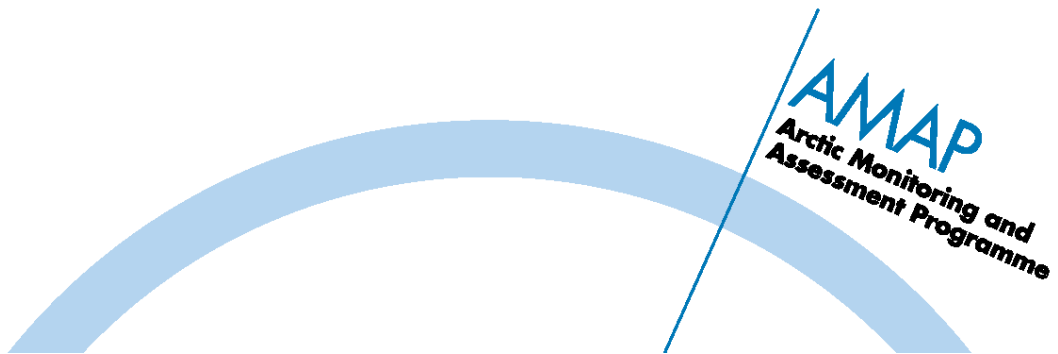


**Minutes of the 24<sup>th</sup> AMAP WG Meeting**

**Tromsø, Norway, 19–21 January 2011**



## Table of Content

1	Opening of the WG meeting	5
1.1	Practical information	5
1.2	Approval of the Agenda	5
1.3	Actions from the Extended HoDs Meeting in Reykjavik	5
2	SWIPA: science and layman's reports	5
	SWIPA science report	6
	SWIPA summary for policy-makers	7
	SWIPA layman's report	8
	SWIPA films	9
	SWIPA – report from ad hoc group and final discussion of the reports, recommendations and the way forward	9
3	The mercury report, status of the production	10
4	Outreach strategy for SWIPA and Mercury reports	11
5	AMAP SLCF report: status and recommendations	12
6	The Oil and Gas assessment	13
7	Unmanned Aircraft Systems (UAS)	14
8	AMAP's new web page	14
9	The AMAP Implementation Plan	15
9.1	The assessment strategy	15
9.2	The Monitoring Programme for Trends and Effects of contaminants, climate, and human health	16
9.3	The role of CBMP in AMAP's integrated monitoring plans	18
9.4	Coordination with international programmes	19

9.5	The way forward to finalize the work, time schedule, etc.	19
10	SAON: Recommendations from the SAON SG meeting in Oslo	19
11	The AMAP Conference in May 2011 in Copenhagen: status	20
12	AMAP's Work Plan for 2011–2013 and beyond	20
12.1	Ongoing and new monitoring programmes	20
12.2	Ongoing and new assessment programmes, e.g., Arctic Ocean Acidification, OGA follow up	20
12.3	AMAP's communication and outreach plan	20
12.4	Cooperation with AC WGs	20
	AMSA II(c) project	20
	PAME	21
12.5	International Polar Decade	21
12.6	Other tasks to be included in the Work Plan for 2011–2013	22
	The Russian GEF application	22
	Overall Work Plan 2011–2013	22
13	The AMAP report to the Ministerial Meeting in Nuuk	23
15	Election of Chair and Vice Chair for AMAP	23
16	Messages from Observing countries on their AMAP-related activities	24
17	Next meeting and upcoming conferences, workshops of interest for AMAP	24
18	Any other business	24
19	End of the meeting	25

## **List of Annexes**

- Annex 1: Agenda
- Annex 2: List of Participants
- Annex 3: List of Documents for the AMAP 24th Working Group Meeting
- Annex 4: Action List



# **Minutes of the 24<sup>th</sup> AMAP WG Meeting**

**Tromsø, Norway, 19–21 January 2011**

## **1 Opening of the WG meeting**

The Chair, Russel Shearer (Canada), opened the 24th meeting of the AMAP Working Group at 8.45 hrs on 19 January 2011 and welcomed all countries, Permanent Participants, and observers to the meeting in Tromsø. All participants then introduced themselves.

Lars-Otto Reiersen, AMAP Executive Secretary and native of Tromsø, reminded the participants that the first meeting of AMAP had been held in Tromsø twenty years ago. Accordingly, there will be a 20th anniversary dinner during this meeting and a celebration will also be held in May with a 20th anniversary conference in Copenhagen, co-sponsored by AMAP, Copenhagen University, and Aarhus University.

### **1.1 Practical information**

The Chair reported that, since the last AMAP WG meeting in San Francisco, an Extended HoDs meeting was held in Reykjavik in November 2010, which concentrated on the review and approval of the mercury assessment report and layman's report. This meeting will concentrate on reviewing and approving the SWIPA products, particularly the layman's report, SWIPA Summary for Policymakers, recommendations, and the films, as well as the documents for the Ministerial Meeting.

### **1.2 Approval of the Agenda**

A new Agenda Item 12.5 was added on the proposed International Polar Decade (IPD) and WWF and EEA requested time to give presentations under Agenda Item 16. With these additions, the agenda was adopted and is attached as Annex 1. The list of participants is at Annex 2.

### **1.3 Actions from the Extended HoDs Meeting in Reykjavik**

The Extended HoDs meeting in Reykjavik on 17–18 November 2010 reviewed and approved the science recommendations from the mercury assessment report and the layman's report.

## **2 SWIPA: science and layman's reports**

Morten Skovgaard Olsen (Denmark), Chair of the SWIPA project and Vice-Chair of AMAP, reviewed the history of the SWIPA project, which was initiated by the three Scandinavian countries as a follow-up to ACIA. IASC, CliC, and IASSA are also co-sponsors of SWIPA and an important aim has been to include as many results from IPY projects as possible. A very large pool of experts—around 200—nominated by Arctic countries and international organizations has

contributed to the project. The main deliverable is a scientific report on the changes in the Arctic cryosphere. Peer review on most of the chapters has been completed, but the Chapter 1 introduction and Chapter 12 extended summary are currently out for peer review. The science report is the work of scientists and the views expressed therein belong to them.

In addition, a layman's report has been written by external science writers; this is a product of the AMAP WG. This is for policy-level readers and also contains science-based policy recommendations.

Three films are under preparation: 1) a film on the physical changes in the cryosphere and how they affect the environment; 2) a film on how these changes affect people; and 3) an update of the GRIS film.

### **SWIPA science report**

Morten Olsen described the overall structure of the science report and some of the overall results. The structure of the report is as follows:

Chapter 1 Introduction;

Chapter 2 Past and Present Climate;

Chapter 3 Modelling;

Chapter 4 Snow;

Chapter 5 Permafrost;

Chapter 6 River and Lake Ice;

Chapter 7 Mountain Glaciers and Ice Caps;

Chapter 8 Greenland Ice Sheet;

Chapter 9 Sea Ice;

Chapter 10 Arctic Societies;

Chapter 11.1 Feedbacks;

Chapter 11.2 Sea Level Rise;

Chapter 11.3 Contaminants;

Chapter 11.4 Ecology;

Chapter 11.5 Observations and gaps.



Helgi Jensson (Iceland), Chair of the SWIPA Peer Review Selection Committee, described the peer review process used for the SWIPA science report. Every AMAP country was requested to nominate a member to the Peer Review Selection Committee, as well as nominate scientists who could serve as peer reviewers; international organizations were also asked to nominate peer reviewers. Based on their CVs, the Selection Committee chose three peer reviewers for each chapter and invited them to review. Ultimately, not all responded and some declined the

invitation, but at least two peer reviewers were allocated for each chapter. All correspondence went through the SWIPA Secretariat so the peer reviewers were anonymous to the lead authors. The authors were required to respond to all comments received from peer reviewers and their responses are available for inspection. The entire process has been well-documented by the SWIPA Secretariat. When complete, the entire record was sent to the Selection Committee for final review of the process.

In addition to the peer reviewers, the AMAP Secretariat requested three senior scientists to review the entire science report for overall consistency and content, raising the minimum number of reviewers for each chapter to five.

Thus, there has been a three-tier process of review: 1) national data check; 2) peer review of each chapter by reviewers selected by the Selection Committee; and 3) overall review of the entire report by three senior scientists. In addition, the majority of the SWIPA report is based on peer-reviewed source material. Thus, the SWIPA review exceeds the review processes of most international journals.

Regarding the deliverables for the Ministerial Meeting in May, it was agreed that a package would be produced containing all SWIPA products, including a CD that could include the summary for policy-makers, the films, (possibly the layman's report), and the science report (but probably without all final graphics).

### **SWIPA summary for policy-makers**

Morten Olsen reported that the summary for policy-makers was sent out for national review and many countries have responded with helpful comments. There were a number of comments on the format of the report, as many people felt that the format was not clear or consistent. There were also comments on the overall balance of the document and the emphasis given to specific issues. Nonetheless, an overall comment was that national reviewers were generally satisfied with the policy-maker summary.

The structure of the policy-makers summary is similar to that of the ACIA policy-maker summary, comprising the introduction, heading 1, key finding 1, elaboration, heading 2, key finding 2, elaboration, etc. Thereafter, recommendations are given on adaptation; mitigation; monitoring, research, and model development; policy follow-up; and outreach. This draft will need to be reviewed in detail to prepare a final document that will be sent out by 14 February.

