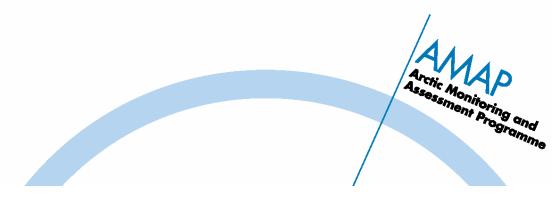
AMAP Report 2005:5 This report can be found on the AMAP website: www.amap.no

Minutes of the 19th Meeting of the Arctic Monitoring and Assessment Programme (AMAP) Working Group

St Petersburg, Russia

12, 13, and 16 September 2005



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Minutes of the 19th AMAP WG Meeting, St Petersburg, Russia, 12, 13, and 16 September 2005

1. **Opening of the meeting**

The AMAP WG Chair, John Calder (USA), opened the 19th AMAP WG meeting, held in conjunction with the third meeting of the Oil and Gas Assessment at 9.30 hrs on 12 September 2005.

Yuri Tsaturov, Russian Federal Service for Hydrometeorology and Environmental Monitoring, welcomed the participants to St Petersburg and to the Arctic and Antarctic Research Institute of Roshydromet (AARI) and provided a brief description of this research institute. He expressed his wish that the participants enjoy the beautiful city.

Dr Danilov, Deputy Director of AARI, greeted the participants and wished them a fruitful meeting, good weather, and a good time in St Petersburg.

Lars-Otto Reiersen, AMAP Executive Secretary, provided practical information for the groups and outlined the schedule for the meeting, after which the participants in the Oil and Gas Assessment moved to a different room to conduct their work.

The AMAP WG Chair then formally opened the AMAP WG meeting. All the participants introduced themselves.

The list of participants is attached as Annex 1.

2. Approval of the Agenda

The agenda and schedule for the meeting were reviewed. The Executive Secretary noted that the CAFF representative would arrive later and would report on the outcome of the CAFF meeting, which had taken place in Cambridge, UK, the previous week. Some of the agenda items will require this information for complete coverage, and thus some items may not be finalized until Friday.

The draft agenda was adopted without changes, and is attached as Annex 2.

The list of documents to the meeting is attached as Annex 3.

A list of Actions from the WG meeting is attached as Annex 4.

3. Information from the Chair and the Secretariat

The Executive Secretary briefly reviewed the activities that have taken place since the last AMAP WG meeting, and the Extended Heads of Delegation meeting in Helsinki (February 2005), including the AMAP workshop on follow-up of ACIA and meetings connected with ongoing AMAP assessments.

He informed that, following the retirement of Kai Olsen due to illness, a new consultant has been engaged to complete the AMAP heavy metals report, but that this work was still not yet completed. A person has also been engaged to work on the layout of the AMAP fact sheets, and the first two of these (concerning mercury and brominated flame retardants) were due to be delivered by the end of September. The next Focal Point meeting will be held on 21 September in Oslo, and the ACAP Steering Group meeting will take place later that week in Moscow.

A draft of the progress report to the next meeting of Senior Arctic Officials (SAOs) will be considered under Agenda Item 18.

The Executive Secretary reported that at the end of August a meeting had taken place in Russia with the SAO Chair to facilitate the delivery of Russian data and bring additional Russian expertise into the Oil and Gas Assessment (OGA); based on this, several experts from Russia would be attending the OGA expert meeting that was being held in parallel with the AMAP WG meeting.

4. Follow-up of actions

Referring to the minutes of the 18th AMAP WG meeting, held in Oslo in April 2004 (AMAP Report 2004:1), and the minutes of the AMAP Extended Heads of Delegations (HODs) meeting in Helsinki in February 2005 (AMAP Report 2005:1), the Executive Secretary reported that most of the actions on the action lists from these meetings have now been completed.

5. ACIA follow-up

5.1. Translation of the ACIA Overview report

The Executive Secretary reported that the Russian translation of the ACIA overview report was now underway; the Saami and Norwegian translations are currently at the printer and these versions of the report should be available within four to six weeks. Together with the already published English, Dutch and German versions, the ACIA overview report will therefore soon be available in six languages. There was no information on progress in the French translation. [Following the meeting, information was received that the French translation is also now being produced].

5.2. Printing and Distribution of the ACIA Science Report

The Executive Secretary informed that the ACIA scientific report is now ready for printing. According to agreements with Grabhorn Studios (responsible for the ACIA report layout) the entire report should have been handed over Cambridge University Press for printing on 5 September. As the price charged by Cambridge University Press for printing the overview report (in English) had been significantly higher than the costs for printing the German and Dutch translations, the AMAP Secretariat had negotiated a reduced price for printing of the scientific report (\$25,000 less than the original quote) and will also receive an additional 300 copies of the report within this new price agreement. The production will therefore comprise a total of 2300 copies of the (ca. 1000 page) report. The printed reports should be available in late October.

Outstanding problems with the publisher (Grabhorn Studios) regarding copyright issues were raised. Currently, only low-resolution versions are available within the AMAP, CAFF and IASC Secretariats of many of the (ACIA Overview) graphics, and these are not adequate for use in other publications. This creates problems for third parties who wish to use ACIA graphics. The AMAP Secretariat has received many requests to use materials from the ACIA reports, and to date has had to forward all such requests for high-quality graphics to the

publisher. This was not considered an appropriate long-term solution, especially as it is not possible to track whether these requests have been met. *The WG agreed that copyright for all ACIA products should be in the name of AMAP, CAFF, and IASC as the organizations responsible for ACIA.*

The AMAP WG requested that the AMAP Secretariat work with the publisher to clear up the copyright issues on the ACIA reports and graphics, as part of the agreement for supplementary funding for the production, so that there will be appropriate access in future to high-quality graphics for authors and other preparing publications based on ACIA materials.

The WG were informed that the ACIA scientific report will definitely be available by the time of the eleventh session of the Conference of Parties to the U.N. Framework Convention on Climate Change (COP 11) that will take place in Montreal, Canada at the end of November 2005. An event to launch the ACIA science report could be organized at COP11, and *the meeting agreed that Russia, as Chair of SAO, should ensure that AMAP, CAFF, and IASC are involved in any such event to introduce the ACIA science report.*

5.3. Outcome of the AMAP Workshop on ACIA Follow-up

The AMAP WG Chair reported that, to prepare for the task of providing recommendations from the ACIA scientific report, AMAP had held an ACIA Follow-up Workshop in Oslo in June. The report of this workshop (AMAP WG19/5/2) contains the reports of the three sub-groups that reviewed the recommendations and a spreadsheet containing all of the scientific recommendations arising from the scientific report, along with comments about which Arctic Council WG or other group should handle them. By next spring, AMAP should prepare a list of what AMAP will do to follow up the ACIA report, so ideas should now be developed on what this should include.

The Executive Secretary reported that the Focal Point meeting in June requested AC WGs to provide ideas on follow-up to the ACIA by the end of August. Document AMAP WG19/5/4 contains an overview and extract of the workshop report showing the areas in which AMAP could work to follow up ACIA. The annex to AMAP WG19/5/4 should be checked to ensure that it covers all the key issues from the workshop report that AMAP could work on in relation to climate change and UV. Creation of an expert group to continue this work would be the best way forward.

The Chair reported that the CAFF meeting the previous week felt that the AMAP Workshop on ACIA Follow-up had covered the entire area, so that CAFF does not need to have its own workshop. Thus, if an expert group is set up, AMAP could consider opening it up for participation by other WGs.

There was general agreement in the meeting that the establishment of an AMAP Expert Group on Climate and UV issues would be the best way forward. Most countries felt that this group should be under AMAP but should have close cooperation with CAFF, as many recommendations for AMAP follow-up also have a relation to CAFF work. It was agreed that the national nomination process for members of this expert group should consider the types of expertise needed to cover the wide range of ACIA scientific follow-up issues, while still ensuring that the core expertise will handle the main task of supporting AMAP followup to ACIA.

There are some issues, such as sociological and economic issues related to sustainable development, that are border issues that should be considered by the Focal Point in relation to ACIA follow-up.

The representatives from Sweden stated that they would prefer that the decision on the establishment of the AMAP Climate and UV Expert Group be made by SAOs to see how issues that are outside the scope of AMAP can best be accommodated.

The Chair pointed out, however, that AC WGs do not need SAO approval to establish expert groups, workshops, or other informal working procedures. In the case of the Climate and UV Expert Group, the SAO Chair will be informed of the AMAP decision to establish the group at the Focal Point meeting on 21 September, and the SAOs as a body will be informed of this decision and the outcome of the Focal Point meeting at the SAO meeting in October. All SAOs will have the opportunity to comment on the AMAP Climate and UV Expert Group and its remit at that time, including on the potential extension of the issues covered to those outside the usual scope of AMAP.

In response to this, Sweden suggested that the climate/UV question should be addressed at the next Focal Point meeting in an open-ended manner so that other WGs and SAOs (through the Arctic Council Chair) may provide input and suggest experts that could cover their mandates.

In terms of the remit of this expert group, *it was agreed that the group should review the recommendations from the June ACIA Follow-up Workshop, which are very broad, and decide the focus for topics for further work.*

The Chair reported that the USA is willing to co-lead the establishment of this expert group with the expectation that the participation of experts in meetings will be funded by the countries, but the U.S. could fund some of the costs. Norway was ready to offer co-leadership.

Summing up, the Chair stated that the intention is to have AMAP establish a Climate and UV Expert Group and that consideration should be given as to whether other AC WGs should also be involved in the nomination process. This can be discussed by the Focal Point, but there is no need for AMAP to have approval from another body to establish an expert group. It must be ensured that the AMAP Secretariat is central to the implementation of this work. The Secretariat should send invitations to HODs for nominations of experts, and a process is required for deciding how many experts are needed and with what types of expertise. As a minimum, atmospheric, marine, terrestrial, freshwater, and other relevant fields of expertise will be required.

