

Minutes of the 18th Meeting of the Arctic Monitoring and Assessment Programme (AMAP) Working Group

Oslo, Norway, 14-16 April 2004

including:

Annex 7: Minutes of the 3rd Joint AMAP/CAFF meeting, Oslo, Norway, 15-16 April 2004

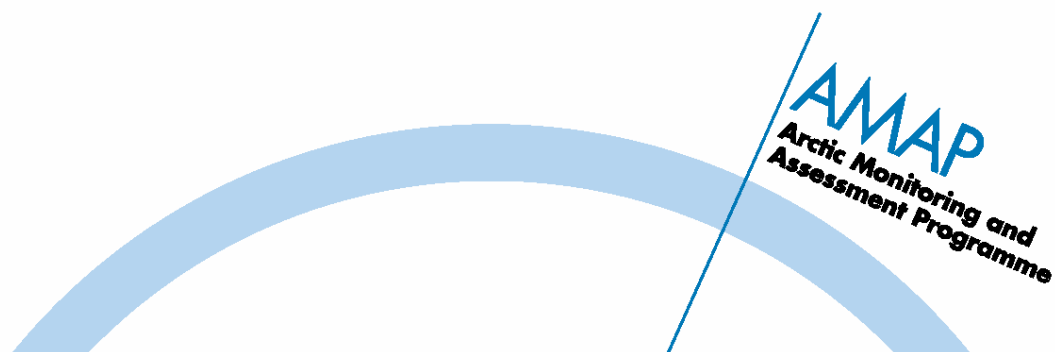


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Minutes of the 18th AMAP WG meeting, Oslo, Norway, 14-16 April 2004.

1. Opening of the AMAP WG meeting

The AMAP WG Chair, Helgi Jensson (Iceland), opened the meeting. He welcomed the participants to an important meeting, which would involve discussion of a number of major issues, including the two newly initiated assessments of acidification and petroleum hydrocarbons, and the finalization of the ACIA assessment process. Some of these issues would be addressed during the 3rd Joint AMAP/CAFF meeting.

Gunnar Futsæter (Norway) welcomed the participants to SFT, and wished them a fruitful meeting and pleasant stay in Oslo.

Practical information was given by Lars-Otto Reiersen (AMAP Executive Secretary).

A list of participants at the WG meeting is attached as Annex 1.

2. Approval of the Agenda

Helgi Jensson introduced the draft agenda for the meeting and invited comments. The draft agenda (Annex 2, WG 18/2/1-rev2) was adopted without changes. He noted that the timing of the discussions would be adjusted as necessary.

A list of documents to the meeting (WG 18/2/3) is attached as Annex 3.

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

3. Progress report from the Chair and the Secretariat.

Lars-Otto Reiersen (AMAP Executive Secretary) reported on progress since the last AMAP WG meeting by introducing document WG18/3/1-rev 1. This document had been drafted as a combined report to the AMAP WG and the Draft AMAP Progress Report to the SAOs meeting in Reykjavik in May 2004. It would be amended for this latter purpose after the AMAP WG consideration. He also referred to the Draft Minutes of the SAO Meeting in October 2003 (WG18/3/Info-1).

The progress report was briefly reviewed as a number of the issues would be covered in more detail during the joint AMAP/CFF meeting.

Referring to the possibility to include an 'Update on Issues of Concern' as one of the deliverables to the Arctic Council, the WG concluded that they would keep this matter under review; however no update was currently under preparation.

The representatives of Canada and Russia proposed amendments to the draft progress report, which, following discussions, were agreed by the WG.

4. Statements from Observers

None of the observers present at the meeting wished to make a statement.

Lars-Otto Reiersen informed the WG that OSPAR and UNEP-Chemicals had informed that they were unable to attend the meeting, due to conflicting meetings in the case of OSPAR. He further informed about recent contacts with Germany. German representatives had indicated

an interest in working closely with AMAP in connection with their work on the long-range transport of organic contaminants.

5. AMAP Strategic Plan for 2004 and onwards

Lars-Otto Reiersen informed that a small drafting group had met in Oslo in August 2003 and prepared a draft for the *AMAP Strategy 2004+* document which had subsequently been circulated to the AMAP HoDs for comments. Based on comments received a revised draft (WG18/5/1) had been distributed for the WG meeting.

Simon Wilson added that a number of the comments received concerned implementation issues and had therefore not been taken up in the Strategic Plan document, but had been compiled for use in later discussions on future organization and implementation of AMAP work. He suggested that it might be appropriate to devote time to consideration of these issues at the next AMAP WG meeting, when the ACIA reports had been completed and before the acidification and petroleum hydrocarbons assessments were due.

The WG discussed several general issues, including the period for which the Strategic Plan should be considered valid, and the need for a Preface. They also discussed the need to ensure that a network of relevant experts was maintained in order not only to produce the major periodic assessments, but also to be able to react to short-term requests, and keep under review (and if necessary prepare) the envisaged Updates on Issues of Concern and other first and second order products, etc. One option noted was to use workshops to facilitate production of Updates on Issues of Concern and other first order products. They then continued to review the texts of the Strategic Plan line-by-line.

The conclusions of these discussions were as follows:

- The document should be considered to be valid for a period of 10 years, and at least until 2012 (which is the provisional schedule for the next major update of the AMAP assessments); however it will also be updated as necessary and appropriate during the intervening period. This will be reflected in a Preface.
- The Preface will also include information on the main changes relative to the previous Strategic Plan document, a paragraph on the relationship between the AMAP Strategic Plan and those of the other Arctic Council WGs, and a note concerning where details of implementation plan can be found, etc.
- Specific changes were agreed by the WG and incorporated directly in the document.
- It was agreed to insert a reference to the ecosystem approach under section 3.1, together with a web reference to information defining this concept. The text proposed by Hein Rune Skjoldal (Norway) was amended to remove the implication of a commitment to this approach.
- The WG considered that a new section on climate change and UV should be introduced in the part dealing with 'Components of the trend and effects monitoring programmes', and that other texts related to climate change and UV issues might need to be updated following the outcome of the ACIA process. A possible text for such a new section was drafted, however the WG recognized that a process considering possible ACIA follow-up would be ongoing over the following weeks, and that it would be inappropriate to pre-suppose the outcome of this. Consequently, it was decided to include a place holder in the Strategic Plan – to be filled when results of discussions on ACIA follow-up are known – and to bring this to the attention of the SAOs.

- The WG agreed that there was a clear need to maintain a network of experts. The existing expert groups should be used to conduct ongoing assessments and updates, etc; and where necessary should be supplemented with new experts to maintain their effectiveness. However, in the longer-term, the WG will need to discuss how to build and maintain the experts groups for the future, and that this should be discussed in more detail at the next WG meeting.

6. The ACIA process

Helgi Jensson introduced this agenda item noting that the main discussions would take place during the joint meeting with CAFF; the discussions within the AMAP WG were to provide an introduction only.

Lars-Otto Reiersen reviewed the process and the status of the work leading to the production of the ACIA scientific assessment report and its overview document. He apologized for the fact that only the Executive Summary of the overview report was available for the WG to consider, however, he drew attention to the document (WG18/6/5) which describes the process by which the AIT had handled comments received to the previous draft of the overview report. In summary, he noted that the main comments received had concerned issues of balance and the aspects of the regional summaries, which had now been toned down to reflect the documentation in the scientific background material. Also, a number of graphics were being updated to standardize these (in relation to the time periods represented). He noted two documents (WG18/6/3 and WG18/6/4) concerning follow-up of ACIA. This issue was originally intended to be a part of the ACIA Policy Document, but this discussion was now on hold pending SAOs consideration, and the WG therefore might need to consider how to provide input to Ministers on follow-up of scientific recommendations regarding knowledge gaps and monitoring and research needs. He also noted that the lead scientists have full documentation of how they have handled all comments received, and that these were available, making the production of the scientific reports a very clear and transparent process. Concerning the decision regarding the publisher and the orders from countries for copies of the reports, Lars-Otto Reiersen suggested that these issues be returned to during the joint AMAP/CAFF meeting to avoid repeating the discussion.

John Calder (USA) noted that some of the comments submitted by the US had been critical of and use of language in respect to 'value judgments'. He also proposed that the AMAP/CAFF WG might consider preparing a letter of transmittal to explain the 'ownership' of the documents, reflecting that these reports have not been endorsed by AMAP and CAFF.

Lars-Otto Reiersen replied that, because unlike the other countries, the USA had not provided a national consensus view but rather a list of all national comments received, these had often been contradictory. However, in relation to the comments concerning 'value judgments', the overview report had been revised for consistency with the IPCC wording conventions.

Dave Roddick (AAC) noted that not all of the Permanent Participants were represented on the AIT, raising question about its representativeness.

Helgi Jensson outlined how the ACIA process had been organized to include individuals who collectively represented all of the indigenous peoples' organizations rather than individual representatives of each PP organizations. He emphasized that what the AMAP WG had to approve was the process rather than the content of the scientific and overview reports – the content being the responsibility of the experts who had authored the reports. It was not the intention to prepare a message that would be read as a disclaimer that distanced the AMAP

WG from the ACIA products, but rather one that confirmed AMAP's acceptance of the process.

Several delegations supported the idea to produce a letter of transmittal confirming that the AMAP WG had confidence that the ACIA process had produced a scientific report of appropriate quality, and that this science was correctly reflected in the overview report. It was suggested that the wording used in the Prefaces to the previous AMAP scientific assessment reports might serve as a model for such a letter.

It was agreed that this proposal would be raised at the joint AMAP/CAFF meeting, and that if accepted a small group (including John Calder (USA), David Stone (Canada), and representatives of the AMAP, CAFF and IASC Secretariats) should draft a proposal for a text that could be considered in plenary at the joint AMAP/CAFF meeting.

Referring to the possible follow-up after the delivery of the ACIA assessment, Odd Rogne (IASC) pointed out the need for a process to identify priority areas for research and to consider whether ACIA follow-up should be based on a circumpolar or regional approach.

Lars-Otto Reiersen reviewed the implementation of the long-term climate monitoring in the AMAP Trends and Effects Programme, and highlighted the monitoring activities ongoing at the Danish Zackenberg station as a good example of how a future AMAP climate effects programme could be implemented. He noted that the ACIA scientific report chapters contain many suggestions concerning knowledge gaps and how these might be filled. An ICARP workshop is also planned to address these issues, but this will not occur until too late to provide input to the Ministerial meeting. He stressed the importance of maintaining the momentum of the ACIA process and ensuring continuity. If this is to be achieved through an open discussion leading to the development of proposals that might be considered by the Ministers in November, work will need to be started in May.

Cindy de Wit (Sweden) noted that the next IPCC assessment is due in 2007, and this might be an appropriate target for any ACIA follow-up to feed into. Similarly, the IPCC process could feed into any future ACIA related initiatives, for example to address knowledge gaps identified by IPCC.

Helgi Jensson summarized the discussions, reflecting the general agreement for continued/improved linkages with the IPCC process and the need to establish a process to prepare a document that would identify priorities or ACIA follow up based on the recommendations contained in the ACIA scientific report concerning knowledge gaps and monitoring and research needs. This document should highlight activities that AMAP (and CAFF) would like to bring to the attention of the SAOs.

Lars-Otto Reiersen provided a short introduction process to select company to publish, print and market the ACIA reports. He provided additional details on the Cambridge University Press bid, and reviewed the issues that would need to be considered during discussions with CAFF concerning the number of copies of the reports to be produced (WG18/6/2), and the arrangements and budget for the ACIA Symposium (WG18/6/1-rev 1).

7. The coordination of the AMAP monitoring programme with CAFF and international organizations

Helgi Jensson introduced this item and referred to three related documents for the WG meeting.

CAFF CBMP

Considering the documents from CAFF (WG18/7/2 and WG18/7/3) concerning their Circumpolar Biodiversity Monitoring Program (CBMP), several delegations commented on their difficulties understanding exactly what the CBMP was and how this issue should be approached. The documents provided by CAFF appeared to be presenting a justification for biodiversity monitoring rather than a specification of a programme as such that could be compared with the AMAP trends and effects monitoring programme for harmonization, etc. One question was whether a limited number of networks that in several cases are concerned only with single species could address 'biodiversity'.

Denmark and Norway noted that, despite the name, most biodiversity monitoring is actually focusing only on a few key species, and that if CAFF could define their key species this might be a basis for comparing with the AMAP trends and effects monitoring programme. It was however also noted that the CAFF programme did not appear to include any marine fish species which are key species in marine biodiversity monitoring such as that conducted under OSPAR and ICES, etc.

John Calder (USA) suggested that the WG might focus on the CPAN network and then look at what type of monitoring network would be required to assess impacts of various stresses (climate, contaminants, etc.) within this network.

Other delegations proposed that coordination of national activities was the best manner to achieve appropriate linkages between the AMAP and CAFF programmes, and that possibly a pilot case in a specific area (e.g. Fennoscandia) might provide a way forward.

David Stone (Canada) suggested that although monitoring biodiversity to detect changes might be feasible, however with the exception of point source situations, the methodology to attribute changes in biodiversity to different stresses does not exist.

Helgi Jensson summarized the discussions as follows:

- AMAP has its Trends and Effects Monitoring Programme that details both key areas and key species – more specific information can be provided to CAFF about where monitoring for individual species is being conducted for AMAP if this is useful.
- Coordination (or better coordination) of AMAP-CAFF activities at the national level, and a regional pilot study could be suggested.
- More specific information is still needed from CAFF about what exactly their programme to monitor biodiversity involves (in terms of practical monitoring work) before the AMAP and CAFF activities can be properly coordinated.
- CAFF should be asked whether their programme to monitor biodiversity addresses only changes in biodiversity, or is also expected to be able to attribute changes observed to (multiple) stresses.