In the discussion, the general view of all delegations was that the policy-makers summary was good. Some of the points made during the discussion included:

- There is a need for a paragraph that gathers together all the knowledge gaps in one place and also gives a priority to the most urgent requirements, dividing between old and new data and cryospheric components, although the challenge of prioritization was acknowledged.
- A clearer distinction needs to be made between observed changes and anticipated changes, as this is not always clear in the current text.
- The treatment of uncertainty should be strengthened in the text.

- Further work is needed on some of the policy recommendations as they are very mixed and could be separated better.
- A change in format would improve the presentation; this should include ensuring that the recommendations are easily identified by their format.
- The SWIPA report starts with the main unstated assumption that major changes in the cryosphere are being caused by anthropogenic actions; if people do not believe that humans are causing climate change, the policy recommendations for mitigation actions are meaningless. This could be solved by referring to the IPCC statement on this issue.
- A better connection needs to be made between the changes and how Arctic societies are affected and the recommendations for actions. A middle section that points to regional solutions and regional actions would be useful.

Most delegations also had a number of minor comments concerning the text and format that they will send in the very near future.

After the overall discussion, a small group composed of members of the delegations of Canada, Russia, and Sweden, and Lynn Dicks and Simon Wilson was formed to go over the policy-makers summary in detail during the course of the meeting.

### **SWIPA layman's report**

Morten Olsen stated that the SWIPA layman's report has been reviewed by the SWIPA science authors and a number of specific comments have been made; there has been much interaction between the science authors and the writers of the layman's report. He requested to receive all comments, especially overall comments, on the layman's report during the meeting or as soon as possible.

Several countries and PPs stated that they had already forwarded all of their comments to the science writers and had now completed their review. Several others had line-by-line comments on the text that they gave to Lynn Dicks for her use during the meeting.

During the discussion, a request was made to have the same period used for all parameters. It was noted, however, that this is difficult owing to a lack of data and the fact that there are different numbers of years of observations for each parameter; this could be explained in the introduction. A request was also made to clearly define the role of observers in SWIPA. There is a paragraph in the ACIA report on the role of observers that could be copied for the SWIPA report as their roles in both projects were identical.

Comments on the layman's report were to be delivered by the end of the meeting to complete the AMAP WG sign-off on the report. In addition, although there has been a great deal of communication between the SWIPA convening lead authors and the science writers, the convening lead authors have not yet signed off on the layman's report. This will need to be completed by the March SAO meeting.



## **SWIPA films**

Jacob Bendtsen, Alphafilm ApS, reported that the scripts for all three films have been prepared and are open for comment. All film material, locations, and characters have been identified and informed. The manuscripts will be closed and the last interviews will be completed in February. He then gave a detailed outline of the science/physics film, which is intended for a global audience, and of the film on the human dimension, for which the target group is the regional audience.

In the discussion of the human dimension film, some of the points included:

- Concern was expressed about the treatment of governance; it must be clear what is meant by governance and that it is not intended to be international governance; the Arctic Five has stated that good governance is already in place for the Arctic continental shelf;
- Difficulties were expressed concerning the use of the term ‘new frontier’; it was not considered appropriate for the Arctic which is not a frontier environment as new activities will be subject to laws and regulations, unlike in the old frontier;
- New opportunities also bring new risks; this should be made clear;
- This film covers more political arenas so there is a need to be careful about the implications of many of the statements made and also to ensure that the statements are linked to the assessment and do not go beyond it; there may be a need to generalize more.

All delegations were invited to comment on the film manuscripts, which have been posted on the AMAP website. Comments should be sent to the AMAP Secretariat by no later than 26 January.

In conclusion, the Chair noted that the films will contain a clearly stated disclaimer. SWIPA is the responsibility of the scientists and they will also sign off on the films when they are ready.

Later in the meeting, Jacob Bendtsen showed some proposed footage for the SWIPA physics film. In the discussion, there was a feeling that the tone was very pessimistic and there was a need for a message that gives hope. There should also be more shots of habitats with birds and mammals in addition to the trees and melting water currently shown.

## **SWIPA – report from ad hoc group and final discussion of the reports, recommendations and the way forward**

The AMAP WG reviewed the SWIPA summary for policy-makers on a line-by-line basis and agreed on a number of amendments. In the discussion of the recommendations regarding mitigation, it was decided that the entire mitigation section of the ACIA policy document should be quoted verbatim; this had been adopted by the Fourth Arctic Council Ministerial Meeting in Reykjavik in 2004. The use of the word ‘governance’ was discussed and it was considered to be a controversial term with different possible interpretations.

Simon Wilson stated that the SWIPA summary for policy-makers including the recommendations will be distributed to the WG for final acceptance on Wednesday, 26 January. Responses must be received by the following Monday, 31 January. No response is taken as

acceptance. The summary for policy-makers including recommendations will be sent to SAOs by 14 February for their review.

It was agreed that any additional comments on the SWIPA layman's report should be sent in writing to the AMAP Secretariat by 26 January at the latest. All comments will be compiled and the report will be amended and sent to HoDs for final review and adoption during a teleconference in March. The layman's report does not need to be submitted to SAOs for approval.

In closing this item, the Chair thanked Lynn Dicks, Carolyn Symon, and Simon Wilson, as well as the intrasessional ad hoc group, for their hard work during the meeting to amend the policy-makers summary and recommendations.

### **3 The mercury report, status of the production**

The Chair reported that the text of the layman's report including the recommendations had been agreed at the HoDs meeting in November. The layman's report has gone for layout and the science report is also beginning to be sent for layout. There are no remaining issues regarding the text, but there is still some work on the graphics. The layout of both reports will be complete by the end of February.

In response to a question as to whether the recommendations from the mercury assessment and the SWIPA report have been compared to ensure compatibility, it was noted that this is being handled by the AMAP Secretariat, particularly Simon Wilson.

Mikala Klint (Denmark) reported that she has met with Jacob Bendtsen and Rune Dietz, co-chair of the mercury assessment, concerning the production of a ten-minute and/or three-minute film on mercury with a focus on the Arctic but also on other issues related to mercury. The film is intended for the Ministerial Meeting and the production will be coordinated by the AMAP Secretariat. Financing will be obtained from Denmark, Canada, Norway, and possibly also the Nordic Council of Ministers.

Mikala Klint noted that Rune Dietz and Jacob Bendtsen have applied for funding to produce a one-hour educational film on mercury, but the decision on this will not be made until next May or June.

Lars-Otto Reiersen invited other countries to assist in funding the short film on mercury. He will distribute a letter to the countries requesting support.

In answer to a question concerning the possibility of adding sub-titles in other languages to the short film, it was noted that it is not difficult or expensive to add sub-titles to a film. When the film is ready, countries or PPs that would like sub-titles could prepare translations and send them to the film makers for insertion.

It was noted that it would be very useful to have a set of PowerPoint slides that explain the assessment issues and results available for downloading from the AMAP website for use in presentations regarding the assessment. The meeting also took note of a four-page handout on

mercury that was prepared for release at the second meeting of the UNEP International Negotiating Committee (INC-2) to establish a mercury agreement, which would be held in Japan on 24–28 January. The Chair will be attending this meeting and will bring copies of the brochure with him to hand out at the meeting.

#### **4 Outreach strategy for SWIPA and Mercury reports**

Morten Olsen presented a paper on the SWIPA outreach plan to ensure efficient distribution of SWIPA products. This plan identifies the different target groups and their relevant products as follows:

- 1) English-speaking scientists: science report, science conference in May to present results;
- 2) Non-English-speaking scientists: no specific arrangement;
- 3) English-speaking policy-makers: layman's report, films;
- 4) Non-English-speaking policy-makers: for those in the Arctic, there is a plan to make some translations of the policy-makers summary after the English text is complete;
- 5) English-speaking public: layman's report, films;
- 6) Non-English-speaking public: this will depend on the local press;
- 7) Youth in the Arctic: there is a need to prepare educational materials based on all of the new knowledge being created.

Morten Olsen noted that when the report is released, it is important to make the right media contacts and this will require the assistance of AMAP HoDs. It would also be good to establish a PowerPoint database that could be used by scientists and teachers to present SWIPA information.

Regarding the outreach strategy for the mercury assessment, Simon Wilson reported that the International Negotiating Committee under UNEP is a target in addition to the Arctic Council. A four-page handout on mercury and its impacts on people and wildlife in the Arctic has been prepared for Denmark to present on behalf of the Arctic Council at the INC2 meeting in Japan next week; this handout is also displayed on the Arctic Council website. The handout was reviewed and approved by SAOs.

In addition, several lead scientists in the mercury assessment will present papers at the Global Mercury Conference in Halifax, Canada in the last week of July 2011. AMAP and the Canadian Northern Contaminants Program are co-sponsors of this conference, at which the mercury assessment report will be made available.

AMAP has also been involved in the preparation of the Paragraph 29 report under UNEP Chemicals that will be delivered at INC2 next week.

In the discussion, it was considered that the above strategy is good and that it was important to develop products for a range of audiences. This use of other science media and publication outlets should be built into the assessment process. To attract younger scientists, it is necessary to find products that they can use for their CVs to enhance their careers.

It was reported that the Human Health Assessment Group has made an arrangement with the Journal of Circumpolar Health to have articles summarized in one page. These can be used for policy-makers and other interested people. Many potential readers want short papers in understandable language with a good visual layout in terms of colours and graphics.

It was noted that AMAP will develop a communication and outreach plan and that the Arctic Council is also developing a high-level communications plan. One vehicle for bringing the AMAP information to a broader audience and for education could be through the University of the Arctic. Another vehicle could be via the commentary sections of major scientific journals such as *Nature* and *Science*. SWIPA could also be associated with the Arctic Report Card and prepare annual updates on various issues. To reach the general public, films should be used more often; meetings in local communities would also be good, but these must be arranged locally.

