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Minutes of the 30th Meeting of the AMAP Working Group Helsinki, Finland; 28 November–1 December 2016

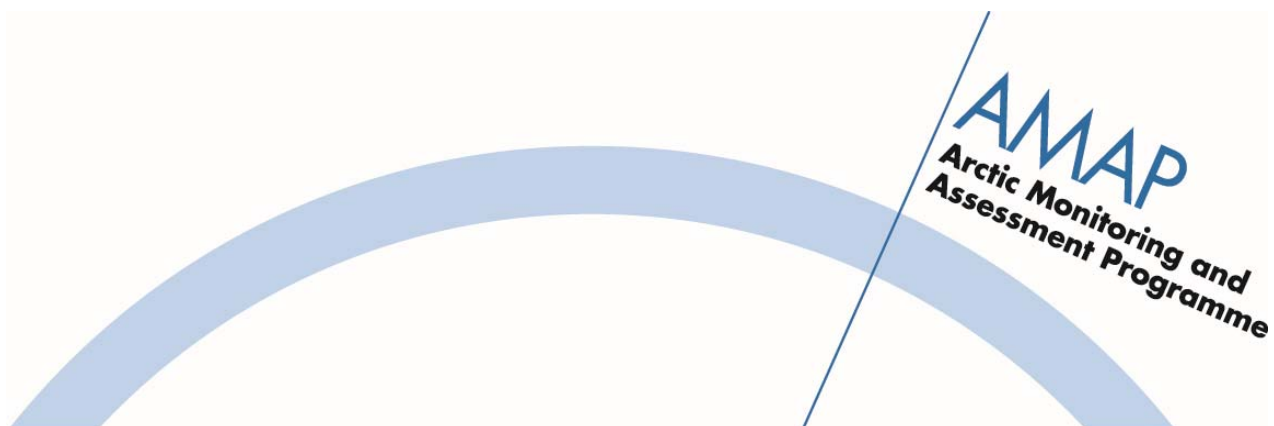


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1 Opening of WG meeting, welcome and adoption of agenda

The AMAP Working Group Chair, Martin Forsius (Finland), opened the meeting at 9:00 hrs on 28 November and welcomed the participants. He noted that this is a special meeting at which the 25th anniversary of AMAP will be celebrated, including with an anniversary seminar the following day. He extended a special welcome to the observers, noting that they make an important contribution to AMAP in many ways, and also to representatives of several of the Arctic Council (AC) Working Groups (WGs) who attended for the anniversary.

Outi Mähönen (Finland) welcomed participants to Helsinki, and also noted the special significance of this meeting as it marked the 25th Anniversary of the establishment of the Arctic Monitoring and Assessment Programme following the Finnish initiative that led to the adoption by the eight Arctic countries of the Arctic Environmental Protection Strategy in 1991. This anniversary would be marked by a seminar to be held on the afternoon of 29 November, followed by a dinner to which all participants were welcome.

Martin Forsius identified the consideration of the AC Ministerial 2017 deliverables, and in particular the five planned Summary for Policy-Makers documents, and the AMAP work-plan for 2017-2019 as the priority items that needed to be addressed at the meeting. The agenda was adopted as proposed. The agenda for the meeting is attached as Annex 1.

All Arctic Council member states were represented at the meeting. The Arctic Council Permanent Participants (PPs) Arctic Athabaskan Council (AAC), Inuit Circumpolar Council (ICC) and Saami Council were also represented. Observers attending the AMAP Working Group meeting were: AC ACAP, CAFF, and EPPR WGs and the ACS; China, France, Germany, Italy, Japan, Republic of Korea, IASC, UNEP, WMO, and WWF. Additional experts participating included a representative from the European Commission/JRC and the three science writers responsible for drafting policy-makers summaries. The list of participants at the meeting is attached as Annex 2.

The Chair noted that the two main issues for this meeting are to approve the Summary for Policy Makers (SPM) for the five assessments/technical reports that have been prepared over the past few years. For each SPM, the focus should be on the main conclusions and recommendations because these will be forwarded to the AC Ministerial Meeting. Editorial changes and small edits should be provided to the science writer for further work. The aim is to approve the SPMs as much as possible at this meeting. The second main issue is approval of the AMAP Work Plan for 2017–2019.

2 Follow-up actions from previous meetings

It was noted that most outstanding actions (Doc. WG30/2/1) will be addressed later in the agenda under the relevant item. In addition, the AMAP Secretariat has received a message from the Intergovernmental Panel on Climate Change (IPCC) giving official recognition of AMAP's work on climate and cryosphere issues.

3 Report from October SAO meeting

The Chair provided information from the recent meeting of Arctic Council Senior Arctic Officials (SAOs), at which he had presented reports from AMAP concerning connections with the IPCC on the

issue of the 1.5 °C Paris Agreement target and on oceans and cryosphere. The SAOs had discussed a number of issues, including a common set of operating guidelines for all AC WGs and a handbook, for which AMAP has the lead.

4 Approval of SWIPA SPM, deliverables to Ministerial meeting and other SWIPA outreach products

The WG Chair outlined the procedure that would be employed for the approval of all summary for policy-maker (SPM) documents to be considered at the meeting. Under this procedure, the WG should focus on the 'recommendations' sections, as these are the parts that will be developed into the information that needs to be communicated to SAOs by latest 1 February 2017. Delegates were requested to raise any proposals relating to the 'recommendation' sections and any substantive comments that may affect these sections during the meeting discussions. They were requested to deliver any non-substantive/editorial comments to any parts of the documents to the Secretariat; these would be addressed as far as possible by the science writers responsible for the different SPMs during the meeting. Any comments that were unclear or needed further consideration would be annotated for subsequent attention. Redrafted 'recommendations' sections would be reconsidered during the meeting for approval, if possible; otherwise revised drafts of the SPMs would be prepared for approval by AMAP HoDs during a HoDs meeting to be convened at the end of January 2017.

The Chair of SWIPA, Morten Skovgaard Olsen (Kingdom of Denmark), reported that SAOs had requested information on what the 1.5 °C Paris Agreement target would imply for changes in the Arctic cryosphere. As this request had been received very late in the preparation of the scientific report, there had not been adequate time to follow up on it yet. However, some new text on the impact of the Arctic on global mean sea-level rise is under preparation based on a request made at the meeting of the SWIPA authors group in early November. The science writer for the SWIPA SPM, Brad Hurley, had participated in that meeting and presented a draft of the SPM. SWIPA lead authors had broadly agreed on this text.

Brad Hurley then presented an overview of the key findings and recommendations of the SWIPA SPM (Docs. WG30/4/1-1, WG30/4/1-1Add, and WG30/4/2).

In a tour de table of the delegations and Permanent Participants (PPs), there was general agreement that this was overall a well-written, clear report. Most delegations had either already submitted editorial comments or would do so during the meeting. Among the issues brought up in the discussion were that the report gives an impression that if the Paris Agreement were to be implemented, the Arctic will stabilize; however, the Paris Agreement will be very difficult to implement, and the Arctic will stabilize at a different level. PPs remarked that a statement was missing on the vulnerability of Arctic Indigenous people and that they were particularly suffering from climate change. There was also a wish to coordinate with the IPCC as much as possible.

In discussion of the recommendations, several delegations considered that they were too general and that more specific recommendations should be added. The recommendations lacked a sense of urgency in addressing the need for action, and the target audience for the recommendations was also not clear. The PPs noted that climate change has been happening for 20 years now, and an important factor is not just that the temperature is increasing very rapidly but that there is a much greater irregularity of temperature. These irregular patterns stress the biota. They felt that Indigenous peoples and their knowledge should be mentioned specifically in the recommendations and that research efforts should also include community-based monitoring.

A more specific comment noted the need to supplement the message that 'climate stabilization may result if the Paris Agreement is implemented by mid-century' with further messages that (1)

implementation by mid-century is unlikely, and (2) that the implied stabilization will in any case be to a very different climate than that which exists at present.

The SWIPA Chair expressed appreciation for the many useful comments and stated that they should be possible to address. He noted, however, that SWIPA is an assessment of changes in the Arctic cryosphere, so impacts on Arctic ecosystems or economic issues have not been covered; it was anticipated that they would be addressed in the Adaptation Actions for a Changing Arctic (AACA) work. PP engagement is an issue that may require more consideration as human aspects were not a focus of the SWIPA update because they were being addressed under AACA. He noted that the SWIPA group was still struggling with how to take into account Indigenous and local knowledge, but that cooperation had been established with Indigenous and local knowledge holders during the course of the work. With regard to the target audience, he stated that the scientific report targets the scientific community, while the SPM targets policy-makers both in the Arctic and globally and also aims to inform the general public.

The AMAP Chair requested that all editorial comments on the SWIPA SPM be submitted to the science writer as soon as possible during the meeting. The science writer should endeavour to use more scientific language and prepare specific recommendations for the Arctic Council directly. This could also include mention of Sustaining Arctic Observing Networks (SAON). The Chair of SWIPA and the science writer were requested to address the comments and return with an improved version of the text that can be submitted for approval.

