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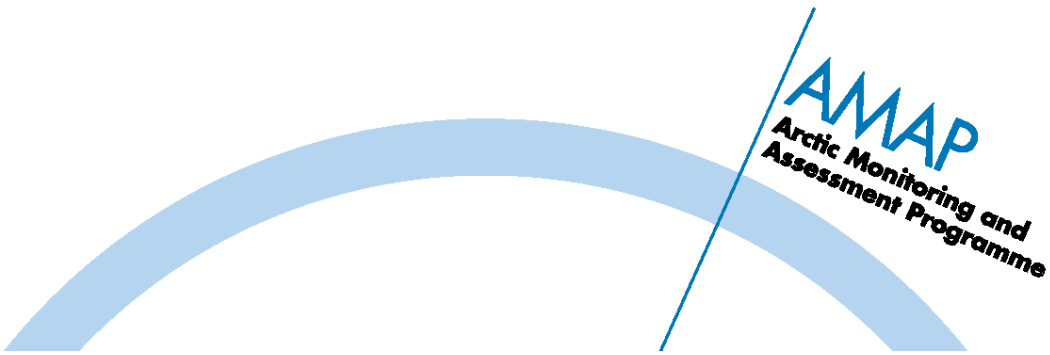
Minutes of the 23rd AMAP WG Meeting

San Francisco, CA, USA, 11–12 February 2010



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Minutes of the 23rd AMAP WG Meeting

San Francisco, CA, USA, 11–12 February 2010

1 Opening of the WG meeting

The Chairman, Russel Shearer (Canada), opened the 23rd meeting of the AMAP Working Group at 8.30 hrs on 11 February 2010 and welcomed all countries, Permanent Participants, and observers to the meeting.

1.1 Practical information

The host, Tom Armstrong (USA), welcomed the participants. Loretta Quinn, the local organizer, then provided information on the practical arrangements.

1.2 Approval of the Agenda

The agenda was adopted as proposed, but with a rescheduling of the discussion on short-lived climate forcers moved to the end of the day on Friday to allow a presentation from the Co-Chairs of the Arctic Council Short-Lived Climate Forcers Task Force, which was meeting simultaneously in the same building. The agenda is attached as Annex 1 and the list of participants as Annex 2.

1.3 Actions from last meeting

Lars-Otto Reiersen, AMAP Executive Secretary, reported that most of the long list of actions from the meetings in Quebec, Helsinki, and Copenhagen have been completed. However, two important actions require follow up: the reporting of data from Arctic research and monitoring activities to Thematic Data Centres, and the reporting of projects to the web-based Project Directory. HoDs were encouraged to follow this up with their scientists to ensure that regular updates take place.

2 Report from COP15 in Copenhagen

Morten Skovgård Olsen, Vice-Chairman of AMAP and Chair of the SWIPA Integration Team, reported on AMAP involvement in a number of outreach activities at COP15. These included the Arctic Venue, which was the focal point for Arctic Council outreach activities. The Arctic Venue was visited by Prince Albert of Monaco to whom Lars-Otto Reiersen presented the AMAP outreach products. AMAP also participated in several other outreach events.

During the second week of COP15, a high-level side-event sponsored by Denmark, Greenland, and Norway was held at which Dorthe Dahl-Jensen from Denmark presented the report on the Greenland Ice Sheet in a Changing Climate on behalf of the Arctic Council. Norway presented its Melting Ice report. This well-attended event was very successful; it received good press coverage and gave good exposure to AMAP.

Lars-Otto Reiersen reported that, on the basis of the SWIPA project and AMAP's contributions to COP15, the Secretariat of the UN Framework Convention on Climate Change has invited AMAP to become a formal observer to the UNFCCC. He raised the question of whether AMAP could have something to contribute to COP16 in Mexico at the end of this year, even though the SWIPA report will not yet be ready.

The meeting agreed that the Chairman should try to add an item to the April SAO meeting to ask whether AMAP should prepare some information for COP16.

3 Status of the SWIPA project

Morten Olsen, Chair of the SWIPA Integration Team (IT), noted that the SWIPA materials presented at COP15 included the science report on the Greenland Ice Sheet in a Changing Climate (GRIS), the associated layman's report in six languages, a film on GRIS, a film on SWIPA as a whole, and a 12-page pamphlet on SWIPA. Any delegation that would like extra copies of any of these materials should contact him.

His aim for SWIPA is to produce a high-quality scientific report and a layman's report simultaneously to present at the AC Ministerial Meeting on 4 April 2011 and feed into the IPCC process, as well as to develop a good outreach component.

Morten Olsen reported that a SWIPA Cross-Fertilization Workshop had been held in Potsdam, Germany in mid-January in which 70 scientists had participated to discuss the first draft of the SWIPA report and further develop the work. The Workshop: 1) agreed on a revised outline for the report, 2) agreed that a statement of key findings and a summary should be included at the beginning of each major chapter, 3) revised the timeline for the work by moving the peer review process to before the summer of 2010, and 4) supported the production of outreach products. The final, agreed outline for the SWIPA report is attached as Annex 3. According to the revised timeline, work on each chapter will take place at different paces, but all chapters are to be ready for peer review at the latest by the beginning of May 2010. A Peer Review Selection Committee, composed of high-level experts from each Arctic Council country and chaired by Helgi Jensson, AMAP HoD from Iceland, will choose the peer reviewers from a slate of nominations based on their CVs. The peer review will take place from April to mid-June. The Peer Review Selection Committee will follow the process to ensure that authors respond appropriately to the review comments. There is a strong commitment from the scientific community to meet the agreed deadlines. In addition to the peer review, two people will read the entire report to check for consistency in the statements. When the peer review is complete, work on the layman/summary report will begin; this will convey the scientific messages of the main report.

AMAP Heads of Delegation (HoDs) will need to sign off on the SWIPA recommendations and the SWIPA IT will need to sign off on all products. With regard to outreach materials, the film may be updated. There is a need to decide whether educational materials should be prepared based on SWIPA; the AMAP WG should discuss this issue so that planning can begin during the spring for the development of these materials.

Morten Olsen stated that the main challenges for meeting the timeline include the need for strong secretariat support within the main components of SWIPA to help the scientists in preparing their

syntheses; this support depends on the amount of national resources being provided for SWIPA because a scientific secretary needs to be hired to assist in the process. For the SWIPA report as a whole, Denmark has hired Henning Thing to serve as the scientific editor to keep up the momentum of the work, remind authors of their deadlines, etc. Another challenge is to ensure that there is only one entry point and one person responsible for disseminating the information for each chapter, even when the chapter has more than one Convening Lead Author.

In the discussion of this presentation, many delegations expressed their appreciation to Morten Olsen and the SWIPA authors for their excellent and important work, and the contributions to COP15. It was agreed that the layman's report should not be started until after the peer review of the science report has been completed; however, both reports should be released simultaneously.

In response to a question on whether the SWIPA results are under embargo until the publication of the report, it was stated that scientists can publish their own results, but SWIPA results must be embargoed until the report is released. For the ACIA report, scientists had been allowed to produce other articles and papers on the topic, but they were not allowed to release them until the main report appeared; this had worked well.

Lars-Otto Reiersen stated that AMAP is moving into a very intense phase with its publications. Technical editing, which proceeds at a pace of approximately 100 pages per month, will require six person-months for the SWIPA report. Thus, there is a need for additional technical editors for this report and the others that are being processed simultaneously. There is also a need for additional layout designers.

In conclusion, the Chairman stated that there are two issues requiring decision by SAOs that should be brought to the SAO meeting in April: 1) a decision on preparing a SWIPA layman's report containing science-based policy-relevant recommendations; and 2) a decision concerning the outreach products that should be prepared by the time of the release of the SWIPA report, such as an update of the film.

4 International Cooperation

Stockholm Convention

Lars-Otto Reiersen recalled that Arctic Council Ministerial Meetings have requested AMAP to work with international conventions to reduce duplication. As an example, AMAP presented its assessment report on POPs in the Arctic at a side-event at the Stockholm Convention (SC) COP4 in Geneva in May 2009. In addition, a report on the combined effects of climate change and contaminants will be prepared as a joint report between AMAP and the Stockholm Convention Secretariat. This should be completed by March 2011 in advance of SC COP5. While it is hoped that some funding may be available for AMAP for this work, there may be a need for some Arctic countries to help sponsor it.

The Chairman encouraged countries to bring experts forward to support this joint work with the Stockholm Convention Secretariat. He indicated that Canadian experts have already expressed an interest in cooperating in the preparation of this report. The Russian delegation reported that Roshydromet has funded a special project on the influence of climate change on the transport of

contaminants in large Russian rivers up to 2050 and the runoff of POPs from various areas of Arctic Russia. This information can be contributed to the report. Noting that Denmark is currently participating in the Nordic Council of Ministers-funded project on combined effects, the Danish delegation expressed interest in contributing to the report on combined effects.

Regarding the Nordic Council of Ministers-funded project, Lars-Otto Reiersen stated that this project was initiated about three years ago and was intended as co-funding for the ArcRisk project. Institutes from Denmark, Norway, and Sweden are participating in the study of the influence of climate change on the transport of POPs, mercury, and radionuclides to the Arctic and the impact on human health. The project is nearly complete and a conference on the outcome will be held in late spring, which can provide information for the AMAP/SC Secretariat report on combined effects.