In summing up the discussions, the Chair stated that there is now a clear way forward that AMAP needs to implement. AMAP has a history of excellent assessments but has not carried out much outreach. There is now a need to build this into the assessment process by beginning an assessment with the issue of what we want to achieve with it, who are the target audiences we want to reach, and what products should be prepared. Products should be planned that will reach a variety of audiences and the means of engaging these target audiences should be identified. To develop this communications strategy, AMAP will need the assistance of communications experts.

The AMAP WG agreed that a small group should be created to develop a good plan that can be used for outreach of AMAP products to various audiences. This work should be included in the Work Plan for 2011–2013.

## **5 AMAP SLCF report: status and recommendations**

Andreas Stohl (NILU, Norway), Co-Chair of the Short-Lived Climate Forcers Expert Group together with Patricia Quinn (NOAA PMEL, USA), presented an update of the activities of the SLCF Expert Group. This group was established to provide scientific and technical advice regarding the formulation of mitigation strategies and an assessment of the benefit to the Arctic climate of these mitigation strategies. The group works closely with the SLCF Task Force under the Arctic Council. Biomass burning causes particulates to be transported to the Arctic; this pollutes the snow, decreasing albedo and increasing absorption of radiation and thus resulting in the earlier melting of snow and exposure of dark surfaces in spring. In addition, aerosols are captured in thin Arctic clouds during winter creating a blanketing effect that clean thin clouds do not have, and thus warming the lower atmosphere. The Expert Group is currently focusing on black carbon and scattering aerosols, but not on tropospheric ozone or methane, owing to the short time line of the work requested and the types of expertise in the group.

The Expert Group is assessing published estimates of the transport of black carbon to the Arctic and the resulting impact; model simulations have also been prepared. The first draft of this report is now ready and will be discussed at a meeting of the Expert Group the following week. The final draft will be ready in March for peer review. The model simulations have been conducted for the USA, Canada, Russia, and the Nordic countries covering the following sources: 1)

domestic; 2) energy, industrial, and waste; 3) transport; 4) agriculture and forestry; and 5) grass and forest fires. Biomass burning, mainly grass and forest fires, in Russia has the largest impact on the Arctic because the emissions are transported directly to the Arctic. The report also includes a number of recommendations.

In the discussion, it was noted that the SLCF Task Force is working in parallel with the SLCF Expert Group and according to the same time line; there is a need to ensure that the Task Force uses the Expert Group data. Good communication has existed between the two groups.

The meeting commended Andreas Stohl and the SLCF Expert Group for their excellent work in the short amount of time allotted. The presentation of information by regions was considered very useful, giving greater scientific flexibility to use the information.

As the next step, Lars-Otto Reiersen will send out an open call for peer reviewers of the final draft report in March; among others, he will look for international experts from LRTAP.

After discussion it was agreed that AMAP would like the SLCF Expert Group to continue its work and to include consideration of tropospheric ozone and methane as well as to bring in data from the rest of the world on black carbon; this will be added to the AMAP Work Plan for 2011–2013. In addition, as AMAP is reviewing its monitoring programme, the SLCF Expert Group was requested to recommend relevant monitoring activities for SLCF that should be considered for addition to the programme as well as to recommend priorities for assessments for AMAP to consider. This should also include recommendations concerning how to proceed with adding experts on tropospheric ozone and methane to the group and how to work in the best way with other groups such as the UNEP Black Carbon Group and the LRTAP group on this subject. The addition of experts from other countries such as China and from the Himalayas should also be considered so that information from these areas can be provided.

## **6 The Oil and Gas assessment**

Lars-Otto Reiersen stated that Chapters 1 to 5 of the oil and gas assessment are now ready to be printed and copies should be available by the March SAO meeting. There is much follow-up work needed on Chapter 2. The U.S. NOAA has prepared a table for PAME on follow-up to the oil and gas assessment, with recommendations for PAME and also for AMAP. Work on Chapter 6 is also progressing.

Hein Rune Skjoldal (Norway), lead author on Chapter 6, reported that the texts on the status and vulnerability of species and ecosystems have been completed. This summarizes information on aquatic birds, marine mammals, and other species groups and formed the basis for vulnerability considerations to identify vulnerable areas. This information is contained in an overview map in the overview report, while Chapter 6 explains the details. He noted that this information was also used as a basis for the AMSA II(c) work to create maps of sensitive areas. The compilation of information has concerned mainly the spatial distribution of species and can be used in a future Arctic change assessment. Hein Rune Skjoldal stated that he is aiming to have the chapter ready for final editing in three months.

Lars-Otto Reiersen stated that this chapter can be used as a textbook, so high quality photos should be obtained of Arctic birds and other animals. Peer reviewers will now need to be nominated for the review of this chapter and one senior person may also be needed to review the chapter.

Lars-Otto Reiersen mentioned the peer review template that has been proposed for use in AMAP. He requested to receive comments on whether this type of template should be adopted for use as a standard procedure in AMAP.

The meeting agreed that follow-up to the oil and gas assessment should be included on the AMAP Work Plan for 2011–2013.

## **7 Unmanned Aircraft Systems (UAS)**

Rune Storvold (Norway), Northern Research Institute, Co-Chair of the Unmanned Aircraft Systems Expert Group together with Brenda Mulac (USA), NASA Airborne Science Program, presented information on the work of this group. He stated that there are a number of political and regulatory challenges regarding the use of UAS owing to the need to obtain permission to operate and the fact that five countries control the airspace over the Arctic Ocean; however, it is even more difficult to obtain permission to operate UAS over land areas. The UAS Expert Group has focused on assisting the Arctic science community to understand the possibilities and challenges of UAS; it also works with civil aviation authorities concerning how to operate, including streamlining applications, etc. The following deliverables will be ready in 2011: 1) a website that lists points of contact to national UAS experts and civil aviation authorities; 2) a safety case outline: a comprehensive description of what a safety case should include and methodology for estimating risks and the effect of mitigation; 3) a report delivered to the Arctic Council on the use of UAS in Arctic research; and 4) a demonstration campaign in Svalbard.

Rune Storvold outlined the contents of the report on the use of UAS in Arctic research, which will include a description of past and planned UAS scientific missions in the Arctic, UAS technology for science and relevant products, information on airspace access and regulations in the Arctic, and recommendations. A case study will be included as an annex.

After discussion, the WG noted the importance of receiving the UAS report in March so that it is available for the meetings in Nuuk. The WG would also like to have information on the plans of the UAS Expert Group beyond 2011 so that this can be added to the AMAP Work Plan for 2011–2013. Finally, the WG offered to help the expert group in any way that it can.

## **8 AMAP's new web page**

Simon Wilson stated that work on the development of a new website for AMAP has been ongoing for about one year. He had sent an e-mail to HoDs for comments on the proposed design of the site but did not receive any responses. The designer is currently writing code for the website, which received inspiration from the BBC website. Most of the content on the website will be tagged to different interests. When a user first clicks onto the site, choices can be made of the level and types of interests: scientist or policy-maker, interested in POPs, health, or climate. The site will include videos, maps and figures, fact sheets, and a diary. A better demonstration

model of the site will be available in a few weeks; participants will be sent a link so they can review and comment on it. The running model will be available in a few months.

In the discussion, it was stressed that the AMAP home page should be attractive to a broad audience and that the site should emphasize the AMAP products and also its mission and vision. It was considered important to have a good strategy for the website because updating a website is very time consuming. For example, it was generally considered that including news items was a burden and was not useful for the AMAP website.

The WG agreed that it was important that the website shows that AMAP is part of the Arctic Council and the links to other Arctic Council WGs. It could also be useful to be redirected to other WG key pages when relevant so that all Arctic Council material on a topic can be easily located.

## **9 The AMAP Implementation Plan**

### **9.1 The assessment strategy**

The Chair reported that a plan for an integrated approach to assessments had been developed at the brainstorming session in Helsinki; however, the SAOs did not decide on it. The AMAP HoDs discussed this approach at its meeting in Reykjavik and would like to have the issue of an integrated approach to an Arctic change assessment mentioned in the Nuuk Declaration. PAME supports the idea; CAFF is somewhat supportive, but SDWG did not support it. The aim is to build on current and future assessments to develop a more comprehensive assessment. The question now is how to create a strategy that will move this concept forward.

It was noted that IUCN and WWF are developing similar proposals, so it is very timely for the Arctic Council to take up this issue before others take over.

In the discussion, a tour de table showed that all delegations supported the idea of an integrated assessment approach. It was considered that an integrated assessment could serve as a knowledge base for future work and a tool that should be used within the Arctic Council, which should take the lead in reviewing Arctic change issues. This approach will now be used in the USA for a climate assessment and a parallel activity by AMAP would be beneficial. This approach also provides strong links to management and contains a valuable regional dimension. Sweden is discussing potential Arctic resilience assessments as a more future-oriented approach to strengthen the resilience of the whole system: ecosystem, communities, and the entire system; this concept could possibly be added as a building block to this type of assessment. However, it was pointed out that the final aim of this assessment must be very clear. The workload is also an important issue.

It was reported that PAME will hold a workshop the following weekend to consider boundaries of Large Marine Ecosystem designations in the Arctic as well as to prepare an inventory of existing status reports on the ecosystems, covering four components of assessment: climate, pollution including contaminants and effects, fisheries issues, and biodiversity, all of which should be recognized in an integrated monitoring and assessment programme.