On this basis, it was agreed that the discussions would be continued at the joint AMAP/CAFF meeting.

CEON

Odd Rogne (IASC) introduced the document (WG18/7/1) concerning the CEON proposal for a Terrestrial Circum-Arctic Environmental Observatories Network. This paper is an application to IASC, and IASC is expected to support this project. A shorter version (avoiding the support issue) will be presented to SAOs. He suggested that AMAP participate

as an active partner in the network to ensure that the types and locations of stations in the network are relevant to AMAP needs.

Lars Moseholm (Denmark) suggested that the document also present success stories (such as Zackenberg) as well as the challenges for maintaining station networks.

The Secretariat noted that CEON was a possible mechanism to support the survival of some existing (long-term) monitoring stations and/or establish new stations, and asked if CEON included an activity to evaluate the coverage of the existing networks to meet the needs for a global observing system. It was suggested that an exercise could be carried out to compare the activities at CEON stations with the AMAP trends and effects programme specifications to identify those stations that best support AMAP's needs.

John Calder (USA) informed that CEON was in its early development, with an initial focus on terrestrial stations, and that AMAP and CAFF should ensure that, at the national level, the AMAP/CAFF networks are not seen as competing with CEON.

David Stone (Canada) indicated that although it would be possible for AMAP to participate in CEON planning meetings, and provide relevant input, the main problem remains the difficulty in getting commitments from countries to support long-term monitoring, and CEON will face the same problems in this respect as previous networks have had.

The WG agreed that AMAP should take part in CEON planning, provide input on 'AMAP needs' from such a network, and promote harmonization that might be beneficial to AMAP objectives; however, it should be made clear that AMAP cannot provide funding.

8. The 2006 Acidification and Arctic Haze assessment

Outi Mahonen (Finland) reported on the status of the acidification assessment work following the kick-off meeting held in Helsinki in January 2004. This meeting included 21 participants from 6 countries (WG18/8/1). The lead for the assessment is Martin Forsius (Finland). Three expert groups had been established to cover different aspects of the assessment and lead authors had been identified for most chapters. The assessment is intended to be an update of the 1998 AMAP assessment, and will put less emphasis on ecosystem processes (pathways, etc.) than the previous assessment, but concentrate more on levels and trends. The document provided to the WG contains the relevant plans and deadlines for producing the assessment. She also mentioned that the expert group had discussed the potential issue of emissions from oil and gas development in the Arctic and the possible need for linkages with the petroleum hydrocarbons assessment group on this subject.

Simon Wilson added some information about the meeting, and some of the main issues that needed to be addressed to further the assessment. These included the fact that the meeting had recognized the importance of information concerning Norilsk, and had requested support on how this might be obtained. Also, several of the experts who were nominated to participate in the meeting lacked the support from their countries to commit to take on a writing assignment, etc. In particular, no lead authors had yet been identified for some of the main sections in the chapters dealing with atmospheric transport, levels and trends. Finally, there had been some discussion of whether health effects associated with particles should be covered in the assessment. In this connection there was a desire to establish contacts with the AMAP human health expert group to identify possible experts to assist with covering these issues.

Vitaly Kimstach reported on contacts with the deputy director of Norilsk, who unfortunately had not been able to participate in the AMAP WG meeting. The Secretariat would follow-up

on these contacts and communicate the outcome to Finland and the acidification assessment lead.

The WG took note of this information. In connection with the support for experts to lead the assessment of atmospheric transport, levels and trends, Norway agreed to provide some support for experts from NILU, but requested that Sweden and Denmark might also support this work. Also, it was requested that the Danish modelling group at NERI support the assessment work concerning hemispheric transport modeling, to complement the regional modeling work under the EMEP MSC-W in Oslo.

David Stone (Canada) provided information about the group under the UN ECE that was working on human health impacts of LRTAP. This group had prepared a report on health effects of acidifying substances, and may be in the process of updating this. He agreed to provide relevant information on the activities of the UN ECE health group and their reports, etc to the acidification assessment group.

A question was raised on whether an ASG should be established to coordinate the work of the acidification and oil assessment groups.

Helgi Jensson reminded the WG of the importance of ensuring the necessary support for experts to participate actively in the assessment work, and asked the WG HoDs to address this on their return. Concerning the question regarding the ASG, he indicated that the WG should return to this later when the oil assessment had also been discussed.

9. The 2006 Assessment on Petroleum Hydrocarbons

John Calder (USA) presented the plans for the assessment of petroleum hydrocarbons in the Arctic, based on the Prospectus document (WG18/9/1) that had been developed during the assessment kick-off meeting in Washington DC in January 2004. He noted that the working title of the assessment was now the 'Oil and Gas Assessment (OGA)', and reviewed the scope of the assessment. The USA and Norway are the lead countries for the assessment, and Hein Rune Skjoldal (Norway) and Dennis Thurston (USA) have been appointed as co-leads of the OGA.

Yuri Tsatarov (Russia) complemented the USA on their work and apologized for the lack of Russian participation in this initiative so far. He informed that Russia is planning to become more active in the future. Discussions have been held with the governor of Yamal concerning the organization of the Oil Symposium in 2005 in Salekhard. He also nominated Alexander Solovjanov as a co-lead author for chapters 2 (industry) and 4 (sources and inputs), and Sergey Melnikov as a key national expert for chapter 5 (concentrations). All relevant Ministries of the Russian Federation have been contacted to obtain their support for participation in the OGA.

Helgi Jensson, referring to the nominations for lead authors noted that he had not made clear that in principle, in the past, it has been the practice that it is countries that can nominate chapter lead authors, but that the assessments are also produced by key experts and contributing experts. Lead authors have main drafting responsibility for the chapter and are expected to compile all relevant information and ensure that it is covered in a comprehensive and objective manner. Key experts take part in the writing of the chapter. Contributing experts may be asked to draft short texts, e.g. summarising results of their own work, or to submit data required for the assessment, etc. He added that if Permanent Participants wished to nominate a lead author, then this lead author should represent all six PPs, but he was not sure how this related to the Arctic Council rules of procedure. Consequently, he expressed his

preference that lead authors are nominated by countries rather than other organizations. PPs were however welcome to nominate key experts and contributing experts. Finally he noted the need for obtaining CVs for all nominated experts. These would be reviewed by the AMAP Board and Assessment Leads as part of the process by which the experts would be selected.

Norway volunteered to act as lead for chapter 5 (concentrations) but would welcome involvement of another country to co-lead this chapter. Similarly, they volunteered to co-lead chapter 7 (populations and habitats), covering the marine parts, but would need a co-lead to cover the terrestrial parts.

The USA welcomed the participation of Russia, and in particular their offer to co-lead chapter 2.

The representative of the AAC apologized that AAC had not been able to participate in the Washington meeting. He reported that AAC had been looking at chapter 3 (dealing with socio-economic issues) and, following communication with AMAP and SDWG, had nominated Mark Nutall as a (co-)lead for this chapter. Furthermore, he proposed that chapter 3 be supplemented by a separate chapter focusing on indigenous peoples concerns, and presented a proposal for an outline for this (sub-)chapter that had been developed by AAC (WG18/9/3). He informed that not all PPs have been consulted yet on this initiative.

Lars-Otto Reiersen also noted the letter received from the Chair of the SDWG (WG18/9/2), which indicated a positive response from SDWG representatives from AAC, Sweden and (informally) Canada and IIASA in participating in the OGA. SDWG expected to discuss this matter further during their meeting starting 3 May.

Canada responded that, as far as they were aware, Canada had not proposed any experts to SDWG, and possibly this information related to the AAC nomination of Mark Nutall (a British scientist working in Canada).

Helgi Jensson suggested that the proposals regarding chapter 3 should be passed to the assessment leads for their consideration, with the AAC representative participating in these discussions.

John Calder (USA) welcomed the input, stating that there is still time to incorporate new ideas, although he hoped that these could be addressed through a modification to the existing chapter 3 outline rather than splitting this into two separate chapters. He repeated the call for a lead for chapter 6 (biological effects).

Lars-Otto Reiersen proposed that a letter be sent out to call for additional nominations for lead authors and key and contributing experts, including the nominees CVs, and preferably an indication that these experts had the necessary 'support' to allow their participation in the proposed role (i.e. lead, key, or contributing expert). Responses to this call would be required by latest 24 May, and if possible before 3 May (to allow any related issues to be raised at the SAO meeting). If necessary, these proposals will be reviewed to ensure an appropriate balance (national, geographical, subject expertise, etc.).

The AAC representative, referring to the Arctic Council rules of procedure and precedents set during the ACIA process, requested further discussion on their proposals regarding nomination of experts and a decision regarding their proposal for a separate chapter.

Helgi Jensson pointed out several issues that needed to be clarified, including the financial responsibilities that may be associated with nominations of lead authors, the desire expressed by the meeting to have a holistic chapter on socio-economic issues rather than splitting this chapter, etc. He also noted that the assessment structure is still flexible and will be developed

further by the ASG – consequently the proposals could still be considered and no decision need be taken at the WG meeting.

The AAC representative indicated his agreement to follow the procedures as outlined, but recognizing the importance of the ability of PPs to lead an assessment chapter, he would reserve the option to raise this matter with the SAOs.

The WG agreed to postpone the discussion of the cooperation on the OGA with EPPR and SDWG pending the deliberations at their respective WG meetings, and to continue the discussions concerning CAFF involvement during the joint AMAP/CAFF meeting.

The WG agreed that the acidification and oil and gas assessments should each have their own assessment steering group, with John Calder (the ASG Chair) acting as chair of both groups. The lead(s) of the oil and gas assessment may participate in meetings of the acidification group or vice versa to ensure appropriate coordination as and when necessary.

10. National Implementation Plans and reporting to TDCs

AMAP National Implementation Plans (NIPs)

Simon Wilson provided an overview of the information received regarding AMAP NIPs (for the period since the completion of the AMAP phase II assessments, and for 2004-) in follow-up to the Actions arising from the 17th WG meeting. Sweden had delivered an updated NIP and also updated relevant information regarding Swedish projects in the AMAP Project Directory (PD); Denmark had provided a status report on projects conducted during 2002-2003, which also covered relevant Faroese projects (WG18/10/1); USA had provided a web-link to information on relevant US projects, but these were not incorporated into the AMAP PD. Most countries had therefore not yet delivered their updated NIPs. He also informed about the increasing number of project descriptions in the AMAP PD that had been registered as a result of the ENVINET PD cooperation that had been reported to the WG at the last meeting.

Yuri Tsaturov (Russia) reported on Roshydromet activities, including those associated with the routine monitoring network and special expeditions, which constituted the Russian AMAP NIP. Documentation describing these activities was provided to the Secretariat.

Gunnar Jonsson (Iceland) reported that an updated national NIP description was under preparation and would be provided to the Secretariat before the end of the meeting. New developments include installation of automated atmospheric mercury monitoring equipment.

Outi Mahonen (Finland) apologized that the Finnish NIP was not fully updated yet, but indicated that it would be ready within the next two months. The same applied to updating of the relevant Finnish projects in the AMAP PD. The NIP will essentially be the same as the previous NIP because it is based on existing long-term monitoring and research programmes. However, there will be some increase in activities relating atmospheric subprogramme. The measuring station for monitoring RITS at Pallas was rebuilt during 2001, and the continuous measurement programme has been extended to include in-situ measurement of methane, carbon monoxide and nitrogen dioxide. A new station was built in 2002 for measuring CO₂ and sensible and latent heat fluxes, with the eddy-covariance method. Other measurements include solar radiation components and an extensive set of meteorological parameters. In addition, screening of new contaminants (mainly EU Water Framework Directive's priority substances, such as BFR-compounds) in sediment cores and fish from one lake near Pallas is planned for 2004-2005.

Jonas Rodhe (Sweden) reported on its updated NIP. The Swedish EPA coordinates both chemical and biodiversity monitoring projects, and both components are described in the AMAP PD. Two new projects relevant to the acidification assessment have been implemented concerning deposition at high altitudes and landscape inventorisation. A programme for screening of new contaminants has been implemented at the shared station at Pallas.

Gunnar Futsæter (Norway) informed that the Norwegian entries in the AMAP PD had not yet been updated, but that this would be done. He noted the priorities in Norwegian monitoring and research on screening of new substances (e.g. BFRs in Arctic biota), and a focus on mercury.

Frits Steenhuisen (Netherlands) informed about plans to update Dutch project registrations in the AMAP PD following a Symposium to be held in May. He anticipated this work would be completed by the end of the summer.

An updated NIP for Canada was delivered after the meeting.

Lars-Otto Reiersen informed about the marine oil survey that was being planned to support the 2006 oil and gas assessment. This NCM funded activity is focused on the Nordic and Barents/Kara Sea areas. He indicated that if compatible work could be conducted by the USA and Canada in the western Arctic Seas, this would extend the value of this contribution to the assessment. Canada responded by informing about relevant work on PAHs in its northern Sea areas.

Simon Wilson repeated the call for all countries that had not yet done so to deliver their NIP descriptions to the Secretariat and to update the AMAP PD, in particular for projects relevant to the ongoing (acidification and oil and gas) assessments. The new NIP documents that had been provided to the Secretariat would be added to the documentation available from the AMAP website.

AMAP Thematic Data Centres (TDCs)

Simon Wilson reported on the activities at the AMAP TDCs.