It was noted that a memorandum of understanding (MoU) between the Stockholm Convention Secretariat and AMAP will be prepared, similar to that with UNEP Chemicals for the mercury report. The Stockholm Convention Secretariat has contracted Andy Gilman to take the lead on the overall project, but further details remain to be decided.

UNEP Chemicals

Simon Wilson, AMAP Deputy Executive Secretary, reported that AMAP had fast-tracked the preparation of a 2005 global atmospheric mercury emission inventory to assist UNEP in the preparation of its *Global Atmospheric Mercury Assessment* report. Follow-up activities include work to review and update historical mercury inventories for the period 1990–2000 supported by Canada and Denmark. In addition to its use in the AMAP mercury assessment, this work will contribute to the 'Paragraph 29' study that is currently being conducted by UNEP with the involvement of several AMAP experts. The 'Paragraph 29' study will focus on technological solutions to the mercury problem.

At the last AMAP HoDs meeting, the UNEP representative proposed a possible activity to follow up on the 2005 emissions report by producing an updated (2010) global inventory in 2011–2012. UNEP has requested AMAP to prepare a proposal for the production of this new inventory report, which will need to be more comprehensive than previous reports and build on data that will hopefully be made available in the Paragraph 29 study.

These reports will be used by UNEP to support the negotiations for a global agreement on mercury. The first meeting of the Intergovernmental Negotiating Committee (INC) under the UNEP process will be held in Stockholm on 7–11 June 2010. UNEP has requested access to some of the information from the AMAP mercury assessment for the INC process; however, this is likely to be problematic as this would require the provision of information before it has been subject to the AMAP assessment peer review process.

Mikala Klint (Denmark) stated that the Nordic Council plans to hold a side-event on technology in relation to mercury emissions at the INC-1 meeting, coordinated by Denmark. She suggested that AMAP might either arrange a similar side-event or participate in the NCM event to facilitate the contribution of other countries.

The meeting agreed that AMAP should contribute to this UNEP work to the extent possible, but that this could not include a pre-release of information from the AMAP mercury assessment before it has been subject to peer review.

It was further agreed that Denmark and the AMAP Secretariat should discuss with UNEP Chemicals an opportunity for AMAP to present its mercury work either at a side-event or through roll-ups and posters at the UNEP INC-1 meeting. This issue may need to be raised with SAOs in April 2010.

GESAMP

Lars-Otto Reiersen reported that GESAMP will hold a meeting in Bangkok next week. GESAMP will conduct an assessment of the global distribution of mercury in sea water and also has other relevant assessments on its agenda. He has communicated to GESAMP that AMAP would like to establish cooperative efforts on these issues. Gunnar Futsætter of UNEP Chemicals will attend this meeting and can describe the AMAP assessments.

IPCC

The meeting noted that good links need to be re-established between AMAP's cryosphere work and the Intergovernmental Panel on Climate Change (IPCC) Secretariat in Bonn. AMAP's previous links with the IPCC were broken when its former Chairman, Robert Watson, resigned.

John Walsh (USA) stated that previous IPCC assessments have suffered from a fragmentation of the cryosphere material over various working groups and the authors of different chapters did not come to the same conclusions. He recommended that SWIPA authors contribute to both WG1 and WG2 of IPCC.

The meeting noted that nominations to the IPCC Fifth Assessment Report (AR5) will be made soon; when the national nominees to the AR5 WGs are known, AMAP can decide on which experts should be designated to coordinate and cooperate with the IPCC. It was pointed out that organizations can also nominate experts to IPCC WGs, so when AMAP has obtained observer status with the IPCC under the UNFCCC, it can also nominate people to the WGs.

WMO

It was reported that WMO will establish a Global Cryosphere Watch Programme at a meeting to be held on 16 May 2011. It was agreed that AMAP should consider collaborating with any programme that is established on the cryosphere, similar to the AMAP cooperation with the WMO programme on atmospheric transport.

IASC

The close cooperation with IASC particularly on SAON and SWIPA was noted; this has been a very positive development.

WRCP

It was reported that there will be a WRCP conference in Denver in 2011 that could be a good opportunity to present the results of SWIPA.

5 Report from the AMAP Workshop held 8–10 February 2010

5.1 The AMAP Strategic Framework Programme

The Chairman stated that the aim of the review of the AMAP Strategic Framework is to assess the past twenty years of monitoring and assessment and develop plans for the next ten years, taking into account requests from Ministers and including new monitoring needs and the latest recommendations from science. This includes the conduct of a review of the AMAP Trends and Effects Monitoring Programme strategy and implementation, and revision of the AMAP Monitoring Programme Guidelines and Assessment Strategy to cover the period after 2010, for presentation to Ministers in 2011. The AMAP documents to be updated include the AMAP Strategy 2004+, which should be updated to 2010+, the Guidelines for AMAP Phase 2 Assessments, and the AMAP Trends and Effects Programme, 1998–2003.

Based on a plan initiated by HoDs in June 2009, the Strategic Framework Document has been updated by the AMAP Board, HoDs and PPs, and has been subjected to an internal review and an external review. The internal review was conducted by HoDs from Iceland (Chair), Denmark, and the USA and is now complete. The External Review Group, composed of David Stone (Chair, former AMAP Chair), David Carlson (IPY Executive Director IPO), David Stanners (EEA), Kristjan Kristjanson (IASC President), Gunn-Britt Retter (Saami Council), and James Parker (Shell Oil Ltd.), has prepared an initial report that will be completed by 15 March 2010.

The Chairman noted that it is vital that the External Review Group maintain the independence of its report in terms of both the content and publication, including the comments back from the AMAP WG. Thus, the External Review Group will produce and publish its report itself. The report addresses a number of very broad issues that may fall outside the AMAP mandate; therefore, the Chairman recommended that the report be brought to the SAOs at their meeting in Greenland on 28–29 April and be presented by the Chair of the External Review Group.

It was noted that, in reviewing the AMAP Strategic Plan, the External Review Group realized that AMAP activities must be seen in the context of the work of the other AC WGs and the cooperation needed with these WGs. The issues covered are broader than AMAP, and other WGs may also want to make use of these findings. A number of delegations stated, however, that there will be a need to assure SAOs that AMAP will not go outside of its mandate from the Arctic Council; it will be necessary to liaise with SAOs to make sure that they clearly understand the process AMAP is using in revising the Strategic Plan and the purpose of presenting the report of the External Review Group to them. Thus, it should be clearly conveyed to SAOs that the reason that the review is being presented to them is that it is also applicable to other AC WGs. Furthermore, the Chair of the External Review Group should explain that its report is merely one tool in the full stakeholder review process.

In conclusion, the WG agreed to propose the addition of this issue to the agenda of the SAO meeting and to ask the Chair of the External Review Group to present its report in Greenland; this agenda item needs to be proposed for the SAO meeting by 1 March. In the presentation, the report will be put in its proper context and it will be made clear how the report is being used by AMAP in the revision of its Strategic Plan and that the only reason for requesting that it be put on the agenda is that it may be of interest to other WGs.

The Chairman then described the next steps in the revision of the AMAP Strategic Framework and the Assessment and Monitoring Programme, as attached as Annex 4. Workshop participants will have until 1 March to submit further comments to Chairs and rapporteurs of the various breakout sessions, and the consolidated reports should be sent to the AMAP Secretariat by 8 March.

The Chairman suggested that the first draft of the Strategic Plan be prepared in his office, taking into consideration the outcome of the Workshop and the reports from the internal review and the external review. He suggested that the current documents be put aside and that a fresh start be made building on the discussion at the Workshop during the past three days. This should result in a clear document of 8 pages, which will be distributed on 15 March to the AMAP Board and to David Stone, Andy Gilman, and David Stanners for comment by 1 April to the Chairman. The document will then be sent to HoDs for review, with comments due by 15 April. The comments will thereafter be incorporated and the first draft of the Strategic Framework Plan will be ready by 1 May for distribution for extensive consultation and review by experts, other AC WGs, and international organizations until 1 July. The final draft should be ready by 15 September and approved by the AMAP WG at its meeting in November or December 2010. Final consultations and revisions should take place during January and February 2011, after which the final Strategic Framework Plan will be sent to SAOs and ultimately approved at the Ministerial Meeting at the beginning of April 2011.

5.2 The AMAP Assessment Strategy and Monitoring Plan and Implementation

Andy Gilman, facilitator for the Workshop on the AMAP Assessment and Monitoring Programme, presented a preliminary view of the very rich outcome of the Workshop (summarized in Annex 5).

Mega-messages from the Workshop include the following:

- More coordination, networking, and cooperation are needed—an ASG should be used to network and propose priorities;
- Leadership from AMAP is needed;
- Geo-mapping and data are needed for model input;
- New areas could include ocean acidification, underwater noise, SLCFs;
- There should be more integrated assessments;
- Quality is critical!