The Chair stated that AMAP had wanted to hold a workshop in winter/spring 2011 for stakeholder consultations with Permanent Participants, industry, Arctic residents, and others to gain feedback on what outcomes they would like to see from an integrated assessment. However, the SAOs did not approve this proposal at their most recent meeting and indicated that any further work would have to take place after the Nuuk Ministerial Meeting in May.

Other Arctic Council Working Groups have been sent a five-page prospectus on the integrated approach and some informal meetings have been held with some of them. It was proposed that the next step could be to hold a more formal meeting of the Arctic Council Working Groups on the theme of an integrated assessment approach.

In conclusion, the AMAP WG supported the concept of integrated assessments but agreed that it is necessary to have a statement in the Nuuk Ministerial Declaration text supporting work on the issue to give the Arctic Council a mandate to develop and carry out such an assessment. It was agreed that all participants including PPs should speak to SAOs to make sure that this statement will come into the Nuuk Declaration. It was considered critically important to begin this type of work now as an Arctic Council initiative including all AC WGs and not only AMAP. A sentence in the Nuuk Declaration can enable the work to begin, and a more formal decision can be made later at the Deputy Ministers Meeting in 2013.

## **9.2 The Monitoring Programme for Trends and Effects of contaminants, climate, and human health**

The Chair recalled that the AMAP Workshop on Monitoring and Assessment held in San Francisco last February was the occasion of thorough discussions of the AMAP monitoring programme and much useful information had come from the excellent cross-fertilization discussions. Thereafter, leads had been chosen to propose revisions to the monitoring programme based on the outcome of the Workshop. These are: Roland Kallenborn (Norway) for contaminants, Peter Murdoch (USA) for climate change, and Jason Stow (Canada) for an assessment strategy and plan. They are to respond to the general need for more integrated monitoring of the environment and also greater coordination with health-related monitoring. Another issue is how AMAP can be more efficient and respond more quickly to questions than at present, but still retain the high quality of the response.

As the lead on contaminants, Roland Kallenborn stated that based on the San Francisco Workshop, further discussions in AMAP, and feedback from AMAP Expert Groups, he has prepared a discussion paper that he distributed in October to the Co-Chairs of the Expert Groups. This paper covers sections A to F of the AMAP Implementation Plan and provides a good basis for the integration of activities. He has not yet received feedback from the Expert Group Chairs. The next step will be to update the Trends and Effects Programme for 2011 to 2016; priorities and requirements identified for this stage of the Trends and Effects Programme have been sent to Expert Group Chairs for their feedback.

Roland Kallenborn made a number of other suggestions in his presentation, including:

- To adapt the future AMAP monitoring programme to the requirements of integrated assessments, there is a need for close, formalized collaboration among Expert Groups.



- Expert task forces could be established to obtain a rapid response on emerging issues.
- Consideration should be given to a holistic ecosystem approach.
- Gap analyses and revision of scientific priorities should be integrated into regular assessments.
- There should be better integration of AMAP assessments into the work of international conventions.
- The description of the QA/QC requirements for analyses should be better defined.
- There should be broader spatial coverage of the Trends and Effects Programme.
- For contaminant-related requirements, useful activities include a process-oriented assessment including intercompartmental exchange; circum-Arctic registration and characterization of pollution sources; and habitat characterization on a regional basis.

In the discussion, it was noted that AMAP is working towards multi-stressor assessments in which Expert Groups on contaminants work with the Human Health Assessment Group and the Climate Experts Group. A critical issue is to have a timely response to new issues; it would be good to establish a process to be able to provide a more rapid response. Communication and outreach to local communities must also be made in an appropriate way. However, another issue is to restrict the overexpansion of the monitoring programme. There will need to be much more cooperation among different funding agencies to have a more efficient use of funds and development of priorities.

In conclusion, it was stressed that the three leads to revise the Implementation Plan should work together now, linking contaminant- and climate-related monitoring together and also with the assessment strategy. This is a long-term issue and it is a good time for the three-way work to begin.

The Chair noted that further work is needed to revise the AMAP Implementation Plan before undertaking national reviews. The Expert Groups should comment on the draft plans before they are sent for national reviews. HoDs were requested to ensure that the review by the Expert Groups is conducted as quickly as possible.

It was considered that a follow-up workshop may be needed to finalize the Implementation Plan; this workshop should also include the CBMP. The workshop will be included in the Work Plan for 2011–2013.

All HoDs were requested to review the tables of designated experts in the various AMAP Expert Groups to make sure that the right key experts are involved. The Climate Expert Group should be reviewed in particular, as its Chair has stated that the group is too large and unfocussed and many members do not respond when requested. A new Arctic Ocean Acidification Group will be formed that could be a sub-group of the Climate Expert Group. The Short-Lived Climate Forcers Expert Group could also be a sub-group.

The WG agreed that decisions concerning which expert groups are needed and their direction should be made on the basis of the discussions in the workshop on the Implementation Plan. This

workshop should be held early in the Swedish chairmanship to keep up the momentum for the further development of the Implementation Plan.

### **9.3 The role of CBMP in AMAP's integrated monitoring plans**

Jim Reist provided an overview of the developments in the CBMP under CAFF, which aims to integrate all biodiversity monitoring. The CBMP is a direct response to the ACIA recommendation to expand and enhance long-term biodiversity monitoring. There are four expert groups under the CBMP: marine (led by the USA and Norway), freshwater (led by Canada and Sweden), terrestrial (just starting), and coastal (just starting). The CBMP is an ecosystem-based, site-based network of networks covering species and habitats. The integrated monitoring plans cover development, synthesis of information, and reporting designed to meet management and monitoring objectives on a core set of circumpolar parameters and indicators.

Kathleen Crane (USA) gave a more detailed overview of the marine plan, which was developed over 2.5 years starting in 2008 under the Marine Expert Monitoring Group (MEMG). At present, the Marine Integrated Plan covering seven designated Arctic Marine Areas is awaiting endorsement. The most important drivers are covered: environmental contaminants, invasive species, oil and gas, harvesting, and climate change. A Marine Expert Monitoring Advisory Committee will be created, which will establish Marine Expert Networks supported by countries. Phase I of the project (2008–2011) included the Arctic countries Russia, USA, Canada, Greenland/Denmark, Iceland, and Norway. In Phase II (2015–on), Arctic Council observer countries will also be able to join. An important aspect of the plan relates to the choice of specific monitoring sites that can be visited by various countries for measurements of abiotic and climate parameters as well as observations of biological parameters and stressors. Kathleen Crane noted that the CBMP MEMG supports the SAON vision and goals and using the CBMP as a tool to achieve them.

In the discussion, this was considered an important development but it will require a great deal of coordination to get on the right track so it can contribute to management. Currently there appears to be no clear links to assessment or to management, which are required to make use of the monitoring data. It is also very difficult to establish linkages between changes and stressors, even in cases where ecosystem changes have been very large.

The WG noted that AMAP had wanted to cooperate on an integrated monitoring programme and, in particular, on the Circumpolar Biodiversity Monitoring Programme; however, despite discussions with CAFF in Quebec in 2008, this cooperation ultimately did not materialize as well as AMAP had anticipated. Now, however, the CBMP Marine Expert Group has incorporated in the CBMP parameters on contaminants and climate that AMAP has been monitoring for many years and on which AMAP has extensive expertise. Based on CBMP's inclusion of AMAP monitoring parameters on contaminants and climate into the CBMP, AMAP should indicate renewed interest in cooperation on the CBMP, also in the light of AMAP's review and revitalization of the AMAP monitoring programme. The Chairs of AMAP and CAFF should discuss this. At the national level, discussions between AMAP and CAFF representatives should also take place as cooperation must occur at the national level for it to function properly. The Chair encouraged all participants who will attend the next CAFF meeting to mention this issue.

He also requested Outi Mähönen (Finland) to bring this message to the CAFF meeting, based on a one-page paper that he, Lars-Otto, and Outi will prepare.

#### **9.4 Coordination with international programmes**

The Chair noted that AMAP's work on POPs, mercury, and climate change has met with great success in relation to international programmes and AMAP is working with the European Environment Agency on SAON. Thus, cooperation with UNEP Chemicals, UN ECE, and EEA should be built into the Work Plan 2011–2013.

Lars-Otto Reiersen reported that AMAP experts have prepared a joint report with experts from UNEP Chemicals and the Stockholm Convention Secretariat on the impacts of climate change on POPs for the Stockholm Convention. This report was released at a side-event at UNFCCC COP16 in Cancun and will be presented at a meeting in Nairobi of the UNEP Governing Council (GC 26) in February 2011. AMAP was allocated \$60,000 for its work on the report, which AMAP is currently preparing for publication. This report will also be released at a side-event sponsored by AMAP at COP5 of the Stockholm Convention.

AMAP has also worked closely with IASC on SWIPA and SAON, as well as with WMO, CliC, and IASSA on SWIPA.

Other potential organizations mentioned were SETAC, which however was considered too large, and an emerging forum, the Intergovernmental Panel on Biodiversity.

It was agreed that AMAP should remain involved with other international organizations as a key aspect of its strategic plan as it has the capacity, expertise, and secretariat to keep involved.

#### **9.5 The way forward to finalize the work, time schedule, etc.**

This was discussed under the individual items above.