A new contract has been established with NILU to act as the AMAP atmospheric TDC; the work at NILU will focus on supporting the acidification assessment, and routine acquisition of AMAP relevant data, including old data not yet reported to the TDC. In this context, the following priorities have been noted: US data, including data from joint US-Russian monitoring at Pevek (POPs) and Lavretiya (mercury), and additional data on mercury monitoring at Barrow, Alaska; monitoring data on acidification parameters from locations in Sweden not included under EMEP reporting, and additional data from Finland and Sweden concerning monitoring at Pallas, Finland; Canadian data, including data from joint Canadian-Russian monitoring at Dunai Island and Amderma that are not already in the database, POPs data from Alert (1998-), Kinngait/Cape Dorset (1994-1996), Dunai (1994-1995), mercury data from Amderma, and additional data on metals and acidification parameters from Alert. An updated report on AMAP data held at NILU will be produced in January 2005.

The AMAP marine TDC (ICES) is currently redeveloping its database systems; including implementing new systems to handle biological effects data and biological community data sets. Following criticism that the ICES reporting systems presented an obstacle to delivery of AMAP data to the TDC from some countries, in particular where data were in the hands of individual scientists and not available from national/institutional databases, the Secretariat has been discussing possible solutions with ICES. ICES are currently conducting tests on datasets delivered by AMAP to investigate the possibilities for a more flexible reporting

procedure, such as that available at the AMAP freshwater/terrestrial TDC. The outcome of these tests will be reported to the WG after the summer, at which time a new contract may be agreed with ICES for AMAP marine data handling, in particular data handling in support of the oil and gas assessment. Inventories of AMAP data currently held in the ICES databases have been provided to the Secretariat, and these will be circulated to AMAP HoDs after the meeting. The inventories can also be found at www.ices.dk/env/commissions/amap and the status of AMAP data submissions to ICES can be tracked via www.ices.dk/datacentre/accessions/StatusAMAP.htm.

The AMAP freshwater/terrestrial TDC (UAF) and the AMAP radioactivity TDC (NRPA) continue to operate based on internal funding and funding provided by Norway, respectively. Inventories of AMAP data holdings at UAF can be viewed from the TDC website (www.syncon.uaf.edu), these present metadata not the actual monitoring data. Monitoring data can also be downloaded from the TDC website, but only if they are not subject to data restrictions or if appropriate password access is given. The freshwater/terrestrial TDC is currently working on incorporating datasets arising from the PTS project.

Morten Sickel (Norway) reported that he was in the process of updating the AMAP radioactivity TDC website to include facilities for reporting data to the TDC.

Lars-Otto Reiersen informed the WG that, thanks to funding from some countries, TDC operations had been secured for 2004, but that similar funding would be required to support TDC operations in 2005. He repeated the call for countries to support the submission of relevant national data to the AMAP TDCs.

11. Cooperation with other AC Working Groups

CAFF

Lars-Otto Reiersen noted the ongoing cooperation with CAFF on production of the ACIA assessment, and coordination of the AMAP and CAFF monitoring activities, both of which are covered under separate agenda items, and will be discussed at the joint AMAP-CAFF meeting.

EPPR

Simon Wilson informed the WG about preliminary consultations between the AMAP Secretariat and EPPR representatives (Kjell Kolstad, Norway) regarding possible cooperation on GIS related activities of the respective WGs. EPPR were considering updating their 'circumpolar oil sensitivity maps', including the possibility of presenting these data using an interactive web-based mapping system. The Secretariat informed the EPPR representative about development of a pilot interactive mapping system that had already been undertaken in 2002 between AMAP (radioactivity TDC) and GRID-Arendal, to present information on sources of radioactivity in the Arctic (see http://maps.grida.no/amap_radioactivity/). It had been proposed that this system might be used as a basis for the proposed EPPR work, rather than development of a completely new system. This would have the advantages of avoiding duplication and waste of resources on development of already existing applications, and increased potential for data sharing between Arctic Council WGs. Following these discussions, EPPR had developed a modified proposal for cooperation on GIS related work that might also be considered by AMAP (WG18/11/1).

A suggestion has been made within EPPR that they should develop a map of known locations of radioactivity in the Arctic. In this connection, the EPPR representative was asked to inform the EPPR WG that AMAP had already developed such a map in an interactive (web-based)

GIS, based on the data compiled in the AMAP radioactivity TDC. Given the desire to avoid a situation in which the different WGs duplicate each others activities, it was considered that the existing AMAP map could meet the intended needs of the EPPR regarding mapping of radioactivity sources. If however, EPPR were to pursue the idea of including information on sensitive species/habitats, etc., compiled under their oil sensitivity mapping exercise in the existing interactive mapping system, this would have the added value of combining the information collected under AMAP and EPPR.

A small informal workshop of individuals involved in GIS work had been held immediately prior to the AMAP WG meeting (to take advantage of the joint AMAP-CAFF meeting arrangement); the EPPR representative also attended this meeting. Discussing the various proposals made in relation to GIS work, the workshop participants concluded that a pilot project to extend the existing AMAP interactive mapping development to incorporate other datasets, such as those compiled by EPPR, would be a feasible and cost effective approach that could easily be undertaken if supported by AMAP and the EPPR. This could then be used to demonstrate the potential for combining AC WG data in a common system, to share data and avoid duplication, etc. In addition, the group discussed how GIS work under different groups could be harmonized on a practical level to facilitate future cooperation.

The AMAP WG supported the continued involvement of the Secretariat in a pilot activity along the lines proposed above, on the condition that this activity could be accomplished without interfering with other priority work, and had minimal cost implications. If a follow-up workshop on GIS activities were to take place, the Secretariat should participate and other groups such as CAFF should also be encouraged to participate.

The WG further expressed its hope that the EPPR representative would convey the information regarding the existence of the map of radioactivity sources to the EPPR WG at their coming meeting, and that this would avoid duplication of work within different AC WGs.

PAME

Lars-Otto Reiersen summarized the AMAP involvement in the workshop on the development of an Arctic Marine Strategy (AMS); it was not entirely clear how the AMAP input at the workshop had been taken into account.

The AMS document (WG18/11/3) was perceived by the WG as a general framework, and as such it was recognized that it is not, in its present form, a detailed specification for future work. However, some delegations expressed their concern that inappropriate wording of certain texts in the AMS could lead to confusion in the future.

In particular, the WG noted that under section 5.0 of the latest version of the AMS document, the description of the AMAP activities did not correctly reflect the AMAP mandate according to current and past Ministerial decisions. The WG also questioned whether the texts currently included in section 5.0 of the AMS document correctly reflect the mandates of the other AC WGs.

The AMAP Chair noted that he had provided comments to PAME that also reflected these concerns, but that they had apparently not been fully taken into account.

The AMAP WG therefore requested that the WG Chair and Secretariat provide PAME with a suitable replacement text, for the description on AMAP responsibilities in section 5 of the AMS at least, based on the relevant texts in the AMAP Strategic Plan document.

SDWG

Lars-Otto Reiersen introduced WG18/11/4, a draft document prepared by the SDWG concerning capacity building components of Arctic Council projects. He noted that due to other priority work, the Secretariat had had little time to provide detailed comments in response to this draft, but that verbal comments had been provided to the SDWG Secretariat. In the main, these comments had reflected the fact that, although generally correct with respect to capacity building components in past AMAP projects, much of the content of the document was now outdated; many of the projects represented had been completed and new projects had been initiated.

ACAP

There is an ongoing cooperation between AMAP and ACAP connected to the development of a proposal for a BFR project. The issue of a fact sheet on sources and effects was under discussion and AMAP had contributed some material based on its 2002 assessments to ACAP as background for the project. However, it was also noted that work on sources of BFRs in the Arctic would be a major task; a thorough assessment of this issue was probably not possible.

The AMAP WG discussed the advantages of incorporating agreed texts in the fact sheets, but also recognized that the intention now is to produce something different from the previous fact sheets prepared by AMAP for ACAP, which were mainly to produce a record of AMAP results advice and related Ministerial decisions. Simon Wilson noted from his experience in preparing some of these materials that the agreed texts in AMAP assessment reports did not really lend themselves to direct incorporation in fact sheets.

Vitaly Kimstach noted the comments of the Russian SAO calling for follow-up measures to be included in fact sheets, and that this should be a joint work between AMAP and ACAP.

The WG agreed on the need to rewrite the existing AMAP fact sheets to update the information contained. While they agreed that it would be no problem to incorporate agreed texts, they recognized that this was probably not the optimal approach for producing the envisaged products, and HoDs would need to be involved to approve newly produced fact sheet texts.

12. International cooperation (e.g. UNEP & UNECE) and implementation of special projects (e.g. PTS, mercury & PCB)

UNEP

Lars-Otto Reiersen informed the WG about the involvement of AMAP experts and the Secretariat in the development of the UNEP Global POPs Monitoring Programme to support the Stockholm Convention.

David Stone (Canada) outlined the process by which the monitoring programme is expected to provide data for the first review of the Convention, which is due to take place four-years after entry into force. The first meeting of the Conference of Parties (COP) will discuss how this will be done.

Referring to the outline for the Global POPs Monitoring Programme, Simon Wilson noted that this no longer included human blood monitoring, although at the workshop to develop the programme, this had been accepted as an alternative to breast milk monitoring. He also noted the programme has a strong focus on atmospheric monitoring at background stations. However, a number of the Arctic stations that had been monitoring POPs in the past have

now ceased these activities (Barrow, Amderma, Dunai, etc.). Consequently, over a large part of the Arctic, the current monitoring network was no longer in-place to meet the Stockholm Convention monitoring objectives in this respect.

The WG agreed that it was important for AMAP to track this work under UNEP, and also to respond concerning the omission of human blood monitoring as an acceptable alternative to breast milk in the programme outline.

UN ECE

David Stone (Canada) outlined the programme of work under the UN ECE LRTAP Convention to review the 'effectiveness and sufficiency' of the POPs Protocol, and the Heavy Metals Protocol. He proposed a redraft of the material in the Draft AMAP Progress report to the SAOs (WG18/3/1-rev 1, see agenda item 3) to more correctly reflect the status of this work. In summary, the first review of the POPs Protocol is due in December 2005, so a final draft must be ready by June 2005; an annotated outline of the review report will be discussed at the second POPs Task Force meeting, the first week of June 2004.

Simon Wilson reported on the UN ECE invitation that AMAP participate in the preparation of this review.

The USA asked for clarification as to whether AMAP input to this process would be based on published AMAP reports.

David Stone (Canada) responded that the review would use any sources of information available, but the major source would be available and published regional assessment reports, such as the recently published AMAP POPs report. He added that the group responsible for the review was very aware of the limitations of the work that could be accomplished in this first review process.

Cindy de Wit (Sweden) noted that the special issue of Science of the Total Environment (based largely on the AMAP and CACAR assessment work) might provide an appropriate source of additional information as this also contains new results from studies completed after the AMAP POPs report had been published.

Helgi Jensson confirmed the WG support for AMAP involvement in the POPs Protocol review process, on the understanding that this did not imply a work commitment without additional support (financial or other) being made available to do this work.

David Stone (Canada) confirmed that this was the case, and that the same process as that which led to AMAP providing input to the UNEP-Chemicals Regionally-Based assessment of the Arctic was envisaged.

PTS Project

Vitaly Kimstach informed the WG about the status of the PTS project, which is due to be completed in 2004. Following initial project results, additional targeted surveys among some indigenous families, which include monitoring of indoor and occupational environments as well as food and blood monitoring, have been conducted. This additional work has delayed the project completion by about 6-months, but this has been agreed with GEF. The final project report is under preparation and due to be finalised during the summer. He also informed the WG about the plans for communicating the results of the PTS project, including additional project products, production of a short film, and arrangement of a series of workshops in the regions where the project was implemented.

A proposal for a follow-up project, initiated by the Russian government and RAIPON, is currently under discussion with GEF.

Lena and Siberian River Project

Vitaly Kimstach reported on the Lena Basin project, which was successfully completed in June 2003. The project report is available in hard-copy and electronic versions. In follow-up to this project, the Russian scientific community has initiated two further activities: the *Lena basin partnership* and the *Lena and other Siberian rivers* project. The proposals for both of these (linked) projects are currently under consideration; the latter is submitted as a proposed project for GEF support.

Helgi Jensson noted that Russia will present these proposed initiatives at the SAO meeting, possibly together with a request for funding to support these projects, and suggested that HoDs may wish to bring these projects, which are relevant to the work of AMAP, to the attention of their SAOs in advance of the meeting.

The WG approved the involvement of the AMAP Secretariat in these activities, in a similar manner to the earlier involvement of the Secretariat in the organization and coordination of the PTS project and the Lena Basin project.

13. The Financial Situation

Lars-Otto Reiersen reported that, since 1990, the AMAP Secretariat had annually received ca. 2 million NOK support from Norway to operate the Secretariat. The Secretariat operating budget in 2004 was ca. 3 million NOK. The shortfall had been covered in 2003 by additional Secretariat funding from some countries, and through taking on projects, such as the coordination of the PTS and PCB projects, that included finances for Secretariat work.

Funding for core activities such as operation of TDCs has been assured for 2004 but will be needed to continue operations in 2005.

However, since the PTS-project is now coming to a close and Phase 3 of the PCB project requires less coordinating work by the Secretariat, existing project financing is reduced. The Lena project may constitute a new activity that can help fund the Secretariat work; however this will take some time to establish.

Consequently, if financial support from Norway is not increased, and without support from other countries, there is a potential shortfall in Secretariat funding for 2004 and 2005.

Helgi Jensson noted the vital role played by the Secretariat in supporting the work of AMAP. He therefore asked the WG to take the message concerning the financial shortfall for Secretariat operations and core activities home, and to do their best to find funding that could ensure the continued operations of the Secretariat.