In the AMAP WG discussion of the outcome of the Workshop, the following points were made:

1) The need for independence of the scientists should also be stressed as a mega-message;

2) The SWIPA model providing for greater involvement with other organizations should be used more frequently;
3) A proper strategy for using Traditional Knowledge should be developed and implemented;
4) Climate is a stress superimposed on other stressors; there is a need to understand whole systems so that an understanding can be gained of the impact of stressors;
5) Flexibility should be included so that tasks such as an assessment of the state of ecosystems can be supported;
6) There is a need to link research and assessments to monitoring to enhance understanding;
7) There is a need to know what should be monitored for long-term records;
8) The desire for more integrated assessments, integrating from abiotic to biotic to humans, will require making more significant resources available because integration will require additional effort by scientists, countries, and the AMAP Secretariat; more time will also be required to conduct this integration;
9) The Strategic Plan will need to reflect the complexities regarding the climate issue: the need to enhance regional models for the Arctic, the need to relate to other issues, e.g., contaminants;
10) It was noted that early AMAP monitoring work was segmented, but in the current very different situation now, there is a need for:
    a) Integration: of databases, meta-data, effects on humans and ecosystem stressors, integration of monitoring, integration of modelling and budgets;
    b) Entrainment: to have a community that matches the issues: there is a need to entrain new, young scientists; the demography must match the issues: bring in new methods and new concerns (e.g., ocean acidification);
    c) Communication: to discuss who we are communicating with and a strategy for this; AMAP has communicated well with scientists and policy-makers, but a clear strategy is needed.

After discussion, the WG agreed that the AMAP Secretariat will work with the Chairs of the Expert Groups to prepare a revised assessment programme and monitoring guidelines, including a new effects monitoring programme. This will include a core programme and it will also be flexible. The scientists will be consulted and encouraged to provide input throughout the process.

The Chairman concluded by expressing the WG's appreciation to Andy Gilman for his excellent work in serving as facilitator of the Workshop.

6 Short-Lived Climate Forcers (SLCFs)

The Co-Chairs of the Arctic Council Task Force on Short-Lived Climate Forcers (SCLFs), Bendy Angelo (U.S. EPA) and Hovart Thoresen (Norwegian EPA), presented an overview of their meeting, which had just finished. Bendy Angelo stated that the Task Force had been established to develop recommendations on mitigation and policy issues on black carbon and other SLCFs by April 2011. The Task Force had received a presentation by Patricia Quinn and Anders Stohl on black carbon. The Task Force has decided that, rather than trying to prepare specific proposals, it will define climate sensitivity scenarios that would be fairly easy for

modellers. This will include the Arctic climate benefits of reducing open agricultural burning and diesel use by certain amounts. The development of scenarios will also allow parallel work by the AC SLCF TF and the AMAP Expert Group on this topic. The SLCF TF will produce two products: an underlying technical report and a brief policy summary. The topics to be covered include: emission inventories, future mitigations and associated costs, policy options, and interactions with AMAP. The climate benefits of mitigation options will be provided. The report will be reviewed at SAO meetings, with the November SAO meeting as the deadline for the report and the final report presented at the April 2011 Ministerial Meeting.

In the discussion of this report, the issue of monitoring was considered. It was noted that improved monitoring is needed not only to determine the effects of black carbon deposited in the Arctic, but also to determine the sources of this black carbon. LRTAP has now established an expert group on SLCF which will prepare a report by September using questions that are very similar to those of the AC SLCF TF.

7 Status of the AMAP assessment publications

Simon Wilson, AMAP Deputy Executive Secretary, reported that many AMAP reports are under preparation, as shown in the spreadsheet in Annex 6. The radioactivity assessment was delayed but should be ready within the next few months.

For the mercury assessment, drafts have been prepared for all chapters and reviewed internally by the AMAP Mercury Assessment Group; updated drafts will be sent out for peer review at the end of February. At the November HoDs meeting, it was requested that the peer review be open until the end of April, but the authors would like to receive the reviews by 15 April to be able to handle review comments before experts leave for field work, etc. The AMAP WG accepted this request. A list of potential peer reviewers for the mercury report has been compiled, but the Mercury Expert Group felt uncomfortable with selecting the reviewers itself. In addition, **the national review/data check needs to be conducted simultaneously with the peer review. The AMAP WG agreed to provide names of possible peer reviewers and take the necessary steps to arrange national review as soon as possible**. **They further agreed to adopt the normal process by which national review comments will be compiled by HoDs before they are submitted to the assessment leads and Secretariat by the deadline of 15 April; peer review comments will be returned directly to the authors.**

Both SWIPA and the mercury assessments are being produced on almost identical timetables, as both aim to deliver at the same time. Simon Wilson highlighted the tight timeframe for the production of the SWIPA report in particular. This report is about four times larger than the GRIS report produced in 2009, but the time available for its production is the same as that available for the GRIS report; in addition, it has to be produced at the same time as the mercury assessment, using many of the same resources. He therefore recommended that, in future, the combined timelines for all reports under production should be carefully considered. The SWIPA scientific report is likely to require six months for technical editing, so for both this and the editing work on the mercury assessment additional editorial assistance will be needed. The editor currently engaged by AMAP will not be available until June; therefore, additional editors will need to be engaged as soon as possible and the fact that they will have no previous experience editing AMAP reports will introduce additional challenges.

Furthermore, the two main science writers used by AMAP in the past are no longer available, so there is an urgent need to identify new writers and to engage them within the next few weeks. The science writer(s) chosen for the SWIPA layman's report should participate in the SWIPA meeting in June.

For both the SWIPA and mercury assessments, the full science reports and their layman's reports need to be essentially completed by October to be available for circulation to and approval at the AMAP WG meeting in November/December so that the publication work can be completed in time for the Ministerial Meeting in 2011.

The publication of the oil and gas assessment scientific report has been seriously delayed. The main chapters for the first two volumes have been completed long ago, but Chapter 2 still needs to be laid out for printing. Simon Wilson reported that work is in progress aiming to have Chapters 1–5 and 7 in print in two volumes within the first half of this year. The work by Hein Rune Skjoldal on Chapter 6 is nearly completed, but further work will still be needed thereafter, so it is not yet possible to determine the timing of this final chapter volume.

In the discussion, the WG recognized the intensity of the workload and acknowledged the significant work required to manage and accomplish the preparation of the publications. There is a need to discuss the distribution of this workload and to find additional people who can assist during the course of this year. The delegations of Canada and the USA each offered to review their resources to see if they might be in a position to provide the assistance of technical editors and/or layout designers this year. Other delegations were encouraged to consider the possibility of providing assistance.

Nominations of science writers who could prepare layman's/summary versions of the SWIPA or mercury assessment should be sent to the AMAP Secretariat at the beginning of March. The names of technical editors and layout designers should be provided by 15 March. When making nominations, CVs and examples of writing should be supplied for the science writers, editors, and layout designers.

Lars-Otto Reiersen indicated that finances are still available for production of the oil and gas assessment volumes and the SWIPA report, and probably also for the mercury assessment, so no extra funding would be requested at this time.

In concluding the discussion, the WG agreed that the issue of the resources available to the Secretariat should be revisited as part of the revision of the Strategic Plan. The AMAP Secretariat needs to have access to the resources it needs to be able to do the work requested. It was agreed that this issue would be placed on the agenda of the next meeting so that a longer-term solution can be found to this problem.

8 SAON: status and work in progress

John Calder, Vice-Chairman of AMAP, described the history of the SAON work that led to the establishment of the SAON Steering Group (SG) by the Arctic Council in the Tromsø Declaration in April 2009. The SAON SG, composed of national representatives from each of

the eight Arctic countries, and representatives of AC PPs and AC WGs, and IASC and WMO, held its first meeting in June 2009. National representatives were requested to prepare an inventory of national monitoring networks and to identify key agency officials for consultation on SAON. SAON activities planned for this year include:

1) Improving links to local and traditional knowledge (LKT): the SAON SG will work with projects such as ELOKA to develop opportunities for collaboration on LKT, community-based monitoring and 'non-traditional data';
2) Convening a Funding Agency Officials Workshop on 18–19 March 2009 in Miami to seek inputs from funding agencies; 40–50 participants including 8 PPs and 4 IGOs are expected to attend;
3) Holding a Data Management Workshop on 7–8 June 2009 in Oslo to begin to develop a plan for 'data management' under SAON, and to identify current 'best practices'.

John Calder noted that, after four years of consultations, the SAON SG will recommend that it be disbanded in April 2011; it will further recommend that Arctic Council member states agree on an operational structure with signed agreements by all member countries. Data management will be integral to the observing activities. However, it is not clear how a 'SAON Central' will be funded or whether it will be part of the Arctic Council or an independent body.

The Head of Delegation of the USA expressed his appreciation for this information and noted the great importance of this issue and the need for credible action. Common meta-data standards should be proposed and the USA is willing to provide resources to develop such standards. The WG noted that ISO has meta-data standards, but they are too simple. However, some other countries and the IPY have been developing views on such standards.

In discussing the Funding Agency Officials Meeting in Miami, it was pointed out that most international cooperation is bilateral and not multilateral because the latter is too complicated. One way to facilitate cooperation among eight countries with different objectives would be to centre on the AMAP monitoring programme. AMAP and its requirements could be mapped out to show how SAON could help countries to meet their AMAP monitoring commitments. The AMAP strategic planning process could also be used to show how SAON can contribute to this work, thus putting SAON in a context.