### **10 SAON: Recommendations from the SAON SG meeting in Oslo**

John Calder (USA), Vice-Chair of AMAP and Co-Chair of the SAON Steering Group, reported on the outcome of the SAON SG meeting in Oslo at the beginning of the week that reached agreement on a proposal to the Arctic Council concerning the future structure of SAON. The proposal is that the Arctic Council and IASC co-sponsor SAON and each select a Co-Chair of the SAON Council, which will be composed of one member from each AC country, AC WG, PP, IASC, and WMO up to a total of 40 people potentially. The secretariat would comprise the AMAP and IASC Secretariats. SAON partners would provide resources to SAON Task Teams. Each country will be encouraged to establish a national SAON Coordinating Committee. John Calder reported that 17 tasks relevant to the goal of SAON have been proposed: five for workshops, four for data management, five for network status and improvement, and three for data access and visualization. These proposals are available on the SAON website and will need to be developed more formally.

Lars-Otto Reiersen reported that Norway has agreed to support funding for a new AMAP staff member to work on SAON. This will secure AMAP's interests to obtain monitoring data and have them submitted to the Thematic Data Centres.

The WG agreed that AMAP will continue to support SAON because it fits with the AMAP mandate and Work Plan.

## **11 The AMAP Conference in May 2011 in Copenhagen: status**

Lars-Otto Reiersen reported that the AMAP 20th anniversary conference will be held on 4 to 6 May in Copenhagen. The call for papers had been out for some time and so far about 100 abstracts had been received. The deadline for abstracts is 1 February (note that over 200 abstracts were submitted by this deadline). The overall structure of the conference is that the first day will concentrate on the SWIPA report and associated issues; the second day will be on contaminants; and the third day will focus on global issues and a panel discussion. In addition, on 3 May there will be a workshop for young scientists and also a special session on black carbon. He will send out a letter requesting additional financial support for the conference; currently some support has been promised from Danish and Norwegian ministries. The University of Copenhagen offered a free auditorium for the conference and several ministers have been invited to open and close the conference (which has now been moved to the Radisson Blu Falconer Conference Center owing to the need for a larger facility). All participants were encouraged to attend the conference and to request further abstracts from their scientists so that there will be good representation across the circumpolar area. It is anticipated that over 350 people will attend this conference.

## **12 AMAP's Work Plan for 2011–2013 and beyond**

### **12.1 Ongoing and new monitoring programmes**

This was covered in agenda items 2 and 3.

### **12.2 Ongoing and new assessment programmes, e.g., Arctic Ocean Acidification, OGA follow up**

It was noted that the Arctic Ocean Acidification Expert Group will meet in Copenhagen on 24–25 January. It is a strong group and there is some Nordic Council of Ministers funding for its report. The Black Carbon Expert Group will also meet in Copenhagen during that week.

### **12.3 AMAP's communication and outreach plan**

This was covered somewhat in previous agenda items.

### **12.4 Cooperation with AC WGs**

#### **AMSA II(c) project**

Hein Rune Skjoldal reported that the first version of the AMSA II(c) report on the identification of Arctic marine areas of heightened ecological and cultural significance was available on 17

December 2010. A second version was ready on 20 January and will be considered at the next PAME meeting. This report is closely associated with Chapter 6 of the oil and gas assessment covering the descriptions of the Large Marine Ecosystems, the vulnerability assessment, and the tables and maps. These were enhanced in association with the preparation of the AMSA II(c) report. The material includes tables of vulnerable species in particular areas and maps illustrating the distribution of vulnerable species or activities; these maps are currently on an annual basis, but they will be prepared for seasons later on. The draft material has been reviewed at an IUCN workshop. Information from Canada will be added later based on an ongoing national process. It was noted that, in addition to Canada, a national process is also being run to obtain information for northwest Greenland; most, but not all, of this information will be available at the time of the Ministerial Meeting.

The Chair stated that this draft report is being distributed to all AMAP HoDs and AC WGs today; comments should be submitted by 31 January. A new version will be distributed on 5 February and a final version on 14 February. Comments should be coordinated nationally between AMAP and CAFF representatives.

This work will continue to the end of 2011 and should be included on the Work Plan 2011–2013. The interim report will not be presented specifically to Ministers but will be reported as part of the AMSA recommendations. The final report should be published by the end of December 2011.

It was noted that, when the work on this report began, PAME had stated that oil spills were the greatest threat and, thus, the vulnerability assessment in Chapter 6 of the oil and gas assessment was considered the logical material to use. However, Canada (and Greenland) had reservations about using this unpublished material for a different purpose than originally intended and decided to prepare their own reports on vulnerable areas based on different criteria. Ultimately, the results from these two different processes will need to be reviewed to ensure that the outcomes are consistent and comparable.

## **PAME**

Lars-Otto Reiersen reported that Hein Rune Skjoldal has worked on the PAME Arctic Ocean Review. PAME has also circulated a number of papers recently in association with their next meeting; one covers PAME follow-up to the oil and gas assessment, which AMAP will need to review later. PAME would also like to update the Arctic Marine Strategic Plan and has asked AMAP to assist; AMAP contributed to the 2004 plan so AMAP will now need to provide an update. It was agreed that this now needs to be included in the AMAP Work Plan.

## **12.5 International Polar Decade**

Yuri Tsururov (Russia) emphasized the strong support of Russia for the initiation of an International Polar Decade (IPD) to support long-term polar research. This initiative had been announced at a WMO conference, but it has not yet been formally supported by any international organization. He felt that it would be very helpful if an IPD would be mentioned in the Nuuk Declaration. To move forward on this topic, Russia will host a workshop on IPD in St Petersburg

on 14–15 April for representatives of interested organizations to further develop the concept of IPD and to prepare a scoping paper on the focus of the work.

In the discussion, it was considered that an IPD would create an excellent opportunity to support longer-term observations, but funding will be crucial and must be addressed at the outset. An IPD could also be useful to synthesize IPY data and information as AMAP enters an era of integrated assessments.

In conclusion, the WG agreed that there is support by AMAP for defining an IPD and adding a mention of it in the Nuuk Declaration as a means of maximizing the IPY legacy or as a follow-up of SWIPA. It was considered too early to discuss what IPD would do or new resources. AMAP could make a presentation on IPD at the mid-March SAO meeting. In addition, all HoDs should discuss the request to mention IPD in the Nuuk Declaration with their SAOs.

## **12.6 Other tasks to be included in the Work Plan for 2011–2013**

### **The Russian GEF application**

Yuri Sychev (AMAP Secretariat) reported that a proposal for funding an Arctic river project had been sent to GEF, but initially they had no money and thereafter they changed their priorities. The project must now be transformed to meet these new priorities; a workshop will be held in February to do this. If the project is not funded, it will be abandoned. The new priority is that the project must now be pan-Arctic, whereas previously projects could be based on national priorities. This now means that co-sponsors will be needed from other Arctic countries. The terms of reference for the work will be sent to AMAP HoDs.

### **Overall Work Plan 2011–2013**

Taking the items discussed above and ongoing activities, the AMAP Work Plan for 2011 to 2013 will include the following items:

- AMAP monitoring and assessment plans, including an expert workshop in 2011/2012 to finalize the Implementation Plan
- Conduct of ongoing and new monitoring programmes: contaminants, climate change, human health, combined effects
- SWIPA follow-up: films, translations, outreach
- Mercury assessment follow-up: films, translations, outreach
- Oil and gas assessment follow-up
- Completion of Arctic Ocean Acidification report
- Update short-lived climate forcers report to include data on black carbon from the rest of the world and expand expert group to include tropospheric ozone and methane
- Develop integrated assessment approach: Arctic change assessment
- UAS: develop safety guidelines and conduct other work recommended by expert group

- SAON co-lead
- Update 2004 Arctic Marine Strategic Plan and Arctic Ocean Review (with PAME)
- Prepare final report on AMSA II(c) (with CAFF and SDWG)
- Develop an AMAP communications and outreach strategic plan and update website; create small group to develop plan for outreach of AMAP products to various audiences
- Contribute to the proposal for an International Polar Decade
- Follow up on activities with UNEP Chemicals for the Stockholm Convention and UNEP mercury negotiations; cooperate also with IASC, UN ECE and EEA
- Cooperate with CAFF on the CBMP

The Chair requested participants to send any additional items for the work plan to the Secretariat.

### **13 The AMAP report to the Ministerial Meeting in Nuuk**

The Chair reported that the three-page report to the Ministers will reflect the work plan agreed under the previous agenda item. The SAO agenda includes items on SWIPA, the mercury assessment, SLCFs, and SAON. In addition, the WG will request that an item be added on the AMAP 20th Anniversary Conference in May.

Deliverables for the Ministerial Meeting in Nuuk will include the following:

- 1) Science reports: POPs, radioactivity, oil and gas assessment;
- 2) SWIPA products: science report, summary for policy-makers report, three films;
- 3) Mercury assessment: science report, layman's report, films;
- 4) Science report on short-lived climate forcers;
- 5) Revised AMAP Strategic Framework document;
- 6) Proposal for SAON organizational structure and implementation plan;
- 7) Report on Unmanned Aircraft Systems;
- 8) 2010 Arctic Report Card;
- 9) AMAP/Stockholm Convention Secretariat Joint Report: Climate Change Impacts on POPs Levels and Effects.

In addition, the draft AMSA II(c) report will be part of the submission from PAME.

### **15 Election of Chair and Vice Chair for AMAP**

It was noted that Russel Shearer and Morten S. Olsen have served one term as Chair and Vice-Chair, respectively, of AMAP. John Calder has served several terms.

The WG re-elected Russel Shearer as Chair of AMAP and Morten Olsen as Vice-Chair. In addition, Outi Mähönen was elected as Vice-Chair. The new AMAP Board will serve from mid-May 2011.

The WG expressed their heartfelt gratitude to John Calder for his many years of service to AMAP and commended him on all his hard work.