Later in the meeting, the science writer reported that they had addressed all comments received during the meeting. This revised SPM will be circulated to HoDs and PPs for any final substantive comments shortly after the meeting. Substantive comments must be received by the Secretariat by 19 December at the latest, after which the draft will be revised for distribution to SWIPA lead authors by 4 January 2017, with a response due by 15 January. The final revised version will be distributed shortly thereafter for final approval by HoDs at the end of January.

5 The AMAP conference in April 2017

The U.S. Delegation reported that AMAP had requested the United States to host the next five-year science conference. This will take place in Reston, Virginia, near the headquarters of the U.S. Geological Survey, during the week of 24 April 2017. A scientific committee and an organizing committee have been formed; these include representation from SDWG and CAFF. The first day will be held in plenary, with presentations on recent AMAP assessment reports and other scientific issues. The second day will be held in break-out groups on thematic topics with a partial focus on AACA regions. The third day will consider how to take knowledge to action at the regional, national and global levels. A number of side events are being planned in association with this conference, including an AMAP/EU-PolarNet Stakeholder Workshop on Research Needs on Climate-related Effects on the Arctic Cryosphere and Adaptation Options.

6 Approval of Chemicals of Emerging Arctic Concern (CEAC) SPM, deliverables to Ministerial meeting and other CEAC outreach products

The Secretariat introduced document WG30/6/1, the draft SPM of the chemicals of emerging Arctic concern assessment, noting that some additional text boxes had been added and some further minor editorial changes made after the circulation of this document. These were identified in the text flow version of the SPPM (document WG30/6/3). The science writer responsible for the SPM, Jennifer Balmer, present at the meeting, had also authored some of the chapters of the scientific report as well as acting as scientific secretary for the assessment.

Comments to the documents were generally complimentary regarding the style and content of the draft SPM. Several delegations submitted editorial comments to indicate where they felt issues such as contradictions or some repetition could be addressed. The author was encouraged to include more descriptions of specific chemicals and their main sources/uses (possibly in the form of additional boxes or tables), and where feasible also include information on levels found in the Arctic vs. other regions for comparison. Given the high costs of screening for these chemicals in the environment, ways should be explored to obtain information on such chemicals from industry and producers. The question of whether AMAP should propose regional bans on specific chemicals, such as siloxanes, was raised. Several delegations also welcomed the assessment in relation to furthering knowledge on the evolving nature of Arctic chemical contamination issues, and possible needs for defining what sort of regulatory structures may need to be put in place in the future. One of the PPs identified the need for improved communication of findings to, in particular, young people as well as the need to engage with the observers on communication and outreach regarding chemical pollution issues. Outreach should address messaging on local vs. long-range-transported (LRT) pollution issues.

Specific comments focussing on the recommendations section were as follows:

- There was a greater need to specify who recommendations were targeting, and in the case of the recommendations relating to future monitoring and research which have operational consequences for AMAP, to make clear connections between this and the AMAP work plan, including QA/QC aspects. In particular, the second recommendation would need to be reformulated in this respect; there was, however, a desire to retain it.
- Recommendations need to be reformulated to better differentiate between items addressing LRT vs. local pollution issues, and discussion of potential POPs and chemicals that would not qualify as POPs, including substances such as micro-plastics that are not in themselves chemicals but have clear linkages to chemical pollution issues with respect to transport and biological effects.
- Recommendations addressing needs for improvement in chemical regulatory systems should be strengthened to reflect the need for more proactive regulatory systems (to avoid time lags in regulation of harmful chemicals) that also take account of information on LRT from monitoring activities. It was recommended that Arctic countries and observers be more active in the nomination of candidate POPs for the Stockholm Convention. Furthermore, given that the assessment shows that some of these chemicals originate from local sources in the Arctic, there may be a need to recommend and facilitate information on potential regional or national regulatory systems.
- A separate recommendation should be added addressing the need for improved information from industry.

Following revision of the recommendations sections of the SPM (including review by one of the POPs EG co-leads), an updated version was presented to the WG for their further comments. Generally, the WG expressed satisfaction with the revised version and HoDs agreed to provide any additional comments by 12 December.

It was agreed that the timeline for finalising the CEAC SPM would follow (approximately) that previously agreed for the SWIPA SPM, namely:

- The revised CEAC SPM incorporating the revised recommendations would be circulated to HoDs/PPs by 14 December. This draft would address as far as possible the comments provided during the meeting, with any that could not be resolved annotated for further consideration by HoDs. The revised draft would also be circulated to assessment leads for their sign-off.

- HoDs and PPs would provide a fast response to the updated draft by 19 December; after this, the SPM would be finalised for circulation to HoDs/PPs on 4 January, for their final approval for publication during the HoDs meeting at the end of January 2017.
- Recommendations sections would be adapted as appropriate by the Secretariat for inclusion in the draft AMAP Progress report to SAOs and as input to SAOs' discussions on the Ministerial Declaration.

7 Approval of AACA SPMs and deliverables to Ministerial meeting

The Secretariat introduced documents WG30/7/1, 2 and 3, the three regional Summaries for Decision Makers (SDMs), and reported about the process leading up to the three SDMs for approval. The Secretariat stated that the three SDMs have been reviewed and commented on by the three author teams and the SDMs were also submitted to HoDs and PPs in October for unofficial review. This resulted in comments from the Kingdom of Denmark for the Baffin Bay/Davis Strait SDM and one Russian comment to the Barents SDM. These comments have been taken into account in the final draft SDMs.

The Secretariat also drew attention to the overview tables developed by Iceland and attached to the SDMs. Iceland stated that the tables were not meant to be included in the SDMs, but rather that the statements in the SDMs could be organised into 'informative' and 'action' statements.

The Delegation of Canada questioned whether the SDMs had included the necessary information from the technical reports to give decision-makers the information they needed and noted that there was still work to be done with the SDMs.

The Delegation of the Kingdom of Denmark noted that the statements in the SDMs were partly general statements and considered that they should be more region-specific, which was supported by the delegations of Canada, Finland, Russia and Sweden. The Delegation of the Kingdom of Denmark also noted that it was necessary to prepare a 'lessons learned' evaluation of the project; this also was supported by the delegations of several countries, PPs and observers.

The Delegation of Finland agreed to the comments made and also stressed that the SDMs need to build on the technical reports.

The Delegation of Norway stated that they saw the need to refine the SDMs and especially the Barents SDM.

The Delegation of Russia agreed with the previous comments and especially noted that the recommendations in the three SDMs were too similar.

The Delegation of Sweden stated that it is necessary for the SDMs to clearly indicate whether the statements are for information, or are key findings or recommendations.

The Delegation of the USA stated they had no structural comments to the SDMs and they regarded the texts as informative.

Several delegations noted that the fact that these reports arise from a pilot project, thus representing a new line of work by AMAP, was not reflected in the SDMs whereas this should be made clear.

PP organizations noted in particular terminology issues and some aspects that seemed to be missing in some reports.

The observer countries and organisations generally gave a positive feedback to the SDMs and also suggested some improvements. WWF was particularly interested in the lessons learned from the AACA approach and wanted the SDMs to look at adaptation in a more integrated way with resilience.

The AACA Chair, Tom Armstrong (USA), summed up the interventions and assured the participants that the SDMs reflect the material in the technical reports and the science writer has been faithful to the technical reports. He stated that if text on a specific topic is not contained in an SDM, most probably this is because the specific text is missing from the technical reports.

It was decided that the AACA team should restructure the SDMs and come back to plenary to present a proposal for this and a timeline for finalising the SDMs.

The following morning, the AACA Chair presented a proposed way forward to the plenary. The restructuring included renaming the SDMs to 'Summary reports' and starting each report with a short text about the AACA process, then laying the foundations for adaptation, and finally containing a section with concluding remarks/lessons learned at the end of the summary reports. This section should also identify gaps that need to be filled in future work.

Noting that several of the comments received pointed to the contents of the technical reports, the AACA Chair stressed that it is too late to revisit the technical reports, and the science writer has been faithful to these technical reports.

The WG agreed that this proposal was a good way forward and agreed that the summary reports should not be rewritten, but that the existing text should be used and restructured. The additional introductory and process text will be similar for all three regions, while the text concerning foundations for adaptation and the concluding remarks/lessons/learned/knowledge gaps will be region-specific.

The WG agreed to the timeline presented for finalising the summary reports. This includes the receipt of feedback from HoDs and PPs particularly on the 'next steps/lessons learned' section of the summary reports by 6 December, circulation of revised summary reports by 16 December, final feedback (minor text revisions only) to be received from HoDs by 6 January 2017, and circulation of the final summary reports to HoDs and PPs by 12 January for approval at the end of January.

In comments on the AACA process and the way forward, the AAC stated that no AACA region included its area so any future regional designation should ensure that its area would also be covered. ICC stated that it would like to see a different process established in the future.