14. AMAP Workplan for 2004-2005

Lars-Otto Reiersen presented a tentative workplan including the ongoing assessments of acidification and oil and gas; follow-up of ACIA; the possible need for an Update on Issues of Concern for submission to Ministers in 2006; Work to update the AMAP monitoring programme and review the organization of AMAP assessment expert groups; the procedure for finalization and endorsement of the AMAP Strategic Plan; the possible preparation of AMAP fact sheets (a work item on the workplan for 2003 that had not been completed); and arrangement of the Oil Symposium in 2005.

In connection with the update the AMAP monitoring programme and review the organization of AMAP assessment expert groups, Simon Wilson noted the need to follow-up on a number of documents from the expert groups, and comments received in relation to the Strategic Plan, that concern AMAP implementation as part of the work in advance of the next AMAP WG meeting. The follow-up to ACIA will also be relevant in this context.

David Stone (Canada) reminded the WG that although we had committed to deliver a Strategic Plan to the SAOs, the question of whether they needed to endorse it was unclear. The Secretariat agreed to look into whether the previous Strategic Plan had been endorsed by the SAOs.

Denmark proposed that a possible update on mercury and/or new POPs be kept in the workplan. Radioactivity was another issue that may need to be kept under review.

Norway asked whether it was the intention to produce fact sheets during the autumn for release after the Ministerial meeting. In particular, interest was expressed in a fact sheet on brominated flame retardants that might be connected with the ACAP initiative to prepare a fact sheet/information package on BFRs in time for the 2004 Ministerial meeting (see discussions under Agenda item 11). A fact sheet summarizing Arctic information on BFRs may also be useful in connection with the consideration by the UN ECE of whether these substances should be added under the LRTAP POPs Protocol, but this would probably not be needed before the end of this year.

Keith Finlayson (UNEP) expressed the interest of UNEP in being involved in preparing fact sheets and 'Vital Graphics', etc. He proposed that communications initiatives should be discussed between UNEP and the AMAP Secretariat at some point.

David Stone (Canada) indicated his understanding that only the WG have to approve AMAP fact sheets; SAOs/Ministers do not need to approve them. This has been the situation in the past. However, SAOs and Ministers should be informed that AMAP intends to prepare such fact sheets, including a fact sheet on BFRs and possible also other 'new POPs', but it is not necessary to commit to a timeline for this at the present time.

In the case of producing a BRF fact sheet in connection with the ACAP work, the AMAP WG agreed that it may be possible to do this, based largely on agreed texts, before the Ministerial meeting in autumn 2004; however there are a number of other priorities that will need to be taken into account.

The AMAP Chair and Secretariat agreed to prepare a more detailed work plan for the period 2004-2005 based on the discussions and decisions from the WG meeting. This will be included in the WG meeting Minutes (see Annex xxx) and made available on the AMAP website.

15. AMAP report to the Ministerial Meeting 2004

A Progress report to the SAOs based on the progress report presented under agenda item 3 (WG18/3/1-rev 1), and the amendments noted, will be prepared for submission to the SAOs at their meeting in May.

16. Election of AMAP Chair and Vice-Chair

After discussions between the HoDs, Helgi Jensson reported the following:

He proposed that the election of the next WG Chair be delayed until the autumn (sometime prior to the Ministerial meeting). The new Chair will be elected by correspondence or if necessary a special meeting of HoDs, in time to inform the SAOs/Ministers at their meeting in November.

Because of the way AMAP has worked in the past, the ASG is chaired by the AMAP WG Vice-Chair. This ensures the connection between the AMAP WG and the assessment process. Due to the delay in the election of the new Chair, and in order that when the current Chair resigns the WG will have in place both a new Chair and a Vice-Chair, he further proposed a new procedure whereby a second Vice-Chair would be elected for the period until the new Chair takes his place.

He proposed that John Calder (USA) be elected as the second Vice-Chair of the AMAP WG, by which he would also become an active member of the AMAP (WG) Board.

This proposal was seconded by Canada.

John Calder was elected as a second AMAP Vice-Chair and accepted this position.

Helgi Jensson informed the WG that he would be in contact with them again regarding the election of the Chair in due time before the November Ministerial meeting

17. The next AMAP WG meeting

Referring to the previous discussions, Lars-Otto Reiersen noted that if an AMAP HoDs or Extended Board meeting was required, it might be possible to hold this in connection with the ACIA Symposium. Consequently, the next full WG meeting should take place in 2005 before the Oil Symposium in June.

Provisionally, therefore, the AMAP WG agreed that their next meeting should be scheduled for March 2005.

The AMAP Secretariat informed that it would welcome any invitations to host the meeting.

18. Any other business

Lars-Otto Reiersen informed the WG about the role of AMAP in contributing to the UNEP/EEA report '*Arctic environment: European perspectives*'. He stressed that, although much of the report was based on material published in AMAP assessment reports, the responsibility for authoring and publishing this report was with UNEP/EEA. The report has been received with interest in Brussels, where its purpose was to raise awareness of Arctic issues linked to activities in Europe.

On behalf of the WG, David Stone (Canada) thanked Helgi Jensson for his work chairing the AMAP WG. Although his period as Chair will formally continue until the autumn, this will be his last WG meeting as Chair.

19. End of the meeting

Helgi Jensson thanked Norway for hosting the meeting and closed the meeting at 18:15 on 16 May.

Annex 1. List of Participants at the 18th Working Group Meeting of the Arctic Monitoring and Assessment Programme and 3rd Joint AMAP-CAFF meeting, Oslo, Norway. 14-16 April, 2004.

Country/ Organization	Name	Address	E-mail/Phone/Fax	Attending: AMAP and/or CAFF meetings
Canada	<i>McCormick, Kevin</i>	Environment Canada Northern Conservation Division 5204-50th Ave. Yellowknife, X1A 1E2, Canada	Tel.: +1 867 669 4760 Fax: +1 867 873 8185 e-mail: kevin.mccormick@ec.gc.ca	CAFF
Canada	<i>Stone, David</i>	Indian and Northern Affairs Les Terrasses de la Chaudiere North Tower Ottawa K1A 0H4 Ontario Canada	Tel.: +1 819 997 0045 Fax: +1 819 953 9066 e-mail: stoned@inac.gc.ca	AMAP
Canada	<i>Masterton, Joan</i>	Environment Canada Meteorological Service of Canada 4905 Dufferin Street Downsview, Ontario, M3H 5T4 Canada	Tel.: +1 416 739 4321 Fax: +1 416 739 4882 e-mail: joan.masterton@ec.gc.ca	
Denmark	<i>Moseholm, Lars</i>	Department of Arctic Environment Frederiksborgvej 399 P.O. Box 358 DK-4000 Roskilde Denmark	Tel.: +45 46 30 12 00 Fax: +45 46 30 11 14 e-mail: lmo@dmu.dk	AMAP
Faroe Islands	<i>Dam, Maria</i>	Food and Environmental Agency Falkavegur 6 FO - 100 Torshavn Faroe Islands	Tel.: +298 35 64 75 Fax: +298 35 64 51 e-mail: mariad@hfs.fo	AMAP

Faroe Islands	<i>Fosaa, Anna Maria</i>	Faroe Museum of Natural History Oebesartrød FO-100 Tórshavn Faroe Islands	Tel.: +298 35 83 06 Fax: +298 35 23 01 e-mail: ANMARFOS@ngs.fo	CAFF
Greenland	<i>Hansen, Anette</i>	Greenland Homerule Dept. of Environment and Nature P.O. Box 1614 DK 3900 Nuuk, Greenland	Tel.: +299 34 67 09 Fax: +299 32 52 86 e-mail: anha@gh.jl	AMAP
Greenland	<i>Jensen, Marianne</i>	Greenland Homerule Dept. of Environment and Nature P.O. Box 1614 DK 3900 Nuuk, Greenland	Tel.: +299 34 67 15 Fax: +299 32 52 86 e-mail: MARJ@gh.jl	CAFF
Finland	<i>Jaakkola, Esko</i>	CAFF Vice Chair Ministry of the Environment P.O. Box 380 FIN-00380 Helsinki, Finland	Tel.: +358 9 160 39371 Fax: +358 9 160 39364 e-mail: esko.jaakkola@ymparisto.fi	CAFF
Finland	<i>Mahonen, Outi</i>	Ministry of the Environment C/o Lapland Regional Env. Centre P.O. Box 8060 96101 Rovaniemi, Finland	Tel.: +358 16 329 4444 Fax: +358 16 310 340 e-mail: outi.mahonen@ymparisto.fi	AMAP
Iceland	<i>Jensson, Helgi</i>	Environment and Food Agency of Iceland P.O. Box 8080 IS-128 Reykjavik Iceland	Tel.: +354 591 2030 Fax: +354 591 2020 e-mail: helgij@ust.is	AMAP
Iceland	<i>Jonsson, Gunnar Stein</i>	Environment and Food Agency of Iceland P.O. Box 8080 IS-128 Reykjavik Iceland	Tel.: +354 591 2000 Fax: +354 591 2020 e-mail: gunnar@ust.is	AMAP

Iceland	<i>Petersen, Ævar</i>	Icelandic Institute of Natural History Hlemmur 3 P.O. Box 5320 125 Reykjavik, Iceland	Tel.: +354 590 0500 Fax: +354 590 0595 e-mail: aevan@ni.is	CAFF
Norway	<i>Brodersen, Christopher</i>	The Norwegian Polar Institute Polarmiljøseneteret N-9296 Tromsø Norway	Tel.: +47 77 75 06 50 Fax: +47 77 75 05 01 e-mail: brodersen@npolar.no	AMAP/ CAFF
Norway	<i>Christophersen, Øyvind</i>	Norwegian Pollution Control Authority P.O.Box 8100 Dep. N-0032 Oslo Norway	Tel.: +47 22 57 37 24 Fax: +47 22 67 67 06 e-mail: oyvind.christophersen@sft.no	CAFF/ AMAP
Norway	<i>Futsæter, Gunnar</i>	Norwegian Pollution Control Authority P.O.Box 8100 Dep. N-0032 Oslo Norway	Tel.: +47 22 57 34 49 Fax: +47 22 67 67 06 e-mail: gunnar.futsater@sft.no	AMAP
Norway	<i>Huberth Hansen, Jan Petter</i>	Senior Adviser Directorate for Nature Management N-7485 Trondheim, Norway	Tel.: +47 73 58 08 29 Fax: +47 73 58 05 01 e-mail: jan-p.hubert-hansen@dirnat.no	CAFF
Norway	<i>Lein, Berit</i>	Directorate for Nature Management Tungasletta 2 N-7005 Trondheim, Norway	Tel.: +47 73 58 05 00 Fax: +47 73 58 05 01 e-mail: berit.lein@dirnat.no	CAFF
Norway	<i>Løbersli, Else</i>	Senior Adviser Directorate for Nature Management Tungasletta 2 N-7485 Trondheim, Norway	Tel.: +47 73 58 06 33 Fax: +47 73 58 05 01 e-mail: else.lobersli@dirnat.no	CAFF
Norway	<i>Pettersen, Marit</i>	Norwegian Pollution Control Authority P.O.Box 8100 Dep. N-0032 Oslo Norway		AMAP/ CAFF

Norway	<i>Prestrud, Pål</i>	Cicero P. O. Box 1129 Blindern N-0318 Oslo, Norway	Tel.: +47 22 85 87 53 Fax: +47 22 85 87 51 e-mail: pal.prestrud@cicero.uio.no	CAFF
Norway	<i>Rosland, Audun</i>	Norwegian Pollution Control Authority P.O.Box 8100 Dep. N-0032 Oslo Norway	Tel.: +47 22 57 35 47 Fax: +47 22 67 67 06 e-mail: audun.rosland@sft.no	AMAP/ CAFF
Norway	<i>Skjoldal, Hein Rune</i>	Institute of Marine Research P.O.Box 1870 Nordnes N-5817 Bergen Norway	Tel.: +47 55 23 85 00/....69 46 Fax: +47 55 23 85 31 e-mail: hein.rune.skjodal@imr.no	AMAP
Norway	<i>Syversten, Erik</i>	Norwegian Pollution Control Authority P.O.Box 8100 Dep. N-0032 Oslo Norway	Tel.: +47 22 57 36 53 Fax: +47 22 67 67 06 e-mail:	AMAP
Norway	<i>Thoresen, Håvard</i>	Norwegian Ministry of the Environment P.O.Box 8013 Dep. N-0030 Oslo Norway	Tel.: +47 22 24 59 73 Fax: +47 22 24 27 55 e-mail: hto@md.dep.no	AMAP/ CAFF
Norway	<i>Østern, Gabrielle</i>	Norwegian Ministry of the Environment P.O.Box 8013 Dep. N-0030 Oslo Norway		AMAP/ CAFF
Norway	<i>Sickel, Morten</i>	Norwegian Radiation Protection Authority Grini Næringspark 13 N-1342 Østerås Norway	Tel.: +47 67 16 26 08 Fax: +47 67 14 54 44 e-mail: Morten.Sickel@nrpa.no	AMAP

