

ArcRCC Network Meeting
May 17, 2018
Ottawa, Canada
Summary Notes and Decisions

1. Reflections on the PARCOF-1, Round table

General

- Highlighted as one of the best first RCOFs held, and the Canadian Team was congratulated for their efforts.
- Good balance between the presentations, coffee-breaks, and break-out groups.
- Some thought that we needed more time to present and explain the products. Other suggested that more time needs to be spent before the PARCOF to ensure the presentations are in plain language. Communicating science is not easy. Drafts need to be done in advance and vetted before the presentation. Words like rank of anomalies and probabilities are difficult to understand by end-users.

Meeting with Users

- Not enough users, but it may have been good to start small.
- Need to develop a strategy and team approach for how to reach out to users. Identify the theme of the PARCOF and start early and systematically reach out to the users.
- Develop a matrix of our current users and who we have contacts with.
- It was important for the Indigenous organizations to be invited from the outset of the ArcRCC
- Indigenous peoples consider themselves information providers and not just end-users, how do we make this link?
- Need to stop referring to the Arctic as a harsh environment, it is a beautiful place where Indigenous peoples have lived for millennia
- There was a discussion around having a balance of users – i.e. more terrestrial, aquiculture, tourism, keep it open. As there is a lot of information presented it was felt that we need to keep the PARCOF's focused. Most RCOFs have an overarching theme to focus the sessions and users. Africa is looking at the gender dimension of climate information. The first PARCOF theme was shipping. A Terrestrial theme could be considered for PARCOF-2. All PARCOFs can be unique, it can differ by country and can differ from what was done in Canada.
- Need to focus on the right levels of users. Hunters at the community scale will not likely use our products, as we heard their needs are more immediate at the weather scale. However, hamlet/municipal/provincial/state/territorial decision-makers could use our products for policy and planning purposes.
- Future PARCOFs could be split into different parts/groups for stakeholders, technical and policy users. The planning team struggled over whether to have separate break-out groups for Indigenous, Shipping and Met /Ice Service Users. For the PARCOF-1 it was decided to combine the users, so they could learn about each other. However, we didn't have enough discussion from the various Met and Ice Service intermediate users and how they work with users in their countries. Future forums could separate users and their different needs could be shared when reporting back from the break-out groups in plenary to hear more about countries experiences.
- Bring users in as part of the planning process to decide on the theme, agenda and invitees

2. ArcRCC Demonstration Phase

- Completed a milestone in the implementation and developing a proof of concept for the ArcRCC.
- We have the web site constructed and have developed the first LRF and monitoring products and consensus statement.
- Still need to work on training aspects.

ArcRCC Summer 2018 Consensus Statement

- Need to have a follow up discussion about the consistency of output products (geographical coverage and colours) and the different needs of the intermediate and end users.
- There was a discussion about a common geographical coverage of the Arctic to ensure consistency amongst the products and a circle (e.g. 50°N) is the easiest boundary for the graphical products.
- Need to develop a knowledge translation/communications team that works and translates between the Met/Ice services and users (i.e. like Rick Thoman) to review the out-put products for plain language, ease of interpretation and consistency amongst products (colours, legends, latitude) towards developing a consensus statement template.
- Bring in the theme users early as part of the knowledge translation will to help gain insight on how to better communicate the products.
- Need more time to develop the final consensus statement. Perhaps meet 1-2 days before the PARCOF to work on the final consensus statement as a team.
- Suggest having WMO communications more involved in helping to draft/edit and communicate the consensus statement and the press release.
- Everyone, communities and/or industry will ask for more than what we can deliver. We need to make sure that we can tell what is possible with current monitoring and modelling and what is not.
- The timing of the forecast (April or May). Modellers want a May product, closer to the summer, but users at sea would like it in April for getting ready for summer operations. Could we see if there is any difference between forecasts made in April or May?

Decisions:

- The ArcRCC will adhere to Implementation Plan text in defining the Arctic. The website and communications will use this definition
- Graphical products will cover the area from 50-90 degrees N.
- The Implementation plan and its annexes will not be updated. The ArcRCC will develop and operational plan to specify goals and track achievements and challenges

Actions:

- **John Parker** to provide the map showing the boundary of the area to be included in Quebec (from the National Inuit Strategy) to Finland. FMI graphics specialists will prepare a domain map for the ArcRCC Network.
- **Kumar Kolli** to share the CCI draft template for RCC annual reporting
- **Helge Tangen** will inform the WMO SG that the ArcRCC has officially launched its demonstration phase

3. Defining the ArcRCC roles and responsibilities

This was the first time that many of the ArcRCC Network members were able to meet face to face and the discussion focused on clarify roles and responsibilities amongst the Nodes and WMO.