Pan-Arctic report

The Delegation of the USA stated that it was still the intention to follow the decision at the Tromsø WG meeting to prepare a pan-Arctic AACA report. The aim is for a report that draws an overview from the regional reports and concludes with a final section on 'next steps' at the pan-Arctic level to be more effective for AACA. A group of authors is ready to prepare this report, which originally was intended to be available for the AC Ministerial Meeting next May. However, given the tight timetable, he proposed that instead this report should be moved into the work-plan for 2017-2019. He will provide a proposal for the contents of this report in the near future.

8 Approval of ARR SfAL and deliverables to the Ministerial meeting

The project leader of the Arctic Resilience Report (ARR), Marcus Carson (Sweden), presented the ARR project and the document WG30/8/1 ARR Summary for Arctic Leaders (SfAL). He noted that this is a Swedish initiative which is co-chaired by the USA. The final science report was launched the previous week and received good press coverage. The science report did not contain any policy recommendations, so the SfAL was intended to provide a synthesis of the science report with some policy-relevant recommendations.

All delegations generally agreed that this is an important product, although there were concerns raised about some sections in the text. However, it was considered that this is a product of Sweden and the USA, peer reviewed separately (via IASC), and not a product that was produced under the aegis of AMAP so that AMAP experts would have reviewed and quality controlled it. This leaves open the potential that statements in the synthesis may not be entirely consistent with AMAP work, including the AACA. It was also noted that ARR scientists participated in the AACA, contributing a resilience perspective to that work. In addition, the AMAP board had discussed this issue a week earlier and had produced a disclaimer text to include in the SfAL report in the event of its approval.

It was noted that AMAP HoDs had agreed at their meeting in June 2016 that the science report should be peer reviewed before possible acceptance. Peer review of the report was organized by IASC, with peer review of both individual chapters and of the entire report. Questions were raised at the AMAP HoDs meeting in June 2016 about two specific sections of the report and these sections were subject to additional review by two reviewers suggested by the AMAP Secretariat. This review was carried out and with minor clarifications the two additional peer reviewers accepted the contents of the report.

The meeting decided to establish a small group, with representation of the USA, Sweden and the Kingdom of Denmark, to discuss a way forward for the SfAL and AMAP. After break-out discussions, the group presented to the WG a way forward. This included a redrafting of the synthesis of key findings from the technical report in the results section and of the recommendations section. When the SfAL has been redrafted, the revised version of the synthesis document will be circulated among ARR lead authors and other key contributors to ensure that they are satisfied with the contents, and checks will be made for consistency with SWIPA, AACA, and other relevant reports.

The WG agreed to report SfAL to the Arctic Council via AMAP. Accordingly, the ARR project leader will revise the present SfAL text and AMAP Secretariat will circulate the text to HoDs for comments. After feedback, the ARR team will finalise the SfAL for AMAP HoDs endorsement. A disclaimer text reviewed during the meeting will be included.

9 Approval of the plan for the finalization of the AOA SPM to the Ministerial meeting

The Secretariat reported that the Arctic Ocean Acidification (AOA) Expert Group had met in October in Helsinki to review and further develop the work that is meant as a follow up to AMAP's 2013 AOA assessment. In the same context, the Expert Group had contributed to a workshop led by NOAA (USA) with the title 'Pathways to Adaptation: Ocean Acidification in the Arctic'.

Monique Baskin (NOAA, USA) presented remotely document WG30/9/1 on the preparation of a Summary for Policy-Makers (SPM) on AOA. The SPM is planned to be based on one of the five cases studies that are currently under development within the AOA Expert Group. The title of the case study is 'Adaptation Framework: Ocean acidification adaptation in the Arctic', but the framework is intended to be used more widely, for example, on climate change and its impacts.

The SPM for this case study is intended to be available in relation to the Arctic Council Ministerial Meeting in May 2017, while the remaining four case studies should be ready by 1 December 2017.

In the discussion, several delegations found the topic interesting and of relevance to improve the targeting and effectiveness of adaptation actions. There was, however, a general concern about the timeline for this SPM, given that the AMAP HoDs want the approval process to be thorough and deliberate. It was also questioned whether there was a need for a SPM for a single case study.

The Delegation of the USA concluded the discussion by stating that the timelines will need careful review and that he would work with Monique Baskin and Jeremy Mathis (NOAA) to prepare a proposal for a revised product and clear timelines.

10 Status of production of reports and deliverables

The Secretariat introduced document WG30/10/1 noting progress that had been achieved since the WG29 meeting with respect to the publication of the *AMAP Assessment 2015: Human Health in the Arctic* (December 2015) and *AMAP Assessment 2015: Radioactivity in the Arctic* scientific assessment reports (September 2016) and finalisation for publication by the end of the year of the *AMAP Assessment 2015: Temporal Trends in Persistent Organic Pollutants in the Arctic* report. Publication of two overview reports based on the AMAP 2015 round of assessments was, however, still outstanding, with this work now scheduled for early 2017.

Work on the three AACA regional assessment reports, the SWIPA 2016 update scientific background report and the Chemicals of Emerging Arctic Concern (CEAC) scientific assessment report was progressing in parallel, but still with much to be done. Work on the former four reports had been given a higher priority than work on the CEAC product in connection with editing and technical work on graphical production and layout. Ultimately, the production timelines would be determined by the slowest component in the outstanding work on each of the reports, which is sometimes not within the control of those responsible for the production work, e.g., if awaiting responses from authors to editorial questions or proofing requests, etc.

In previous report production scheduling, it had been hoped that work on the scientific reports would be completed by the end of 2016, so that attention could turn to production work on the SPM products due for delivery in April/May 2017. A question for the WG was now, therefore, whether to prioritise the production of the SPMs over the scientific background reports.

The WG agreed that production of the five SPMs should be prioritised over scientific background documents with a view to having all SPMs available in print in time for the AC Ministerial meeting.

If printed versions of scientific background documents were not available, they should at least be available in the form of electronic documents (preferably laid-out final PDFs) by the time of the AC Ministerial meeting. Any sections still being worked on would need to have undergone peer review, editing and be available in manuscript form by the end of January (in time for HoDs final approval of SPMs). It was understood that, once SPMs had been finalised and produced, no further (incompatible) adjustments to the scientific background reports could be contemplated.

Delegates noted that the situation is not ideal, but was not surprising given the significant delays that had been encountered in much of the report pre-production work, in particular in connection with the drafting and hand-over for production of the AACA regional reports.

The AACA Chair provided information on the status of and plans for preparation of a Pan-Arctic AACA report, noting that priority had been given to the regional AACA products. Essentially, work on the Pan-Arctic AACA report had stopped and some members of the proposed drafting team may now

have conflicts with work on the IPCC special reports. There is still an intention to produce a Pan-Arctic AACA report following the structure agreed at the Tromsø meeting and more information on this can be found under Agenda Item 7.

11 AMAP Work-plan for 2017–2019

The Secretariat introduced document WG30/11/1 and the background to how it had been prepared, building on documents presented at the HoDs meeting in Obninsk, and supplemented by work-plan proposals for SWIPA and AACA follow-up that had not been available at that time. Proposals had been formatted according to a common template and, where possible, had been developed in consultation with HoDs who had indicated their interest in tracking specific AMAP work items. In addition to document WG30/11/1, the Secretariat introduced (on screen) an overview of the likely workload and timing associated with proposed activities, not just for the period 2017-2019, but also with a longer perspective. HoDs had previously agreed that the work-plan for the coming period should be viewed as part of a longer-term strategic work-plan for work in the period to 2023. The background document presents work-plan proposals associated with 11 main topic areas related to the AMAP mandate to address contaminant and climate change issues, and three further areas of internal work including communication and outreach (C&O), update of AMAP monitoring guidelines and AMAP's future strategic framework. In addition, consideration should be given to whether delegations can contribute to the GEOTRACES work (Doc. WG30/11/2) in relation to marine issues, and support the request from the European Commission for the AMAP Secretariat to administer a project on black carbon (BC) (Doc. WG30/14/1) in connection with work-plan topic addressing air pollution.

On this latter subject, the WG Chair stated that there had been some informal communications with the EC regarding this initiative, but the document reflected decisions made public only recently by the EU following their internal consultations. It was noted that this project had been developed as part of the EU's international cooperation initiative and was also based on consultations with non-EU Arctic countries; the project had been briefly introduced by EC representatives at the recent meeting of the AC EGBCM. He stressed that, if AMAP Secretariat were to undertake such a role, this would include engaging with all relevant AC groups working on BC as well as relevant external (including LRTAP bodies and the wider scientific community working on BC issues).

The Chair invited comments, requesting that delegates addressed all parts of the work-plan proposals together, highlighting in particular their priorities for items to be included on the work-plan for 2017-2019 and beyond.