Russia	<i>Tsaturon, Yuri</i>	Russian Federal Service for Hydrometeorology and Environmental Monitoring Novovagankovsky Street 12 123995 Moscow Russia	Tel.: + 7 095 252 2429 Fax: + 7 095 255 24 00 e-mail: tsaturon@mecom.ru	AMAP
Russia	<i>Shaposhnikov, Vladislav</i>	Embassy of the Russian Federation in Norway Drammensveien 74 0244 Oslo Norway	Tel.: +47 22 55 32 78 Fax.: +47 22 55 70 00	AMAP
Russia	<i>Petrenko, Yuri</i>	Embassy of the Russian Federation in Norway Drammensveien 74 0244 Oslo Norway	Tel.: +47 22 55 32 78 Fax.: +47 22 55 70 00	AMAP
Russia	<i>Solovjanov, Alexander</i>	GAZPROM Head of Department	Tel.: +7 095 717 62 83 Fax: +7 095 719 44 21 e-mail: solovyanov@gazprom.ru	AMAP
Russia	<i>Sychev, Yuri</i>	Polar Foundation	Tel.: +7 916 124 72 55 +7 095 292 71 43 Fax.: +7 095 292 76 50 e-mail: polarf@meteo.ru	AMAP
Sweden	<i>De Wit, Cynthia</i>	Institute of Applied Environmental Research (ITM) S-106 91 Stockholm Sweden	Tel.: +46 8 674 7180 Fax: +46 8 674 76 37 e-mail: cynthia.de.wit@itm.su.se	AMAP
Sweden	<i>Rodhe, Jonas</i>	Swedish Environmental Protection Agency Bleholmsterrassen 36 S-106 48 Stockholm Sweden	Tel.: + 46 8 69 81 307 Fax: + 46 8 69 81 584 e-mail: jonas.rodhe@naturvardsverket.se	AMAP

Sweden	<i>Sohlberg, Sune</i>	Swedish Environmental Protection Agency Blekholmsterrassen 36 S-106 48 Stockholm Sweden	Tel.: +46 8 698 13 36 Fax: +46 8 698 14 02 e-mail: Sune.Sohlberg@naturvardsverket.se	CAFF
USA	<i>Calder, John</i>	1315 East West Highway Room 11362 mail Code R/ARC Silver Spring, Maryland 20910, USA	Tel.: +1 301 713 2518 Fax: +1 301 713 2519 e-mail: john.calder@noaa.gov	AMAP
USA	<i>Thurston, Dennis</i>	U.S. Dept. of the Interior Minerals Management Service 949 E #6th Ave., Room 308 Anchorage, AK 99508-4363 USA	Tel.: +1 907 271 6545 Fax: +1 907 271 6565 e-mail: dennis.Thurston@mms.gov	AMAP
USA	<i>Wohl, Kent</i>	CAFF Chair U.S. Fish & Wildlife Service 1011 E Tudor Rd. Anchorage, Alaska, USA	Tel.: +1 907 786 3503 Fax: +1 907 786 3641 e-mail: kent_wohl@fws.gov	CAFF
Arctic Athabaskan Council	<i>Dickson, Cindy</i>	Arctic Athabaskan Council Council of Yukon First Nations 11 Nisutlin Drive Whitehorse, Yukon Y1A 3S4 Canada	Tel.: +1 867 393 9214 Fax: +1 867 633 6397 e-mail: cdickson@cyfn.net	AMAP/ CAFF
Arctic Athabaskan Council	<i>Roddick, David</i>	Arctic Athabaskan Council Council of Yukon First Nations 11 Nisutlin Drive Whitehorse, Yukon Y1A 3S4 Canada	Tel.: +1 867 393 9237 Fax: +1 867 668 6577 e-mail: droddick@cyfn.net	AMAP/ CAFF
GCI	<i>Fleener, Craig</i>	Gwich'in Council International 283 East 2nd Avenue Fort Yukon 99740-0283 Alaska, USA	Tel.: +907 662 2667 Fax: +907 662 3047 e-mail: cfleener@catg.org	AMAP/ CAFF

Netherlands	<i>Steenhuisen, Frits</i>	Arctic Centre University of Groningen P.O.Box 716 NL-9700 AS Groningen The Netherland	Tel.: +31 503 63 60 56 Fax: +31 503 63 49 00 e-mail: frits@let.rug.nl	AMAP
ACIA	<i>Corell, Bob</i>	American Meteorology Society (AMS) c/o 1401 Oyster Cove Dr. Grasonville, MD 21638 USA	Tel.: +1 443 994 3643 Fax: +1 410 827 3958 e-mail: global@dmv.com	AMAP/ CAFF
IASC	<i>Rogne, Odd</i>	International Arctic Science Committee P.O. Box 5156 Majorstua N-0302 Oslo Norway	Tel.: +47 22 95 99 00 Fax: +47 22 95 99 01 e-mail: iasc@iasc.no	AMAP
IPS	<i>Crump, John</i>	Arctic Council Indigenous Peoples' Secretariat Strandgade 91, 4.sal P.O. Box 2151 DK - 1016 Copenhagen K Denmark	Tel.: +45 32 83 37 94 Fax: +45 32 83 37 91 e-mail: jpc@ghsdk.dk	AMAP/ CAFF
IPS	<i>Retter, Gunn-Britt</i>	Arctic Council Indigenous People's Secretariat Strandgade 91, 4th floor 1016 Copenhagen K Danmark	Tel.: +45 32 83 37 95 Fax: +45 32 83 37 91 e-mail: gbr@ghsdk.dk	CAFF
IPS	<i>Yefimenko, Alona</i>	Indigenous People's Secretariat Strandgade 91, 4th floor 1016 Copenhagen K Danmark	Tel.: +45 32 83 37 96 Fax: +45 32 83 37 91 e-mail: ay@ghsdk.dk	AMAP

UNEP/GRID-Arendal	<i>Finlayson, Keith</i>	Polar Programme Manager, United Nations Environment Programme Centre, GRID-Arendal Longum Park, Service Box 706 N-4808 Arendal, Norway	Tel: +47 370 35713 Fax: +47 37 03 50 50 Email: keith.finlayson@grida.no	AMAP/ CAFF
WCMC	<i>Zockler, Christoph</i>	Senior Advisor Biodiversity UNEP-WCMC 219 Huntingdon Road Cambridge, CB3 0DL, UK	Tel: +44 1223 277314 Fax: + 441223 277136 Email: christoph.zockler@unep-wcmc.org	CAFF
WWF	<i>Smith, Samantha</i>	Kristian Augusts gate 7a P. Box 6784, St. Olavs plass 0130 Oslo, Norway	Tel.: +47 22 03 65 00 Fax: +47 22 20 06 00 e-mail: ssmith@wwf.no	AMAP
WWF	<i>Norris, Stefan</i>	Head of Conservation WWF International Arctic Program Oslo, Norway	Tel: +47-22 03 65 02 Fax: +47-22 20 06 66 Mobile phone: +47 - 95 07 23 02 Email: snorris@wwf.no	CAFF
CAFF	<i>Gudmundsdóttir, Anna</i>	CAFF Sekretariat Hafnarstræti 97 600 Akureyri, Iceland	Tel.: +354 462 3350 Fax: +354 462 3390 e-mail: anna@caff.is	CAFF
CAFF	<i>Muir, Magdalena</i>	CAFF Executive Secretary Hafnarstræti 97 600 Akureyri Iceland	Tel.: +354 461 33 52 Fax: +354 462 33 90 e-mail: magdalena.muir@caff.is	CAFF
EPPR	<i>Kolstad, Kjell</i>	Norwegian Pollution Control Authority The Polar Environmental Centre N-9296 Tromsø Norway	Tel.: +47 77 75 04 80 Fax: +47 77 75 04 81 e-mail: kjell.kolstad@sft.no	AMAP

AMAP	<i>Kimstach, Vitaly</i>	Arctic Monitoring and Assessment Programme P.O. Box 8100 Dep. N-0032 Oslo Norway	Tel.: +47 23 24 16 34 Fax: +47 22 67 67 06 e-mail: vitaly.kimstach@amap.no	AMAP
AMAP	<i>Reiersen, Lars-Otto</i>	Arctic Monitoring and Assessment Programme P.O. Box 8100 Dep. N-0032 Oslo Norway	Tel.: +47 23 24 16 32 Fax: +47 22 67 67 06 e-mail: lars-otto.reiersen@amap.no	AMAP
AMAP	<i>Stafne, Galina</i>	Arctic Monitoring and Assessment Programme P.O. Box 8100 Dep. N-0032 Oslo Norway	Tel.: +47 23 24 16 35 Fax: +47 22 67 67 06 e-mail: galsta@amap.no	AMAP
AMAP	<i>Wilson, Simon</i>	Arctic Monitoring and Assessment Programme P.O. Box 8100 Dep. N-0032 Oslo Norway	Tel.: +31 10 466 2989 Fax: +31 10 4662989 e-mail: s.wilson@inter.nl.net	AMAP

Annex 2. Draft agenda for the 18th AMAP WG meeting.

- 1 Opening.**
- 2 Approval of the Agenda.**
- 3 Progress report from the Chair and the Secretariat.**
- 4 Statements from Observers.**
- 5 The AMAP Strategic Plan 2004+.**
- 6 The ACIA process (a short introduction before the joint meeting with CAFF).**
- 7 The coordination of the AMAP monitoring programme with CAFF and international organizations.**
- 8 The 2006 Acidification and Arctic Haze assessment.**
- 9 The 2006 Assessment on Petroleum Hydrocarbons.**
- 10 National Implementation Plans and reporting to TDCs.**
- 11 Cooperation with other AC Working Groups.**
- 12 International cooperation (e.g. UNEP & UNECE) and implementation of special projects (e.g. PTS, mercury & PCB).**
- 13 The Financial situation.**
- 14 Tentative Workplan for 2004-2006.**
- 15 AMAP report to the Ministerial Meeting 2004.**
- 16 Election of AMAP Chair and Vice-Chair.**
- 17 The next AMAP WG meeting.**
- 18 Any other business.**
- 19 End of meeting.**

Annex 3. List of Documents for the 18th AMAP WG meeting.

AMAP WG18/2/1 – rev 2	Draft Agenda and timetable for the 18th AMAP WG meeting, Oslo, Norway, 14 – 16 April, 2004.
AMAP WG18/2/2 – rev 1	Draft Time Schedule and Draft Agenda for the Third Joint AMAP and CAFF Working Group Meeting
AMAP WG18/2/3	Provisional List of Documents for the AMAP WG 18 meeting and the 3 rd Joint AMAP/CAFF WG meeting
AMAP WG18/2/4	Provisional List of Participants for the AMAP WG 18 meeting and the 3 rd Joint AMAP/CAFF WG meeting
AMAP WG18/3/1 – rev 1	Progress report from the AMAP WG Chair and the Secretariat
AMAP WG18/3/Info-1	Draft Minutes of the October 2003 SAO meeting
AMAPWG18/5/1	Draft AMAP Strategy Plan 2004+ (February 2004 version)
AMAP WG18/6/1 – rev 1	Budget for the ACIA Symposium
AMAP WG18/6/2	Pre-order of ACIA reports as of 31 March 2004
AMAP WG18/6/3	Initial views on continuation of ACIA beyond 2004 (prepared by G. Weller)
AMAP WG18/6/4	Priority Research for ACIA II (input from IASC)
AMAP WG18/6/5	Memo from ACIA AIT regarding ongoing revisions in response to comments.
AMAP WG18/7/1	Terrestrial Circum-Arctic Environmental Observatories Network (CEON): Project proposal
AMAP WG18/7/2 *	Executive Summary for CAFF's Circumpolar Biodiversity Monitoring Program Framework Document (prepared by CAFF)
AMAP WG18/7/3 *	Draft discussion paper on the coordinated monitoring efforts of CAFF and AMAP (prepared by CAFF)
AMAPWG18/8/1	Minutes of kick-off meeting 'AMAP Assessment on Acidifying Pollutants, Arctic Haze and Acidification in the Arctic'
AMAPWG18/9/1	Prospectus for the 2006 Arctic Council Assessment of Potential Impacts of Oil and Gas Activities in the Arctic
AMAPWG18/9/2 *	Letter from Chair of SDWG concerning petroleum hydrocarbons assessment.
AMAPWG18/9/3	Petroleum hydrocarbons assessment - Chapter 3 outline proposal.
AMAP WG18/10/1	Report on Danish AMAP-projects 2002 and 2003
AMAP WG18/11/1	Interactive maps and environmental information from Arctic Council Programmes on the Web
AMAP WG18/11/2 *	Letter from PAME concerning Arctic Marine Strategy Development.
AMAP WG18/11/3	Arctic Council Arctic Marine Strategic Plan (2nd

	Draft – March 2, 2004
AMAP WG18/11/4 *	SDWG Capacity Building of the Arctic Council – Overview (Draft for review by 27 February)
AMAP WG18/12/1 *	Letter from Arctic Council Chair concerning the International Polar Year
Un-numbered *	AMAP 18th WG Meeting: Requests to WG members (distributed by e-mail, 11 February 2004)
Un-numbered *	Washington Post Article “Poisons from Afar ...”

* *distributed document not numbered*

Documents relevant the 3rd Joint AMAP/CAFF WG Meeting

AMAP/CAFF 3/2/1 (AMAPWG18/2/2 – rev 1)	Draft Time Schedule and Draft Agenda for the Third Joint AMAP and CAFF Working Group Meeting
AMAP/CAFF 3/2/2 (AMAP WG18/2/4)	Provisional List of Participants for the AMAP WG 18 meeting and the 3 rd Joint AMAP/CAFF WG meeting
AMAP/CAFF 3/3/1 * (AMAP WG18/6/1 *)	Budget for the ACIA Symposium
AMAP/CAFF 3/3/2 (AMAP WG18/6/2)	Pre-order of ACIA reports as of 31 March 2004
AMAP/CAFF 3/3/3 (AMAP WG18/6/3)	Initial views on a proposal for continuation of ACIA beyond 2004 (G. Weller)
AMAP/CAFF 3/3/4 (AMAP WG18/6/4)	Priority Research for ACIA II (input from IASC)
AMAP/CAFF 3/3/5 (AMAP WG18/6/5)	Memo from ACIA AIT regarding ongoing revisions in response to comments.
Un-numbered *	Minutes of Joint meeting between AMAP and CAFF (Stockholm, 31 August 2001)
Un-numbered *	Minutes of the Second Joint meeting between AMAP and CAFF regarding ACIA (Trondheim, September 4 2000)
AMAP/CAFF 3/4/2 * (AMAP WG18/7/2 *)	Executive Summary for CAFF’s Circumpolar Biodiversity Monitoring Program Framework Document (prepared by CAFF)
AMAP/CAFF 3/4/3 * (AMAP WG18/7/3 *)	Draft discussion paper on the coordinated monitoring efforts of CAFF and AMAP (prepared by CAFF)
Un-numbered *	AMAP Trends and Effects Programme 1998-2003: Section B – Trend Monitoring Programme

* *distributed document not numbered*

Annex 4. List of Actions arising from the 18th AMAP WG meeting.