Nominations should therefore include a brief description of an expert's field of expertise so that a sufficiently broad range of expertise within the group can be ensured. Invitations to nominate experts should also be sent to relevant intergovernmental organizations (e.g., IASC, IPCC, ICES, etc.), indigenous groups, and certain observer countries and NGOs that have relevant activities ongoing in the Arctic. It was emphasized, however, that nominated individuals will constitute 'independent experts', and not representatives of these organizations – and support for their participation might be dependent upon countries agreeing to provide such support. *Permanent participants and observers will have the same role in this expert group as they have in any other AC group.*

A timetable will need to be established for this work. The call for nominations should be sent out so that the expert group can be nominated before the end of the year. Priorities for activities that the group should initially focus on will also need to be developed. **Both the** *composition of the expert group and its initial work priorities should be completed in time to be presented to the SAO meeting in April 2006.* There is also a need to ensure that climate components of the AMAP and CAFF monitoring programmes are suitably coordinated, again if possible in time to be presented to the April SAO meeting. Interest in this work by the other AC WGs can be determined at the Focal Point meeting on 21 September. The meeting then reviewed the activities proposed for the expert group on page 5 of Document AMAP WG19/5/4 under point (2) the sequential role of the experts. *This statement of the activities was approved by the meeting,* noting that it would need to be somewhat flexible as under item (f) the expert group is asked to come up with more detailed proposals for its work.

In addition, Norway stated that it would like to have a general guiding statement requesting the expert group to focus on broad issues, including improving modelling, covering larger cross-sectoral issues, and understanding key processes.

In association with the discussion of the ACIA follow-up, James Tate (USA) stated that the production of the ACIA should be accompanied by an external review by experts not associated with the ACIA, to assure readers that the overview document faithfully summarizes the full ACIA scientific report.

In response, several countries stated that they felt that the process adopted for the production of the overview report had been developed to ensure that it reflected the science in the main report. All primary chapter authors had had the opportunity to review the overview document and had accepted it as a true reflection of their parts of the scientific report. Much work had already gone into the peer review of the ACIA reports, so the focus should now be on follow-up activities.

The Executive Secretary stated that more that 200 independent experts had reviewed the overview document. Authors were required to document all comments received from reviewers, together with a description of how the comments had been handled. Thus, there is good documentation for the review process.

The meeting agreed that the AMAP Secretariat, along with CAFF and IASC Secretariat's, should obtain copies of this documentation of how reviewers' comments were handled from the ACIA Secretariat. This documentation could also be put on the ACIA website for anyone to consult.

5.4. Scientific synthesis and assessment of the Arctic carbon cycle

The Chair stated that NOAA has received a proposal from the University of Alaska at Fairbanks to hold a workshop in (tentatively Spring) 2006 to begin an assessment of the carbon cycle in the Arctic, and he inquired as to whether AMAP would be interesting in co-sponsoring this activity and making it truly circum-Arctic. The outcome is envisaged as a scientific description of the Arctic carbon cycle, developed on the basis of the knowledge of many experts and organizing their collective knowledge into a coherent picture. The document is intended for scientists and not policy-makers. It could be determined later if there is a need for a more popular summary.

There was a general interest in supporting this activity, and it was agreed that AMAP should co-sponsor the workshop. It was further agreed that the outcome would be a report of the workshop, which would not be associated with AMAP and thus would not require AMAP approval. The workshop should take place within the next nine months. The AMAP Secretariat should send out invitations for nominations for experts to participate in the workshop.

5.5. Focal Point meetings

The Executive Secretary reported that the first Focal Point meeting had been held in Oslo in June, in parallel with the AMAP ACIA Follow-up Workshop. The minutes of this meeting are available. The second Focal Point meeting will be held in Oslo on 21 September 2005, with the participation of the SAO Chair, Ambassador Churkin. This meeting will discuss the draft terms of reference for the Focal Point, which have been sent to HODs for their comments. These would set the scene for the work of the Focal Point.

The main issues for this one-day meeting include: 1) priority issues and work in the AC WGs and in IASC to follow-up of the ACIA; 2) the need for national implementation plans for this work; and 3) follow-up on policy-related issues.

The Chair noted that, since the Focal Point members are WG Chairs, they may want to discuss other issues than ACIA follow-up; so this forum many develop more broadly over time to include more than ACIA issues.

There was some discussion about the draft terms of reference for the Focal Point. Sweden had comments regarding whether the Focal Point would coordinate reporting, and the USA wished to see amendments stating that the Focal Point should always clearly identify scientific facts and distinguish them from evaluations for policy and policy recommendations. The USA also requested that any minority views be reported to SAOs. The Chair stated that he would bring these comments to the Focal Point meeting; they will be brought together with comments from other WGs, with no guarantee that they will be accepted in the final terms of reference.

It was noted that the issue of a possible Arctic Council 'side event' at COP11 may be discussed at the Focal Point meeting, as the AC have requested time for such an event to be held. This arrangement needs to be planned.

Russel Shearer (Canada) stated that Canada will organize an Arctic Day at COP11 with input from the Arctic Council. He requested the AMAP Secretariat to provide the ACIA posters or other ACIA related materials for use at this side event.

Norway and Denmark offered to support this side event. Morten Olsen (Denmark) reported that a meeting of 23 ministers, including representatives of China and Brazil, had taken place on Greenland during the summer and discussed how countries with fast-developing economies might be involved in Kyoto after 2012. The Chair's summary of that meeting included ten points of agreement (copy supplied to the AMAP Secretariat). The availability of the ACIA report, together with the Arctic location of the meeting, both contributed to the process.

The Executive Secretary stated that the ACIA posters are available electronically and can be reprinted for the COP11 Arctic side event. He also noted that a Danish paper on ACIA-related projects had been presented at the ACIA Follow-up Workshop and it would be useful if all AMAP countries prepared papers on national implementation plans on ACIA-related projects, for the COP11 side event.

A Danish educational web-site based on the ACIA, was announced by the Secretariat. The website can be found at <u>http://www.dpc.dk/acia</u> and will be fully operational from autumn 2005. The website presents the information in Greenlandic, Danish, and English language versions.

5.6. World Bank proposed project

The Executive Secretary reported that AMAP had received a request from the World Bank to develop a concept paper for a project on potential links between climate change and contaminants issues. The concept was based on a GEF- project proposal to be promoted through the World Bank, with a funding level of ca. \$1 million from GEF and requiring an equivalent level of co-funding. The project was linked to ACIA follow-up, International Polar Year (IPY) activities, and other relevant initiatives. The original discussions had considered the possibility that the World Bank might support a workshop to be held in October or November to develop the project proposal, and possibly to submit this proposal by the time of the COP11.

The Secretariat provided a draft concept paper for internal review within the World Bank in June, and had received some comments on this paper. However, the contact person at the World Bank on this matter had now left his position. The Secretariat has sent a message to the World Bank to clarify the current status of this initiative, but at the present time have not yet received a reply to this communication.

Canada was supportive of this initiative and offered to assist in contact related to this proposal, but felt that the original time schedule was now too ambitious, given the time necessary to arrange co-financing.

The Working Group agreed that the Secretariat should continue its efforts to develop this project proposal with the World Bank and asked the member countries to see if they could support implementation of such a project.

6. 2006 Assessments

6.1. Oil and Gas Assessment

Dennis Thurston (USA) and Hein Rune Skjoldal described the progress in the Oil and Gas Assessment (OGA), as follows:

Chapter 1, the introduction, will be written by the Assessment Steering Group (ASG) when the rest of the report is nearly completed.

Chapter 2, on oil and gas activities in the Arctic: past, present, and future (with projections covering the next ten years), provides a background for several other chapters. It is already a very long chapter. Activity indices have been developed based on five-year groupings of data. Russian data are currently the major gap although some data are also still missing from most other countries.

Chapter 3, on socio-economic issues, is based on a series of case studies from Canada, the USA, and Russia. However, since the Russian case studies have not been written by Russians it is vital that these are reviewed and approved by Russian experts. This chapter addresses governance, and uses nine effects categories including some described in the Arctic Human Development report. Subject to some outstanding sections, the chapter has nearly been completed.

Chapter 4 covers sources, pathways, and fate of pollutants related to oil and gas activities. Case studies have been provided for accidents, and the authors are trying to coordinate with other chapters on the selection of case studies. Additional Russian information is needed. Chapter 5, provides comprehensive information on biological effects on organisms from the molecular level up; it also covers effects on human health. The chapter is mostly complete except for Russian information.

Chapter 6 covers the status and vulnerability of Arctic ecosystems: focussing on key functions of ecology, key populations, especially migratory species, and key areas. It provides summaries of Environmental Impact Assessments, reviews major issues in these assessments, and gives a general evaluation of current ecological status and vulnerability to accidents. This chapter is missing a co-lead on the terrestrial part. Hein Rune Skjoldal noted that CAFF, at their recent meeting, had offered to provide a network of experts to assist in provision of some relevant material (on distributions of flora and fauna).

The OGA leads noted that the report will be considerably larger than originally planned owing to the increased scope and volume of the material and the timeline for its production represented a problem that would need to be discussed further. They also identified the general lack of information from Russia as a critical gap owing to the large area covered by Russia and the magnitude of Russian oil and gas activities in the Arctic.

Regarding the missing data from Russia, the Russian representative stated that there had been a recent meeting between the AMAP Executive Secretary and one of the co-leads of the assessment and the SAO Chair and representatives of relevant Russian Ministries and the Russian Academy of Sciences, to discuss how this information can be provided. All relevant Russian Ministries have now been requested to contribute the required information and a process has been agreed to facilitate this information flow. Despite this progress, the OGA authors still expressed major concerns over the timelines for delivery of the report even if the Russian data and information is forthcoming in the next few weeks (see below).

The representative from Russia also informed the WG that the SAO Chair (Vitaly Churkin) had also expressed an interest in a possible input to the G8 meeting in June 2006 based on the OGA, as this could be a small contribution to the G8 agenda objective on efficiency and response.

Both the AMAP Oil and Gas Symposium and the RAO/CIS Offshore 2005, due to take place in the coming days, were considered useful initiatives as part of the assessment process aimed at providing access to Russian experts, but lacked adequate time for questions and dialogue.

In the discussion it was noted that some indigenous people's representatives have previously proposed that the OGA include a separate chapter, or possibly a separate report, to cover their concerns. It was felt, however, that this material could best be incorporated within the socio-economic chapter. Dennis Thurston indicated that the authors of chapter 3 have tried to seek input from the Permanent Participants and that the work on chapter 3 has always been open to any data or information from representatives of the Permanent Participants.

The representative from the Arctic Athabascan Council (AAC) reiterated the proposal that a separate chapter of the OGA be prepared concerning the impacts on indigenous peoples. The AAC has obtained funding and contracted a consultant at the University of Alberta to conduct a study on this topic. The research, covering issues in north-western North America, is well under way and will result in a separate publication. However, he also wanted to see how this material could be included in the OGA and would discuss this with the principals in the OGA with the objective of resolving this question. The conclusion of this discussion was that the authors of chapter 3 would be interested and willing to consider the information contained in the AAC research report, but noted that for this to be done the report would have to be provided before 1 November 2005.