## **16 Messages from Observing countries on their AMAP-related activities**

The observer from the Netherlands announced the conduct of the Netherlands Scientific Expedition Edgeøya Spitsbergen (SEES 2012). This field work campaign will be a follow-up of field work conducted in the 1960s and 1970s on Edgeøya. Large amounts of field data and samples are still available from those campaigns, some of which were recently rediscovered in an institute move. The project will focus on changes in the physical environment and in the ecosystem since the 1970s. More information can be found on [www.sees.nl](http://www.sees.nl).

The observers from China reported on Chinese IPY activities, including active participation in the PANDA programme of Arctic and Antarctic research expeditions. In addition, following Chinese expeditions to the Arctic in 1999, 2003, and 2008, a fourth expedition was conducted from 1 July to 20 September 2010. A total of 70 scientists participated, including five from the USA, France, Finland, and Estonia. This expedition studied the mechanisms of rapid change in the sea ice in the Arctic and the response of the Arctic ecosystems to the rapid change of sea ice. Studies included marine chemical analyses, marine geological surveys, biological sampling, greenhouse gas analyses, and many others. The observers stated that China recognizes the high importance of AMAP's work and hoped for good cooperation.

The observer from the European Environment Agency presented information on relevant activities that are being coordinated and initiated by the EEA and recent developments in Brussels. In particular, information was provided with regard to a) the recently adopted report by the European Parliament on a sustainable EU policy for the High North, b) the recently published European State and Outlook of the Environment Report (SOER2010) which covered a number of Arctic-related issues, c) EEA Arctic cooperation initiatives initiated with Greenland and Russia, d) a planned workshop on using Arctic traditional knowledge in EEA environmental monitoring work, e) information on the recently published EU Arctic Footprint report, and f) a possible EEA publication on Arctic environment and health issues later in 2011.

## **17 Next meeting and upcoming conferences, workshops of interest for AMAP**

The Russian delegation offered to host the 25th meeting of the AMAP WG in Moscow during the first week of October. The WG gratefully accepted this invitation and agreed that the next meeting will be held on 4 to 6 October 2011 in Moscow.

## **18 Any other business**

There was no other business.



## **19 End of the meeting**

The Chair thanked the host for the excellent meeting and social arrangements and the participants for their dedicated work during the meeting. He closed the meeting at 16:00 hrs.



## Annex 1

# AMAP 24<sup>th</sup> Working Group meeting

Fram centre, Tromsø, Norway. 19-21 January, 2011

## Agenda

### Wednesday 19th January

- 0830 1. Opening of the WG meeting**  
**1.1. Practical information**  
**1.2. Approval of the Agenda**  
**1.3. Actions from the Extended HoDs Meeting in Reykjavik**
- 0900 2. SWIPA: Science and Layman's reports.** Presentation and Review of the reports, conclusions and recommendations.  
*The following documents will be distributed/be available at least 2 weeks before the meeting:*  
*Draft science report*  
*Extended summary of the science report*
- 1000 – 1020 Health break**
- 1020 2. Review of SWIPA reports continues.** The chair may establish ad hoc groups to work on specific issues related to the reports.
- 1200 – 1300 Lunch**
- 1300 2. SWIPA continues.** Discussion and presentation of Draft films
- 1400 3. The Mercury report, status of the production.**
- 1500 - 1520 Health break**
- 1520 4. Outreach strategy for SWIPA and Mercury reports.**  
*Strategy for SWIPA and mercury assessment outreach will be presented*
- 1630 5. AMAP SLCF report: status and recommendations.** *Report from the AMAP expert group. Presentation by co-chair Andreas Stohl.*
- 1730 6. The Oil and Gas assessment.** *status of the work and publication.*
- 1800 End of the day**
- 1900 Reception**

**Evening and Night: TIFF – Tromsø International Film Festival**

**Thursday 20<sup>th</sup> January**

**0830** 7. **Unmanned Aircraft Systems (UAS).** *Report from the expert group and proposal to the Ministerial meeting. Presentation by co-chair Rune Storvold*

**0900** 8. **AMAP's new web page.** *demonstration by Simon.*

**0930** 9. **The AMAP Implementation Plan.**

**9.1. The Assessment strategy,**

- discussion of strategy for integrated assessments

**1000 - 1020** Health break

**1020** 9.1. **The Assessment strategy continues.**

**9.2. The Monitoring Programme for Trends and Effects of contaminants, climate, and human health**

**1200 - 1300** Lunch

**1330** 9.3. **The role of CBMP in AMAP's integrated monitoring plans**

**9.4. The coordination with international programmes**

**9.5. The way forward to finalize the work, time schedule, etc.**

**1500 - 1520** Coffee break

**1520** 10. **SAON: Recommendations from the SAON SG meeting in Oslo, Discussion.**

**1730** 11. **The AMAP Conference in May 2011 in Copenhagen: status.**

**1800** End of day 2.

**1900** The AMAP 20<sup>th</sup> Anniversary dinner at “Arktandria”

**2300** TIFF continues.

**Friday 21<sup>st</sup> January**

- 0900 12. AMAP's workplan for 2011–2013 and beyond**  
**12.1. Ongoing and new Monitoring programmes**  
**12.2. Ongoing and new Assessment programmes, e.g. Arctic Ocean Acidification, OGA follow up.**  
**12.3. AMAP's communication and outreach plan**  
**12.4. Cooperation with AC WGs.**  
- **AMSA II (c) project:** Endorsement of draft report and final work plan

**1030 – 1050 Health Break**

- 1050 12.4. Cooperation with AC WGs continues**  
- update of the PAME Arctic Marine Strategy Plan and AOR  
**12.5. International Polar Decade**  
**12.6. Other tasks to be included in the workplan for 2011–2013**  
- the Russian GEF application, etc.

**13. The AMAP report to the Ministerial meeting in Nuuk**

**1230 – 1330 Lunch - Return of the Sun after two months of darkness**

- 1330 2. SWIPA – report from ad hoc group and final discussion of the reports, recommendations and the way forward.**

- 1445 15. Election of Chair and Vice Chair for AMAP**

- 1530 16. Messages from Observing countries on their AMAP related activities**

- 1545 17. Next meeting and upcoming conferences, workshops of interest for AMAP**

- 1550 18. Any other business**

- 1600 19. End of the meeting**

**Pre & Post Events:**

**January 17<sup>th</sup> – 18<sup>th</sup>** SAON Steering Group meeting at the AMAP Secretariat in Oslo.

**January 22<sup>nd</sup> – 23<sup>rd</sup>** PAME Workshop on ecosystem approach to management; Boundaries and status of Large Marine Ecosystems (LMEs). **Please remember to nominate experts!**

**January 23<sup>rd</sup> 1600 - 2000** Opening of the exhibition at Polaria in Tromsø  
”From Lomonosov to Nansen and beyond”.

**January 24<sup>th</sup> – 28<sup>th</sup>** Arctic Frontiers Conference in Tromsø.

**January 24<sup>th</sup> – 28<sup>th</sup>** Global Mercury Negotiations – INC-2 in Japan.



## Annex 2

### AMAP 24<sup>rd</sup> Working Group Meeting, Tromsø, Norway, 19–21 January 2011

#### List of Participants

Country	First name	Last name	Institute name	Mailing address	Direct phone	Direct fax	e-mail
Canada AMAP Chair	Russel	Shearer	Northern Science and Contaminants Research Directorate Indian and Northern Affairs Canada	360 Albert St. 10th Floor Constitution Square Ottawa, ON K1A 0H4	+1 613 995 6933	+1 613 995 7029	Russel.Shearer@ainc- inac.gc.ca
Canada	Frederick J.	Wrona	Aquatic Ecosystem Impacts Research Div. Water Sciences and Techn. Directorate Environment Canada	University of Victoria P O Box 3060 STN CSC Victoria British Columbia V8W 3R4	+1 250 363 8901	+1 250 363 3345	fred.wrona@ec.gc.ca
Canada	James D.	Reist	Fisheries and Oceans Canada	501 University Crescent Winnipeg, Manitoba R3T 2N6	+1 204 983 5032	+1 204 984 2403	jim.reist@dfo-mpo.gc.ca
Canada	Shannon	Headland	Canadian International Centre for the Arctic Region Foreign Affairs and International Trade Canada Government of Canada	Wergelandsveien 7 Oslo	+47 22 99 53 41  Cell: +47 48 40 24 72	+47 22 99 53 01	shannon.headland@inter- national.gc.ca
Denmark	Morten S.	Olsen	Danish Energy Agency Ministry of Climate and Energy	Amaliegade 44 DK-1256 Copenhagen K	+45 33 92 68 92	+45 25 65 02 47	mso@ens.dk
Denmark	Povl	Frich	Danish Energy Agency Ministry of Climate and Energy	Amaliegade 44 DK-1256 Copenhagen K	+45 33 92 78 30	+45 25 65 02 47	pfr@ens.dk
Denmark	Mikala	Klint	Danish EPA Chemicals Danish Ministry of the Environment	Strandgade 29 DK-1401 Copenhagen K	+45 72 54 42 33	+45 33 32 22 228	mkl@mst.dk
Denmark	Henning	Thing	Centre for Ice and Climate Niels Bohr Institute Univ. of Copenhagen	Juliane Maries Vej 30 DK-2100 Copenhagen Ø	+45 28 40 88 09		thing@gfy.ku.dk