Agenda Item	Action	For	By
5	Finalise AMAP Strategic Plan 2004+ for submissions to SAOs/Ministers	AMAP Secretariat	1 September 2004
6	Inform SAOs of plans for ACIA sign-off and follow-up	AMAP Chair	May 2004 (SAO meeting)
6 (see Annex 7)	Send letters to AMAP/CAFF Secretariats confirming their sign-off of the ACIA scientific and overview documents in writing	ACIA Lead authors	1 July 2004
6 (see Annex 7)	Send letters to SAOs confirming their agreement that the reports be passed to the SAOs/Ministers	AMAP HoDs and CAFF National Representatives	20 August 2004
6 (see Annex 7)	Communicate ACIA scientific and overview reports to SAOs/Ministers with letter of transmittal	AMAP and CAFF Chairs	30 September 2004
6 (see Annex 7)	Provide AMAP Secretariat with binding pre-order for numbers of copies of the ACIA scientific and overview reports that they will require (based on a price of 70 USD and 10 USD for the scientific and overview reports, respectively).	AMAP HoDs, PPs, Observers, Others	24 May 2004
6 (see Annex 7)	Prepare contract between AMAP Secretariat and Cambridge University Press for production of ACIA reports (addressing issues relating to copyright, publication of translated versions of the reports; publication of material in scientific journals, etc.)	AMAP Secretariat	End-May 2004
6 (see Annex 7)	Prepare a concise list reflecting their views on priorities for monitoring and research as follow-up to ACIA (as input to possible workshop and for use by AMAP and CAFF in development of their workplans).	ACIA ASC and lead authors	a.s.a.p
6 (see Annex 7)	Plan a workshop (for early September) to discuss follow-up to ACIA recommendations concerning monitoring and research, etc.	AMAP and CAFF Secretariats	-
6 (see Annex 7)	Promote work at the national and regional level to ensure that the momentum generated by the ACIA process is maintained.	AMAP HoDs	1 September 2004
7 (see Annex 7)	Draft a discussion paper for consideration for submission to SAOs	Gunnar Stein Jonsson and Ævar	1 June 2004

	to outline some of the possibilities for harmonization of AMAP and CAFF monitoring activities.	Petersen	
7	Participate in CEON development	AMAP Secretariat	-
8	Follow-up on contacts with representatives of Norilsk and communicate the outcome to Finland and the acidification assessment lead	AMAP Secretariat (Vitaly Kimstach)	1 September 2004
9	Send letter to call for additional nominations for lead authors and key and contributing experts for the OGA, including the nominees CVs, etc.	AMAP Chair	Letter sent on 19 April 2004
9	Respond to this call for additional nominations for lead authors and key and contributing experts for the OGA, including the nominees CVs, etc.	AMAP HoDs, PPs, Observers, Others	3 May 2004
10	Countries that had not yet done so to deliver their NIP descriptions to the Secretariat and to update the AMAP PD, in particular for projects relevant to the ongoing (acidification and oil and gas) assessments.	AMAP HoDs	1 August 2004
10	Add new NIP documents to the AMAP website	AMAP Secretariat (Simon Wilson)	1 September 2004
10	Inform AMAP WG about procedures for submission of data to AMAP marine TDC	AMAP Secretariat (Simon Wilson)	October 2004
10	Distribute information to countries regarding data submissions to AMAP TDCs	AMAP Secretariat (Simon Wilson)	1 September 2004
11	Rewrite AMAP fact sheets to update the information contained	AMAP Secretariat	Autumn 2004
13	Investigate possibilities for funding to support AMAP Secretariat, operation of TDCs and other core activities, AMAP projects, etc.	AMAP HoDs	-
15	Prepare AMAP Progress report to the SAOs	AMAP Board and Secretariat	May 2004
17	Inform the AMAP Secretariat about possibilities for hosting next WG meeting	AMAP HoDs, Others	1 November 2004

Annex 5. OGA: Chapter content and lead responsibilities.

1. Introduction

Background and introduction to the assessment, emphasizing recent and future developments, and the need to assess environmental, social, and economic consequences including the sustainable development implications of oil and gas activities in the Arctic. This would include a summary of and reference to past relevant assessments and studies by the Arctic Council and its working groups.

2. Oil and gas activities in the Arctic (Lead countries: USA and Russia)

The assessment of oil and gas activities in the Arctic will consider the history of activities, ongoing activities, planned activities for the next ten years, and include a qualitative projection of activities “on the horizon”, for example gas hydrate exploration and research. This review will provide the context for socio-economic and environmental issues that will be discussed in subsequent chapters.

The assessment will include discussion of both historical and current oil and gas activities in the Arctic, including exploration, production, and transportation in Russia, Canada, USA, Greenland, Faroe Islands, and Norway.

To evaluate future activities, this chapter will bring together information on known petroleum or gas basins in the Arctic and national plans for leasing, exploration, and development. This information, along with an evaluation of current economic, environmental, and policy conditions, will enable an assessment of priority areas for future activities. Other factors, e.g., technology development, climate change effects, will be considered if possible. Assessment of future activities will need to be determined for specific sub-regions or on the basis of national sovereignty. See Appendix A for more information on this chapter.

3. Social and economic consequences of oil and gas activities in the Arctic (Lead country: USA)

This chapter will assess socioeconomic, human health, and sustainable development implications of oil and gas activities and the possible impact on lifestyles of indigenous and non-indigenous residents of the Arctic. The assessment will have to consider regional and national differences. It is intended to identify a set of socio-economic “indicators” that can be used to produce a semi-quantitative result. The assessment process will include evaluation of the early history of oil and gas activities in the Arctic. In particular, the assessment will include a review of how local governments acted in response to oil and gas development and how development was managed on a local basis. It will consider impacts and benefits at the local to national/regional level at all stages of the life cycle of an oil or gas field. It will also look at the impacts and benefits to individuals in areas such as employment, quality of life, energy needs, occupational health, behavioral health, etc. If possible, the assessment will consider economic “progressions”, for example when mining in a remote area becomes possible because of the onset of production of oil or gas nearby. See Appendix B for more information on this chapter.

4. Sources and inputs of petroleum hydrocarbons, PAHs, and other relevant contaminants in the Arctic (Lead countries: Russia and ?)

The chapter will give an overview of sources of inputs of contaminants related to oil and gas activities in the Arctic. This will include contaminants from discharges, emissions and spills

from petroleum exploration, production, and transportation, as well as other sources from human activities and long-range transport and should include naturally occurring sources. The substances considered would include all relevant contaminants from oil and gas development and use, i.e. petroleum hydrocarbons, petroleum related PAHs, oil related substances in produced water (e.g. phenols), and production chemicals, including radionuclides in drill cuttings. Information should be given on source characteristics and approaches to identify and distinguish different sources.

The chapter should also give an overview of the amounts of inputs of petroleum hydrocarbons, PAHs, and other relevant substances to the different regions of the Arctic.

5. Concentrations and fate of petroleum hydrocarbons and PAHs and other relevant contaminants in the Arctic (Lead country: Norway)

This chapter will give an updated description of concentrations of petroleum hydrocarbons, PAHs, and other relevant substances in different compartments (sediments, soils, water, and biota) of the Arctic terrestrial, freshwater and marine environments. This will be based on existing information from national monitoring, and research activities. The chapter will also describe transport pathways and fates of hydrocarbons, PAHs, etc. in the Arctic environment, including oil-ice interactions and physical-chemical weathering processes. Information on temporal trends will be included based upon results from long-term monitoring and sediment cores where such information exists. The spatial and temporal patterns in concentration of the contaminants will be examined in relation to sources and inputs.

6. Effects of pollutants and disturbance on organisms (individual level) and effects of pollutants on human health (Lead country: ?)

This chapter will consist of five main parts:

- a. Biological uptake, accumulation, and metabolism of petroleum hydrocarbons, PAHs, and other relevant substances in various organisms in the Arctic.
- b. Overview of the various types of biological effects from oil, PAHs, other substances, to include discussion of lethal and sub-lethal effects including those from radionuclides or other hazards from discharged drill cuttings or fluids.
- c. Overview of effects of physical disturbance, including noise, on Arctic animals, e.g. mammals and birds
- d. Summary of information on the sensitivity and vulnerability to oil and petroleum activities at the individual level of selected Arctic species or groups of organisms of high sensitivity and/or high importance to humans (birds, mammals, fish, vegetation, plankton, and benthos)
- e. Human health aspects related to pollution

The chapter will include results and experiences from accidental oil spills as well as laboratory and field studies. The emphasis will be to summarize new information.

7. Environmental status and impacts on populations, habitats and ecosystems in the Arctic (Lead countries: Norway and ?)

Building on the information on biological effects in the previous chapter, and the description of current and expected oil and gas activities in chapter 2, this chapter will address the environmental quality status and impacts or threats by pollution, disturbance or physical

structures related to petroleum activities on populations, habitats and ecosystems in the Arctic.

- a. The chapter will provide a brief overview of ecosystems and habitats based on geographic divisions, such as river systems and drainage basins, and large marine ecosystems. This will include information on species, populations and habitats that are vulnerable and/or of special conservation concern in relation to pollution and petroleum activities. Information on the environmental quality status of habitats and ecosystems will be summarized from case studies.
- b. Information will also be summarized from environmental assessments and impact analyses and risk assessments that have been carried out in relation to petroleum development activities. This will include experience from research and monitoring of impacts from existing developments in the Arctic.
- c. Information on impacts on habitats, populations and ecosystems after accidental oil spills will be summarized
- d. The information will be used to make an assessment of the environmental impacts of oil and gas activities including the full life cycle of developments, and the potential impact from accidental spills and other factors related to petroleum development
- e. The assessment will include potential impacts on populations of harvested species (including subsistence harvest) (feeding into chapter 3)
- f. The current status as well as a realistic future scenario (based on chapter 2 and ACIA) will be assessed

8. Conclusions and recommendations

Information from the preceding chapters will be brought together and a set of key findings and conclusions will be developed. Based on these, a set of recommendations to Arctic Council Ministers will be presented as suggestions for improving the implementation of oil and gas activities in the Arctic and for enhancing the benefits of such activities to Arctic residents.

Annex 6. Draft AMAP Workplan for 2004 and 2005.

- Complete the delivery of the ACIA, including the preparation of the ACIA overview and scientific reports, arrangement of the *ACIA International Scientific Symposium on Climate Change in the Arctic* in Reykjavik, Iceland in November 2004, and other ACIA communication initiatives.
- Perform the 2006 Oil and Gas Assessment.
- Perform the 2006 Acidification Assessment.
- Continue ongoing monitoring activities, including (long-term) temporal trend studies, and monitoring of spatial trends, human health, and biological effects in the Arctic, with special emphasis on the collection of information on new contaminants, assessment of the combined effects of climate (and UV) and contaminants, emerging issues, and improved information on sources of contaminants (follow-up of 2002 assessment).
- Take part in arrangement of the 2nd International Conference on Radioactivity in the Environment and the 6th International Conference on Radioactivity in the Arctic and the Antarctic that will be held in Nice in October 2005.
- Arrange an International Symposium on Oil and Gas in the Arctic, in Salekhard, Russia August 2005.
- Translate and print the ACIA Overview report in other languages (e.g., Russian, Saami, French, German and Dutch).
- Follow-up the ACIA work on monitoring and assessment, and special climate related projects.
- Prepare updated reports on Issues on concern, e.g. related to POPs and Mercury.
- Continue to review the AMAP Monitoring Programme and update the AMAP Guidelines for Monitoring and Assessments to reflect the requests from Ministers and latest recommendations from science (concerning methodology, etc.).
- Produce fact sheets reflecting AMAPs assessment.
- Support ACAP projects, in particular those on PCBs, mercury, obsolete pesticides, dioxins and furans, and any additional projects that are related to issues addressed by AMAP, and the development of AMAP/ACAP joint fact sheets.
- Continue a close cooperation with international bodies to avoid duplicating work and to coordinate work programmes in an efficient and cost effective manner.
- Participate in planning and implementation of the IPY.
- Participate in relevant international meetings and symposia to communicate AMAP results and information on ongoing activities.
- Develop harmonized monitoring activities jointly with CAFF.
- Coordinate GIS related activities with EPPR and other WGs.
- Improve the financial support for the AMAP work.

Annex 7. Minutes of 3rd Joint AMAP-CAFF Meeting, Oslo, Norway, 15-16 April 2004.

1. Welcome statement

Helgi Jensson (AMAP Chair) opened the meeting together with Kent Wohl (CAFF Chair) who would chair the first part of the joint meeting.

Berit Lein (Norway) welcomed participants to the third Joint AMAP-CAFF meeting.

2. Adoption of the Agenda

The meeting agenda was adopted without changes.

A proposal to discuss the ACIA communication strategy at the end of the meeting was agreed.

3. ACIA: Sign off of the ACIA Scientific and Overview Documents

Bob Corell (ACIA ASC Chair) reviewed the status of the ACIA assessment in the light of the following four questions:

- What have we learned
- How did we get here
- How do we do outreach/communication
- Where do we go from here

He provided a comprehensive overview of the ACIA process and the main results of the ACIA scientific assessment.