Conclusions from the discussion of the work-plan proposals were as follows:

On contaminants issues:

- POPs and mercury were identified as a high priority by all countries with the exception of the United States and work on these contaminants was supported by two of the PPs; particular emphasis was given to the work in support of the Stockholm, LRTAP and Minamata Conventions.
- Ongoing POPs assessment work is due to be completed in 2017; further consideration should be given to the proposed update on climate and contaminants, and work should be initiated under the 2017-2019 work-plan to prepare timely input to both the chemicals regulatory/ review processes and the next Stockholm Convention effectiveness evaluation. It was agreed that chemicals should be viewed in a wider context than just 'POPs' in order to address chemicals of emerging Arctic concern. Canada, Kingdom of Denmark and Sweden confirmed their co-leadership of this work, and Finland indicated an interest in also co-leading the work on POPs.

- For mercury, work would need to be started in 2019 to prepare for an update assessment to be delivered in 2021. Several countries identified work during 2017/2018 in support of the UN Environment Global Mercury Assessment as a priority, and Kingdom of Denmark noted that resources need to be allocated to work to ensure that support is given to the work of UN Environment on Effectiveness Evaluation of the Minamata Convention on Mercury and that Arctic monitoring activities (including human biomonitoring) are harmonized and coordinated with an eventual (Minamata) global mercury monitoring plan. Canada and Kingdom of Denmark confirmed their co-leadership of the AMAP mercury work.
- Proposed work on radioactivity was generally supported, noting the fact that there is no major assessment activity scheduled for the near term. Russia and Norway indicated that they would continue to be co-lead countries for radioactivity issues. Continuing technical work proposed under the 2017-2019 work-plan includes collaborative work with other AMAP expert groups on climate and contaminants, which would incorporate a case study on Camp Century in Greenland. Denmark took note of the proposal to include Camp Century as a case study. In this connection, the representative from Greenland requested that the following statement be included in the WG Minutes:

“Greenland supports and considers it important that high priority is given to the proposal concerning radioactivity that proposes that Camp Century is used as a case study to investigate the effects of radioactive pollution as suggested in the Draft AMAP work-plan for 2017-2019. Greenland finds the proposal important and in line with Greenland’s previous statements regarding Camp Century. Greenland appreciates that this study is carried out.”

- Human health-related activities proposed under the work-plan include regular updates of monitoring results, with a focus on preparing products based on these results as input (in 2019) to the next Stockholm Convention effectiveness evaluation. A joint meeting between human health and POPs biological effects experts is proposed to improve coordination of the related work under these two EGs. Human health work has a high priority for Canada and Kingdom of Denmark (the co-lead countries), Finland and Iceland and two of the PPs; Sweden would continue to support the planned work under the AMAP Human Health Assessment Group. The need for good coordination between work of the human health expert group under AMAP, the biological effects expert group, and SDWG was emphasized. USA and Norway gave the human health work a lower priority with respect to allocation of resources, with Norway no longer co-leading the AMAP human health work, but still consider this work important to continue.
- Most countries indicated a high priority for the proposed work on an integrated air pollution assessment, aiming at an interim assessment component focussing on SLCF emissions scenarios and modelling in 2019, and a more comprehensive update assessment in 2021. On the scope of the latter, AMAP should focus on SLCFs. A joint scientific assessment together with CLRTAP groups (including IIASA, HTAP, WGE, etc.) and other relevant initiatives such as PACES should be considered with respect to integrated air pollution assessment that may also address issues such impacts on human health and ecosystems. The WG was generally positive regarding the proposal that the AMAP Secretariat conduct follow-up negotiations with the EC with respect to project management and coordination activities relating to the EU BC project. In this context, AMAP would also initiate discussions with AC EGBCM and ACAP in particular to ensure coordination with their work, as well as relevant external potential partners. A joint workshop, preferably also involving external organizations, should be convened in spring 2017 to organize the planned work on air pollution issues in more detail. USA and Finland have appointed co-leads to the AMAP SLCF EG and Norway is currently considering its nomination.
- All countries have previously indicated that an update assessment on oil and gas issues has a low priority; however, Russia supported the proposal for further technical work on this topic

area; USA indicated that this area may have higher priority in the future but this is still uncertain.

On climate Issues:

- All countries gave highest priority to SWIPA follow-up work-plan proposals, in particular the planned work in 2017/2018 to contribute to IPCC special reports on a 1.5° C global warming over pre-industrial levels and on climate, oceans and the cryosphere. Greater engagement with IPCC in general was identified as a strategic objective. SWIPA outreach proposals were also supported by all parties, including the proposals for more general outreach products reflecting all AC climate-related work through collaboration with CAFF and ACS in particular. ICC would like a project on climate change that has engagement of the PPs and would use a participatory approach; this was supported by Saami Council, who noted the problem of capacity and funding as limiting factors to support AMAP work.
- Canada, Kingdom of Denmark, Finland, Norway, Russia, Sweden and USA identified completion of AACA regional assessment products as a high priority task for 2017. The United States identified production of an AACA Pan-Arctic overview report (in 2017) and implementation of a sustained AACA process as having high national priority. Kingdom of Denmark and other countries indicated that more work on lessons learned and more specific proposals on AACA follow-up, which should also be integrated with possible ARR follow-up, need to be prepared before they would support these parts of the proposed AACA work-plan.
- Following information from Sweden on a proposed initiative on protection of wetlands, several countries and one of the PPs indicated that this should be considered with respect to the AMAP work-plan when more information becomes available (possibly by the time of the planned HoDs meeting at the end of January).
- Observer countries identified ongoing and planned monitoring and research activities that, in particular, could contribute to SWIPA follow-up assessment work, as well as work relevant to work-plan items on contaminant issues including POPs, mercury, air pollution, AOA, and AACA.

On marine issues:

- Iceland and other countries noted their continuing interest in work on marine issues; however, Norway and Finland, among others, associated this work with a lower priority due to resource limitations.
- Countries, in particular the USA, identified completion of work on the ongoing AOA assessment during 2017 as a priority task; Norway expressed concern about progress to date.
- The topic of integrated ecosystem assessment of the Central Arctic Ocean was considered to be of interest to several countries, but some expressed reservations concerning AMAP taking a major role in a Central Arctic Ocean assessment beyond the provision of existing AMAP information. The AMAP WG Chair and Executive Secretary were requested to discuss this initiative with the CAFF and PAME WG Chairs at the December WG Chairs meeting to gain more insight into how AMAP might contribute to this work, what the envisaged deliverables might be and the timeline involved. Possible linkages exist to the suggestion from the GEOTRACES group for greater collaboration with AMAP, but several delegations also requested further clarification on the GEOTRACES document and its relationship to AMAP work.
- The topic of marine litter/micro-plastics was identified as being of interest to several countries (Iceland, Finland, Norway and Sweden), but not given a high priority with respect to resource allocations. A scoping study on micro-plastics is included in the AMAP CEAC assessment and several countries have initiated national research/studies into this issue. It

was suggested that this scoping study could provide a basis for further AMAP WG consideration of the needs for additional work on this topic at future WG meetings. Recognizing that other WGs are proposing work on marine litter, the AMAP WG Chair and Executive Secretary were requested to discuss this at the December WG Chairs meeting, to gain more insight into how this issue is being addressed on the work-plans of other AC WGs and whether AMAP should be involved in that work. It was also noted that other organizations such as UNEP and OSPAR are proposing work on marine litter and that AC work should also be considered in relation to those initiatives.

On AMAP implementation issues:

- All countries identified the planned work to develop a future AMAP strategic framework as a high priority. It was generally agreed that this work should be conducted by the AMAP HoDs and initiated in early in 2017 with a view to preparing a draft strategy document during the winter/spring for consideration by AMAP HoDs in May 2017 and approval at the autumn WG meeting.
- The importance of enhancing C&O was identified as a high priority by all delegations; specific proposals for SWIPA outreach presented in the draft work-plan were supported, as was a general need to coordinate C&O with other AC WGs and ACS.
- The United States indicated a high priority for continuation of work on UAS and for expanding this work also to address autonomous underwater vehicles (for use in monitoring), with the proposal that the AMAP UAS EG (currently co-led by Norway and USA) continue a limited activity to provide the WG with relevant information in 2017 or 2018.
- Several countries identified the importance of completing work to update the AMAP monitoring guidelines, including mechanisms for easily maintaining the guidelines in the future.

AMAP HoDs noted that the relocation of the AMAP Secretariat and associated transitions in Secretariat staffing will have implications for the AMAP work in the period 2017/2018, but agreed that this should not constrain the development of the AMAP work-plan. If necessary, additional resources should be allocated to ensure that important AMAP work is not negatively impacted by these developments.

The WG agreed to the following process for approval of the AMAP work-plan for 2017-2019:

- The WG Chair and Executive Secretary should discuss work-plan coordination issues with other WG Chairs at a meeting on 9 December (also emphasising the need to place the right work in the right group)
- The Secretariat should update the spreadsheet overview of work-plan proposals and associated timing of work-load in the period to 2022, also including information on anticipated products, and connections with external groups, etc., and distribute this to AMAP HoDs by 12 December.
- The Secretariat should compile additional input from HoDs responsible for tracking various topics by 14 December.
- The Secretariat should prepare a draft progress report to SAOs including work-plan and circulate this to HoDs by 19 December, for fast response from HoDs by 3 January.
- The Secretariat should update draft progress report/work-plan and circulate to HoDs by latest 7 January as document for approval at HoDs meeting at the end of January, for submission to SAOs by 3 February.