Country	First name	Last name	Institute name	Mailing address	Direct phone	Direct fax	e-mail
Faroe Islands	Maria	Dam	Environmental Agency	Tradagøta 38 P.O. Box 2048 FO-165 Argir	+298 34 24 70		MariaD@us.fo
Finland	Outi	Mähönen	Ministry of the Environment c/o Lapland ELY Centre	P.O.Box 8060 FIN-96101 Rovaniemi	+358 40 512 7393  +358 400 148 604	+358 16 310 340	outi.mahonen@ely-keskus.fi
Iceland	Helgi	Jensson	Environment Agency of Iceland	Sudurlandsbraut 24 IS-108 Reykjavik	+354 591 2030	+354 591 2010	helgij@ust.is
Norway	Per	Døvle	Climate and Pollution Agency	P.O.Box 8100 Dep. Strømsveien 96 N-0032 Oslo	+47 22 57 34 37	+47 22 67 67 06	per.dovle@klif.no
Norway	Hein Rune	Skjoldal	Institute of Marine Research	P.O.Box 1870 Nordnes N-5817 Bergen	+47 55 23 69 46	+47 55 23 85 84	hein.rune.skjoldal@imr.no
Norway	Bjørn Einar	Grøsvik	Institute of Marine Research	P.O. Box 1870 Nordnes N-5817 Bergen	+47 55 23 86 36	+47 55 23 85 84	<a href="mailto:bjorn.grosvik@imr.no">bjorn.grosvik@imr.no</a>
Norway	Andreas	Stohl	Norwegian Institute for Air Research (NILU)	Postboks 100 N-2027 Kjeller	+47 63 89 80 35		ast@nilu.no
Norway	Roland	Kallenborn	Department of Chemistry, Biotechnology and Food Science (IKBM) University of Life Sciences (UMB)	Christian Magnus Falsens vei 1 Postbox 5003 NO-1432 Ås	+47 6496 6151  Cell: +47 908 79 988		roland.kallenborn@umb.no
Norway	Jon Øyvind	Odland	Institute of Community Medicine	University of Tromsø N-9038 Tromsø	+47 75 58 41 66/90 95 38 87	+47 75 50 70 49	<a href="mailto:oodland@online.no">oodland@online.no</a>  jon.oyvind.odland@uit.no
Norway	Anne Regine	Lager	Climate & Human, Environment and Health Research Strategy Centre (CHEHR)	University Hospital of North Norway Division of Internal Medicine Tromsø	+47 77 75 03 83 +47 91711630		anne.regine.lager@unn.no
Norway	Rune	Storvold	NORUT	P. B. 6434 9294 Tromsø	+47 934 16 169		Rune.Storvold@norut.no

Norway	Justin	Gwynn	Norwegian Radiation Protection Authority	The Fram Centre N-9296 Tromsø	+47 77 75 01 65	+47 77 75 01 71	Justin.Gwynn@nrpa.no
Russia	Yuri	Tsaturov	Russian Federal Service for Hydrometeorology and Environmental Monitoring	Novovagankovsky Street 12 123995 Moscow	+ 7 499 252 0728	+ 7 499 252 24 29	tsaturov@mecom.ru
Russia	Alexander	Klepikov	Arctic and Antarctic Research Institute of Roshydromet	38, Bering str., 199397 St. Petersburg	+7 812 352 0226	+7 812 352 1557	klep@aari.nw.ru
Sweden	Tove	Lundeberg	Swedish Environmental Protection Agency	SE-106 48 Stockholm	+46 10 698 16 11	+46 10 698 15 85	Tove.Lundeberg@naturvardsverket.se
Sweden	Jonas	Rodhe	Swedish Environmental Protection Agency	SE-106 48 Stockholm	+ 46 10 69 81 307	+46 10 698 15 85	jonas.rodhe@naturvardsverket.se
Sweden	Marianne	Lilliesköld	Swedish Environmental Protection Agency	SE-106 48 Stockholm			marianne.lillieskold@naturvardsverket.se
USA	John A.	Calder	National Oceanic and Atmospheric Administration Climate Program Office R/CPO	1100 Wayne Ave. Room 1202 Silver Spring, Maryland 20910-5603	+1 301 427 2470	+1 301 427 0033	john.calder@noaa.gov
USA	Kathleen	Crane	National Oceanic and Atmospheric Administration Climate Program Office R/CPO	1100 Wayne Ave. Room 1202 Silver Spring, Maryland 20910-5603	+1 301 427 2471		kathy.crane@noaa.gov

#### PERMANENT PARTICIPANTS

Arctic Council Indigenous Peoples' Secretariat	Alona	Yefimenko	Arctic Council Indigenous Peoples' Secretariat	Strandegade 91 DK - 1401 Copenhagen K	+45 32 83 37 96	+45 32 83 37 91	alona.yefimenko@arcticpeoples.org
ICC	Duane	Smith	Inuit Circumpolar Council (ICC)	Suite 1001 75 Albert Street Ottawa, Ontario K1P 5E7	+1 867 777 2828	+1 867 777 2610	inuviatuk@northwestel.net
ICC	Eva	Kruemmel	Inuit Circumpolar Council (ICC)	Suite 1001 75 Albert Street Ottawa, Ontario K1P 5E7	+1 613 563 26 42	+1 613 565 30 89	EKruemmel@inuitcircumpolar.com
ICC	Dan	Fitzgerald	Inuit Circumpolar Council-Alaska	3000 C Street Suite N201 Anchorage, AK 99503			<a href="mailto:dan.fitzgerald@north-slope.org">dan.fitzgerald@north-slope.org</a>



Saami Council	Gunn-Britt	Retter	Saami Council	Bergeby N-9840 Varangerbotn	+47 913 59 222 (Cell)		gbr@saamicouncil.net
Saami Council	Jan Idar	Solbakken	Saami Council	Saami University College N-9520 Guovdageaidnu	+47 78 44 85 17	+47 78 44 84 02	jan- idar.solbakken@samiskh s.no
<b>OBSERVER ORGANISATIONS</b>							
AWRH	Svein D.	Mathiesen	Association of World Reindeer Herders	P.O. Box 508 N-9255 Tromsø	+47 90 52 41 16 (Cell)		svein.d.mathiesen@gmail .com
EEA	Nikolaj	Bock	European Environment Agency	Kongens Nytorv 6 DK-1050 Copenhagen	+45 33 36 71 03	+45 33 36 72 72	Nikolaj.Bock@eea.europ a.eu
WWF Global Arctic Programme	Martin	Sommerkorn	WWF International Arctic Programme	P.O. Box 6784 St. Olavs pls. N-0130 Oslo	+47 22 20 53 09	+47 22 20 06 66	msommerkorn@wwf.no
<b>OBSERVER COUNTRIES</b>							
People's Republic of China	Yang	Liu	Ministry of Foreign Affairs of China Department of Treaty and Law	No. 2 Chaoyangmen Nadajie Chaoyang District Beijing 100701	+86 10 65963265	+86 10 65963276	liu_yang6@mfa.gov.cn
People's Republic of China	Wenting	Zhao	Ministry of Foreign Affairs of China Department of Treaty and Law	No. 2 Chaoyangmen Nadajie Chaoyang District Beijing 100701		+86 10 65963276	Zhao_wenting@mfa.gov. cn
People's Republic of China	Ziwei	Yao	National Marine Environment Monitoring Center	42 Linghe Str. Dalian	+86 411 84782505	+86 411 84782573	zwyao@nmemc.gov.cn
The Netherlands	Frits	Steenhuisen	Arctic Centre University of Groningen	P.O.Box 716 NL-9700 AS Groningen	+31 (0)50 3636056		f.steenhuisen@rug.nl
<b>Arctic Council Secretariats</b>							
Arctic Council Secretariat	Nina E. Buvang	Vaaja	Arctic Council Secretariat	The Fram Centre Hjalmar Johansens gate 14 N-9007 Tromsø	+47 77 75 01 43	+47 77 75 01 40	Nina.Buvang.Vaaja@arct ic-council.org

<b>Science Writers</b>							
Science Editor	Carolyn	Symon		Arden House 6 High Street Tutbury Derbyshire DE13 9LP United Kingdom	+44 5600 987644		carolyn.symon@btinternet.com
SWIPA Layman Science Writer	Lynn	Dicks		96 High Street West Wickham Cambridge CB21 4SB United Kingdom	+44 (0) 1223 769018 (work)  +44 (0) 1223 290711 (home)	+44 1223 336676	<a href="mailto:lyd22@cam.ac.uk">lyd22@cam.ac.uk</a> & Lynn.dicks@writing science.co.uk
<b>SWIPA Documentary</b>							
Alphafilm Aps	Jacob	Bendtsen	Alphafilm Aps	Strandgade 102 1 floor DK- 1401 Copenhagen K Denmark	Phone: + 45 70 23 03 35  Cell: + 45 20 33 03 35		Jacob@alphafilm.dk
Alphafilm Aps	Henrik	Egede-Lassen	Alphafilm Aps	Strandgade 102 1 floor DK- 1401 Copenhagen K Denmark			henrikegedelassen@gmail.com
<b>AMAP SECRETARIAT</b>							
AMAP	Lars-Otto	Reiersen	Arctic Monitoring and Assessment Programme Secretariat	P.O. Box 8100 Dep. N-0032 Oslo	+47 23 24 16 32	+47 22 67 67 06	lars- otto.reiersen@amap.no
AMAP	Simon	Wilson	Arctic Monitoring and Assessment Programme Secretariat	P.O. Box 8100 Dep. N-0032 Oslo	+31 10 466 2989		s.wilson@inter.nl.net
AMAP	Yuri	Sychev	Arctic Monitoring and Assessment Programme Secretariat  c/o Polar Foundation	Seleznevskaya Str., 11A Moscow 113030	+7 495 692 7143	+7 495 692 7650	sychev@polarf.ru
AMAP	Odd	Rogne	Arctic Monitoring and Assessment Programme Secretariat	P.O. Box 8100 Dep. N-0032 Oslo Norway	+47 23 24 16 34	+47 22 67 67 06	Odd.Rogne@amap.no or: oddr@hotmail.com