Based on this discussion, the WG agreed that AMAP should take the initiative to bring a concrete proposal to the Miami meeting by preparing a paper that describes the AMAP monitoring programme and its requirement for comparable monitoring data throughout the Arctic, and how a programme such as SAON can help bring this work forward. This will emphasize building on an existing programme and the ways in which SAON can help advance this work. It was agreed that Canada and the USA will work with John Calder and the AMAP Secretariat to develop a proposal in advance of the Miami meeting. This should be ready by 8 March so that it can be circulated to the participants ten days in advance of that meeting.

John Calder stated that the next SAON teleconference is scheduled for 18 February and a pre-meeting will be held on 18 March in Miami.

AMAP will also be invited to the Data Management Workshop in June, which should discuss the best future way to deal with data management for Arctic observations.

9 Ocean Acidification

Lisa Robbins, USGS, presented a scoping paper on ocean acidification that she had prepared with several colleagues. She noted that the CO_2 concentration in seawater tracks that in the atmosphere; thus, the increased CO_2 concentrations in the atmosphere have resulted in proportionate increases in seawater, resulting in a concomitant decrease in the pH of seawater as well as a decrease in the carbonate ion concentration. Since the beginning of the industrial age, the pH of seawater has decreased from pH 8.2 to pH 8.07. Carbonate ions and calcium ions in the oceans are vital to small organisms such as terapods and coccolithophores at the base of the food chain as well as to other shellfish, and the decrease in carbonate ion saturation will disrupt many parts of the food chain from primary producers to higher trophic levels. High latitude planktonic and benthic calcifers are already showing effects. In the Arctic Ocean, the low year-round temperature increases the absorption of CO_2 and the loss of sea ice exposes more shelf waters to the atmosphere, thus causing additional absorption. There is a need for systematic monitoring of pCO_2 in the Arctic Ocean to determine the current state. This is a high priority because the Arctic Ocean is very productive and it is the bellwether for ocean acidification. The information needs include seasonal monitoring of open-ocean, coastal, and under-ice seawater with a high degree of spatial and temporal resolution as well as high quality surveys, mapping and measurements to assess the abundance and depth distributions of planktonic and benthic organisms and the seafloor habitat. Baseline data are needed now for all periods of the year because ocean acidification is occurring now in this very vulnerable ecosystem.

Rob Macdonald of the Canadian Department of Fisheries and Oceans also gave a brief presentation on recent Canadian ocean acidification studies, including in the Arctic. He outlined the relative importance of this issue in the Arctic system and recommended follow-up by AMAP.

In the discussion, it was noted that this is a very complex issue and there are not yet many data. In particular, little is known about the response of the organic system to the changes in seawater chemistry; moored sediment traps at fixed stations are needed to collect the sedimented organic material.

It was pointed out that there are number of parameters in the chemistry of CO_2 in seawater that can be hindcast so it could be possible to rescue old carbonate data in a way that would show the previous conditions; the tipping points can be estimated very well because the chemistry is known and can be modelled.

Lars-Otto Reiersen reported that, based on the oil and gas symposium in Tromsø, he had contacted several experts including Richard Bellamy (Norway) and Bogi Hansen (Faroe Islands) to create a group to review ocean acidification. AMAP has recently received $100,000 from the Nordic Council of Ministers to support some work on this issue. He would like to create a three-year project and also bring in experts from Canada, Russia, and the USA. The project should start with a workshop to plan the work and decide on a timeline. More resources will be needed, however.

In the discussion, it was noted that there is much work being conducted on ocean acidification in the Arctic Ocean, but it is not coordinated. The WG considered this an important issue and felt that AMAP has a role to play and is in a good position to coordinate the work.

Noting that the Nordic Council project would not cover Canada, Russia, or the USA, the delegations of these three countries agreed to review the Nordic Council proposal in more detail in consultation with their experts to decide whether to develop a complementary project or a broader umbrella project. The observer countries were also invited to consider whether they would like to join this initiative. Countries will have one month to scope their involvement in this work; responses should be sent to the AMAP Secretariat by 15 March. The AMAP Secretariat should send out the Nordic Council proposal immediately.

In conclusion, the WG agreed that this is an important issue in which there is a role for AMAP. A workshop should be held in 2010 to plan the work.

10 The new website for AMAP, AMAP PD, AC Outreach activities, etc.

Simon Wilson reported that work has been initiated on the development of a new AMAP website that it is planned will be implemented later this year. He encouraged countries to upload descriptions of their Arctic projects on the Project Directory. In terms of AMAP outreach activities, he drew attention to the possible need to coordinate this with a new AC initiative on outreach for which he is the nominated AMAP contact to the AC group working on this issue. In this connection, he referred to the AC questionnaires on outreach and communication that he had distributed to HoDs for their input. Some replies had been received and compiled in the AMAP response that had been provided to the AC.

In the discussion, it was agreed that AMAP should do more on outreach activities, using new means of communicating and distributing information. Furthermore, it was felt that it would be useful to obtain the assistance of communications experts in developing a more comprehensive AMAP outreach plan that would ultimately form part of the Strategic Plan. The communication plan should also include new initiatives targeting, in particular, young people, possibly through educational outreach activities. Before such a plan can be developed, communication requirements need to be clearly determined so that the best way to address them can be found. This includes the identification of AMAP stakeholders and their needs, which is partly being addressed by the External Review Group for the Strategic Plan.

In conclusion, it was agreed that AMAP does not want to duplicate the efforts on outreach that are being conducted by the Arctic Council, in which all AC countries participate and Simon Wilson is the contact person representing AMAP. However, there is a value in having a parallel process under AMAP, connected to the Strategic Plan, and for AMAP to develop an overall communications plan that individual countries can use and adapt as appropriate in developing their own initiatives to communicate AMAP information. This would allow the countries to better link up with the AMAP outreach activities and thus lead to a more coordinated, coherent approach to communications and outreach in relation to AMAP issues.

Accordingly, the WG agreed that each country should nominate one or two communications experts to work together to develop a communications plan for AMAP under the guidance of

AMAP HoDs. The experts should be persons responsible for such communications in their country or agency. The External Review Group report can be used as a basis for parts of the activity when it is available, and the work will be further defined when this report has been reviewed and HoDs have developed a clearer idea about what is wanted. When this has been defined, the work can begin with a teleconference and possibly a workshop to be arranged at some appropriate time in the future.

National nominations of communications experts should be sent to the Secretariat by 15 March. Observer countries were also invited to nominate experts.

11 Special projects linked to the AMAP work

EU FP7 project ArcRisk

Janet Pawlak, AMAP Deputy Executive Secretary and ArcRisk Project Coordinator, provided an overview of the progress in the EU-funded project ArcRisk (Arctic Health Risks: Impacts on health in the Arctic and Europe owing to climate-induced changes in contaminant cycling), which officially began on 1 June 2009. A total of 21 partners participate in the project, seventeen of which receive funds from the EU contribution of €3.5 million. The partners not receiving EU funding include one Russian and three Canadian institutes; these need to receive funds from other sources. Using modelling, the project is investigating the ways in which climate change will affect the long-range transport of contaminants to the Arctic, via the atmosphere and ocean currents, and their transfer and uptake into the food chain. Field studies will measure the fluxes of contaminants in terrestrial and marine systems and the uptake of contaminants into food webs ultimately leading to species for human consumption, including fish, reindeer/caribou, and marine mammals. The third part of the project concerns the effects of contaminants on human health in the Arctic and includes the compilation of all relevant studies into a database to better evaluate such effects; information from a number of mother-child cohorts will also be compiled. Comparisons of the situation in the Arctic with selected areas of Europe will also be made using studies from partners in the Czech Republic, Slovenia, and Spain.

The first five deliverables have recently been submitted to the European Commission. These include a report on the selection of contaminants that will be studied in the project (core substances are DDTs, PCBs, HCHs, mercury, and perfluorinated compounds); a report on the field sampling strategy for process studies; and a summary of the procedures for data collection and a critical review of the health effects of contaminants. Two outreach deliverables were also prepared: Simon Wilson, the lead for communication and dissemination, organized the design of the project website (www.arcrisk.eu) and the preparation of a brochure. Simon Wilson stated that he is hoping to link the communications strategy that he needs to develop for this project with the common AMAP strategy discussed during this meeting.

Janet Pawlak noted that the human health portion of this project builds strongly on the work of the AMAP Human Health Assessment Group and AMAP monitoring data will be useful in the environmental parts of the project.

Follow-up of Russian PTS project

An application has been submitted for a project in Russia to follow up the mothers and children from the PTS project. A workshop will be held in St Petersburg at the end of March to scope the health aspect of this project, which will serve as a type of Russian component of the ArcRisk project. GEF has indicated that this project, as well as a project on hydrology, should receive funding but some co-funding will also be required.

International Polar Decade

Alexander Klepikov (Russian Federation) reported that the WMO has established a new expert Polar Panel with the objective to consider an International Polar Decade. The Polar Panel will prepare a white paper on this subject before the next WMO meeting. WMO will consider this and make a decision at its meeting in June 2010.