In terms of the size of the report, it was noted that an overall review of the draft chapters should help identify and eliminate overlap in the material; which can be expected to reduce the size of the report. Nonetheless, there is also a need to incorporate missing material.

The Working Group stressed again that it is not the intention to produce a text book on subjects that might be relevant to the OGA assessment, but rather to focus on the assessment itself.

The Executive Secretary expressed concern about the size of the report and the delays in its preparation. He suggested that one option might be to find additional support to assist in the writing of some chapters. The meeting generally supported this idea if additional money could be found for this purpose, but noted that the main cause of the delays was lack of information rather then lack of writing capacity.

Simon Wilson (AMAP Deputy Executive Secretary) similarly expressed concern about the delays in the work relative to the timetable proposed at the Washington meeting. It had been intended that all chapters would be complete by 1 November for a last round of national comments, however in his view it was no longer feasible to meet this deadline. He also noted that a science writer had been engaged to produce the overview report based on the Washington meeting timetable; further delays in the production of the science report would also have implications for the overview report production. If the delays implied that it would not be possible to present the intended deliverables to the 2006 Ministerial meeting, the SAOs would need to be notified of this already at their meeting in October.

In their parallel meeting, the OGA authors further discussed the timeline for the production of the OGA reports, and reported the results of these discussions to the AMAP WG, as follows:

The timetable proposed during the Washington meeting (which was contingent on Russian data and information being made available before the OGA Symposium) was no longer practical. It was therefore proposed that the timetable be allowed to slide a further three months such that complete drafts of all chapters of the science report would now not be available until 1 February 2006. These would be subject to a second round of national review and peer review and a final (pre-edited) version of the scientific report would be available by 30 June – when authors would provisionally sign-off on the report. A technically edited version of the report would be available in electronic format by 30 September (when authors would confirm their final sign-off). In order to meet these deadlines, all the remaining missing information, including Russian information, would need to be received by latest 15 January 2006 (and most before this date). Under this option, Ministers could expect to receive a technically edited science report, in electronic pre-print form, ready to go to print and with author sign-off, together with printed copies of the overview report.

If there were any further delays, a fall-back option was presented whereby the time schedule slipped a further three months and complete drafts of all chapters would not be ready until 1 May 2006. Under this scenario only a non-edited version of the science report (in electronic format, with provisional author sign-off) and a pre-print version of the overview report would be available for the ministerial meeting.

The OGA authors did not feel that a partial report, e.g. for only a part of the circumpolar Arctic, was a viable option. It would lack scientific integrity and could not form a basis for any Ministerial conclusions or recommendations on this issue.

Presented with this information, *the WG agreed that all effort should be placed into achieving the first option.* Countries are providing resources and experts their time in order to

produce an assessment in 2006, and these commitments cannot be extended beyond 2006 without new directions from the SAOs/Ministers. All parties that have not yet delivered all the requested information, were requested to do so in order to allow an assessment product of good quality to be produced in time for the Arctic Council Ministerial meeting under the Russian Chairmanship. *It was further agreed that the AMAP WG Chair should report on this situation to the SAOs at the upcoming SAOs meeting in October 2005.*

The Executive Secretary reported on the budget for the OGA report production. Based on a previous (smaller) estimate of the size of the science report, the estimated requirement to produce the intended science and overview reports is ca. \$220,000, of which he had received provisional support from some countries and the NCM so far totalling about 50% of this amount. Additional funding may be needed if the volume of the science report is significantly increased, and also to finance extra help to complete it.

The assessment co-leads were requested to update the gap analysis and list of experts still needed to support the process and to provide this to the AMAP WG Chair and Secretariat before for the SAO meeting.

6.2. Acidification and Arctic Haze

Finland is the lead country for the Acidification and Arctic Haze assessment (AAHA). Marjut Nyman (Finland, and scientific secretary for the AAHA) reported that the second draft of the AAHA scientific report is about two thirds complete. Drafts of chapters 2 to 4 are on the web for national review, but chapter 5, on the effects on terrestrial and aquatic environments, is still under preparation. The second draft should be complete before the next authors meeting in Tromsø in October. Thereafter, the third and final draft will be prepared and it is expected that the report will be finished on schedule by the end of the year. Modelling results from Jesper Christensen (Denmark) are important to the work on both the atmospheric and Arctic haze chapters, as well as for parts of other chapters dealing with future scenarios, and these results will hopefully be made available during the Tromsø meeting.

In response to a question concerning whether all relevant data have been submitted, Simon Wilson informed that field data for the Norilsk area are still lacking and no good solution has been found for obtaining these data, however the Norilsk area will be covered to some extent through modelling results. Approaches had also been made to the EANET programme (a new programme in the Pacific region that has similar objectives to the EMEP programme for Europe and western Russia) to see if they could provide information for the far eastern part of Russia, but the programme is not yet sufficiently developed to provide results at the present time.

Yuri Tsaturov (Russia) advised the WG that data for the Norilsk area should not represent a problem, and asked the assessment secretary to contact him with details of any data still needed for the assessment. *It was agreed that the AAHA coordinators would take contact with Yuri Tsaturov, detailing any specific data needs regarding Norilsk.*

Part of the work for the October AAHA authors meeting is to set up the peer review process. A call for nominations of experts not involved in preparing the assessments, to serve as peer reviewers will therefore be made to AMAP countries, observer countries and organizations – peer reviewers are required for both the Acidification and the Oil and Gas Assessments.

The need for transparency in the review process was discussed and the WG recommended that the process used in the ACIA review, wherein all review comments and the way in which they were handled was documented, be followed.

The Executive Secretary reported on the budget for the AAHA report production. The estimated requirement to cover science writing of the overview document, graphics, editing, and printing of the reports is ca. \$138,500. So far, \$36,750 has been received from national sources; this includes funding from Sweden (SEK 50,000) and the USA NOAA (\$23,000). The remaining amount will hopefully be covered by support from the Nordic Council of Ministers (NCM) and other countries.

Concerning support for the production of the planned (OGA and AAHA) assessment reports: Finland offered to provide an in-kind contribution through support for graphical production on the AAHA reports by the Finnish Environment Institute (SYKE). Finland would also supply €20,000. Additional funding support is expected from Norway, and also from the NCM.

7. AMAP Strategic Programme 2004+, Implementation and Deliverables

(see minutes under Agenda Item 9)

8. Monitoring Programmes

The Chair reminded the WG that that SAOs have requested that AMAP and CAFF work together to harmonize their respective monitoring programmes. As a pre-requisite to this, AMAP has been awaiting the development of the CAFF Circumpolar Biodiversity Monitoring Program (CBMP).

Maria Victoria Gunnarsdóttir, Executive Secretary of CAFF, informed that the strategy for developing the CBMP had been endorsed by Ministers at their meeting in November 2004. A workshop had been held in Spring 2005 at which four task teams were established, and the CBMP had been formally launched at a meeting in Cambridge, UK, co-hosted by UNEP World Conservation Monitoring Centre, the previous week. A paper (AMAP WG 19/8/1) on draft key indicators for the CBMP is due to be finalized later in the year, and AMAP should review this paper and provide comments so that the key indicators can be coordinated between the two WGs. She also presented a paper for review which proposes joint CAFF/AMAP monitoring sites; this paper will be added to the document on key indicators in its next version. Microsoft has pledged money for the development of the data management side of the CBMP, which is intended to provide an interactive data mapping facility to coordinate data use among the AC WGs.

The AMAP Executive Secretary noted that many of the proposed sites for monitoring coincide with AMAP key monitoring areas, and many of the proposed species are also monitored under the AMAP programme. The AMAP Mercury and POPs Expert Groups, in particular, should review the CAFF documents to ensure that it meets AMAP needs. It was noted that, in practise, coordination of monitoring effort occurs at a national level, so sampling should be conducted at the same site whenever possible to be cost-effective. Care should also be taken to ensure that the same populations of animals are sampled; if AMAP contaminants/biological effects data and CAFF population/diversity information are to be compared, the work needs to be done on a very specific level.

The CAFF Executive Secretary stated that the paper on key indicators, originally drafted in July, had been updated at the CAFF meeting the previous week. The final meeting on indicators will take place in late October in Whitehorse, Yukon, Canada and will probably

also mention humans. AMAP experts would be welcome at this workshop. It was agreed that participation of AMAP experts at this meeting would be the most effective way of securing harmonisation with the AMAP programme.

The AMAP Executive Secretary requested to receive the updated indicators paper as soon as possible so that it can be sent to lead experts in the relevant AMAP expert groups for review. He would like to give the experts at least a month for this review, after which the review comments will need to be compiled and sent to AMAP HODs. Thus, *a period of about two months will be needed for the AMAP review the indicator document.*

It was pointed out that integrated monitoring is already being conducted at several sites (e.g. Zackenberg, Abisko). These could be considered pilot sites and a review could be made of the programmes and how they have functioned at these sites before new sites are started.

The AMAP Secretariat noted that the climate monitoring indices that had previously been developed by a joint AMAP/CAFF expert group, recommended for the ACIA monitoring component, and incorporated in the AMAP effects monitoring programme, had apparently not been considered by the group responsible for preparation of the CAFF CBMP key indicators. These AMAP/CAFF climate indices were provided to the CAFF Secretary and the meeting agreed that these should be introduced as soon as possible into the process to further develop the key biodiversity indicators. Consideration should also be given to the long-term AMAP monitoring stations that are already operating.

It was agreed that, as the goal of this work is to establish a joint document with CAFF on monitoring, this task should be included in the AMAP workplan (Annex 5) and a time frame for this work should be determined. AMAP is also just beginning to review its monitoring programme, with the report from the AMAP ACIA Follow-up Workshop serving as the first step in this revision process for those parts concerning climate issues.

The AMAP WG pointed out that much work is still needed on the CBMP, including the development of a clear implementation plan and funding arrangements, and that this work still needs to be done before the AMAP and CAFF monitoring programmes can be fully harmonized. As a next step, however, it should be possible to develop some pilot activities at selected sites to investigate practical harmonization issues.

Frank Sonne, Chair of PAME, noted that the new CAFF CBMP should help countries to establish an ecosystem approach to environmental management, but first there is a need to know more about the ecosystem, and AMAP can help in developing this knowledge. He stated that if we want to encourage countries to employ an ecosystem approach, there must be cooperation between AMAP and CAFF and also a need for coordination with PAME, given that PAME represents government regulatory agencies. While some within PAME think that there should be a system of relatively few indicators to represent the ecosystem, others want to take the broader ecosystem information obtained by AMAP and CAFF into account. PAME is still discussing how to develop management systems according to an ecosystem approach.