AMAP	Janet	Pawlak	Arctic Monitoring and Assessment Programme Secretariat	Ingeborgvej 11A DK-2920 Charlottenlund	+45 39 64 18 65	+45 39 64 17 75	jpawlak@dahm.dk
AMAP	Inger	Utne	Arctic Monitoring and Assessment Programme Secretariat	P.O. Box 8100 Dep. N-0032 Oslo	+ 47 23 24 16 35	+ 47 22 67 67 06	inger.utne@amap.no



### Annex 3

#### List of Documents for the AMAP 24th Working Group Meeting

Ref.	Title	Notes
WG24/1/1	Draft WG24 Agenda	
WG24/1/2	Draft WG24 List of Participants	
WG24/1/3	Draft WG24 List of Documents	
WG24/2/1	SWIPA Layman's report THIRD DRAFT 21 December 2010	
WG24/2/2	SWIPA Summary for policymakers (21.12.10)	
WG24/2/3	TEMPLATE FOR NEW AND CHANGED PEER REVIEW PLANS December, 2010	
WG24/2/4	Alphafilm Aps and Arctic Monitoring and Assessment Programme Secretariat PROJECT TITLE: Production of Tree High Quality Films that Focus on the Climate Change in the Arctic and Its Consequences on Local, Regional and Global Scales Progress report	
WG24/2/4-1	Coverletter (e-mail 13 January 2011)	
WG24/2/4-2	SWIPA Laymans Summary for Policymakers Dec. 21 2010 – JS and RS Comments	
WG24/2/5	SWIPA Laymans Summary for Policymakers Dec. 21 2010 – Comments Maria Ananicheva	
WG/24/2/6	SWIPA Laymans Summary for Policymakers Dec. 21 2010 – Comments Helgi Jensson	
WG24/2/7	SWIPA Laymans Summary for Policymakers Dec. 21 2010 – Comments US	
WG24/2/8	Swedish Comments on SWIPA Summary for policymakers (21.12.10)  2011.01.14	
WG24/2/9	SWIPA Laymans Summary for Policymakers Dec. 21 2010 – Comments Greenland	
WG24/2/10	SWIPA Layman's report THIRD DRAFT 21 December 2010 Comments - Greenland	
WG24/4/1	Draft SWIPA Communication and outreach plan MSO, January 2011	

<b>Ref.</b>	<b>Title</b>	<b>Notes</b>
WG24/7/1	Campaign Details: Coordinated Investigation of Climate-Cryosphere Interactions(CICCI) Dates: 31 March – 15 May, 2011 Venue: Svalbard, Norway	
WG24/7/2	AMAP Unmanned Aircraft Systems (UAS) Expert Group: Summary of Activities 2010	
WG24/9/1	Update, January 2011: Development of a revised AMAP Assessment Strategy and Implementation Plan.	
WG24/9/2	Summary of the first draft changes to the AMAP Trends and Effects Program 5-year plan for Climate Effects and UV-B	
WG24/9/3	Revised AMAP implementation plan - Contaminant monitoring. Status: 14.01.2011 Roland Kallenborn, University of Life Sciences (UMB, Å, Norway).	
WG24/9/4	Implementations and Future Adaptations for Monitoring of Contaminants in the Arctic Status 12.01.2011 Coordinator: Roland Kallenborn UMB/NILU	
WG24/12/1	Comments on the current status of AMAP Climate Expert Group.  Document Provided by Co-Chair John Walsh	
WG24/12/2-1	External Review of the Arctic Monitoring and Assessment Programme Strategy. AMAP Report 2010:7	
WG24/12/2-2	Coverpage	
WG24/12/3	Note for AMAP: Mercury in oil, natural gas and petroleum products  John Munthe IVL Swedish Environmental Research Institute	
WG24/13/1	Some thoughts on the proposed International Polar Decade (IPD) Prepared by John Calder, January 12, 2011	
WG24/13/2	On the International Polar Decade (IPD) initiative (Prepared by Yuri Tsaturov, Eduard Sarukhanian, Alexander Klepikov)	
WG24/16/1	Press Release: Climate Change Increases Planet's Vulnerability to Persistent Organic Pollutants	

## Annex 4

### 24th Working Group Meeting, January 2011

#### Action list

Agenda item	Subject	Action	For	By
2	SWIPA	Send final SWIPA summary for policy-makers including recommendations to AMAP WG	Simon Wilson	26 January 2011
2	SWIPA	Review and respond to AMAP Secretariat concerning the SWIPA summary for policy-makers; no response indicated acceptance	AMAP HoDs	31 January 2011
2	SWIPA	Send final summary for policy-makers including recommendations to SAOs for their review	AMAP Secretariat	14 February 2011
2	SWIPA	Send comments on SWIPA layman's report to AMAP Secretariat	All participants	26 January 2011
2	SWIPA	Sign off on SWIPA layman's report	SWIPA Convening Lead Authors	15 March 2011
2	SWIPA	Final sign off on SWIPA layman's report during a teleconference in late March	AMAP WG	31 March 2011
2	SWIPA	Send comments on SWIPA film manuscripts to AMAP Secretariat	All participants	26 January 2011
3	Hg assessment	Distribute letter to AMAP countries requesting financial support for the ten-minute film on mercury	Lars-Otto Reiersen	
3	Hg assessment	Prepare translations of script of film on mercury to relevant languages for insertion as sub-titles	AMAP countries and PPs	
3	Hg assessment	Prepare a set of PowerPoint slides for downloading from AMAP website explaining the mercury assessment issues and results	Lead authors of mercury assessment	
4	Outreach strategy	Prepare translations of scripts of SWIPA films to relevant languages for insertion as sub-titles	AMAP countries and PPs	
4	Outreach strategy	Prepare sets of PowerPoint slides for downloading from AMAP website explaining the issues and results of the SWIPA report, for use by scientists and educators	SWIPA Convening Lead Authors	

<b>Agenda item</b>	<b>Subject</b>	<b>Action</b>	<b>For</b>	<b>By</b>
4	Outreach strategy	Create a small group to develop a plan for outreach of AMAP products to various audiences	AMAP WG	
5	SLCF assessment	Distribute letter requesting peer reviewers for the SLCF assessment, including from the LRTAP community	Lars-Otto Reiersen	28 January 2011
6	OGA	Distribute a letter requesting peer reviewers for Chapter 6 of the oil and gas assessment	Lars-Otto Reiersen	21 February 2011
6	OGA	Send comments to AMAP Secretariat on whether the peer review template distributed prior to the meeting should serve as a template and be adopted as a standard procedure in AMAP	AMAP HoDs	28 February 2011
7	UAS	Review and send comments on the UAS report to the Co-Chairs of the UAS Expert Group	AMAP WG	31 March 2011
8	AMAP web page	Send link to demo model of new AMAP home page to WG participants	Simon Wilson	
8	AMAP web page	Review demo model of new AMAP home page and send comments to Simon Wilson	All participants	
9.1	Assessment strategy	Speak to SAOs to ensure that a statement concerning the importance of beginning work on an integrated approach to assessment be included in the Nuuk Ministerial Declaration	All participants	10 March 2011
9.2	Monitoring programme	Comment on the draft Implementation Plan sections on monitoring contaminants and climate-change parameters and the assessment strategy	AMAP Expert Group Chairs and members	28 February 2011
9.2	Monitoring programme	Ensure that Expert Group Chairs and members comment on the draft Implementation Plan sections on monitoring contaminants and climate-change parameters and the assessment strategy	HoDs	28 February 2011
9.2	Monitoring programme	Review the tables of designated experts in the various AMAP Expert Groups to make sure that the right key experts are involved	HoDs	
9.2	Monitoring programme	Conduct a workshop on the draft AMAP Implementation Plan	AMAP	Summer/early autumn 2011

<b>Agenda item</b>	<b>Subject</b>	<b>Action</b>	<b>For</b>	<b>By</b>
9.3	CBMP	Discuss AMAP cooperation on the CBMP with CAFF Chair	AMAP Chairman	
9.3	CBMP	Discuss AMAP cooperation on the CBMP with national CAFF representative	AMAP HoDs	
9.3	CBMP	Prepare one-page paper on AMAP's interest in cooperating with CAFF on the CBMP	AMAP Chairman	
9.3	CBMP	Bring message on AMAP's interest in cooperating with CAFF on the CBMP to next CAFF meeting	Outi Mahonen	
11	AMAP conference	Send out a letter requesting financial support for the AMAP conference in May 2011	Lars-Otto Reiersen	28 February 2011
12.4	AMSA II(c)	Send comments on draft AMSA II(c) to AMAP Secretariat; national comments should be coordinated between AMAP and CAFF representatives	AMAP HoDs	31 January 2011
12.5	IPD	Discuss the possibility of mentioning IPD in the Nuuk Declaration with national SAO	AMAP HoDs	31 January 2011
12.6	GEF project	Send terms of reference for the revised proposal for an Arctic rivers project to AMAP HoDs	Yuri Sychev	
12.6	AMAP Work Plan	Send additional items for the Work Plan for 2011–2013 to the AMAP Secretariat	All participants	