sea ice” activity**

AMAP are requesting clarification from SAOs regarding the (Norwegian) project on ‘Reductions in Sea Ice’, in order to consider whether and how AMAP might be involved in this activity.

**10. Need for directions from SAOs**

The AMAP WG has endorsed the plans of the various experts groups as outlined in sections 8 and 9 above. The AMAP work-plan for the coming years, which already includes most of these activities, will be revised accordingly.

The AMAP WG would like to request an adequate opportunity to present WG information and assessment results to the Arctic Council. In this connection the AMAP WG would appreciate clarification from the SAOs as to whether the arrangements introduced during the Russian chairmanship that precluded WG presentations at the 2006 AC meeting would be continued.

As discussed in section 9e, AMAP are requesting clarification from SAOs regarding the project on ‘Reductions in Sea Ice’, in order to consider whether and how AMAP might be involved in this activity.

## Annex 1 – Updated OGA Timeline

	Science	Overview
12-14 March (AMAP WG21 meeting with participation of chapter leads)	OGA authors group to update Chapter 7 (Conclusions)	WG discussion of overview report and comments received; update of draft during WG meeting with assistance of OGA authors.
15 March – 15 June	Continuation of graphical production  Completion of (pre-editorial) work on chapters 1-3.  Technical and linguistic editing; of chapter 3 (and any other chapters available before deadline)	Revision of overview and Executive Summary  Revision of draft layout and graphics  <b>Circulation of draft for information to stakeholders (NGOs, industry, observers, etc.)</b>
1 May		Overview report author to redraft new material
15 June	<b>Final Deadline for hand-over of Chapters 1-7 for linguistic and technical editing</b>  <b>Author sign-off of scientific assessment</b>  <b>Posting of (pre-edited) drafts on web</b>	Finalization of report texts.  <b>OGA author confirmation that overview report correctly reflects the science.</b>
<b>After 15 June</b>	Continuation of editing work, graphical production; layout; finalization for publication	AMAP HoDs/WG (meeting?) to approve report for publication  Finalization of layout  Delivery for printing
Possible release events  Arctic Energy Summit, Anchorage, October 2007  Arctic Frontiers Conference, Tromso, January 2008  RAO-CIS Conference (or alternative), Russia, 2008	Presentation of results  Publication of printed reports (as soon as possible)	Presentation of results  Publication of printed report (as soon as possible)