12 Information from Observers and cooperation with AMAP

Presentations were given by eleven observers: China, France, Germany, Italy, Japan, Republic of Korea, IASC, UNEP, WMO, WWF, and EC Joint Research Centre.

Lijuan Ma, National Climate Center of the China Meteorological Administration, stated that Chinese work in the Arctic is related to climate change and particularly to predicting its impact on climate anomalies in China. The Climate Monitoring, Diagnosis and Prediction (CMPDD) activity is monitoring high-latitude stratospheric processes including the status of the polar vortex and the Arctic Oscillation Index. Daily monitoring of sea ice and snow is also conducted to determine the impact of Arctic sea ice on East Asian climate. Data sets on sea-ice concentrations are being used to prepare products in key regions that can ultimately be used in predictive models.

France reported on the recently released French National Roadmap for the Arctic and cooperation in the Arctic, especially with AMAP. This includes participation in the AMAP SLCF EG as well as contributions to other AMAP work. Among various flagship projects, France is co-chair of PACES, an international initiative on Arctic Air Pollution. France is also funding the PARCS (Pollution in the Arctic System) multidisciplinary project (2015-2017) involving 19 French laboratories and focusing on northern Scandinavia (Svalbard), Eastern Greenland and Siberia. Another project, ARCTOX, aims to obtain a better understanding of large-scale distribution of contaminants, especially mercury, in the Arctic marine biota and ecosystems. AMAP-related French projects in the Arctic are concentrated on impacts of contaminants and also include work on ocean acidification and air pollution. France would be interested in participating in the coming elaboration of the scientific assessments by AMAP expert groups, and more specifically by the Expert Group on SLCFs.

Björn Rost, Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research, reported on German activities in the Arctic, where the R/V 'Polarstern' spends six months per year. In addition, the AWIPEV research station on Spitsbergen, co-operated with France (IPEV), operates year-round studying impacts of climate change on fjord, glacier and tundra habitats as well as conducting other long-term observations. Another year-round station is Samoylov, operated by the Russian Academy of Sciences, where the permafrost of the Lena Delta is studied. Two polar aircraft are conducting ice research and the FRAM observatory is developing new technology for high resolution data recording. A drift experiment, MOSAiC, is being planned for 2019-2020 to study environmental processes in the central Arctic Ocean.

Angelo Viola, National Council of Research of Italy, presented an overview of Italian research in the Arctic, which centered around two main stations: Thule and a supersite in Ny Ålesund. A number of Italian agencies and universities as well as ten other countries collaborate in investigations at Ny Ålesund, operating a large number of instruments for monitoring a wide range of parameters. Examples of the work include the Climate Change Tower Integrated Project (CCT-IP) and the Unmanned Vehicles for Autonomous Sensing and Sampling (UVASS) project. Extending monitoring cooperation to North America and Russia is a priority.

Takashi Kikuchi, Japan Agency of Marine-Earth Technology and Science, summarized Japanese work in the Arctic, including the GRENE Arctic Climate Change Research Project (2011–2016), which studied the rapid changes in Arctic climate and the effects on the Arctic marine ecosystem as well as on weather in Japan. An Arctic Data Archive System (ADS) has been established (<https://ads.nipr.ac.jp/>) to compile research and monitoring data. A new project was started in 2015, the Arctic Challenge for Sustainability, to improve the research stations in the Arctic, provide more opportunity for young researchers and promote international research cooperation. Topics of recent scientific focus include black carbon and Arctic Ocean acidification.

Yoo Kyung Lee, Arctic Research Center, Korea Polar Research Institute (KOPRI), reported on Republic of Korea Arctic monitoring and outreach activities in 2016 and their action plan for AMAP activities. Since 2010 the ice breaker R/V 'Araon' has conducted annual cruises in the Arctic with scientists from a number of countries joining the work. Multidisciplinary studies are conducted on environmental changes covering atmospheric parameters, marine chemistry, plankton ecology and also micro-plastics. A study of subsea permafrost in the East Siberian Sea has indicated the presence of very high dissolved concentrations of methane on the shelf. The Circum-Arctic Permafrost Environmental Change monitoring (CAPEC) is studying environmental changes in permafrost at six sites in the Arctic and a number of environmental studies are being carried out in several Svalbard fjords as well as studies of the chemical fate of Arctic pollutants in Kongsfjord. Data management is conducted by the Korean Polar Data Center, from which results are freely available.

Timo Vihma (Finland), representing IASC, mentioned the ICARP III priorities for polar research for the next decade, including the role of the Arctic in the global system. IASC has been involved in a number of activities during the past year, including the ASSW in Fairbanks, the SCAR/IASC Polar Task Force, and the IASC Strategy Think Tank meeting. He noted that Allen Pope will be the new Executive Secretary from the beginning of January 2017.

Gunnar Futsæter, Programme Officer, UN Environment, Chemicals and Waste Branch, Geneva, noted that UN Environment has had an established cooperation with AMAP for many years. AMAP is a strategic and important partner of the Global Monitoring Programme under the Stockholm Convention. Recent cooperation has included AMAP's contributions to the global mercury assessment, which was requested by the United Nations Environmental Assembly (UNEA) but is also relevant for the Minamata Convention. AMAP is also a partner in the Global Mercury Partnership, supporting the UNEP Minamata process and the development of effectiveness evaluations as well as a strategy document on a future monitoring program.

Rodica Nitu, Project Manager, Global Cryosphere Watch, Observing and Information Systems Department at the WMO, stated that she looked forward to continuing and strengthening the cooperation between WMO and AMAP. The Panel of Experts on Polar Observations, of which AMAP is a member, and the Year of Polar Prediction could provide useful information to support AMAP work on climate issues. Cooperation with SAON is also important to support projects with common objectives.

Martin Sommerkorn, WWF Global Arctic Programme, noted that WWF has been active in the Arctic, including as observer at the Arctic Council, for over 20 years. Two strategic areas in the Arctic are to integrate biodiversity considerations into policies and practices and to emphasize resilience and adaptation in science-to-policy initiatives. WWF is also working in support of responsible industry practices and strengthening governance systems through national and international engagements. WWF offers to work to add to the outreach of the SWIPA SPM, for example, through WWF communication products that emphasize the urgency for action to decrease greenhouse gas emissions. WWF offered to coordinate such communications with AMAP.

Julian Wilson, European Commission Joint Research Centre (JRC-Ispra), stated that a joint communication on the Arctic was issued by the Commission and external action service in April 2015; it is now with the European Parliament for debate and approval. Three new projects focusing on the Arctic are being funded by the EC H2020 program: INTAROS, Blue Action and APPLICATE, for a total of about 31 million euros. JRC has a project concerning the Arctic in 2017 that will consider climate, sustainable development and international cooperation. Among the activities therein, remote sensing will contribute to an understanding of the marine ecosystem including fisheries and risk assessment in connection with hydrocarbon exploration in the Arctic will be conducted.

13 AMAP administration issues including experience in HoDs tracking, the Secretariat relocation, etc.

Finn Katerås, Chair of the AMAP Foundation Board, described via videoconference the letter from the Norwegian Ministry of Climate and Environment regarding the move of the AMAP Secretariat office from Oslo to Tromsø, the organization of the Secretariat, and the procedure for the appointment of a new Executive Secretary. The decision to move the Oslo office of the Secretariat to the Fram Centre in Tromsø, the location also of the Arctic Council Secretariat, is a Norwegian political decision based on Norwegian Arctic policy and rural policy. The intention is to strengthen the position of Tromsø as an important Arctic city. The move will occur in the first half of 2018 when the new building of the Fram Centre has been completed. At this stage, only the Oslo office will be moved, while the distributed staff members will not be requested to move. The staff members in Oslo have informed the Foundation Board they will not follow the move to Tromsø. The current organization of the Secretariat as a Norwegian foundation with a Foundation Board will also continue for now but some cooperation with the AC Secretariat will be needed. The statutes of the Foundation may also be reviewed and updated in this connection, to ensure that the link to the WG is maintained. The appointment of the next Executive Secretary will be based on agreement between the Foundation Board and the AMAP WG. Requirements and qualifications for this position, located in Tromsø from mid-2018, are being prepared. In the interim, Lars-Otto Reiersen will remain Executive Secretary under a prolonged contract until at least May 2017, after which an interim solution may be needed.

In the discussion of this presentation, HoDs stated that one of the strengths of AMAP is and should continue to be its scientific integrity and independence. Care must be taken to ensure that the proximity of the location of the AMAP Secretariat to the Arctic Council Secretariat offices does not give an appearance of compromising this independence and integrity.

HoDs stated that they would like to follow the process of the relocation of the Secretariat and the recruitment of the next Executive Secretary very closely and requested to be kept informed on a regular basis.