Alexander Klepikov agreed to serve as the AMAP contact with the WMO Polar Panel in regard to the issue of the International Polar Decade.

12 Cooperation with other AC WGs and the Update from WG Chairs' meeting held 1 March in Copenhagen

PAME

The WG noted that PAME has requested AMAP to contribute to the follow-up of the PAME Arctic Marine Shipping Assessment (AMSA) by identifying marine areas of heightened ecological and cultural significance in the light of a changing climate. This identification of vulnerable areas in relation to shipping will be made to encourage the International Maritime Organization to designate them as sensitive areas. AMAP has information relevant to this topic, particularly the yet-unfinished Chapter 6 of the Oil and Gas Assessment, but there is no funding for this work. Lars-Otto Reiersen and Per Døvle met with the PAME Chair, Atle Fretheim, to discuss this issue and indicate the need for funding.

In the discussion, the WG felt that AMAP should assist PAME in the follow-up of the AMSA recommendations, but that this should be done with a minimal effect on the AMAP Secretariat and with no effect on AMAP's main work and the production of its deliverables. Furthermore, SDWG should be requested to take on the issue of cultural significance, as AMAP does not have the relevant expertise on this, and CAFF should be able to contribute significantly to the ecological significance issue.

Per Døvle stated that Norway will provide some funds for this work, but more will be needed. Norway will take the lead and will collect nominations from other countries to create a small group to clarify this work. Nominations to this group should be made by 22 February.

Accordingly, the WG agreed that AMAP was ready to take on this task in close cooperation with CAFF and SDWG, and with the work conducted by a small group coordinated by Norway.

AC WG Chairs meeting March 2010

The Chairman stated that a PAME meeting will take place on 2 March in Copenhagen to discuss with other AC WGs their contributions to the Arctic Ocean Report. The SDWG WG meeting will also take place that week. SDWG has invited other WGs to a meeting on the morning of 2 March to discuss socio-economic issues. The AMAP Chairman will attend this meeting as well as the PAME meeting that afternoon.

The WG agreed that, at the WG Chairs meeting on 1 March, the AMAP Chairman should request that the following items be put on the agenda of the SAO meeting in April: 1) SWIPA, including a possible contribution to COP16, 2) SAON, 3) the process for the development of the AMAP Strategic Plan, including having the Chair of the External Review Group present the report with its findings, 4) AMAP mercury work and a proposed side-event at UNEP INC-1 in June, and 5) the AMAP Expert Group's work on SLCFs in concert with the Task Force report on SLCFs.

The means for other AC WGs to comment on AMAP reports was discussed. It was noted that the usual procedure is that the scientific reports are handled by scientists only, while the layman's reports are distributed to the other AC WGs and reviewed by the countries in a way that they harmonize the views of the different WG experts. Thus, the HoDs need to ensure a good national process to harmonize all comments.

The WG agreed that this process will continue to be used for the SWIPA report, and noted that adequate time must be given to the countries to review the reports and to harmonize their comments.

CAFF

The meeting was informed that the CAFF Circumpolar Biodiversity Monitoring Programme marine monitoring and implementation plan is currently out for technical review before it is distributed for formal review. It has not yet been transmitted to AMAP for review. A draft document would be circulated to AMAP experts by the AMAP Secretariat for comments by 1 March.

It was noted that CAFF is preparing an Arctic biodiversity highlights report using 20 indicators that will be issued as an AC report in June.

13 Observing countries and organizations activities

Dr Yang Liu, from the Ministry of Foreign Affairs of the People's Republic of China, gave a presentation on the Arctic research conducted by China. He gave a brief overview of the Chinese institutes engaged in polar research and some of their activities, which included the establishment of an Arctic research station—the Yellow River Station—in Ny Ålesund, Svalbard in 2004 and research vessel campaigns in the Arctic in 1999, 2003, and 2009 mainly covering stations in the open sea. From June to September 2010, a cruise will take place to study the

mechanism of rapid sea ice change in the Arctic; this is open to the participation of scientists from other countries.

Dr Yang Liu reported that research at the Yellow River Station on Svalbard concerns the environmental fate of typical pollutants in the Arctic, including comparisons with the Antarctic. Contaminants studied include PAHs, PCBs, OCPs (HCH, DDT, HCB, Aldrin, etc.), and PBDEs. Further information can be obtained from the websites: www.chinare.gov.cn and www.pric.gov.cn.

Marie Hidaka, from the Ministry of Foreign Affairs of Japan, stated that Japan has applied for permanent observer status at the Arctic Council because it feels that Japan can contribute in a positive way. Japan is interested in the Arctic as a unique natural area that is changing rapidly. Japan has approximately 200 scientists in five main institutes and about 100 universities that have interests in Arctic science. The research themes of JAMSTEC include Arctic Ocean system studies, cryospheric and hydrological research, and satellite data applications. Japan has operated a research station at Ny Ålesund since 1992 and is currently participating in the North Greenland Eemian Ice Drilling project (2007–2011). The International Symposium on Arctic Research-2 (ISAR-2) will be held in Tokyo, tentatively on 7–9 December 2010.

Frits Steenhuisen, The Netherlands, gave a brief overview of polar research in The Netherlands, which is currently under reorganization. Additional finances have become available, more students are working on polar issues, and several organizations have joined forces for logistic and financial reasons.

14 The next WG meeting and upcoming conferences and workshops of interest for AMAP

The WG took note of the following conferences and meetings:

- The IPY Conference in Oslo on 8–12 June 2010. AMAP will co-sponsor a session on climate change and contaminants; over 80 abstracts have been received for this session. AMAP will also hold a side-event with a display of the roll-ups and the SWIPA films. These films will also be shown at a concurrent film festival in Oslo.
- There will be an IPCC meeting in Bonn on 31 May to 11 June 2010 which could also have a ministerial segment.
- A meeting of the UNEP Intergovernmental Negotiating Committee (INC) to start work on a globally binding mercury agreement will be held in Stockholm on 7–11 June 2010. There is a possibility to hold an AMAP side-event, but about three presentations would be needed and support would be required from the local organizers. The Swedish delegation offered to supply the name of this contact person to the AMAP Secretariat. Potential topics for the side-event that were suggested included presentations on the need for policies to protect Arctic indigenous people, on the effects of mercury on human health, and on effects on biota.
- A meeting of the Arctic Council Ministers of the Environment will be held in Ilulissat on 9–11 June. AC WGs, observers and PPs are also invited. The topic is the protection of the marine environment and presentations will be made by the OSPAR Commission, the Helsinki Commission, and UNESCO concerning marine protected areas offshore. The

SWIPA film will also be shown and Lars-Otto Reiersen will give a presentation on AMAP. It is hoped that the outcome will be a declaration text on marine sensitive areas.

- A Deputy Ministers meeting will be held in Copenhagen on 27–28 May together with an Information Day. The agenda is not yet fixed, but the SAO Chair would like to focus on the SAO Task Forces on SLCFs and on Search and Rescue. On Information Day, WGs may have the opportunity to give a 20-minute presentation each on their key work and there may also be some side-events. This should be to show the current work of the WGs and to facilitate communication.
- The Arctic Five Meeting on the afternoon of 29 March in Ottawa, ON, will be a meeting of the Ministers of Foreign Affairs of the five Arctic coastal countries held on the margins of the G8 meeting. The aim is to have the five Arctic coastal countries (Canada, Denmark, Norway, Russia, and the USA) discuss coordination and cooperation in relation to the Arctic Ocean.

It was noted that 2011 will mark twenty years since the Rovaniemi Declaration, and thus will be a twentieth anniversary for AMAP. It will also be the year in which the SWIPA report is released and could be an opportunity for a major scientific conference to present the results of SWIPA, the mercury assessment, and other AMAP accomplishments during the past 20 years. This could also be an opportunity to bring young scientists into the organization and, if held after the Ministerial Meeting, to launch the next ten-year Strategic Plan. However, planning for such an event should be started as soon as possible to ensure its success.

Regarding future WG and HoDs meetings, it was suggested that the next HoDs meeting take place in association with the SAO meeting in November, possibly on the Faroe Islands. The next full WG meeting will be in late November or probably early December. A HoDs teleconference will be held during the spring.

15 Any other business

The list of actions agreed during the meeting is attached as Annex 7. There was no other business.

16 End of the meeting

The Chairman expressed a big, hearty thanks to the U.S. hosts for their great hospitality during the week and closed the meeting at 16.30 hrs on 12 February.

Annex 1

AMAP 23rd Working Group meeting

San Francisco, CA, USA, 11–12 February, 2010

Agenda

1. Opening of the WG meeting;

1.1 Practical information; Introduction by Tom Armstrong
1.2 Approval of the Agenda; Russel Shearer
1.3 Actions from last meeting; Russel Shearer and AMAP Secretariat

2. Report from COP-15 in Copenhagen; Morten S. Olsen

3. Status of the SWIPA project;

Report from the Cross Fertilization meeting held in Potsdam in January. The way forward. Morten S. Olsen

4. International Cooperation;

Stockholm Convention on POPs (POPs and Climate Change initiative), UN ECE HTAP assessments of POPs, mercury, black carbon (see also agenda item 6), etc.; UNEP mercury process (Paragraph 29 report and 2010 emissions project);
Climate and UV issues, IPCC, WMO/CliC (Global Cryosphere Watch), IASC, etc.;
AMAP Secretariat

4. International Cooperation - continues

5. Report from the AMAP Workshop held the last three days;

Andy Gilman to lead the discussion.