AMAP considered that AMAP and CAFF should be consulted to help define Large Marine *Ecosystems (LMEs) or other ecosystem borders.* Management plans, however, are based largely on national regimes and laws, and different countries have different views. The outcome of the European Marine Strategy in relation to the ecosystem approach and ecosystem regions should also be considered in relation to the Arctic.

The Chair closed this item noting that the beginnings of a road map for harmonizing the AMAP and CAFF monitoring programmes have been developed; we know the starting point and where we want to end, but the details in between still need a lot of work.

9. AMAP Expert Groups: Human Health, Radioactivity, POPs, Heavy Metals, Oil and Gas, Acidification, and Climate-UV/Ozone

9.1. AMAP Future Work Priorities

It was decided to discuss Agenda Item 7 (AMAP Strategic Programme 2004+, Implementation and Deliverables) and Agenda Item 9 together.

The Executive Secretary stated that the AMAP Strategic Plan 2004+ has been approved by the Ministers; the question is now what new activities AMAP should undertake in the coming years. Several delegations have requested earlier notification of planned activities so that they can estimate costs and build these into national implementation plans. Most countries are currently planning their activities for the period until at least 2007.

The AMAP Trends and Effects Programme is continuously under review and some parts need to be updated. Both the Human Health Assessment Group and the Radioactivity Expert Group have reviewed their work and prepared proposals for future work, including revisions to the monitoring programme.

Morten Olsen (Denmark) stated that there is a need for a discussion on the overall priorities. It is difficult to make decisions on long-term monitoring programmes if the deliverables are not known.

9.2. Mercury (AMAP WG19/9/5)

Simon Wilson reported on the AMAP-related session held in connection with the Interdisciplinary Workshop on Research on Mercury in Polar Regions, which took place in Toronto, Canada, at the end of August. This session recommended that the next comprehensive assessment on mercury should not be prepared until 2010, to allow time to incorporate information (including results of IPY studies) that might help answer some significant open questions regarding mercury in the Arctic. However, as it is important that attention remain on mercury, the session proposed that smaller updates be prepared on a more regular basis. Specifically, for the Ministers meeting in 2006, it was proposed that a short update report be prepared covering: 1) new information on the impact of mercury on human health, 2) the importance of climate change in relation to mercury transport and fate, and 3) the need to support research to answer some of the key scientific questions.

The experts present at the mercury workshop also proposed a number of other potential activities, including:

- 1) The preparation of a contribution to the UN ECE LTRAP Metals Protocol effectiveness review that will be completed in 2006/2007, including a more rigorous analysis of mercury temporal trend datasets and production of trend data products; however, the time schedule for this work may be too tight.
- 2) An short update report summarising new information from research into mercury depletion events in the Arctic.
- 3) The preparation of an update of the data on the impact of mercury on human health.

The experts at the workshop proposed that these small reports could possibly be written by sub-groups of experts from the relevant AMAP expert groups/networks of experts (on mercury and human health). They identified a need to get new experts, including young scientists involved in these expert groups/networks and one incentive to achieve this might be for these (scientific) reports to be produced in a manner suitable for publication also in the scientific literature.

The WG supported the proposal to produce a short update report on mercury for the 2006 Ministerial meeting, and a series of reports with restricted scope on mercury-related issues. The AMAP Secretariat was requested to include these deliverables in a list of possible AMAP deliverables for the coming years.

9.3. POPs (AMAP WG19/9/4)

Cynthia de Wit (Sweden) reported that she, together with Derek Muir had been asked to organize a break-out meeting of AMAP POPs experts in conjunction with the Dioxin 2005 meeting that had been held in Toronto, Canada in August. Among other things, this meeting considered whether there is a need for a permanent AMAP expert group on POPs, or whether AMAP needs could be better addressed through a more informal network of POPs experts that AMAP could call upon as required. The POPs experts recommended three proposals/statements, as follows:

- 1) Some structure should be created with key national (POPs) experts who know or are capable of identifying relevant experts from a more extended network with knowledge about specific issues that can be called on to support AMAP work;
- Important issues in the Arctic include mercury; perfluorinated acids (which may be an important problem/issue in the Arctic in the future); brominated flame retardants; short-chained chlorinated paraffins; in-use large-volume chemicals; and dynamics and processes important for transport of POPs to and within the Arctic (including climaterelated processes);
- 3) In relation to the question of how to conduct assessments in the future: young scientists are interested, but need to produce scientific publications. Therefore, we need to devise a way for them to, e.g., publish review articles in peer-reviewed journals, which can also be used as a basis for AMAP reports.

The WG supported these recommendations.

The Executive Secretary noted that AMAP has a draft letter of understanding with UNEP Chemicals that AMAP will supply information on POPs in the Arctic in relation to the review of the implementation of the Stockholm Convention on POPs. The first report for this Convention is due in 2008, so the AMAP contribution should be prepared one or two years earlier.

9.4. Radioactivity Expert Group (AMAP WG19/9/2)

Morten Sickel (Norway, and member of the Radioactivity Expert Group) summarized the outcome of a meeting held earlier this year, at which the group had decided that there is a need to update the radioactivity assessment report. This update should consider 1) how climate change affects sources and transport of radioactivity, 2) the impact of radiation on organisms, and 3) the use of radioactivity as a tracer. As there are many sources and risk areas in the Arctic, the group will conduct a risk assessment of sources of radioactivity in the Arctic. He noted that there is now good communication and coordination on this later issue between radioactivity experts in AMAP and those in EPPR. The mechanism for producing

these updates has not been decided yet, but it will involve a compilation of information from all Arctic countries.

The Chair requested that the Expert Group prepare specific recommendations and plans for its future activities.

9.5. Human Health Assessment Group (AMAP WG19/9/1)

The meeting took note of the report of the Human Health Assessment Group (HHAG) (Document AMAP WG19/9/1), in the absence of a representative of this group (this group were holding a meeting at the same time as the AMAP WG).

Morten Olsen (Denmark) felt that the paper provided a good outline of the priorities and monitoring activities for the HHAG. In relation to the statement in the report that there is a need to reduce human exposure to contaminants, it was stated, and *the WG agreed that AMAP should take steps to ensure that human health experts take part in all assessments and expert groups;* they should be integrated into the entire work as human health is relevant to all sectors.

Russel Shearer (Canada) reported that the HHAG was planning to propose revisions to its terms of reference and would like to build up a larger network. A small secretariat has been set up at the University of Århus in Denmark to support the HHAG.

It was noted that the 'Global POPs Monitoring Programme', set up to support the Stockholm Convention now also includes human blood monitoring, in addition to breast milk, and that this addition was influenced by input from the AMAP HHAG. Based on this addition, AMAP should be able to contribute information to the Stockholm Convention assessments of monitoring data.

The representative of the Arctic Athabascan Council (AAC) expressed the concern of the indigenous peoples regarding bio-data banks containing data on indigenous peoples. He was concerned with the use and possible scale of the data. The AAC intend to make recommendations to the HHAG on this issue at some point in the future.

9.6. Expert groups

Based on the recommendations of the experts on mercury (AMAP WG19/9/5) and on POPs (AMAP WG19/9/4), the meeting discussed whether expert groups should be established for these contaminants and, if so, whether it should be one group for all contaminants or one group for mercury (and possibly other heavy metals) and another group for POPs. There were valid arguments for both approaches, as some experts work on both mercury and POPs and would find it more convenient if all contaminants were handled by one group. However, the scope of this group would be very broad and a large pool of experts would be needed to cover the entire field. Also, the time lines for the production of products differ for mercury and POPs. Accordingly, the meeting decided that there should be separate groups for mercury and for POPs, and that the mercury group should cover only that metal at the present time as that is currently the priority metal contaminant issue in the Arctic based on human *health and other issues.* Other metals can be considered when there is a need to do so. These two expert groups should work together when needed, such as to conduct a review of the AMAP monitoring programme, and they should also work closely with the HHAG. The POPs group should include national focal points, who could identify appropriate expertise for the various types of contaminants. Where they were not already identified, national focal points should also be identified on other AMAP expert groups.

Denmark offered to take a co-lead on the Mercury Expert Group, and proposed that Rune Dietz be a lead expert in this group. Denmark will explore hosting a workshop on mercury, perhaps in early 2006, and would like a member of the AMAP Secretariat to attend and outline the requirements. Canada offered to co-lead this group.

Sweden and Canada confirmed that they were willing to continue as co-leads for the POPs Expert Group.

The Radioactivity Expert Group will continue to be co-led by Norway and Russia.

The Human Health Assessment Group will continue under the co-leadership of Canada and Denmark.

These offers were received with appreciations and endorsed by the WG.

The Secretariat was requested to draft a communication to be sent out to AMAP countries, permanent participants and observers inviting nominations to these expert groups and also to the new climate/UV/Ozone expert group (see agenda item 5). It was agreed that this communication should include a brief description of the types and roles of the experts.

Outi Mähönen (Finland) reported that the work on acidification is moving from a limited (sub-regional) scope to a broader area and in the future it would be more appropriate to link it to global activities. Accordingly, she recommended that acidification and Arctic haze be incorporated into the broader air pollution issues after the 2006 Acidification assessment has been completed.

9.7. Cooperation among Expert Groups

The Chair stated that POPs, mercury, radioactivity, and human health experts should discuss future work and how they can cooperate and coordinate their work together.

In particular, the impact of climate change is a cross-cutting issue that will require work by all groups. It was noted that the impact of climate change on contaminant pathways had not been adequately covered in either the ACIA reports or the ACIA follow-up discussions. *Lead experts from the Climate/UV, Contaminants (Mercury and POPs), Radioactivity, and Human Health expert groups should communicate (by e-mail) concerning this subject, with the aim of preparing a short (two- to three-page) proposal on how best to address the issue of climate change impacts on contaminant pathways in future AMAP assessment work.*

To initiate this process, the Chair requested Simon Wilson to draft a communication to be sent to key experts from the respective groups to ask for their views on how best to address the issue of climate and contaminants in future AMAP assessments (e.g., whether this should be addressed as an independent issue or whether it should be covered in contaminant specific assessments). A draft of this communication was presented to the AMAP WG.

Referring to an earlier suggestion from Denmark on the need to identify and prioritise future AMAP deliverables, Russel Shearer (Canada) proposed that a timeline be produced to clearly indicate what information products AMAP might need to provide to international agreements to meet their requirements. Examples of these requirements might include data on POPs for the Stockholm Convention by 2008 and data on mercury for the UN ECE Metals Protocol by 2006 or 2007.