In conclusion, Finn Katerås stated that he will convey the remarks of the WG to the rest of the Foundation Board. He will initiate a review of the statutes and will aim to care for the staff to the extent possible during the transition period as well as ensure that AMAP can produce its deliverables. He also took note of the caution expressed by HoDs regarding a closer association with the AC Secretariat.

14 Cooperation with international organizations and AC WGs, EG and TFs

Scientific Cooperation Task Force

Yuri Tsaturov (Russian Federation) reported on activities of the Arctic Council Task Force on Scientific Cooperation. Based on the eight meetings of the Task Force, a draft agreement prescribing scientific cooperation in the Arctic had been finalised during the last meeting in Ottawa. The agreement as a legally binding document has been submitted to the Arctic Council for approval at the Ministerial Meeting in May 2017. This document aims to facilitate joint scientific expeditions and joint transportation of samples and equipment within and across national borders. The agreement is based on rules and procedures already existing in the countries.

Expert Group on Black Carbon and Methane (EGBCM)

Kaarle Kupiainen (Finland) reported on work under the Arctic Council Expert Group on Black Carbon and Methane, which aims to draft actions to reduce emissions of these substances in AC member states. There are four sectoral drafting teams (mobile sources, heating stoves, solid waste, and

oil/gas methane leakage and flaring), and each is drafting recommendations for their individual sector. Recommendations on shipping will also be included.

The Group is compiling and synthesising data for emission inventories and projections. The Group has decided that data from ongoing LRTAP processes for black carbon will be used to the maximum extent possible in order to harmonize data collection and avoid overlapping of tasks. All Arctic countries now have black carbon emission inventories and a summary report on these inventories has been prepared, which is currently under review. The data in this draft report are from LRTAP, but the summary has been prepared for the Arctic area specifically.

The Group has a mandate to articulate an aspirational, quantitative black carbon goal for 2025, using 2013 as a baseline year. The Group plans to organise a deliverable for the 2017 Arctic Council Ministerial; the plan is to include recommendations for enhanced action and a collective, aspirational black carbon goal.

ABA Implementation Plan

The Executive Secretary of CAFF, Tom Barry, drew attention to the implementation plan for the Arctic Biodiversity Assessment (Document WG30/15/2). For the 2017 AC Ministerial, CAFF is providing a mid-term evaluation and has asked AMAP to review the inclusion of its activities in the plan. He requested that AMAP review this implementation plan and respond as to whether AMAP can accept responsibility for these activities. He also reported that CAFF has agreed to work with AMAP on the science conference in Reston, VA next April. This will provide a venue for CAFF to present its recent state of the Arctic biodiversity report to a broader audience.

The meeting decided that the AMAP Secretariat should work with the Kingdom of Denmark and Norway to draft a response to CAFF.

EPPR

Representing EPPR, Tiina Peltola-Lampi (Finnish HoD of EPPR) reported that EPPR would meet the following week in Copenhagen and would report on the AMAP seminar and meeting at that time.

ACAP

Representing ACAP, Timo Seppälä (Finland) stated that ACAP is always interested in AMAP findings as a source of new activities for ACAP. There is a now a particular interest in the emerging contaminants and actions that can reduce inputs of these contaminants from local sources into the Arctic Ocean.

UNEP cooperation

The representative from UN Environment began his intervention by noting the potential change of name of the UN's Environment Programme from UNEP to UN Environment. He referred to the good cooperation that exists between AMAP and UN Environment, the valuable input of Arctic information that AMAP had provided to the Stockholm Convention's Effectiveness Evaluation that was being finalised, and to the POPs Review Committee (POPRC) that is responsible for technical review of chemicals proposed for listing under the convention. In relation to mercury issues, he welcomed the decision by AMAP to join the Mercury Fate and Transport Partnership area and the contribution from the Secretariat and AMAP human health expert at a recent meeting connected to that group.

Possible development of a global mercury monitoring initiative plan as part of the Minamata Effectiveness Evaluation process is an area where AMAP has large potential to contribute. He also referred to the ongoing collaboration between AMAP and UN Environment in relation to the joint technical work to update parts of the Global Mercury Assessment (GMA) in 2018, and thanked Denmark for hosting a recent inventory workshop in support of this process, and Sweden for its

financial support for Swedish experts to participate in this activity. He expressed his appreciation for the future commitment to the work on both POPs and mercury expressed by the AMAP WG in its work-plan discussion and looked forward to the future fruitful cooperation.

IPCC collaboration

AMAP has invited the IPCC Secretariat to participate in recent SWIPA lead author meetings to inform the IPCC Secretariat of the progress in and results of the work and their relevance for planned IPCC special reports on the impacts of a 1.5 degree global warming above pre-industrial levels and the planned special report on Climate Change and Oceans and the Cryosphere. SWIPA 2017 follow-up activities will develop new analyses that can contribute Arctic perspectives to the planned IPCC special reports. These activities are reflected in the draft AMAP work-plan 2017-2019.

CLRTAP collaboration

The AMAP Secretariat reviewed the initiatives and discussions that had taken place earlier in the year with regard to enhancing collaboration between AMAP groups and relevant CLRTAP bodies on technical and scientific work relating to air pollution issues, and how these were reflected in the work-plan proposals on this topic. The WG Chair referred to the very positive comments made by the Chair of the CLRTAP Executive Body (Anna Engleryd) during the AMAP 25th Anniversary Seminar Panel discussions regarding this collaboration, and looked forward to further elaboration of joint future work, which is also supported under the Finnish Chairmanship priorities on environmental protection.

Collaboration with the EU

The expert from EU-JRC referred to the earlier discussions on the EU black carbon project (see agenda item 11) noting that planned project outputs include an improved scientific knowledge base on BC sources, communication products to increase awareness of BC in Arctic, and technical advice documents, all with a view to implementing actions to reduce BC emissions. He stressed that the project addressed black carbon only, and not SLCFs in general, although recognizing that BC is also linked to co-emitted species with associated co-benefits of actions, etc. On the proposed role of AMAP, he indicated that AMAP Secretariat is seen as a facilitating body in this EU project; it would also be important to ensure close connections with relevant ongoing activities.

15 Short updates on AMAP relevant activities: White House Science Conference, SAON, EU-PolarNet, AMAP's monitoring guidelines, NIPs, QA, data handling, etc.

AMAP Monitoring guidelines

The Secretariat presented document WG30/15/1, which outlines the activities of the ongoing pilot project for the assessment of the scope and effort needed to update the AMAP monitoring guidelines on trends and effects. The pilot project had been asked to consult with the AMAP Expert Groups on the process for the update, the future maintenance and the technical platform. The document outlines the structure of this dialogue, which will be forwarded to individual Expert Groups. The SWIPA EG and the HHAG had been or would be approached for their views and assistance.

It was agreed that guidelines from other relevant organizations, such as the World Meteorological Organization, should be considered and the AMAP guidelines should link to these to the extent possible to avoid duplication of effort. However, AMAP Expert Groups will need to review external guidelines from an Arctic perspective and determine whether they are sufficient.

One of the important requirements for the AMAP guidelines is that they are under version control and this requirement must be maintained.

Sustaining Arctic Observing Networks (SAON)

The Secretariat presented document WG30/15/05 on SAON, which outlined recent activities of SAON's two committees, including their contributions to EU-PolarNet.

The external review of SAON was submitted to the Arctic Council SAOs, who had noted that 'everyone supports the idea of SAON, and that SAON is evolving'. The external review recommended that SAON develop a strategic framework and a work plan, and this will be on the agenda of a SAON Board meeting in January 2017.

The statement from the Arctic Science Ministerial Meeting in September 2016 mentions SAON as a critical contributor to 'Strengthening and Integrating Arctic Observations and Data Sharing'. The statement also indicates that the USA will establish a national SAON office. One outcome of the Ministerial Meeting was a request by the Science and Technology Policy Institute (STPI) in Washington to SAON to join an initiative to develop Social Benefit Areas and objectives for Arctic observing. Under this initiative, a workshop on this topic will be held in January 2017.

The EU-supported project 'Integrated Arctic Observing System – INTAROS' has been established to support various Arctic observing initiatives, including SAON. The project will begin in January 2017, and SAON has been invited to participate.

In the discussion, it was recalled that SAON was established to ensure AMAP access to data and stations. However, except for Norway, no country has contributed financially to SAON and this has made progress difficult.

Several delegations stated that there is a need to revitalize SAON and a SAON strategy is required for this. The INTAROS project can be an opportunity. These delegations also considered that countries need to establish and sustain national SAON committees. It was proposed that SAON prepare an inventory of monitoring guidelines and analyse them. There should also be a better SAON outreach.

The WG Chair summarised the discussion, saying that SAON needs a strategy to clearly state its key issues and to move ahead. SAON cannot work without resources and INTAROS may be a way to

support SAON objectives. One of the values of SAON is that it is linked to the scientific communities in AC observer countries and can assist them in bringing their work into the Arctic structures.