5.1 The AMAP Strategic Framework

Russel Shearer to present
Discussion of proposals, next steps.

5.2 The AMAP Assessment strategy and Monitoring plan and implementation;

Presentation by Andy Gilman of key conclusions and recommendations from the workshop; AMAP Secretariat to present future challenges and coordination with international programmes and assessments;
the status of CBMP and future work, presentation by Jim Reist and Jason Stow.
Discussion of proposals, next steps
The way forward, Time schedule, etc.

6. Short-Lived Climate Forcers (SLCFs):

Status of the work of the AMAP Experts Group and cooperation with the Arctic Council Task Force on Mitigation and activities under international organizations (e.g., UNEP, UN ECE/HTAP). Patricia Quinn (Co-chair of the AMAP experts group) and Co-Chair of the AC Task Force to present

7. Status of the AMAP assessment publications:

SWIPA, Oil and Gas, Radioactivity, POPs and Mercury. AMAP Secretariat

8. SAON: status and work in progress

The meetings planned for March in Miami, Oslo in June, etc.
John Calder to introduce.

9. Ocean Acidification: presentation of the scoping paper to AMAP by Dr. Lisa Robbins from USGS

10. The new web site for AMAP, AMAP PD, AC Outreach activities, etc. AMAP Secretariat

11. Special projects linked to AMAP's work:

EU- ArcRisk and related health projects in USA and Russia, SCANNET, The Hydrology project in Russia, The NCM combined effects project, IPY/IPD, etc. AMAP Secretariat

12. Cooperation with other AC WGs and the Update from WG Chairs meeting held 1 March in Copenhagen; Chair and AMAP Secretariat

PAME has requested AMAP's input to the Arctic Marine Shipping Assessment (AMSA) recommendations and the Arctic Ocean Report (AOR).

13. Observing countries and organizations activities.

Observing countries and organizations are invited to present ongoing relevant activitites. Representatives from China, Japan and The Netherlands

14. The next WG meeting and upcoming conferences and workshops of interest to AMAP.

- The Arctic 5 meeting March 29th in Ottawa
- Deputy Ministers meeting and Information day 27-28 May in Copenhagen
- AC Ministers of Environment meeting 9-11 June in Illulisat
- UNEP Mercury meeting 7-11 June in Stockholm,
- IPCC meeting 31 May – 11 June in Bonn,
- IPY conference 8 - 12 June in Oslo
- Others

AMAP Secretariat

15. Any other business

16. End of the meeting

Workshop on the AMAP Assessment Strategy and Monitoring Programme, San Francisco, CA, USA, 8-10 February, 2010.

&

AMAP 23rd Working Group Meeting, San Francisco, CA, USA, 11-12 February, 2010.

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Annex 3

Structure of the SWIPA science report (as 15 January 2010)

Convening Lead Authors (CLA) listed in **green**

<table>
<tr><td colspan="2">PREFACE [1-2 pages]</td></tr>
<tr><td colspan="2">EXECUTIVE SUMMARY [5 pages]</td></tr>
<tr><td colspan="2">INTRODUCTION [3 pages] [draft by M S Olsen + L-O Reiersen]</td></tr>
<tr><td colspan="2">PAST AND PRESENT CLIMATE [10 pages] [J Walsh]</td></tr>
<tr><td colspan="2">MODELLING [10 pages] [J Walsh]</td></tr>
<tr><td>SNOW [50 pages]
[T Callaghan]

PERMAFROST [50 pages]
[T Callaghan]

RIVER + LAKE ICE [50 pages]
[T Prowse]</td><td>ICE CAPS + GLACIERS [50 pages]
[M Sharp]

GREENLAND ICE SHEET [80 pages]
[D Dahl-Jensen]

SEA ICE [100 pages]
[W Meier]</td></tr>
<tr><td colspan="2">HUMAN DIMENSION [G Hovelsrud] [25 pages]</td></tr>
<tr><td colspan="2">SYNTHESIS / INTEGRATION [35 pages]

• Feedbacks [10 pages] [T Callaghan + T Prowse]
• Sea level change [5 pages] [D Dahl-Jensen + K Steffen + M Sharp]
• Contaminants [5 pages] [L-O Reiersen]
• Ecology [5 pages] [W Vincent]
• Socio-economics [5 pages] [G Hovelsrud]
• Major knowledge gaps + observation needs [5 pages] [B Goodison + J Key]</td></tr>
<tr><td colspan="2">CONCLUSIONS + RECOMMENDATIONS [5–10 pages]</td></tr>
<tr><td colspan="2">ALL REFERENCES [30 pages in small print]</td></tr>
<tr><td colspan="2">ACRONYMS + DEFINITIONS [5 pages]</td></tr>
<tr><td colspan="2">ANNEXES</td></tr>
</table>

Annex 4

Timetable for the revision of the AMAP Strategic Framework

Activity	Time frame	Who
Review of rapporteurs' reports of sessions at the Workshop on the AMAP Assessment and Monitoring Programme	1 March 2010	All participants send comments to session Chair/Rapporteur
Complete Workshop session reports by Expert Groups	8 March 2010	Chairs/Rapporteurs of Expert Groups
Present status to SAOs	28–29 April 2010	Chair/SAOs
Complete first draft of Strategic Framework Plan	1 May 2010	AMAP HoDs/WG
Consultation process on Strategic Plan	1 May to 1 July 2010	Experts / other AC WGs / International organizations
Revisions – Final draft	15 September 2010	AMAP Board/HoDs
Present status to HoDs/SAOs	1–5 November 2010	HoDs/SAOs
WG approval of final draft	November / December 2010	AMAP WG
Final consultations and revisions to Final Strategic Plan / send to SAOs	January / February 2011	SAOs/others
Approval of new AMAP Strategic Framework 2010+	4–8 April 2011	SAOs/Ministers

Annex 5

Summary of the outcome of the Workshop on the AMAP Assessment and Monitoring Programme, San Francisco, 8–10 February 2010

A preliminary view of the outcome of the Workshop on the AMAP Assessment and Monitoring Programme, as presented by Andy Gilman, facilitator for the Workshop, is given below.

Some of the key points from the sessions concerning assessments included the following:

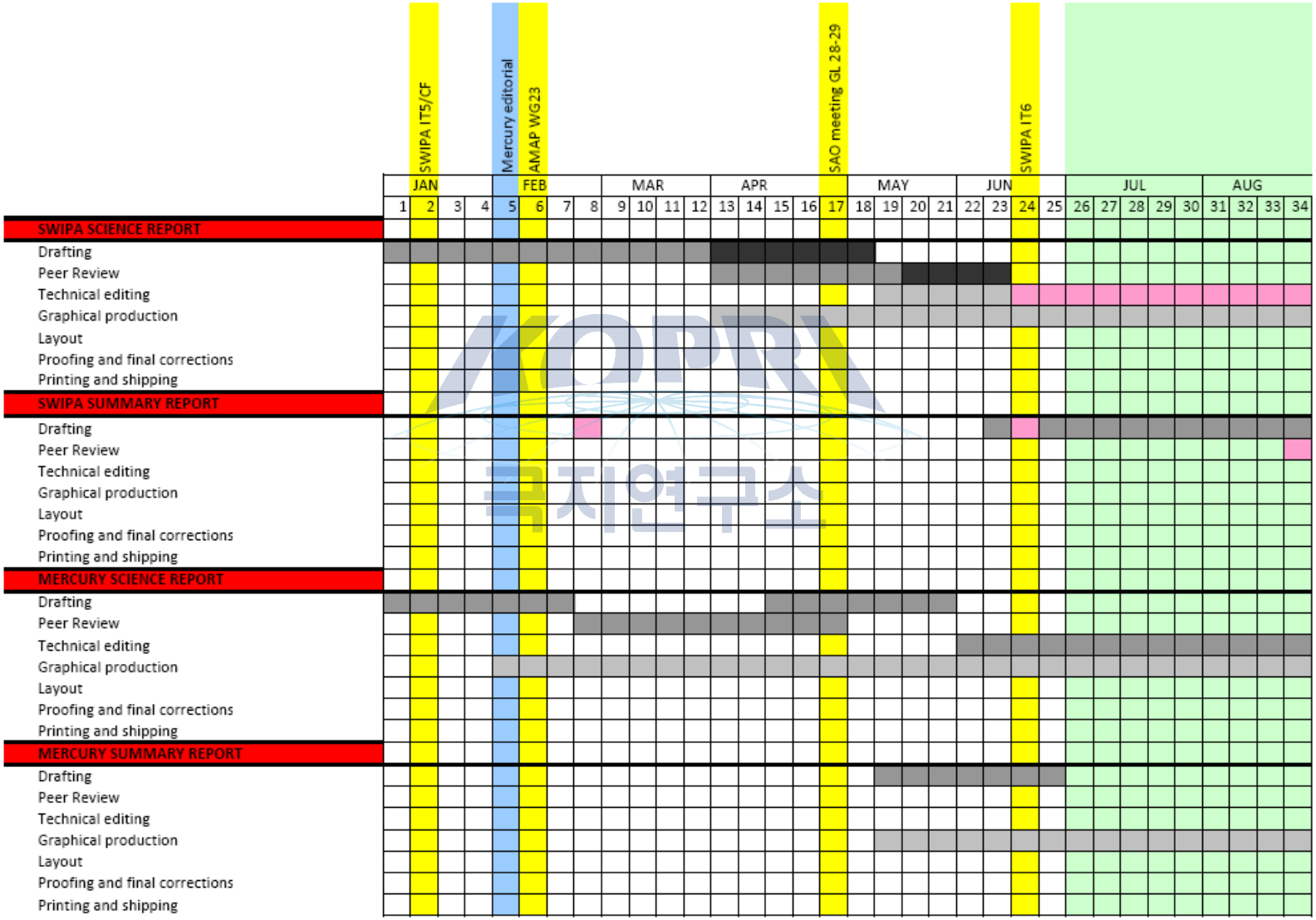
1) For integrated assessment reports:
   a) Cooperation with other agencies and international organizations is essential for an effective approach to assessment;
   b) An Assessment Steering Group is considered very valuable for integration; an integrated effects experts group could also be valuable;
   c) Comprehensive regional reports could possibly be used to focus on problems and/or save time;
   d) Peer-reviewed information and unpublished data are considered essential for the production of timely reports;
   e) To encourage the participation of young scientists, their work needs to result in citable publications;
   f) It is important to know the audience for the assessment.
2) Quality information is important for assessments:
   a) The quality of the scientific information and interpretations is critical for the sustained credibility of AMAP;
   b) The use of QA/QC on measurements and data is vital;
   c) There is a need for access to quality unpublished data;
   d) There is a need for access to meta-databases.
3) The use of the Thematic Data Centres should be reviewed to determine whether they are functioning as desired and whether the scientists can receive data from them.
4) For science and policy recommendations:
   a) Assessments should be ‘data-rich’;
   b) Scientists and AMAP WG members should work together to prepare science-based policy-relevant recommendations;
   c) There should be a retrospective review to determine whether recommendations have been implemented and a possible formal review of the impact of AMAP reports.
5) Regarding assessment group structures:
   a) Consider reviving the Assessment Steering Group that could, among others, integrate levels and trends across media and contaminants;
   b) Capacity is needed to show linkages from the environment to food chains to humans and other top predators;
   c) Consideration should be given to some integration of effects, diseases, and exposures for wildlife and humans.