It was noted that both the mercury and POPs expert groups had proposed that workshops be held in 2006 to address some of these issues, including a possible workshop to evaluate temporal trend datasets and produce data products that could be provided to other international bodies. The WG confirmed that, if these products did not involve any assessment of the results, but only preparation of data products, these products would not need to be approved by the WG, but could be delivered to other organizations as contributions from AMAP, in accordance with the modes of operation outlined in the AMAP Strategic Plan 2004+.

The Chair summarised *the WG agreement that the AMAP Secretariat will coordinate among the expert groups concerning the topic of climate change impacts on contaminant pathways and ask the lead experts of the relevant expert groups (including the climate expert group when these have been identified) to consider the best way forward.* There is also a need for inputs to international agreements and the groups should be requested to prepare such inputs. He asked the WG to bear in mind that there may be a need for workshops (some in 2006) to conduct such work, and thus a need to support the participation of experts in these workshops.

A small group, including Simon Wilson, Russel Shearer and Gunnar Futsæter, was requested draft a table of possible AMAP deliverables and a timeline for their production, for consideration by the WG. This table is attached as Annex 5.

10. International Symposia, workshops and conferences with AMAP's involvement

The 2nd Workshop on Mercury Research in Polar Regions was held in Toronto, Canada, August 29-31. The meeting was attended by ca. 60 mercury experts with backgrounds in a range of disciplines; a representative of the AMAP Secretariat also participated. Goals of the workshop included: identifying new or unfilled gaps in knowledge concerning mercury in polar areas; proposing research priorities and possible timetables for addressing these gaps, and discussing mercury project components of the IPY. A separate session was devoted to discussing future AMAP mercury assessments and related issues. A report from the workshop will be available within a few weeks. A paper describing the outcome of the discussions relating to AMAP mercury assessment issues was circulated to the WG (WG19/9/5), and recommendations from this part of the workshop were discussed by the WG under Agenda items 7 and 9. The AMAP Secretariat agreed to circulate the mercury workshop report to HoDs. Conclusions of this workshop may also be useful as input to the Contaminants session of the ICARP II meeting.

The WG were informed of the final arrangements and programme details for the Oil and Gas Symposium, which was being arranged during the coming days (14-15 September) in St. Petersburg in conjunction with the AMAP WG meeting and OGA authors meeting. The Symposium was expected to contribute information to the OGA. The WG were informed that financial support for the Symposium had been received from Canada, Denmark, Finland, Norway, USA and the Nordic Council of Ministers, and that this support had helped to ensure that the meeting would have every chance of success, with ca. 180 participants expected at the AMAP OGA. The AMAP Secretariat thanked all of the sponsors for their contributions to this arrangement.

The WG were updated on the plans for the 6th International Conference on Environmental Radioactivity in the Arctic and Antarctic, which is co-sponsored by AMAP, and which will take place in Nice, France, 2-6 October 2005.

The WG were informed that a meeting of the AMAP Human Health Assessment Group (HHAG) was ongoing. This meeting was being held in conjunction with the ISEE 2005 Conference in Johannesburg, South Africa (16-17 September), which included an AMAP

Human Health session. The HHAG would discuss plans for future assessment activities at this meeting.

The AMAP Secretariat and AMAP representatives have participated in several other events concerned with, for example, communication of AMAP assessment and ACIA results.

In this connection, the Executive Secretary also mentioned ICARP II, the Second International Conference on Arctic Research Planning, which will be held in Copenhagen on 10–12 November 2005. This conference will develop Arctic research plans that are intended to guide international cooperation over the next decade and beyond, including significant planning for IPY activities. He stated that a planning meeting had been held earlier this year, at which it was noted that contaminants issues were missing from the programme. AMAP had therefore been asked to contribute to the arrangement of a session on contaminants at ICARP II. As this session had been added to the ICARP II programme at a very late stage the Secretariat would be seeking the assistance of HoDs to identify experts who could assist in this work and attend the meeting. This venue could also be used as an opportunity for informal meetings to discuss AMAP issues.

11. AMAP TDCs: Status, Reporting and Problems

The Executive Secretary reported that AMAP continue to operate four thematic data centres. Simon Wilson informed the WG that no reports from the individual TDCs were available for the meeting, however the following information was provided:

The most active data centre over recent years has been the atmospheric data centre at NILU, which was supporting the work for the AAHA. All Arctic countries report data to this data centre and the data centre has been requested to prepare an updated data report on AMAP data holdings later in the year. Prior to this, it is desirable that outstanding data submissions from some countries are completed (including recent mercury data from Barrow and sites in Canada, and POPs data from MSC in Canada). *The HoDs agreed to check that their relevant national data submissions were complete.*

No recent information had been received from the freshwater/terrestrial data centre, but countries were encouraged to ensure that relevant AMAP data was being reported to this centre using the online reporting system.

Some countries, such as Iceland and Norway, routinely report some (but not all AMAP relevant) data to the marine thematic data centre at the International Council for the Exploration of the Sea (ICES). Other countries have large amounts of data that should be reported to ICES (e.g. monitoring data from Greenland and the Faroe Islands), however reporting of these data is dependent upon ICES developing a more flexible reporting system. AMAP has been in discussion with ICES for five years on this issue, and have provided test datasets in order to try to come up with a solution. Although ICES has provided cost estimates for handling individual datasets, to data no generic solution has been forthcoming and no solution is yet in sight. There is thus a considerable backlog of data awaiting the resolution of this problem.

In the discussion, the representatives from Denmark and the Faroe Islands confirmed that the ICES reporting system is outdated and suggested that ICES be requested to provide a cost estimate for preparing an interface from Excel to the ICES system similar to that available for reporting to the freshwater/terrestrial data-centre, where their experience was that data can be reported in a flexible manner with minimal problems. In response, Simon Wilson stated that

he had tried to promote this type of solution within ICES but without success; he further informed that he was due to have further discussions with ICES in November when he would raise this matter again.

The Executive Secretary noted that there remains a large amount of data that has been used in past AMAP assessments that have not yet been reported to the AMAP TDCs and asked countries to ensure that this situation is addressed so that these data are available for future work (including future work to assess long-term trends, etc.). *The WG agreed to look into this matter.*

Morten Sickel (Norway, and AMAP radioactivity TDC manager) reported that the radioactivity data centre is currently being upgraded through purchase of new hardware and development of new software. It is ready to enter additional data as and when they are submitted.

The WG were informed that the establishment of a database on AMAP relevant human health data was on the agenda for the HHAG meeting in Johannesburg. These data currently lack a permanent repository (partly due to issues relating to sensitivity regarding storage and transfer of health data). It had been proposed that these data should be stored on CD-ROM in the AMAP Secretariat until the HHAG decides on a more permanent solution, to ensure that these data that have been used in past AMAP assessments are not lost; *the WG supported this proposal.*

12. AMAP PD and NIPs: Status, Update, International cooperation and Problems

Simon Wilson referred to Annex 4 to the minutes of the Extended Board Meeting, which was held in Helsinki, Finland in February 2005, concerning the status of reporting of AMAP National Implementation Plans (NIPs). Finland has updated its NIP to cover the inclusion of climate and UV and Canada has also provided an update to its NIP. All other countries were encouraged to supply this information. An updated overview of the status of NIPs reporting is attached at Annex 6.

He further reported that some countries have updated their Project Directory (PD) registrations while others have not, and encouraged all countries to ensure that information on new projects is registered and ongoing/past projects are updated, this being particularly important for NIP projects. He noted that projects were also being added by observer countries and several other countries with an interest in Arctic research, and that if these countries could maintain their project registrations it should be expected that the Arctic countries could also do so. Finally, it was noted that the PD now also contains a large amount of information on biodiversity related projects that are relevant to the CAFF CBMP.

Denmark reported that its PD registrations would be updated as soon as possible. The Danish NIPs will be updated in Spring 2006; there have been discussions about how to deal with climate change issues in the NIP and a statement of AMAP priorities would be useful in this regard.

Iceland stated that it will submit its NIPs for contaminants monitoring by the end of the week, but the addition of climate change initiatives will take longer. Icelandic PD registrations will also be updated.

Norway reported that it will start updating its PD in the coming months. The need for both NIPs and PD was questioned.

Russia would report its status as soon as possible.

Sweden stated that its most recent NIP and PD registrations are still valid (they were updated recently); the monitoring programme is currently being reviewed and the NIP and PD entries will be revised when this review is complete.

The USA had no comment on this issue. The AMAP Chair indicated that he would take steps to try to improve relevant US project reporting to the PD. He particularly noted the potential use of the PD and NIPs in supporting the work of the climate expert group on ACIA follow-up.

The Netherlands stated that it has new projects on metals in the Arctic and will update the PD with this information.

In response to the Norwegian question as to why both NIPs and a PD are needed, Simon Wilson stated that they can be used in different ways and are updated at different times by different countries. They are therefore being used for different and complementary purposes.

13. Data and Interactive Mapping initiatives

13.1. Arctic portal (AMAP WG19/13/1)

The CAFF Executive Secretary reported that SAOs had requested CAFF to develop a proposal regarding an 'Arctic Portal' for the SAO meeting in October 2005. In response, CAFF had held a workshop in June that concluded that this was an activity worth pursuing, and the proposal presented in document AMAP WG19/13/1 had been developed over the summer. This proposal is very broad and general; details will be developed if SAOs approve the concept. CAFF national representatives have given support to the concept. This proposal has been distributed to the Executive Secretaries of the AC WGs and needs to be submitted to SAOs later this week.

She pointed out that if this proposal is accepted and implemented, AC WGs will still maintain their own websites. Countries will not need to fund the portal, but they will have a workload in putting up their information on the web.

She noted that a great deal of interest has been expressed in the development of an Arctic portal by other organizations and by indigenous peoples, and boundaries will need to be decided regarding what types of information should be included.

In the ensuing discussions, Simon Wilson pointed out that this is not a new idea. The Arctic Council has tried such a portal earlier but it failed owing to poor maintenance. He also stated that the amount of effort required maintaining such a portal should not be underestimated. He also expressed concern that the considerable expense and effort that had gone into constructing, developing and maintaining the AMAP website in recent years would be lost if the website had to be redeveloped to connect to an Arctic Portal in the manner described in the document.

Several delegations expressed their interest in the idea of an Arctic portal, but also expressed serious reservations regarding implementation, and in particular concerns with respect to maintenance of the system. All agreed that a detailed implementation plan is required to provide estimates of the costs and effort of maintaining the portal, including the means of financing the maintenance. The effort for maintenance was seen as being a central question, requiring clear and realistic estimates of the magnitude of effort required.