The assessment has been produced by some 250-300 individuals over the past 4 years, in a process that integrates scientific knowledge and indigenous insight.

The scientific report comprises 18 chapters (some 1800 pages) and is likely to be published in two volumes. The 'overview' report emphasises 10 key findings.

He reflected that we now have a much better basis for further evaluating climate/contaminant linkages, though there is a need for more ground measurements of UV. Interpretation with respect to measures for 'adaptation' remains a major gap, and integration issues will be more important in the future as 'climate' is linked to 'globalisation'.

Sign-off process

Several views were expressed on the process by which AMAP and CAFF would 'sign-off' the ACIA assessment reports

Referring to the presentation made by Bob Corell, and comments regarding final sign-off of the scientific and overview documents by scientists when outstanding copy editing and graphical production/layout, etc., has been completed, John Calder (USA) pointed out the it would be inappropriate for AMAP/CAFF to sign-off the documents before the scientists had done so.

The AMAP Chair suggested that it might be useful to consider the scientific and overview reports separately. He reminded that by 'sign-off' this was essentially the confirmation by the people involved in the production of the scientific assessment reports that they stand behind the documents.

Canada supported this view: the scientific reports are produced by the scientists, and peer reviewed. Referring to past AMAP scientific reports it was noted that AMAP do not ‘adopt’ or ‘endorse’ their scientific reports, but rather ‘preface’ them with a text that reflects the process by which they are produced. The process described by Bob Corell was that the scientists ‘sign-off’ the reports. All that is required of AMAP/CAFF is that they are informed of this, and are satisfied that they have fulfilled the request to produce the ACIA assessment as mandated, and accordingly can pass the documents to the Ministers for their consideration. John Calder confirmed that this view was consistent with his earlier comments.

The AMAP Chair also agreed with this view, noting that this applied to both the scientific and overview reports, and that the only difference was that the ‘transferral letter’ for the overview report would need to be slightly different to also reflect that AMAP and CAFF are satisfied that the overview report correctly reflects the content of the scientific report. He asked the meeting to consider whether this was best done by a ‘letter of transferral’ of a ‘Preface’ to be introduced into the respective reports.

Yuri Tsaturov (Russia) informed that, assuming comments received have been handled in an appropriate manner, Russia fully supported publication of the reports.

Canada and Norway supported the idea of a Preface, together with a letter as well if necessary, so that this description of the ownership of the reports was incorporated in the reports and thus always followed the documents.

The AMAP Chair asked if this was acceptable to IASC. The IASC representative responded that this was acceptable, and if a preface along these lines was drafted, IASC would be included. IASC would also submit a letter to the Chair of the SAOs reflecting on the cooperation and indicating their satisfaction with the process that had led to the production of the ACIA reports, that it had been implemented in an open and transparent manner consistent with accepted scientific practices, etc.

In conclusion, the representatives at the joint meeting agreed that:

1. AMAP/CAFF/IASC would await letters from lead authors indicating their ‘sign-off’ of the final (pre-print) versions of the documents.
2. On receipt of notification of this ‘sign-off’ by the authors, AMAP HoDs and CAFF national representatives will submit letters confirming their agreement that the reports be passed to the SAOs/Ministers with an appropriate letter of transmittal/preface.
3. A drafting group (including representatives from Canada, Norway, the USA, AMAP Secretariat and IASC) was convened to draft the text for the transmittal letter/preface. The resulting draft was discussed at the meeting, and revised according to comments made; the agreed final draft is attached as Appendix 1. When incorporating this text as a preface in the ACIA reports, the sentence in the second paragraph that reads “*AMAP and CAFF have received acknowledgement by the ACIA lead authors that the final scientific document reflects their expert view, and that the Overview Document is consistent with the Scientific Document.*” should be introduced unchanged. The preceding paragraph may be omitted (or modified as appropriate) to avoid duplication of information regarding the background to the ACIA process that may already be covered in the introductory section(s) of the reports.
4. At their meeting in Nuuk, the SAOs would be informed of how this matter was being handled, and presented with the text of the letter/preface that was prepared at the AMAP/CAFF meeting

Decision on publisher

Lars-Otto Reiersen (AMAP Executive Secretary) provided an overview of the process for selection of the publisher for the ACIA reports, which included a tender to bid based on preliminary estimates of national orders for copies of the reports. Responses to this tender to bid had been discussed by the ACIA assessment integration team (AIT), who had recommended that the bid by Cambridge University Press (CUP) be accepted; however, the final decision on this matter rested with the AMAP and CAFF WGs.

He further noted that the preliminary orders received from countries and organizations were probably low with respect to the actual demand that would be expected. The CUP bid offered a lower price for the overview report than had been used in developing preliminary estimates, but both the scientific and overview report price would be lower if more copies were produced. The bid also included provision for marketing and commercial sale of the reports by CUP (at a higher retail cost), for which CUP are requesting first rights to international publication of the reports (in English language).

Under the proposed arrangement, copyright for the reports remains with AMAP/CAFF; electronic versions of the reports can be made available via the web or on CD-ROM; there are no restrictions concerning translation and distribution of the reports into other languages. Some authors of the scientific report have requested the opportunity to publish their chapters in the scientific journals, and this issue needs to be discussed with CUP.

Subject to the AMAP/CAFF WGs agreeing on this proposal, a binding order for numbers of copies of the reports would need to be agreed by the end of May; shipment of the reports would be additional (with countries/organizations responsible for paying for shipment from the printer to a suitable national distribution point). Given the expected demand, and the lower cost of production of the overview report, it was further proposed that by marginally increasing the cost to countries for their pre-orders, a stock of the reports could be maintained at the AMAP/CAFF/IASC Secretariats, e.g. for use in communicating the ACIA results in international fora, etc. – alternatively, any such additional demand would need to be met by paying for extra copies at the much higher commercial price.

In conclusion, the representatives at the joint meeting agreed:

1. To accept the offer from CUP to publish, print and market the ACIA scientific and overview reports.
2. To provide to the AMAP Secretariat by 24 May updated information on numbers of copies of the scientific and overview reports that they will require; the pre-orders will be based on a price of 70 USD and 10 USD for the scientific and overview reports, respectively. These will constitute binding orders, for which financing will be required in time to meet payments to the publisher according to contractual agreements. Shipment costs are additional.
3. That a contract should be agreed between AMAP Secretariat and CUP by end-May; this contract should clearly address issues relating to copyright, publication of translated versions of the reports; publication of material in scientific journals, etc.
4. That a stockpile of reports be maintained by the AMAP and CAFF Secretariats based on the increased price of the pre-ordered copies of the overview report relative to the production price.

ACIA Symposium

Pal Prestrud (ACIA ASC Vice-Chair) presented information on the arrangements for the ACIA Symposium to be held in Reykjavik, 9-12 November. The symposium is expected to

attract some 300 participants with a conference fee of 300 USD. Additional finances will be required and AMAP HoDs and CAFF national representatives were encouraged to investigate possibilities within their countries to support the Symposium financially.

The meeting participants were informed that the decision to reschedule the Ministerial meeting a week later, and the fact that an IPCC meeting had been arranged the same week as the ACIA Symposium would have unfortunate consequences, for example for those wishing to attend both the Symposium and the Ministerial meeting. However, following discussions, it was decided that, since the ACIA Symposium had already been moved once and registrations were now underway, it would not be appropriate to change the dates once again.

The meeting participants called for more active advertisement of this event by the ACIA Secretariat; also, given the low number of abstracts submitted so far, the ACIA Secretariat were requested to take direct contact with the scientists involved in the assessment to recruit their assistance in ensuring that good abstracts are submitted. In this connection the deadline for submission of abstracts should be extended from 15 April to 1 June.

Follow-up to ACIA

The CAFF Chair invited comments on possible follow-up to the ACIA. The main ACIA products delivered to the Ministers will be the scientific and overview reports, however additional input might be considered, such as a discussion paper with action items, or a proposal for a workshop to develop such a paper.

Issues raised during the discussions included the following:

- The delivery of the scientific and overview reports in 2004 marks the conclusion of ACIA. There is however also an implicit commitment to communicate the messages and information from ACIA, as appropriate, after the delivery of the reports. The ACIA Secretariat will formally close in 2004, and although UAF and others have plans to 'host' the process if it continues, these are not agreed or financed.
- There was strong interest and agreement among the meeting participants in the need for an ACIA follow-up activity. This should be arranged such that the current ACIA process is terminated in a fitting manner, and then linked to proposals for the future that focus on appropriate activities, ensure continuity, and maintain the momentum generated by the ACIA.
- Notwithstanding the fact that policy issues are being addressed by the SAOs, WWF suggested that AMAP and CAFF might consider providing input on proposals for adaptive strategies to help Arctic ecosystems cope with the impacts of climate change as part of an open process for ACIA follow-up. GCI further supported this proposal, and that an ACIA follow-up should help answer questions on the viability of indigenous communities to adapt; furthermore, that the follow-up should also take up mitigation issues.
- Linkage with the IPCC process would be important to address in ACIA follow-up.
- Regarding the possible frequency for repeating the ACIA assessment, it was considered that major ACIA assessments might be warranted on a decadal scale; however the need for more continuous regional assessments was apparent. The need to focus on knowledge gaps, particularly those noted in the ACIA scientific assessment was also highlighted. Strengths of the ACIA assessment (such as linking science and traditional knowledge) should also form a focus of future work.

- Several delegations supported the idea of a (scientific) workshop to further develop proposals for the future, and possibly also a task group to facilitate this. The general consensus was that such a workshop should be convened before the Ministerial meeting (e.g. in early-autumn); if a task group were convened this should address elements related to the need for a long-term commitment to climate monitoring. The goal would be to prepare a 'way forward' paper to present to Ministers in November. This paper could assist Ministers in preparing guidance to AMAP and CAFF on ACIA follow-up during the next 2 years, in order not to lose the ACIA momentum. Such a paper would therefore need to be finalised at least a month before the Ministerial meeting. IASC indicated their willingness to participate in such a process.

Responding to the proposals by WWF, the AMAP Chair reiterated that, following the 2003 SAO meeting, all deliberations by AMAP and CAFF on policy issues had been put on hold, so this suggestion could only be pursued if the WGs were so instructed by the SAOs. Although recommendations regarding research and monitoring needs might be considered by the WGs, issues concerning measures to protect nature, assist indigenous communities, interact with IPCC, etc. were all currently outside the scope of the WGs mandate.

Following discussions, it was agreed that John Calder would prepare a discussion paper outlining possible plans for a workshop to examine ACIA recommendations concerning scientific/research needs, and an activity to elaborate a paper to assist the SAOs to formulate their proposals on ACIA follow-up in their report to Ministers.

Considering this discussion paper, several delegations noted that, although it was appropriate to consider possible recommendations that might be addressed to AMAP and CAFF, there was a need to be careful not to conflict with the SAOs work on policy.

Concerning the suggestion to establish a task group to develop an ACIA follow-up strategy and/or help the WGs coordinate their work, some delegations expressed reservations about the advisability of establishing a separate structure, such as a task group to do this. Ministers and SAOs are sensitive to suggestions to set up new groups and should decide for themselves on the necessary mechanisms to develop a strategy to follow-up on the ACIA.

It was further noted that the ASC would, in September, be going through the scientific assessment recommendations to extract material (on research needs) to feed into the Arctic Council Ministerial process.

Consequently, it was proposed that the envisaged workshop should not duplicate this product, but rather produce more general recommendations on the way forward. The ASC should be requested to provide AMAP and CAFF with their views on priorities for monitoring and research, as input to a workshop if appropriate. Such a workshop should also take account of the results of other bodies (under IASC, AOSB, etc.) that are considering research follow-up. The AMAP/CAFF mechanism could then digest all such input before preparing its submission to the SAOs, so as to be consistent with both the ASC proposals and other science-driven proposals. After appropriate review by the WGs, these proposals could then be brought to the attention of the SAOs. The ultimate objective is to ensure that climate change issues are not only reflected in the Ministerial Declaration, but that clear guidance is provided for continuation of the work.

The purpose of this workshop should not be confused with a possible (workshop) activity that might be warranted after the Ministerial meeting to follow-up on ACIA more generally.

The CAFF Chair noted that the CAFF biodiversity monitoring proposals anticipate a follow-up to ACIA. The AMAP Chair also noted that, following the Ministers consideration of the ACIA, the texts in the AMAP Strategic Plan will be further developed.

In conclusion, the representatives at the joint meeting agreed that:

- The ASC (and ACIA lead authors) be requested to prepare a concise list reflecting their views on priorities for monitoring and research as follow-up to ACIA. This should be a priority task, and it should be feasible to do this well in advance of the workshop.
- The ASC material should be used by AMAP and CAFF in the development of their workplan's for the coming 1-2 years, which could be refined later, as appropriate.
- A workshop should be proposed, provisionally scheduled for early-September, to consider proposals from the ASC and other relevant bodies (IASC, AOSB, etc.) and develop a 'monitoring and research agenda'. The workshop should prepare a proposal for a 'way forward' regarding scientific work to follow-up on the ACIA.
- The proposed workshop should be considered by the ACIA Secretariat and ASC, bearing in mind that there is no funding allocated for such an arrangement.
- The AMAP and CAFF WGs should review the product of the workshop and use it as a basis for preparing a proposal for a possible text to be included in the SAOs report to the Ministers.
- WG representatives should promote work at the national and regional level to ensure that the momentum generated by the ACIA process is maintained.
- SAOs should be informed of these plans at their meeting in May.

Communication Strategy

Representatives of Canada encouraged Bob Corell to discuss with ICC possible input to a communications workshop in Iqaluit (in connection with the next ArcticNet meeting), as an opportunity to better promote the indigenous communications process.