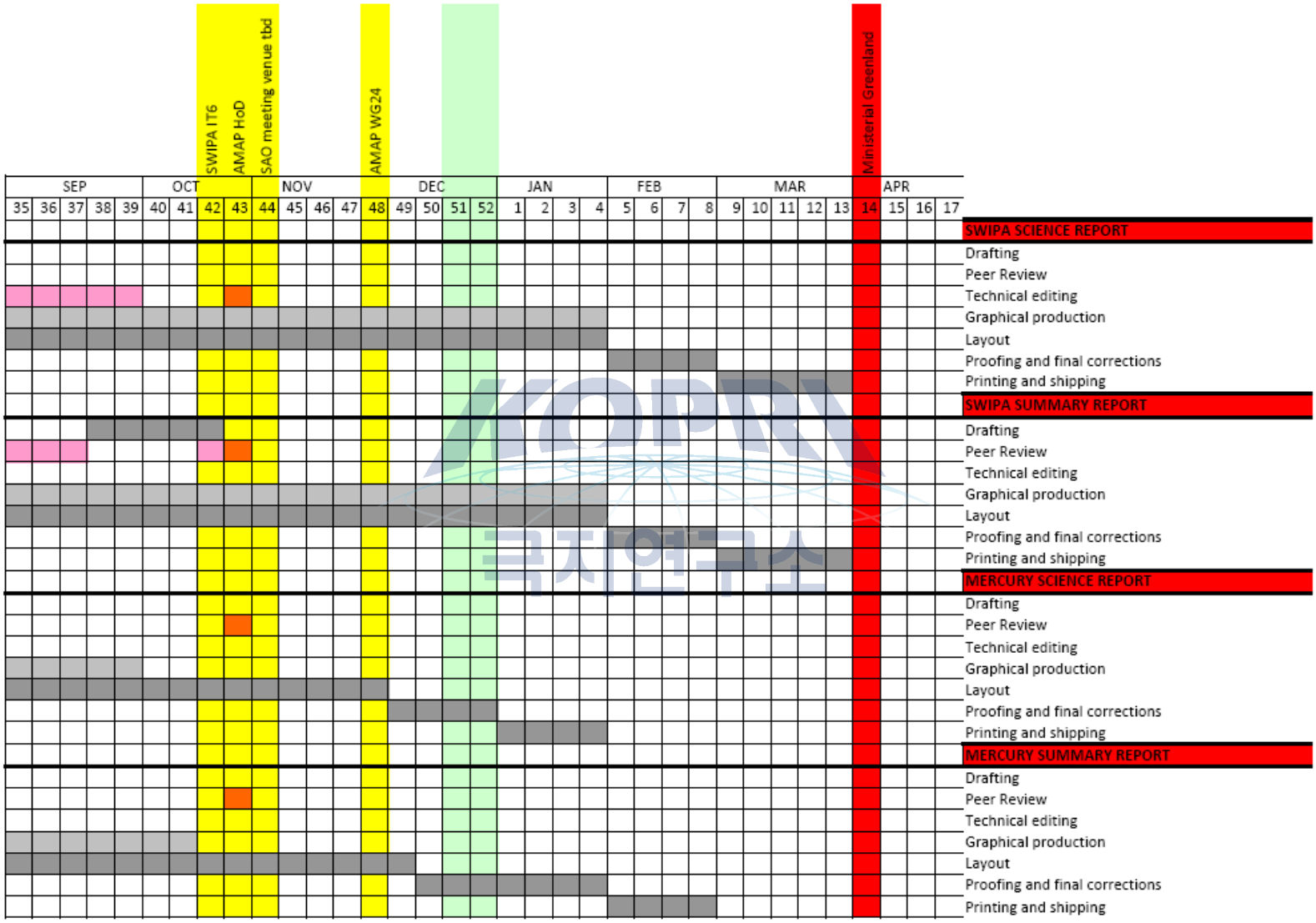
6) Consideration should be given to the creation of specific task groups of finite length to deal with specific issues.

From the cross-fertilization sessions on monitoring, some of the key points included:

1) International coordination and cooperation:
   a) Enhanced cooperation is needed among AMAP, CAFF, and PAME on the Circumpolar Biodiversity Monitoring Programme (CBMP);
   b) Links are needed to other international organizations, e.g., IPCC;
   c) Regarding conventions, there should be a 'living list' to tie directly to the responsibilities of relevant conventions (SC, LRTAP, GMP).
2) Community-based monitoring and research and the use of Traditional Knowledge should be encouraged.
3) There should be an expanded geographical coverage of the monitoring programme and a re-evaluation of the spatial network.
4) The monitoring programme should be restructured building on the results of additional cross-fertilization meetings that:
   a) Consider a longer monitoring plan (longer than 5 to 6 years);
   b) Consider scaling to provide better feedback for modellers;
   c) Consider the value of gathering and using meta-data;
   d) Consider adding animal movements and socio-economics in monitoring.
5) In terms of implementation of the monitoring programme:
   a) Scoping meetings of expert groups should be used to review progress and gaps;
   b) Findings should be mapped, especially multi-stressors;
   c) Current monitoring programmes should be protected.