Questions were also raised about why support services such as an integrated calendar and net meetings were being incorporated in the Arctic Portal proposal. An integrated calendar for the Arctic council and its groups was considered an item that could be implemented readily and at minimal cost outside of a portal development if there was a desire for this.

The meeting concluded that document AMAP WG19/13/1 should be considered only as a concept document. If the next step were the development of a feasibility study, this could be supported by the WG, but an implementation plan should only be further discussed if such a study demonstrated that the project was feasible. Part of the feasibility study should be a clear delimitation of the scope of a proposed Arctic Portal.

The WG agreed that AMAP could be a party to the concept paper on an Arctic portal and was willing to contribute to a feasibility study if SAOs agreed that this was a way forward.

13.2. COMAAR

Sweden reported that the Swedish SAO has submitted a proposal to IPY on behalf of other SAOs for COMAAR. A new document sketching out the structure for this proposed activity had been prepared by Terry Callaghan after the Abisko Workshop in May, but as yet no final (IPY) project proposal was available.

The Chair noted that the proposal is that COMAAR should be a consortium of groups including the Arctic Council and also many others. AMAP is listed as being involved for contaminants and CAFF for biodiversity. The vision is that COMAAR would be a forum for information sharing, and at Abisko it was proposed that an Arctic portal serve as a tool for COMAAR. The relationship between COMAAR and GEOSS, to which all Arctic countries are signatories, was also discussed. The AMAP Chair noted that Sweden may well propose that COMAAR be transformed into an Arctic GEOSS initiative as GEOSS objectives and Arctic Council plans are have a degree of overlap.

The AMAP Executive Secretary noted that GEOSS (and GEO) have grown from the original idea of using remote sensing to include other types of observations and support environmental protection and sustainable development goals. It is currently in a very early stage of development with a secretariat having recently been established in Geneva. The first task of this secretariat is to write a plan for the work, which will not address the Arctic per se. GEO is similar the Arctic Council: a forum without a Convention, non-binding in character (see http://earthobservations.org/). GEOSS is an initiative signed by Ministers and part of the Earth Summit process.

In a brief discussion of this initiative, several delegations noted that the potential workload on the AMAP Secretariat would need to be taken into account if these initiatives are pursued by the SAOs.

The meeting concluded that, based on the information currently available to them, COMAAR is still under development and AMAP cannot make any decision on this issue at the present time. HoDs requested that they receive further information on the COMAAR project proposal as soon as it becomes available.

13.3. International Polar Year

The Executive Secretary reported on several IPY proposals, including OASIS, a large initiative on ocean-atmosphere-ice interactions in relation to the transport of contaminants; AMAP has expressed a particular interest in this project. There are two IPY human health projects, including a proposal by Canada and Denmark to arrange an international symposium

on human health issues in the Arctic in Århus in 2008, and a proposal by Canada to prepare a summary of AMAP work on human health assessment. There are also many smaller projects. *It was decided that AMAP should not endorse specific project proposals, but rather will communicate to the IPY secretariat which projects are of relevance to AMAP, together with any suggestions regarding how these projects might be improved to meet AMAP objectives.*

Russel Shearer (Canada) noted that almost all proposals to IPY are currently unfunded, and there is no guarantee that they will be funded by host countries. He reported that discussions have been held with the former and current heads of IPY concerning a role for AMAP in IPY; and the IPY secretariat are interested in further discussions about this recognizing the network of expertise available to AMAP. He also reported that Canada will make a major announcement on significant funding for IPY proposals on 21 September, and he hoped that this will stimulate other countries to make funding commitments for Arctic IPY projects.

Yuri Tsaturov (Russia) reported that Russia had been very active in preparing for IPY. A national meeting of organizations participating in IPY will be held on 30 September. One proposal is to establish an atmospheric observatory at Tiksi with support from partners in the USA and Finland. Russia would like the project to be supported by the Arctic Council, and Mr. Churkin will bring this up at the SAO meeting in October.

13.4. EPPR/AMAP mapping pilot

Simon Wilson provided a brief demonstration of the pilot online GIS development that had been produced as a result of a co-operation between AMAP, EPPR and UNEP/Grid-Arendal, and other partners including the AMAP TDC at NRPA. The pilot project has been carried out at minimal cost (ca. 5-6K USD) by basing the online GIS application on existing developments produced by Grid-Arendal; it currently includes example datasets from AMAP and EPPR projects (e.g. AMAP data on sources of radioactivity in the Arctic, and data collected as part of the ongoing OGA, and EPPR data from their Resources at Risk from Oil Spills project work). He stated that the goal of the system is to present and overlay data from AC WGs in a common online GIS system. The work also aims to coordinate activities between groups involved in producing GIS datasets, to avoid duplication, increase standardization, and avoid situations where different AC WGS are producing different and inconsistent versions of the same datasets. If supported by the WG, the next steps would be to (i) expand the project group to include other potential partners (CAFF, WCMC, WWF), (ii) agree on and construct additional datasets for common use (including documentation and QA/QC), (iii) set-up remote access to allow groups to add datasets (including addressing ownership/security/access restriction aspects); (iv) add some new functionality to the mapping system (new projections, map rotation, remote sensing images, etc.); (v) add facilities for linking mapped features to related information products. If an opportunity arose, this work could be facilitated by a small workshop of interested parties.

The AMAP WG welcomed the results of this pilot project as a demonstration of the capabilities of an online GIS for presenting AMAP (and other AC WG) results in an interactive manner. They also recognized the benefits of this project in enhancing the cooperation between AMAP and EPPR. *The WG supported the idea that the project work be continued, subject to this involving minimal resource commitments (similar to those used in the work to date) and regular reporting on the status and progress of the work to the WG.*

The representative from UNEP/Grid-Arendal indicated that Grid-Arendal was interested in continuing the work on this project. The representative of WWF expressed an interest in joining this project. The PAME Secretary requested that the AMAP Secretariat prepare a note on this project so that it could be considered at their coming meeting. The AMAP Secretariat

agreed to keep all current and potential new partners (including WWF, PAME and CAFF) informed about future developments in this work, with a view to encouraging their future participation.

14. Cooperation with Arctic Council Permanent Participants, WGs and activities: ACAP, CAFF, EPPR, PAME and SDWG

The AMAP WG was referred to the information on cooperation with other AC WGs and activities presented in the draft progress report to SOAs (WG19/18/1). All main issues relating to these co-operations had been considered under other Agenda items.

15. International Cooperation: IPY, UNEP, UN-ECE, GEF/WB, WMO, WHO, NCM, EU/EEA, Barents Council, IASC, GEOSS, IOC -LMEs, etc.

The AMAP WG was referred to the information on cooperation with other international organizations presented in the draft progress report to SOAs (WG19/18/1). All main issues relating to these co-operations had been considered under other Agenda items.

16. Financial Issues: National situation, AMAP Expert groups, core activities and AMAP Secretariat

The Executive Secretary reported on the financing of the Secretariat and AMAP core activities over the past year. The main part of the funding for the AMAP Secretariat is provided by Norway, however this does not meet all the running costs of the Secretariat, or costs associated with funding other AMAP core activities. He therefore expressed his thanks to Norway for their continuing support for the Secretariat, and also Canada, Finland and the Nordic Council of Ministers for providing additional financial support during 2004/2005 to fund AMAP Secretariat operations and other AMAP core activities and projects.

A similar level of funding is required in the coming year, and countries are kindly requested to investigate the possibilities to provide financial support for these activities in 2005/2006.

17. The AMAP Work Plan for 2005-2006. Summing up of decisions made

The AMAP Chair introduced an overview of points agreed during the first days of the WG meeting, which he intended to use as a basis for his report to the SAOs.

The WG discussed this list and commented on some of the items. The Chair agreed to revise the list to reflect these discussions.

A compiled list of actions agreed at the WG meeting is included in Annex 4, incorporating both the points noted by the Chair, and additional action items identified during the course of the meeting.

As there was no time to discuss in detail the list of possible AMAP deliverables for coming years (see Annex 5), or their priorities and the timeframe and mechanisms for their production, the AMAP WG agreed that this list should be used as a tentative list of products and activities for the coming period.

In relation to the proposed activities/deliverables for 2006, it was agreed that the Secretariat should send out an updated version of the list to HoDs as soon as possible after the meeting, with a request that HoDs respond by 3 October with any comments they may have, including any further additions/amendments to the list. An updated list would then be prepared that could be used by HoDs as a basis for planning their AMAP-related work during 2006.

It was agreed that the Secretariat should maintain an updated list and provide this document to future AMAP WG meetings, and that the proposed activities/deliverables for 2007 and beyond could be further considered at the next WG meeting.

The Secretariat agreed to prepare a draft AMAP workplan for 2005-2007 (to be included in the Progress report to SAOs) by combining outstanding items from the existing workplan for 2005-2006 with relevant items from this list.

18. The AMAP Progress Report to the SAO meeting in October 2005

The Secretariat introduced the draft AMAP Progress Report to the SAO meeting in October 2005 (WG19/18/1), noting that certain parts of this document would be revised to reflect the outcome of discussions at the WG meeting.

The WG considered the draft AMAP progress report. Some countries provided the Secretariat with specific technical amendments and the Secretariat agreed to introduce these.

HoDs were requested to notify any additional comments to the Secretariat by 21 September so that these could also be incorporated before the report was submitted to the SAOs. The final report would also be circulated to HoDs at the same time so that they could use it when briefing their SAOs.

19. Any Other Business

No other business was discussed.

20. End of the Meeting

The next meeting of the AMAP WG will be arranged taking into account the need to approve the AAHA and OGA assessments for delivery to the October 2006 Ministerial Meeting. In this connection it may be necessary to hold an AMAP HoDs meeting in early-April 2006 and an AMAP WG meeting in June 2006.

The Chair thanked the participants for their work during the week, and the meeting was closed at 12:15 on Friday 16 September 2005.