EU-PolarNet

The Secretariat presented document WG30/15/4, providing a summary of AMAP activities under the Horizon 2020 coordination and support action EU-PolarNet. AMAP has organized two international stakeholder workshops in the past year: a workshop on Research Needs for Arctic Health and Wellness on 12 March 2016 in Fairbanks, Alaska in association with ASSW and a workshop on Research Needs on Arctic Ecosystems and Ecosystem Services on 20 September 2016 in association with the Annual Science Conference of the International Council for the Exploration of the Sea. Reports from these workshops are project deliverables to the European Commission as input for their consideration of funding topics; the reports are available from the Secretariat.

AMAP Secretariat members also participated in and contributed to an EU-PolarNet Townhall Event: “Towards the 1.5°C climate goal – Perspectives from the Polar Regions” in Brussels on 27 September 2016. As part of this high-level event, Tom Armstrong gave a presentation on “Science to Knowledge to Action: A Science-Decision Making Process founded upon Sustained Observations and Sound Science” and also chaired the afternoon panel on “European priorities for polar research”. Several AMAP Summaries for Policy-makers were distributed to the participants.

Another deliverable to the project is a compilation of inventories of active polar monitoring and modelling programmes. The inventories will serve as input to the deliverable ‘Roadmap for optimisation of monitoring and modelling programmes’ and it will be co-organised with the lead of the deliverable ‘Strategic analysis of the different monitoring and modelling programmes and related infrastructures’ (Philippe Huybrechts, Vrije Universiteit, Brussels). The SAON Committee on Observations and Networks (CON) will be asked to review the work.

AMAP is also responsible for the deliverable ‘Data management recommendations for polar research data systems and infrastructures in Europe’. Input to the work will be new and recently conducted surveys among data infrastructures and centres and existing recommendation from initiatives such as SAON and the ‘International Polar Data Forum’. The first draft will be available in spring 2017 and will be circulated for review broadly in the polar data management community, including the Arctic Data Committee (ADC) and Standing Committee on Antarctic Data Management (SCADM).

In the discussion, it was proposed that a reference to the CAFF scoping study on knowledge needs for the use of ecosystem services and the ways in which these services are used should be included in the report of the Riga workshop.

AMAP website proposal

The Secretariat presented a proposal from the company responsible for maintaining the AMAP website for implementing responsive templates as part of other work to develop the maps and graphics delivery system. The responsive templates would make the website more useable on mobile devices. The WG supported this development indicating that even though mobile devices accounted for little of the usage at present, this could be expected to increase; and the proposed systems development could remove an obstacle that presently exists to gaining wider audiences on mobile devices.

COP-22

At the SAO meeting in Portland, Sweden proposed that AMAP should try to present information about the SWIPA work that is under preparation. The Executive Secretary was thereafter invited to present Arctic information at two side events at UNFCCC COP-22 in Marrakech, one organized by the

NordForsk and one by Universities in USA and UK. The presentation at the last event was distributed on the web by Mothers for Climate. Links to the presentations can be found at <http://www.motherchannel.com/cop-22-avoiding-irreversible-ocean-polar-thresholds-part-one-oceans/>; <http://www.motherchannel.com/avoiding-irreversible-ocean-polar-thresholds-polar-ice-part-2/>; <http://www.motherchannel.com/avoiding-irreversible-ocean-polar-thresholds-sea-rise-ocean-solutions-part-3/>

16 Actions arising from the WG30 meeting

Annex 4 presents a list of Actions agreed at the WG30 meeting.

17 Next AMAP WG meeting and HoD meeting

Mike Kuperberg (USA) informed the meeting that this is his last meeting as U.S. HoD. Jeremy Mathis will take his place as HoD, but Mike stated that he will still be involved in AMAP work but not as HoD.

The Chair noted that, as it had not been possible to approve the SWIPA and CEAC SPMs and the three AACA overview reports and a final AMAP Work Plan for 2017-2019 was not yet complete, it was necessary to convene a HoDs meeting on the last two days of January 2017. The meeting discussed whether this should be a virtual meeting, with teleconferences for about three hours on each of these two days, or whether a physical meeting should be held. The Delegation of Norway offered to explore whether it could host a physical meeting in Oslo. It was agreed that the Secretariat would send a query to all HoDs to determine how many would have travel funds to attend a meeting in Oslo before a final decision should be made.

The Delegation of Iceland extended an invitation for the next meeting of the AMAP WG to be held in Iceland. He requested that dates for this meeting be decided as soon as possible for logistics purposes.

18 Close of WG meeting

In closing the meeting, the Chair noted that this had been a very special meeting. It not only had had a very busy agenda for the meeting itself, but the 25th anniversary seminar had given a special character to the work. He thanked the participants for their contributions and the Secretariat staff for their efforts. With that he closed the meeting at 15:00 hrs on 1 December 2016.

Annex 1: Agenda for the AMAP WG30 Meeting

Helsinki, Finland, 28 November–2 December 2016

Agenda

- 1 Opening of WG meeting, welcome and adoption of agenda
- 2 Follow up of actions from previous meetings
- 3 Report from October SAO meeting
- 4 Approval of SWIPA SPM, deliverables to Ministerial meeting and other SWIPA outreach products
- 5 The AMAP conference in April 2017
- 6 Approval of Chemicals of Emerging Arctic Concern (CEAC) SPM, deliverables to Ministerial meeting and other CEAC outreach products
- 7 Approval of AACA SPMs and deliverables to Ministerial meeting
- 8 Approval of ARR SfAL and deliverables to the Ministerial meeting
- 9 Approval of the plan for the finalization of the AOA SPM to the Ministerial meeting
- 10 Status of production of reports and deliverables
- 11 AMAP Work-plan for 2017-2019
- 12 Information from Observers and cooperation with AMAP
- 13 AMAP administration issues including experience of HoDs' topic tracking, the Secretariat relocation, etc.
- 14 Cooperation with international organizations and AC WGs, EG and TFs
- 15 Short updates on AMAP-relevant activities; White House Science Conference, SAON, EU-PolarNet, AMAP's Monitoring Guidelines, NIPs, QA, data handling, etc.)
- 16 Actions arising from the WG30 meeting
- 17 Next AMAP WG meeting and HoD meeting
- 18 Close of WG meeting

Programme for the AMAP 25th Anniversary Seminar, 29 November, 2016

Programme

AMAP 25th Anniversary seminar

29.11.2016



Tuesday 29th November 2016

Venue: Scandic Marina Congress Center
Katajanokanlaituri 6, 00160 Helsinki
Conference room Fennia II, 2nd floor

Opening session Chair: Martin Forsius, AMAP Chair, Finnish Environment Institute	
14:00	Local and global challenges for the Arctic environment Hannele Pokka, Permanent Secretary, Ministry of the Environment of Finland Exploring common solutions: The Chairmanship of Finland in the Arctic Council 2017-19 René Söderman, Senior Adviser, Arctic Cooperation, Ministry for Foreign Affairs of Finland
Session 2: Arctic cooperation and AMAP Chair: Martin Forsius	
14:25	Arctic Environmental Protection Strategy (AEPS) and AMAP as the Arctic Messenger David P. Stone, Former AMAP Chair, Canada
14:50	Arctic indigenous peoples involvement in AMAP Jannie Staffansson, Saami Council
Panel discussion: AMAP and international collaboration Moderator: Russel Shearer, Former AMAP Chair, Canada	
15.00 - 15.45	United Nations Environment Programme (UNEP) Gunnar Futsæter, Programme Officer, UNEP Chemicals Branch, Geneva Convention on Long-Range Transboundary Air Pollution (CLRTAP) Anna Engleryd, CLRTAP Chair World Meteorological Organization (WMO) Rodica Nitu, Project Manager, Global Cryosphere Watch, Observing and Information Systems Department Nordic Environment Finance Corporation (NEFCO) Magnus Rystedt, Managing Director
15:45	Coffee break
Session 3: Past and Present Scientific Achievements and Future directions for AMAP Chair: Mikala Klint, AMAP Co-Head of Delegation, Kingdom of Denmark, Ministry of Environment and Food, Denmark	
16:15	Climate change Morten Skovgård Olsen, Ministry of Climate and Energy, Denmark
16:30	Pollution Cynthia A. de Wit, Stockholm University, Sweden
16:45	Radioactivity Per Strand, Norwegian Radiation Protection Agency and Yuri Tsaturov, Federal Service for Hydrometeorology and Environment Monitoring, Russia
17:00	Human health Arja Rautio, University of Oulu, Finland and Pál Weihe, The Faroese Hospital System, Faroe Islands
17:15	AMAP and the future of the Arctic Lars-Otto Reiersen, AMAP Executive Secretary, Norway
17:30	Summing up and Closing

Annex 2: List of Participants at the AMAP WG30 Meeting

AMAP 30th Working Group meeting & AMAP 25th Anniversary Seminar: Helsinki, 28th November – 1st December, 2016

List of Participants:

Country/ Organization	First name	Last name	Institute name	Mailing address	e-mail	Phone
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Annex 3: List of Documents for the AMAP WG30 Meeting

AMAP WG30 – Helsinki 28 November 1 December 2016

Document list

Decision and/or Action = D/A

For information = Info.