Annex 6: Report Production Work Schedule

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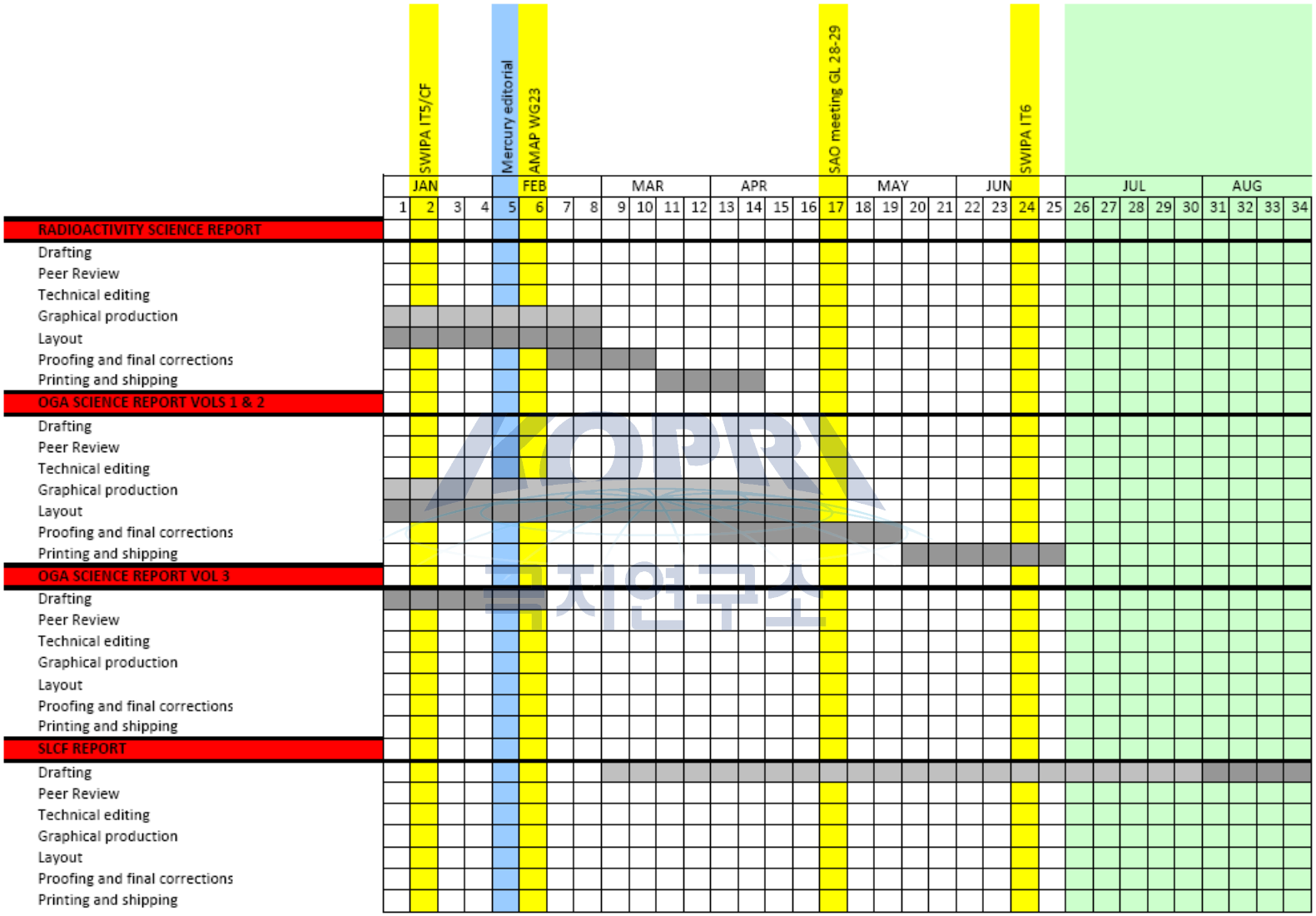
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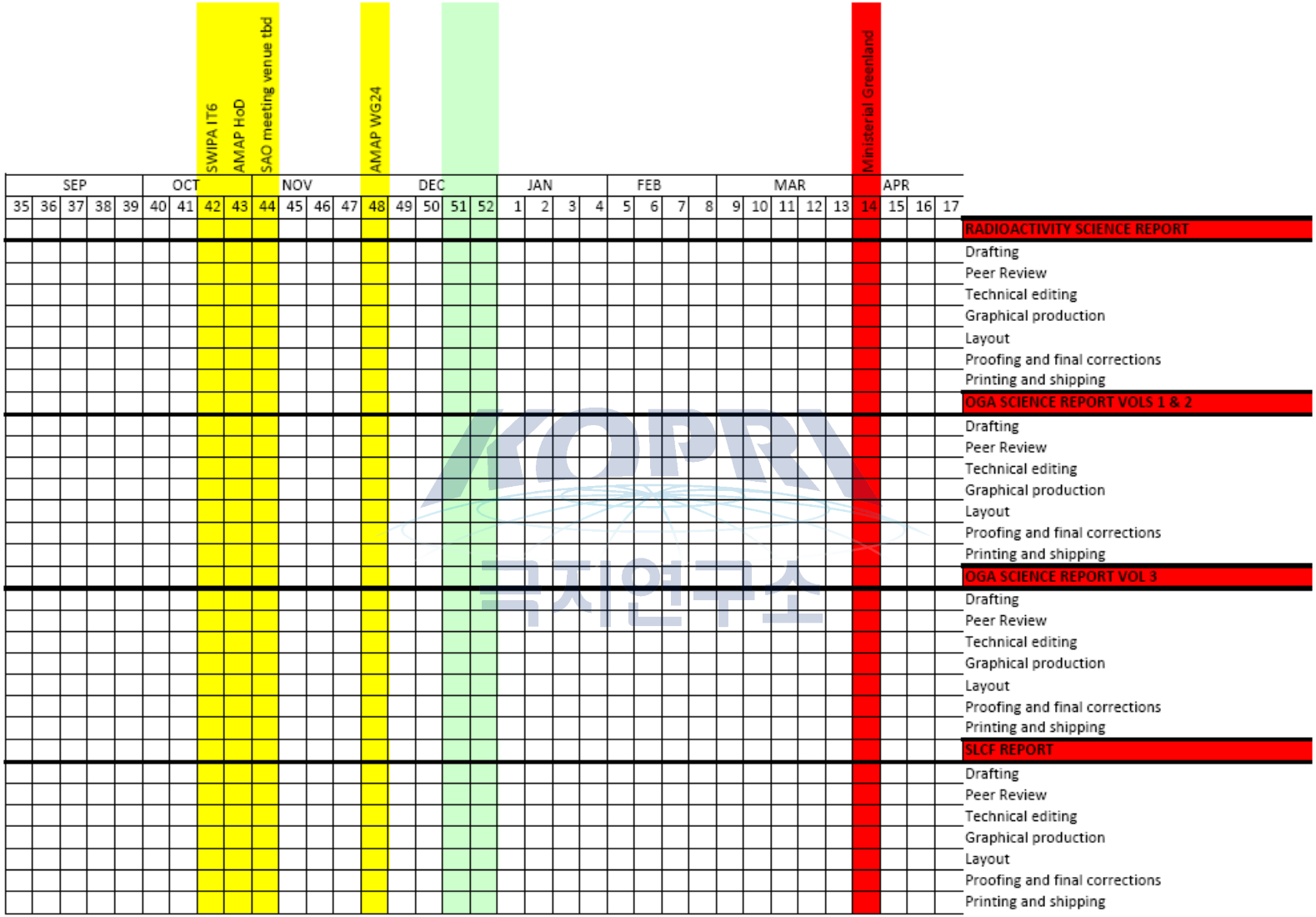
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Annex 7

23rd Working Group Meeting, February 2010

Action list

Agenda item	Subject	Action	For	By
1.3	Data reporting	Ensure that scientists are reporting data from Arctic research and monitoring activities to AMAP Thematic Data Centres	AMAP HoDs	Continuous
1.3	Project reporting	Ensure that scientists are reporting projects to the web-based Project Directory	AMAP HoDs	Continuous
2	UNFCC COP	Write to SAO Chair to add an agenda item to April SAO meeting asking whether AMAP should prepare a contribution to UNFCCC COP16	AMAP Chair	1 March 2010
3	SWIPA	At the April SAO meeting, raise issues for decisions on : 1) the preparation of a layman's report containing science-based policy-relevant recommendations; and 2) which SWIPA outreach products should be prepared by the time of the release of the report	AMAP Chair	1 March 2010
5	Strategic Framework	Prepare final review report	External Review Group	15 March 2010
5	Strategic Framework	Request addition of an agenda item to the April SAO meeting to cover the presentation of the report of the Strategic Framework External Review Group by its Chair	AMAP Chair	1 March 2010
5	Strategic Framework	Present report of the External Review Group at SAO meeting in April	Chair, External Review Group	28–29 April 2010
7	Hg assessment	Submit the names of national reviewers for the mercury assessment	AMAP HoDs	8 March 2010
7	Publications	Nominate science writers who could prepare a layman's summary report for the SWIPA or the mercury assessment	AMAP HoDs	1 March 2010
7	Publications	Nominate technical editors and layout designers who could assist in the preparation of AMAP publications during parts of 2010	AMAP HoDs	15 March 2010
6	Publications	Add the issue of the workload of the AMAP Secretariat regarding the preparation of publications to the agenda of the next meeting	AMAP Chair and Secretariat	

Agenda item	Subject	Action	For	By
8	SAON	Prepare a proposal for the SAON Agency Officials Meeting in Miami describing the AMAP monitoring programme and how a SAON could assist it	John Calder, representatives of Canada and USA, AMAP Secretariat	8 March 2010
9	Ocean acidification	Send proposal for Nordic Council of Ministers support for a project on ocean acidification to the delegations of Canada, Russia, the USA, and observer countries	AMAP Secretariat	15 February 2010
9	Ocean acidification	Respond to AMAP Secretariat concerning planned scope of involvement in AMAP ocean acidification work based on the NCM proposal	HoDs of Canada, Russia, USA, and observer countries	15 March 2010
10	Outreach	Send nominations of one or two communications experts to the Secretariat for the development of a communications plan for AMAP	HoDs and observer countries	15 March 2010
11	WMO	Serve as AMAP contact with the WMO Polar Panel regarding an International Polar Decade	Alexander Klepikov	
12	AMSA	Nominate experts on Arctic marine ecology to participate in a small group to consider the 'ecological significance' of marine areas in relation to shipping	AMAP HoDs	22 February 2010
12	AMSA	Coordinate the work of the small group on the 'ecological significance' of marine areas in relation to shipping	Norway	