Decisions:

- **Node responsibilities:** Each Node (and its member countries) will be expected to contribute to all functions and the consensus statement but will only be responsible to develop and deliver *one* specific mandatory function.
- **PARCOF responsibilities:** The RCC is not obliged to coordinate the RCOFs, but the ArcRCC Network will
- Need to clearly define with the **National Meteorological and Ice Services (NMISs)** the role and products produced by the ArcRCC and what falls into the NMISs domain, so we don't duplicate efforts
- **Ownership of the Consensus Statement:** The responsibility for signing off on the consensus statement at the PARCOF belongs to all three nodes, and not the host PARCOF country.
- **Long-Range Forecasting:** The North American node will commit to lead the drafting, and development, and delivering it through the PARCOF, a consensus statement twice a year (spring/autumn) with input required from the mandatory function leads.
- **Role of the Network Coordinator:** to coordinate monthly network meetings to facilitate planning between the WMO, nodes the ArcRCC implementation and PARCOF delivery; and lead the development of the ArcRCC operational plan.

Action:

- **Helge Tangen** to lead the draft of the ArcRCC operational plan and incorporate the above decisions into the document and establish regular network calls.

4. Global Cryospheric Watch (GCW), and the International Ice Charting Working Group (IICWG)

GCW is the authoritative resource for cryospheric climate information, it does not include forecasting and is not currently operational, but it is being targeted for ~2020. GCW aims to help with experience in observations, integrated product development and dissemination through the WMO networks. All 3 GCW WG and corresponding Teams including the Cryonet, Snow Watch and Portal are coming up with best practises for integrating observations and will provide that link to community-based monitoring such as the LEO network running out of Alaska and ELOKA.

IICWG is in Helsinki Finland in September 2018. Report on the ArcRCC and the PARCOF-1 is already on the agenda, feedback on the Summer 2018 consensus statement and associated products is expected.

Discussion on the inclusion of JCOMM expert teams took place. JCOMM could offer expertise in marine climate and forecast areas of interest. There were comments during the meeting indicating an interest to include parameters such as; waves, marine winds (frequency of alert thresholds), SST's, storm surge and others. Strengthening the relationship with the JCOMM expert team is recommended.

Decision:

- Kumar Kolli and ArcRCC and team to continue to build bridges with the WMO Marine Meteorology and Oceanography Program.

Action:

- **John Parker, Helge Tangen and Vasily Smolianitsky** will investigate opportunities through their roles on the JCOMM expert team to find synergies that would bring value back to the ArcRCC implementation.

5. Climate Watch/Annual State of the Arctic

There was a discussion if the ArcRCC should also provide a climate watch function. It is not a mandatory function. It would require defining thresholds for extremes (flooding, heat waves, etc.) We would need to start with developing a list of what hazards could be considered in the pan-Arctic context and limit it to extreme events. Initially it starts with a seasonal view, then you take it to national and shorter-term levels (e.g. Wx scale). It would be an occasional product, but would require the nodes to monitor, develop the product and then remove it from the website when it is no longer a threat. There are some good examples from RA-VI alert for recent cold wave.

There was also a discussion about if the Arctic RCC should include an annual state of the Arctic – synthesis on climate change, like David Grimes presentation, again not be considered a mandatory function. Network members noted that this would overlap with NSIDC State of the Arctic Report Card. The Report Card is coordinated, and peer reviewed through AMAP and each chapter is written by academic climate experts who also contribute to AMAP climate assessment such as the latest Snow, Water, Ice and Permafrost Assessment (SWIPA). However, users are confused between how ArcRCC is different, the NSIDC Report Card and the WMO Annual Statement which is now formally submitted to the UNFCCC. Perhaps we could work together to develop a joint statement to reduce duplication and bring visibility to PARCOF. AMAP recognizes the need for cooperation on meteorological aspects and is preparing a paper for the AC Ministerial next May.

Actions:

- **Helge Tangen:** to discuss and address the Climate Watch function within the ArcRCC Network and in the operational plan.
- **Johanna Ekman:** to reach within AMAP to discuss the potential for ArcRCC cooperation in annual reporting for the Arctic.

6. Outreach

Discussions about developing a paper for scientific journals and conferences, such as AMS were encouraged. No one committed to developing a paper, but Canada has developed and delivered PowerPoint presentations on ArcRCC and PARCOF at the annual ArcticNET and the Canadian Meteorological and Oceanographic conferences

7. October Virtual Forum and Future PARCOFs

Virtual Forum

There was a discussion around the deliverables for the October virtual forum and who we reach out to, the users from the PARCOF-1. It was noted that it will be quite difficult to host an on-line forum across the various time zones of the Arctic. Other RCCs do it through e-mail, or in an on-line forum. Products are circulated/posted for comment, one at a time to allow for review and comment. The WMO or ArcRCC website could be used for evaluation and to allow for a visual qualitative comparison.