For Discussion = Disc.

Agenda item	Documents	Action Requested
1. Opening of WG meeting, welcome and adoption of agenda	WG 30/1/1-1 Updated Draft annotated agenda (wg30-01-01-1 Updated Draft annotated agenda_241116.pdf)	Info.
	WG 30/1/2 Tentative List of documents (wg30-01-02 tentative list of documents_251116.pdf)	Info.
	WG 30/1/3 Draft List of Participants (wg30-01-03 draft list of participants_251116.pdf)	Info.
2. Follow up Actions from previous meetings	WG 30/2/1 Overview of actions from earlier WG and HoDs meetings (wg30-02-01 Overview of outstanding actions.pdf)	Info.
4. Approval of SWIPA SPM, deliverables to Ministerial meeting and other SWIPA outreach products	WG 30/4/1-1 Updated Draft SWIPA Summary for Policy Makers (wg30-04-01-1 Updated Draft SWIPA SPM_181116.pdf)	D/A
	WG 30/4-1-Add Updated Draft SWIPA Summary for Policy Makers—with revisions marked (wg30-4-1-1Add Updated Draft SWIPA SPMs with Revisions Marked.pdf)	Info.
	WG30/4/2 SWIPA Scientific Report (wg30-04-02 SWIPA Assessment Report.pdf)	Info.
5. The AMAP conference in April 2017	WG 30/5/1 Second call (wg30-05-01 Second Call for Participation.pdf)	Info.
6. Approval of Chemicals of Emerging Arctic Concern (CEAC) SPM, deliverables to Ministerial meeting and other CEAC outreach products	WG30/6/1 – CEAC SPM (wg30-06-01 chemicals of emerging Arctic concern draft Summary for Policy Makers.pdf)	D/A
	WG30/6/2 Chemicals of Emerging Arctic Concern Assessment Scientific Report (wg30-06-02 CEAC scientific assessment.pdf)	Info.
	WG30/6/3 Chemicals of Emerging Arctic Concern Assessment – Summary for Policy-makers: Draft Layout/Text Flow (wg30-06-03 - draft SPM text flow.pdf)	Info.

7. Approval of AACA SPMs and pan-Arctic deliverables to Ministerial meeting	WG 30/7/1 – BCB SPMs (wg30-07-01 AACA BCB SDMs.pdf)	D/A
	WG 30/7/2 – Barents SPMs (wg30-07-02 AACA Barents SDMs.pdf)	D/A
	WG 30/7/3 – AACA BBDS SDMs (wg30-07-03 AACA BBDS SDMs.pdf)	D/A
	WG30/7/info-1 AACA Summary for Decision Makers – Barents draft lay-out (WG30-7-info1_AACA Barents SDM draft lay-out)	Info.
8. Approval of ARR SfAL and deliverables to the Ministerial meeting	WG30/8/1- rev.1 Arctic Resilience Report – Summary for Arctic Leaders (wg30-8-1-ARR – Summary for Arctic Leaders-rev1.pdf)	D/A
9. Approval of the AOA-Alaskan waters SPM to Ministerial meeting	WG30/9/1 Arctic Ocean Acidification (AOA) Assessment: Status and plan for deliverables (wg30-9-1 Arctic Ocean Acidification rev 23NOV2016.pdf)	D/A
10. Status of production of reports and deliverables	WG30/10/1 - Status of production of reports and deliverables (wg30-10-01 Status of report production_281016.pdf)	Info.
11. AMAP Work-plan for 2017-2019	WG30/11/1 – Draft work plan (wg30-11-01 Draft workplan_281016.pdf)	D/A
	WG30/11/02 GEOTRACES (2017-19 work plan) (wg30-11-02 GEOTRACES.pdf)	Disc.
13. AMAP administration issues including experience in HoDs topic tracking, the Secretariat relocation, etc.	WG30/13/1 Plans for relocation of AMAP Secretariat (wg30-13-1 Secretariat relocation.pdf)	Info.
14. Cooperation with international organizations and AC WGs, EG and TFs	WG30/14/1 Information on EU Black Carbon project (wg30-14-1 Information on EU BC project.pdf)	Info.
15. Short updates on AMAP-relevant activities; White House Science Conference, SAON, EU-PolarNet, AMAP's Monitoring Guidelines, NIPs, QA, data handling, etc.)	WG30/15/1 AMAP Monitoring Guidelines (wg30-15-1 monitoring guidelines.pdf)	Disc.
	WG30/15/2 ABA Implementation (wg30-15-2 ABA implementation.pdf)	Disc.
	WG/30/15/3 Arctic Observing System (wg30-15-3 Arctic observing system.pdf)	Info.
	WG/30/15/4 EU-PolarNet Status on deliverables (wg30-15-4 EU-PolarNet.pdf)	Info.
	WG/30/15/5 Sustaining Arctic Observing Networks SAON (wg30-15-05 SAON.pdf)	Info.

Annex 4: List of Actions agreed at the 30th AMAP Working Group Meeting

AI	Action	Who	When
4	Approval of SWIPA SPM		
	Send revised SWIPA SPM without track changes but with substantive changes highlighted to HoDs and PPs	AMAP Secretariat	9 December
	Review revised SWIPA SPM and send substantive comments to Secretariat	HoDs and PPs	19 December; no reply indicates acceptance
	Send updated SWIPA SPM to lead authors of SWIPA science report for their review	AMAP Secretariat	4 January 2017
	Send comments/acceptance on updated SWIPA SPM to Secretariat	SWIPA lead authors	15 January 2017
	Handle SWIPA SPM according to agreed timeline with a view to approval at HoD meeting.	AMAP Secretariat and HoDs	End January 2017
6	Approval of Chemicals of Emerging Arctic Concern (CEAC) SPM		
	Circulate the revised CEAC SPM to HoDs	AMAP Secretariat	14 December
	Response from HoDs to the revised draft	HoDs	23 December
	Final draft circulated to HoDs	AMAP Secretariat	4 January
7	Approval of AACA Summary reports		
	Revised summary reports circulated to HoDs and PPs	AMAP Secretariat	December 16
	Final feedback on revised summary reports: minor revisions only	HoDs and PPs	6 January 2017; no reply indicates acceptance
	Final overview reports circulated to HoDs and PPs	AMAP Secretariat	12 January
	Final approval of overview reports	HoDs and PPs	End of January
8	Approval of ARR SfAL and deliverables to the Ministerial meeting		
	Revised ARR SfAL distributed to HoDs	ARR project leader	15 December
	Comments to revised SfAL	HoDs	6 January
	Final draft ARR SfAL version finalized according to comments received to AMAP Secretariat	Marcus Carson	12 January 2017
	Distribute revised ARR SfAL to HoDs and PPs	AMAP Secretariat	13 January
	Final comment/approval	HoDs	20 January
9	Approval of the AOA-Alaskan waters SPM to Ministerial meeting		
	Work with Jeremy Mathis and Monique Baskin to prepare a better plan for this report, including a revised product and timeline	USA HoD Mike Kuperberg	8 December

11	AMAP Work-plan for 2017-2019		
	Revise AACA work-plan proposal with emphasize on completion of regional reports.	AACA chair/AMAP Secretariat	
	Circulate revised work plan as per agreed timeline for approval end January	AMAP Sec	14 December
	Feedback from HoDs especially regarding support for specific activities, e.g., hosting meetings, etc.	AMAP HoDs	19 December
	Consult with HoDs who have agreed to be consulted on specific parts of the work-plan	AMAP Secretariat	
	Respond to EC regarding EU-Black Carbon proposal	AMAP chair	6 December
	Communicate to UN-ECE re work-plan proposals (joint assessment)	AMAP Chair	Before their EB meeting
12	Information from Observers		
	Post observers' slides on AMAP website	AMAP Secretariat	19 December
13	AMAP administration issues		
	Encourage the Norwegian government to make sure that the AMAP Secretariat has adequate manpower to handle the work and the relocation of the Secretariat Oslo office to Tromsø	HoDs	Spring/summer/autumn 2018
	Maintain contact with AMAP HoDs and PPs regarding transition during appointment of new Executive Secretary and move of Secretariat to Tromsø	AMAP Foundation Board	2017–2018
15	AMAP relevant activities		
	To discuss with AC Chair and other WGs at Copenhagen December meeting terminology; SPMs or SDMs, and report back to AMAP HoDs and PPs	AMAP Chair and AMAP ES	9 December
	Report back to HoDs and PPs	AMAP chair and ES	21 December
	Discuss coordination of outreach on climate change assessment results with AC chair	AMAP Chair and ES	9 December
	Review monitoring guidelines from other international organizations, e.g., WMO, from an Arctic perspective	AMAP Expert Groups	30 June 2017
	Discuss marine relevant activities with AC chair and WGs	AMAP chair and Executive secretary	9 December
17	Next AMAP WG and HoD meeting		
	Next HoD meeting end January. Virtual or face-to-face TBD.	Consulting HoDs	December 12