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Annex 1: List of participants at the 19th AMAP WG meeting

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| | | | Programme | | | | | | |
| | | | Secretariat | | | | | | |

Annex 2: Draft Agenda for the 19th AMAP WG meeting

- 1 Opening of the meeting.
- 2 Approval of the Agenda.
- 3 Information from the Chair and the Secretariat.
- 4 Follow-up of actions from:
 - the Ministerial meeting in November 2004;
 - the SAO meeting in April 2005;
 - the 18^{th} AMAP WG; and
 - the Extended Board meetings in November 2004 and February 2005.
- 5 ACIA follow-up:
 - Translation of the ACIA Overview report;
 - Printing and Distribution of the ACIA Science Report;
 - Outcome AMAP Workshop on ACIA follow-up;
 - Focal Point meeting and further follow-up actions.
- 6 The 2006 Assessments on:
 - Oil and Gas Activities in the Arctic and
 - Acidification and Arctic Haze.
 - Progress and Problems to be solved.
 - Financing of the assessment work.
- 7 AMAP Strategic Programme 2004+, implementation and deliverables.
- 8 Monitoring Programmes
 - AMAP Trends and Effects Monitoring Programme Status and Update.
 - Progress in Harmonization of AMAP Programme and CAFF Biodiversity Monitoring Programme
- 9 AMAP Expert groups; Human Health, Radioactivity, POPs, Heavy Metals, Oil and Gas, Acidification and Climate, UV/ozone.
 - Re-nomination and new nomination of Lead Countries, Authors and experts.
 - Possible reorganization of expert groups.
 - A new AMAP expert group on Climate, Ozone and UV.
 - Expert group activities to implement the AMAP Workplan and Priorities.
 - Deliverables.
- 10 International Sympoisia, workshops and conferences with AMAPs involvement;
 - The 2nd Workshop on Mercury Research in Polar regions, August 29-31, 2005, in Toronto.
 - The Oil and Gas Symposium, September 14-15, 2005, in St. Petersburg summing up of the arrangement and the financial situation.
 - The 6th International conference on Environmental Radioactivity in the Arctic and Antarctic, October 2-6, 2005, in Nice.
 - The ISSE 2005, September 16-17 in Johannesburg, South Africa, AMAP Human Health session,

- Others.
- 11 AMAP TDCs: Status, Reporting & Problems.
- 12 AMAP PD and NIPs: Status, Update, International cooperation & Problems.
- 13 Data and Interactive mapping initiatives
 - AMAP/EPPR Interactive mapping pilot project Results and Further activities;
 - Arctic Portal Outcome of CAFF Workshop;
 - Other data initiatives.
- 14 Cooperation with Arctic Council Permanent Participants, WGs and activities: ACAP, CAFF, EPPR, PAME and SDWG.
- 15 International Cooperation: IPY, UNEP, UN-ECE, GEF/WB, WMO, WHO, NCM, EU/EEA, Barents Council, IASC, GEOSS, IOC -LMEs, etc.
- 16 Financial Issues: National situation, AMAP Expert groups, core activities and AMAP Secretariat.
- 17 The AMAP Work Plan for 2005-2006. Summing up of decisions made.
- **18** The AMAP Progress Report to the SAO meeting in October 2005.
- **19** Any Other Business
- 20 End of the Meeting

| Ref | Title |
|------------|--|
| WG19/2/1 | The 19th AMAP WG meeting St. Petersburg, September 12, 13 & 16, 2005. Draft Agenda and Time schedule |
| WG19/2/2 | Draft List of Participants: The 19 th AMAP Working Group Meeting, 12,13 and 16 September, 2005 |
| WG19/3/1 | List of Documents for the 19 th AMAP Working Group Meeting |
| WG19/5/1 | Announcement of Danish ACIA website |
| WG19/5/2 | Draft AMAP Workshop on Follow-up of ACIA, June 15–17, 2005, Oslo, Norway. Version 12 July, 2005 |
| WG/19/5/3 | A Proposed Arctic Climate Impact Assessment Follow-up Action. By the Arctic Monitoring and Assessment Program. Title: Prepare a Scientific Synthesis and Assessment of the Arctic Carbon Cycle |
| WG/19/5/4 | Follow up of ACIA; AMAP strategy and priorities. A discussion paper prepared by the AMAP Secretariat. |
| WG/19/6/1 | AMAP Assessment on Acidifying Pollutants, Acidification and Arctic Haze in the Arctic 2006 (AMAP/AAHA) Progress report St. Petersburg 12 September |
| WG19/8/1 | Selecting Key Indicators for The Circumpolar Biodiversity Monitoring Program (Including Appendix 1, 10 August) |
| WG19/9/1 | AMAP Phase 3. Human Health Monitoring In the Arctic Environment |
| WG19/9/2 | Strategic document for the AMAP Radioactivity assessment 2004 – 2008 |
| WG19/9/3 | Re: AMAP POPs Group. Department of Applied Environmental Science |
| WG19/9/4 | AMAP POPs experts break-out meeting at Dioxin '05, August 25, 2005, Toronto, Canada - minutes |
| WG19/9/5 | Summary Report: Interdisciplinary Workshop for Research on Mercury in Polar Regions - Toronto 29-31 August 2005: Session on AMAP-related Issues |
| WG19/12/1 | Canadian National Implementation Plan for Contaminants under AMAP 2005/2006 |
| WG19/12/2 | National Implementation Plan 2004+ for The AMAP Trends and Effects Programme, November 2004. DRAFT September 2005 |
| | Amendment to Finnish NIP2004+ |
| WG 19/13/1 | Proposal for Development of an ARCTIC PORTAL. By the Working Groups of the Arctic Council |
| WG 19/13/2 | AMAP/EPPR Online GIS Pilot Project. (No document available. Powerpoint Presentation). |
| WG 19/15/1 | Involvement of the Arctic Council in the Group on Earth Observations and the Global Earth Observation System of Systems |
| WG 19/15/2 | Norway to host IAIA'06 |
| WG19/17/1 | AMAP Workplan for 2004 – 2006 |
| WG19/18/1 | Draft Progress report from AMAP to the SAO Meeting in Khanty Mansyisk, Russia, October 12-14, 2005 |

Annex 3: List of Documents for the 19th AMAP WG meeting

Annex 4: List of Actions from the 19th AMAP WG meeting

| Agenda item | | Action for: | Action due by: |
|----------------|--|---|--|
| 5 | Work with the publisher of the ACIA scientific report to address copyright issues and ensure access to high-quality graphics | AMAP Secretariat | a.s.a.p. |
| 5 | Organize ACIA event at COP11 (if SAOs support this proposal) | AMAP, CAFF, IASC in cooperation with SAOs, Russia and Canada | October 2005 |
| 5 | Provide ACIA and other relevant materials to Canada for use in COP 11 Arctic Day | AMAP Secretariat, Canada | a.s.a.p |
| 5 | Establish AMAP/UV climate expert group | AMAP WG (Board and Secretariat) | before the SAO meeting in April 2006 |
| 5 | Obtain from ACIA Secretariat documentation regarding reviewer comments to the ACIA science report and how they were handled. (put this on the ACIA website) | ACIA, AMAP, CAFF and IASC Secretariats | a.s.a.p |
| 5 | Send out invitation for nominations for experts to participate in the workshop on the Arctic carbon cycle (to take place in Alaska in mid-2006) | AMAP Secretariat | Invitation: a.s.a.p. Deadline for nominations: end- 2005 |
| 5 | Provide to AMAP Secretariat the Chair's summary of the ten points of agreement from the Ministers meeting in Greenland, summer-2005 | Morten Olsen | a.s.a.p |
| 5 | Prepare papers on NIPs for ACIA follow-up projects (for the COP11) and provide these to the AMAP Secretariat | AMAP HoDs | a.s.a.p. |
| 5 | Prepare a consolidated proposal for AMAP activities related to ACIA follow-up | AMAP climate expert group | June 2006 |
| 6 | Report to the SAOs at their meeting in October 2005 on the situation regarding the timetable for preparing the OGA | AMAP WG Chair | October 2005 |
| 6 | Update the gap analysis and list of experts still needed to support the OGA process - and provide this to the AMAP WG Chair and Secretariat | OGA assessment co-leads | By 7 October 2005 |
| 6 | Nominate peer reviewers and organize OGA peer review process | AMAP HoDs and observers, AMAP Secretariat, OGA assessment group | Invite nominations and establish peer review by 1 January 2006 |
| 6 | Nominate peer reviewers and organize AAHA peer review process | AMAP HoDs and observers, AMAP Secretariat, AAHA assessment group | Invite nominations and establish peer review by 1 November 2005 |
| 8 | CAFF Secretary to provide AMAP Secretariat with updated CBMP indicators paper as soon as possible for distribution to lead experts of relevant AMAP expert groups and AMAP HoDs | CAFF Secretary, AMAP Secretariat | a.s.a.p |
| 8 | Provide AMAP/CAFF climate indices to group responsible for developing CBMP key biodiversity indicators | CAFF Secretary | a.s.a.p |
| 8 | Review the updated CAFF CBMP document on key indicators and proposed monitoring sites for consistency with AMAP needs and objectives | AMAP expert groups | as soon as it is available |
| 7/9 | AMAP Radioactivity Expert Group to prepare specific recommendations and plans for its future activities | AMAP Radioactivity Expert Group | next WG meting |
| 7/9 (and 5) | Prepare and circulate a communication to AMAP HoDs (and observers and some intergovernmental organizations) | AMAP Secretariat, HoDs | Invitation: a.s.a.p. Deadline for |