Decisions:

- Norway will host the virtual forum in October
- Canada will be responsible for the evaluation of the long-range forecast from the Summer 2018 consensus statement
- The goals of the October virtual forum are to get feedback and evaluate the Summer 2018 consensus statement and review the Winter 2018/19 Consensus Statement
- Following the meeting it was noted that this virtual forum will be referred to as PARCOF-2

Actions:

- **Anahit Hovsepyan** will share the Caribbean node documents and schedule, they have a well-developed and efficient process.

ArcRCC Winter 2018/19 Consensus Statement

There was general agreement that October is a good time to provide a forecast for the Arctic, although most of the high Arctic will be frozen and it won't be helpful to forecast freeze-up for shipping. There was a discussion around the length of the forecast, 3 months, or is it possible to cover the whole winter (Nov to March/April) by forecasting the start (N/D/J) and using climatology for F/M/A.

Decisions:

- The Winter Consensus Statement would cover a 6-month period and be a combination of modelling and climatology.
- All nodes will be responsible to contribute their mandatory functions in the production of the Winter 2018/19 Consensus statement

Future PARCOFs

The rotation of the PARCOF with each node hosting every three years was discussed. The North America node is 2 countries, Eurasia is one country, and the Nordic Node had 5 countries and the group discussed if the Nordic node could host every other year.

Both Iceland and Finland volunteered to host the PARCOF-3, Russia would also like to host, but not until 2020. Finland noted that May 2019 will be the end of the Finnish Chairmanship of the Arctic council and they will be hosting an Arctic Council Ministerial from May 6-7 2019. Permanent Participants of the Arctic Council will be in attendance and it could be practical for them to stay a day longer and FMI could host the PARCOF May 8-9, 2019. There was a discussion about how many

participants, stakeholders to invite, and estimate of costs. The WMO currently has funding from Environment and Climate Change Canada for the next 4 years to cover the travel costs for end-users and share some of the host country costs. There was also a discussion about inviting users from the UK and China that would have an interest in our products and it was discussed as a possibility if their National Meteorological Service contribute to the products.

Decisions:

- The Nordic Node will host the PARCOF every other year following this proposed pattern: NA (May 2018), Nordic (Oct 2018, May 2019), Eurasia (Oct 2019, May 2020), Nordic (Oct 2020, May 2021), NA (Oct 2021, May 2022) and so on....
- To keep the size of the PARCOFs to approximately 50 participants, reduce the number of observers and increase the number of users
- PARCOF planning meetings will be held separate from the ArcRCC network meetings

Actions:

- **Johanna Ekman** will develop a rationale for Finland to host in 2019 (then Iceland in 2021) and sent it to the ArcRCC Node Leads.
- **Kumar Kolli** will send WMO travel costs to Joanna Ekman
- **John Parker** to send other PARCOF costs to Joanna Ekman

8. Funding

ArcRCC network Members were concerned with the additional work load, lack of resources, dedicated staff and sustainability of the ArcRCC. ArcRCC requirements need to become part of the people's daily jobs at the National Meteorological and Ice Services and not performed off the side of their desks. There was some discussion about external funding opportunities and Finland noted potential Ministerial funding for meetings/collaboration and product development (not research) which could provide opportunities to hold additional workshops with users on communications, training and output products.

Actions:

- **ArcRCC Node leads** will facilitate discussions within their organizations to ensure dedicated time for staff.

9. Summary and closing

Helge Tangen closed the meeting again thanking Canada for organizing and hosting the PARCOF and Network sessions. Kumar Kolli also recognised the accomplishment and thanked the host and all participants, and the Arctic Council Members for their commitment.

Forward Planning Meetings

September 2018:

- ArcRCC Network Meeting
 - Report on Action Items from the May 2018 Network Meeting
 - Follow up discussion about the consistency of output products (geographical coverage and colours) and the different needs of the intermediate and end users.
 - Development of an ArcRCC operational plan to specify goals, track progress and measure success.
 - Planning for the October virtual forum to review with users the Summer 2018 products and the Winter 2018/19 products
 - Discuss a funding strategy

October 2018

- ArcRCC Network Meeting
- ArcRCC Virtual Forum

November 2018

- ArcRCC Network Meeting
- Initial PARCOF-3 planning meeting