Representatives of Norway and Denmark indicated their interest in producing a film based on the ACIA results that could be completed in time to show at the Symposium. Guidance on how this might be achieved was requested.

In conclusion, the representatives at the joint meeting agreed that:

- The ACIA Secretariat should be requested to take care of appropriate communication initiatives prior to the Ministerial meeting.
- All ACIA communication products must reflect and be consistent with the content of the ACIA reports – otherwise they could not be represented as ACIA products.

4. Harmonization of AMAP & CAFF Monitoring Initiatives.

The CAFF Chair stressed that the objective was to discuss possible collaboration between AMAP and CAFF on monitoring issues (e.g. in relation to climate change monitoring), to identify links and commonalities (e.g. in the species monitored). Other possible areas for cooperation included data management.

Ævar Petersen (Iceland) presented the plans for the CAFF Biodiversity Monitoring Programme (CBMP). The CBMP is largely based on existing networks concerned with studying various key species or groups of species (e.g. seabirds, polar bears, Arctic char, etc.).

Lars-Otto Reiersen (AMAP Executive Secretary) presented the AMAP Trends and Effects Programme, focussing on the key monitoring species and key areas where the aim is to conduct integrated atmospheric-terrestrial/freshwater-human health monitoring (and where relevant marine monitoring). He noted that considerable monitoring is also conducted outside of these key areas, and the AMAP programme aims to integrate monitoring data with results from relevant research and special studies (dietary surveys, modelling work, etc.). He also noted the QA/QC and data handling components of the AMAP programmes. The AMAP programme is essentially based on national programmes, and linked to international programmes where relevant.

He further noted that the AMAP Project Directory had been adopted in the past by CAFF as a resource that could be used to compile information on projects that might be of interest to CAFF. It currently lists some 70 projects associated with biodiversity studies (see <http://www.amap.no/Resources/ProjectDirectory.htm>).

The AMAP Chair drew attention to the difference in the requests concerning 'harmonization' of the AMAP and CAFF monitoring activities that had been given to AMAP and CAFF, respectively, at the Barrow Ministerial meeting; which was potentially a source of confusion. He continued by reviewing the discussions that had taken place in the AMAP WG meeting the previous day on the 'harmonization' of the AMAP and CAFF monitoring activities. A particular problem raised was that of attributing changes in biodiversity to causes in situations where multiple stresses are operating. On a practical level, some countries had suggested that the best way of harmonizing the AMAP and CAFF monitoring activities was to coordinate these at the national level (as is already done to some extent in some countries). If studies are conducted in the same area at the same time, it may be possible to optimize the work, but connecting results may be more difficult. One suggestion was to initiate some pilot studies to try to see what might be feasible.

The Canadian representatives observed that information needs are largely issue driven making it difficult to combine different monitoring objectives. Typically the integration occurs at a national level, as is the case in Canada.

The CAFF Chair proposed that the AMAP and CAFF representatives from Iceland might be asked to draft a discussion paper (3-4 pages), by 1 June, for consideration for submission to SAOs to outline some of the possibilities for harmonization of monitoring activities.

5. The 2006 Oil and Gas assessment.

John Calder (USA) presented the plans for the assessment of the 'Oil and Gas Assessment (OGA)', based on the Prospectus document that had been developed during the assessment kick-off meeting in Washington DC in January 2004. He reviewed the scope and timeline for the assessment which is being led by Hein Rune Skjoldal (Norway) and Dennis Thurston (USA). He indicated that the immediate objectives are to agree the prospectus, to complete the nomination of experts, and to establish an organizing committee for the proposed oil and gas symposium.

A letter will be sent out to call for additional nominations for lead authors and key and contributing experts, including the nominees CVs, and preferably an indication that these experts had the necessary 'support' to allow their participation in the proposed role (i.e. lead, key, or contributing expert). Responses to this call would be required by latest 24 May. If necessary, these proposals will be reviewed to ensure an appropriate balance (national, geographical, subject expertise, etc.). In particular, there is a need to identify a lead for chapter 6 (Effects of pollutants and disturbance on organisms (individual level) and effects of

pollutants on human health), and a co-lead for the terrestrial aspects of Chapter 7 (Environmental status and impacts on populations, habitats and ecosystems in the Arctic).

Lars-Otto Reiersen (AMAP Executive Secretary) requested that Kjell Kolstad (Norway) communicate this information also to the EPPR WG meeting that will take place the following week.

The CAFF Chair recalled that CAFF had contributed to the EPPR oil sensitivity mapping project, which may contribute to chapter 6; he further noted that the incoming CAFF Chair would take up the call for nominations for authors for chapters 6 and 7.

The IPS representative raised the question of representation on the OGA steering group. He was informed that this would include representatives of the permanent participants, but that the exact composition of the group had not yet been decided.

The AAC representative informed the meeting about their proposals regarding chapter 3, and related nomination of a lead author, and the ensuing discussions at the AMAP WG meeting. He would pursue this up in the assessment steering group in line with the AMAP procedures, and if necessary with the SAOs for clarification of whether the permanent participants can lead a chapter of the OGA.

6. Information on ongoing and planned activities of relevance for AMAP and CAFF

Lars-Otto Reiersen (AMAP Executive Secretary) provided a brief overview of the IPY initiatives.

The representative of Russia reported on Roshydromet and WMO initiatives in preparation of initial outline science plan to be implemented as contribution to the IPY.

It was agreed that AMAP and CAFF should prepare a joint statement to the SAOs on the relevance of IPY to the work of AMAP and CAFF, to be drafted by the Executive Secretaries of AMAP and CAFF.

Simon Wilson (AMAP Secretariat) informed the meeting about the initiative between AMAP and EPPR to cooperate on GIS related activities. Although no CAFF representatives had joined the small informal workshop held to discuss GIS related work that was held just prior to the AMAP and CAFF meetings, involvement of CAFF in the future would be most welcome.

7. Any other business.

Since ACIA communications issues had been covered under agenda item 3, there was no other business.

8. End of the meeting.

Kent Wohl (CAFF Chair) closed the Third Joint AMAP/CAFF meeting.

Appendix 1:

Text for use in a **transmittal letter** conveying the ACIA documents to the SAOs, and the **preface** to both the ACIA Scientific Document and the ACIA Overview Document. (Fifth DRAFT April 17, 2004)

The Arctic Council Ministers have repeatedly expressed their interest in issues related to changes in climate and UV radiation in the Arctic. In the Alta Declaration of 1997, the Ministers requested that AMAP continue monitoring and assessment to include effects of increased UV radiation due to stratospheric ozone depletion and of climate change on Arctic ecosystems. In their Iqaliut Declaration of 1998, the Ministers requested that CAFF conduct monitoring and assessment in collaboration with AMAP on the effects of climate change and UV radiation on Arctic ecosystems. AMAP and CAFF established an Assessment Steering Committee (ASC) to develop an approach to meeting these mandates. Independently, in 1998 the IASC proposed that it join with the Arctic Council to develop a scientific assessment of consequences of climate variability and change, and the effects of increased UV radiation in the Arctic. During 1999, AMAP, CAFF and IASC agreed to develop an implementation plan for completion of an Arctic Climate Impact Assessment (ACIA) and organized a workshop in early 2000 to provide broad input to this plan. In the Barrow Declaration of October 2000, the Arctic Council Ministers approved the goals and objectives contained in the ACIA Implementation Plan. The Implementation Plan called for expansion of the ASC and assigned to it the responsibility for preparing a Scientific Document and a Synthesis (now called Overview) Document, and described the process for identifying the authors who prepared these documents. The expanded ASC included representatives from AMAP, CAFF, IASC, Permanent Participants and the group of lead authors for the scientific document. The Implementation Plan required that the Scientific Document be composed of detailed scientific and technical information describing current understanding of climate change, climate variability and increased UV radiation and their consequences over the entire Arctic region, and that it be prepared in an open way and contains the best available scientific information. Further, the Implementation Plan required that the Scientific Document should be reviewed by independent scientists not involved in its preparation. The Implementation Plan also required that the Overview Document be prepared by the ASC in concert with a scientific editor and all lead authors of the scientific document, and that it too be independently reviewed.

The AMAP and CAFF Working Groups, and IASC have received periodic status reports during the preparation of the documents and have had the opportunity to read draft versions of both the Scientific and Overview Documents. We concur that the process described in the ACIA Implementation Plan has been followed, resulting in the two documents that were prepared by a large group of scientific and indigenous experts, who are solely responsible for the content of both documents. AMAP and CAFF have received acknowledgement by the ACIA lead authors that the final scientific document reflects their expert view, and that the Overview Document is consistent with the Scientific Document. AMAP and CAFF and IASC appreciate the excellent effort of the ASC and authors, especially the lead authors and Chair of the ASC who contributed substantial time over a lengthy period, and are pleased to present these reports [to the Ministers].

Signed,

[AMAP Chair

CAFF Chair

IASC President]

List of Recent AMAP Publications:

AMAP Assessment Report	Arctic Pollution 2002
AMAP Report 2002:1	Minutes of the 16 th AMAP WG Meeting, Thorshavn, Faroe Islands, 30 April-3 May, 2002
AMAP Report 2002:2	The Second AMAP International Symposium on Environmental Pollution of the Arctic, Rovaniemi, Finland. October 1-4, 2002. Extended Abstracts
AMAP Assessment Report	AMAP Assessment 2002: Human Health in the Arctic
AMAP Assessment Report	AMAP Assessment 2002: The Influence of Global Change on Contaminant Pathways to, within, and from the Arctic
AMAP Report 2002:3-11	Arctic Council Action Plan (ACAP). Multilateral Co-operative Project on the Phase-out of PCB Use, and Management of PCB-Contaminated Wastes in the Russian Federation. Phase 2: Feasibility Study. Supportive Documentation. (as listed below):
AMAP Report 2002:3	Technical Report for Activity 1. Assessment of Relevant Regulation and Requirements
AMAP Report 2002:4	Technical Report for Activity 2. Design of PCB and Storage Schemes
AMAP Report 2002:5	Technical Report for Activity 3. Input to a "Least Cost" Overall Russian PCB Phase-out Strategy
AMAP Report 2002:6	Technical Report for Activity 4. Selection of Alternatives for Replacement of PCB, with Acceptable Environmental Characteristics and Feasible Production
AMAP Report 2002:7	Technical Report for Activity 5. Construction/Retrofit of a Prototype Facility for Production of Alternative Fluids
AMAP Report 2002:8	Technical Report for Activity 6. Use/Retrofit of a Prototype Facility for Use of Non-PCB Alternative Compounds in a Major PCB Use Sector
AMAP Report 2002:9	Technical Report for Activity 7. Selection/Development of Environmentally Sound Technologies for Destruction of PCB-Containing Fluids
AMAP Report 2002:10	Technical Report for Activity 8. Selection/Development of Environmentally Sound Technologies for Destruction/Decontamination of PCB-Contaminated Containers, Equipment and Their Sub-Components
AMAP Report 2002:11	Technical Report for Activity 9. Study of a PCB-Contaminated Site and Evaluation of Rehabilitation Methodology
AMAP Report 2002:12	Progress Report AMAP Board to the SAO Meeting in Oulu, Finland, 15 – 16 May, 2002
AMAP Report 2002:14	AMAP Progress Report to the Arctic Council Ministerial Meeting. Inari, Finland, October 9-10, 2002
AMAP Report 2003:1	Minutes from the 17 th Meeting of the AMAPWG, Boulder, USA, 12 – 14 May, 2003
AMAP Report 2003:2	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 2003:3	Progress Report from the AMAP Board to the SAO Meeting October, 2003
AMAP Report 2003:4	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 2004:1	Minutes from the 18 th Meeting of the AMAPWG, Oslo, Norway, 14-16 April, 2004. (Including Annex 7: Minutes of the Third Joint AMAP/CAFF Meeting, Oslo, Norway, 15-16 April, 2004)
AMAP Assessment 2002	AMAP Assessment 2002: Persistent Organic Pollutants in the Arctic
AMAP Assessment 2002	AMAP Assessment 2002: Radioactivity in the Arctic

The Arctic Monitoring and Assessment Programme (AMAP) was established in June 1991 by Ministers of the eight Arctic countries (Canada, Denmark, Finland, Iceland, Norway, Federation of Russia, Sweden and U.S.A.) as a part of the Arctic Environmental Protection Strategy (AEPS). In order to implement AMAP, the eight Arctic countries established the AMAP Working Group (WG). Representatives of the 6 Arctic indigenous peoples organizations are permanent participants to the WG. 5 non-Arctic countries and 27 international organizations involved in significant research and monitoring relevant to the Arctic are observers to AMAP. In 1997, AMAP, together with other programme groups established under the AEPS, became part of the Arctic Council (AC) responsibility.

The primary objectives of AMAP are the measurement of the levels of anthropogenic pollutants and assessment of their effects in all relevant compartments of the Arctic environment. AMAP monitoring activities cover the atmospheric, terrestrial, freshwater and marine environments, and human health. AMAP assessments are presented in status reports to Ministers and form a basis for necessary steps to be taken to protect the Arctic and its inhabitants from pollution.

During the period 1991 - 1997 the priority focus was on persistent organic pollutants, selected heavy metals, radionuclides and acidification. Oil, UV and Climate Change issues were also covered, but with a lower priority. The first circumpolar assessments were published in 1997 and 1998. For the period 1998 - 2003 the priority is to document biological effects on the Arctic environment and its inhabitants due to pollutants and changes in climate and UV. Assessment of geographical and temporal trends is a continuing priority, as is human health related work.

AMAP has a permanent Secretariat located in Oslo, Norway. For further information regarding AMAP or ordering of reports, please contact the AMAP Secretariat or visit the AMAP website at www.amap.no.