| | inviting nominations/re-nominations of experts to AMAP expert groups, including new climate/UV expert group | | nominations: end-2005 |
|-----|--|---|--|
| 7/9 | Prepare a communication to leads of AMAP expert groups requesting views/proposals on how best to address the issue of climate change impacts on contaminant pathways in future AMAP assessment work | AMAP Secretariat | a.s.a.p. |
| 7/9 | Communicate and prepare a paper on how best to address the issue of climate change impacts on contaminant pathways in future AMAP assessment work | Leads of AMAP expert groups, AMAP Secretariat | for the next AMAP WG meeting |
| 7/9 | Consider opportunities for (joint) meetings to consider updating of the AMAP Trends and Effects Programme | AMAP expert groups (in particular POPs and mercury expert groups) | 2006 |
| 10 | Obtain and circulate report from the Toronto mercury workshop to HoDs, and use conclusions from this workshop as input to the Contaminants session of the ICARP II meeting | AMAP Secretariat | a.s.a.p. |
| 10 | Identify experts who would attend and/or could assist in the preparation of the Contaminants session of the ICARP II meeting | AMAP HoDs | a.s.a.p. |
| 11 | Arrange for reporting of outstanding data submissions to AMAP atmospheric TDC, so these are available for inclusion in the next TDC data report | AMAP HoDs (in particular Canada and USA) | a.s.a.p. |
| 11 | Continue discussions with ICES regarding problems associated with data reporting to the marine TDC | Simon Wilson | November 2005 |
| 11 | Arrange for reporting of datasets used in past AMAP assessments that have not yet been reported to TDCs | All AMAP HoDs | a.s.a.p. |
| 12 | Update AMAP NIPs and AMAP PD registrations, in particular with respect to climate/UV components and new NIP projects (minutes specifically identify commitments regarding this matter by Iceland, Norway and USA/Chair) | All AMAP HoDs | a.s.a.p. |
| 13 | Obtain updated COMAAR project proposal and make this available to all HoDs | Sweden, AMAP Secretariat | a.s.a.p. |
| 13 | Communicate to the IPY secretariat which IPY projects are of relevance to AMAP, together with any suggestions regarding how these projects might be improved to meet AMAP objectives | AMAP Secretariat, leads of AMAP expert groups | a.s.a.p. |
| 13 | Keep all current and potential new partners (including WWF, PAME and CAFF) informed about future developments in work on the online GIS pilot project | AMAP Secretariat | when appropriate |
| 17 | Circulate an updated list of possible AMAP deliverables/timetable for comment by HoDs including comment on priorities any further additions/amendments to the list) | AMAP Secretariat, AMAP HoDs | Distribution: a.s.a.p. Return comments: 3 October |
| 17 | Based on the previous action, AMAP Secretariat to circulate an updated list for use by HoDs in preparing for AMAP work in 2006 | AMAP Secretariat | 17 October |
| 17 | Maintain a list of relevant international activities to which AMAP might contribute information and data products | AMAP Secretariat | Ongoing – updated list to be prepared for next WG meeting |
| 17 | Prepare short update report on issues of concern for the 2006 Ministerial meeting | AMAP Secretariat and AMAP expert groups | June 2006 |
| 17 | Identify relevant experts and arrange a workshop to prepare data products on mercury temporal trends | AMAP Secretariat, AMAP HoDs, Hg expert group | early-2006 or late-2006 |
| 18 | Notify additional comments to draft AMAP progress report to SAOs meeting | AMAP HoDs | 21 September |

Annex 5: List of possible AMAP Deliverables and timeline for their production during the coming years. (NB: This list has been updated to reflect comments received following the WG meeting)

| For | Delivery date | Product | Expert group | Notes |
|--|---------------|--|--|--|
| External Groups (UNI | | - - | | |
| COP11 | Nov. 2005 | (existing products) | Secretariat | Deliver printed ACIA science report. Tentative plans for follow up and projects, and IPY plans. |
| UN ECE Metals Protocol – effectiveness review 2007 | 2006 | Time trend data products (Hg and other metals) | Hg (metals) | Statisticians and key time series data providers |
| UNEP Governing Council – Hg review status – Feb 2007 | 2006 | Time trend data products (Hg and other metals) | " | ACAP contact with UNEP on Hg and BFRs? |
| <c .<="" td=""><td>"</td><td>Human health and Hg effects update</td><td>HHAG</td><td></td></c> | " | Human health and Hg effects update | HHAG | |
| UNEP Stockholm Convention review of (regional) monitoring data - 2008 | 2007 | Time trend data products POPs | POPs expert group | |
| UN ECE POPs Protocol – effectiveness review 2009 | 2008 | Time trend data products POPs | | |
| UN ECE POPs Protocol – sufficiency review 2009 | 2008 | Scientific review of information on BFRs, PFOS/A, etc | ۰۵ | |
| | " | Human health and POPs effects update? | HHAG | |
| Arctic Council | • | · · | • | • |
| AC 2006 | 2006 | AC Assessment of Oil and Gas Activities in the Arctic | OG assessment group | |
| AC 2006 | 2006 | AMAP Assessment of Acidification and Arctic Haze | AAH assessment group | |
| AC 2006 | 2006 | Short (<5 page) update message with new information/results on mercury; contaminants and human health; climate and contaminants pathways; need to support research; progress in decommissioning of submarines. | Hg, HHAG, Radioactivity, Secretariat | All of the above plus |

| For | Delivery date | Product | Expert group | Notes |
|---------------------------|---------------|---------------------------------------|--------------------|---------------------------------------|
| AC 2006 | 2006 | Proposals for joint | Relevant AMAP | |
| | | AMAP/CAFF | expert groups | |
| | | monitoring sites (for | (together with | |
| | | pilot implementation of harmonized | CAFF CBMP | |
| | | monitoring) | group) | |
| AC 2006 | Spring 2006 | Proposals for AMAP | AMAP climate | |
| ne 2000 | Spring 2000 | activities related to | expert group | |
| | | ACIA follow-up | enpere group | |
| AC 2006 | 2006 | Proposals for AC | Focal Point (group | |
| | | WGs activities related | on ACIA follow- | |
| | | to ACIA follow-up | up) | |
| AC 2007 | 2006 | MDE update | Atmospheric Hg | Meeting in |
| | | report/review | group | connection with Hg |
| | | | | conference, |
| A C 2007 (1 | " | | IIIIAO | Wisconsin, USA |
| AC 2007 (see above, | | Human health and Hg | HHAG | |
| UNEP) AC Arctic Portal | 2006 | effects update | | if supported by |
| Feasibility Study | 2000 | | | SAOs |
| AC 2008 | 2006/2007 | Report on | POPs/Hg/metals | 5/103 |
| 110 2000 | 2000/2007 | AMAP/CAFF pilot | expert groups | |
| | | study(ies) | and/or CC expert | |
| | | • • • | group? | |
| AC 2008 | 2006/2007 | Comprehensive | HHAG | Related to the |
| | | update assessment on | | proposal to convene |
| | | effects of | | an IPY human |
| | | contaminants on | | health symposium |
| | | human health of | | in Denmark in |
| AC 2010 | 2009 | Arctic populations Comprehensive | Hg expert group | August 2008 |
| AC 2010 | 2009 | update assessment on | ng expert group | |
| | | mercury? | | |
| AC 2010/2012 | 2009/2011? | Update assessment on | POPs/Hg/metals | |
| | | climate and | expert groups | |
| | | contaminants? | and/or CC expert | |
| | | | group? | |
| AC 2012/2014 | 20011/2013? | Comprehensive | Climate assessment | |
| | | update assessment on | group | |
| | | Arctic climate change | | |
| | | (impacts, including ozone and UV)? | | |
| | | | | |
| | | | | |
| | | | | |
| AMAP WG | · | · | · | · |
| AMAP 2006 | 2006 | Updated version of | All AMAP expert | |
| | | the AMAP Trends & | groups | |
| | | Effects Programme | | |
| AMAP 2008? | 2006-2007? | Assessment of the | Sub-group of the | Related to (UAF) |
| | | Arctic Carbon Cycle | AMAP climate | workshop to be |
| | | | expert group? | arranged in 2006; workshop product |
| | | | | is not an AMAP |
| | | | | approved report but |
| | | | | could provide the |
| | | | | basis for an AMAP |
| | | | | product |

Annex 6: Updated overview of NIP reporting.

| | NIP phase 2 (1998- 2002) | Progress in implementation of work during 2002/2003 | NIP 2004+ | Progress in implementation of work during 2004 | NIP 2006+ | Recent update of PD entries |
|------------------------------|-----------------------------------|--|--------------|---|---|-----------------------------------|
| Canada | \checkmark | national (NCP) reports | \checkmark | | \checkmark | |
| Denmark/Faroes/ Greenland | \checkmark | \checkmark | | | Report on current Danish climate/UV monitoring projects received | \checkmark |
| Finland | \checkmark | national report | \checkmark | | 2004+ NIP updated for climate/UV components | |
| Iceland | \checkmark | | \checkmark | | | |
| Norway | \checkmark | | | | | |
| Russia | \checkmark | \checkmark | | $\sqrt{*}$ | | |
| Sweden | \checkmark | | \checkmark | | $\sqrt{(2004 + \text{NIP})}$ still applies) | \checkmark |
| USA | \checkmark | | | | | |

List of AMAP Assessment Publications

| AMAP 1997 | Arctic Pollution Issues: A State of the Arctic Environment Report | |
|--------------------|---|--|
| AMAP 1998 | AMAP Assessment Report: Arctic Pollution Issues | |
| AMAP 2002 | Arctic Pollution 2002 | |
| AMAP 2003 | AMAP Assessment 2002: The Influence in Global Change on Contaminant Pathways to, within, and from the Arctic | |
| AMAP 2003 | AMAP Assessment 2002: Human Health in the Arctic | |
| AMAP 2004 | AMAP Assessment 2002: Persistent Organic Pollutants in the Arctic | |
| AMAP 2004 | AMAP Assessment 2002: Radioactivity in the Arctic | |
| AMAP 2005 | AMAP Assessment 2002: Heavy Metals in the Arctic | |
| AMAP 2004 | Persistent Toxic Substances, Food Security and Indigenous Peoples of the Russian North. Final Report. AMAP Report 2004:2. | |
| AMAP 1995 | Barents Region Environmental Programme: Proposals for environmentally sound Investment Projects in the Russian Part of the Barents Region: NEFCO/AMAP report. | |
| | Volume one: Non-radioactive Contamination | |
| | Volume two: Radioactive Contamination | |
| AMAP 2003 | Nordic Environment Finance Cooperation (NEFCO). Updating of Environmental "Hot Spots" List in the Russian Part of the Barents Region: Proposal for Environmentally Sound Investment Projects. AMAP Secretariat, Oslo, August, 2003. AMAP Report 2003:2 | |
| AMAP 2000 | PCB in the Russian Federation: Inventory and proposals for priority remedial actions (Executive Summary). AMAP Report 2000:3 | |
| AMAP 2003 | Environmentally Sound Management and Elimination on PCBs on Russia. Executive Summary of the Report of Phase 2: Feasibility Study supporting Documentation on the Multilateral Cooperative Project on Phase -Out of PCB Use, and Management of PCB-Contaminated Waste in the Russian Federation. AMAP Report 2003:4 | |
| AMAP Report 2002:2 | The Second AMAP International Symposium on Environmental Pollution of the Arctic, Rovaniemi, Finland. October 1-4, 2002. Extended Abstracts. | |
| AMAP Report 2004:4 | ACIA International Scientific Symposium on Climate Change in the Arctic, Reykjavik, Iceland, 9 – 12 November, 2004. Extended Abstracts. | |
| ACIA 2004 | Impacts of a Warming Arctic. Arctic Climate Impact Assessment (ACIA). | |
| ACIA 2005 | Arctic Climate Impact Assessment (ACIA). Science report. | |
| AMAP Report 2005:3 | AMAP Workshop on Follow-up of ACIA. June 15–17, 2005, Oslo, Norway | |
| | | |

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