



**ACF**

Arctic Climate Forum

# **Fifth Session of the Arctic Climate Forum (ACF-5), 27-28 May 2020**

## **Summary report**

### *Organization of the meeting*

The fifth Session of the Arctic Climate Forum (ACF-5), previously known as the Pan-Arctic Regional Climate Outlook Forum (PARCOF), was held 27-28 May 2020 as a virtual meeting via the WMO BlueJeans videoconference system. The ACF-5 was originally planned to be convened 12-16 May in the Arctic and Antarctic Research Institute (AARI), St.Petersburg, Russia, in a similar format as ACF-3 (May 2019, Rovaniemi, Finland), but due to COVID-19, the organizing committee unfortunately had to change the Forum into a virtual event. The organizing committee of the event included coordinators of the WMO Arctic Regional Climate Center – Network (ArcRCC-N) nodes and invited ArcRCC-N members. In advance of the meeting it was agreed that AARI will continue to lead organization of the event including inviting participants and convening the sessions.

The key objectives of the ACF-5 were defined as to:

- Develop the consensus statement on the current status (winter 2019/2020 – spring 2020) and future outlook (summer 2020) of the Arctic climate on a seasonal scale;
- Raise awareness of end-users about new climate products and services for the Arctic as potential support to decision-making and the current limitations;
- Interact with end-users and learn about the climate information they currently use for planning and their needs for climate information.

Following the agenda (annex 1) it was defined that the ACF-5 would be arranged as a 2-day meeting:

- May 27 (Wednesday, Day 1, 1600-1740 UTC) was a non-technical session to present: key climate information from Winter/Spring 2019/20 and the Arctic Summer 2020 outlook for 8 regions in the Arctic and the Consensus Statement which provides an overall summary for the circumpolar Arctic.
- May 28 (Thursday, Day 2, 1600-1800 UTC) was a technical session to provide greater detail on the Winter/Spring 2019/20 observations and the modelled and consensus aspects of the temperature, precipitation and sea-ice information used to develop the ArcRCC products.

Invitations including the agenda were sent to those who participated in previous ACFs, including representatives from WMO, meteorological services, shipping industry, organizations representing indigenous people, and other key decision makers. They were encouraged to register by responding to the host at AARI. A total of about 89 participants registered for the meeting (annex 2), representing 12 countries and the WMO Secretariat. Group photo of attendees is given as annex 3.

### *May 27, non-technical session*

Vasily Smolyanitsky, AARI host of the meeting and coordinator of ArcRCC-N North Eurasian node, welcomed the participants and gave an introduction to the whole meeting and the non-

technical session. The structure of the session was changed due to the virtual form of the meeting and restricted session time so that attendees were asked to provide questions and make comments mostly using the chat function. All material for the sessions was made available for participants prior to the time of the meeting at the working folder at <http://wdc.aari.ru/acf5> and the forum's entry at the ArcRCC-N portal (<https://arctic-rcc.org/acf-spring-2020>).

A report on the current status of the ArcRCC-N was provided by the center's coordinator, Helge Tangen. This included an overview of the ACF and the governance and structure of the ArcRCC and identified what is essential and different in the ACF's products in comparison to other activities, e.g. AMAP SWIPA or the Arctic Report Card.

The next 20 minutes the non-technical regional climate briefing included the temperature, precipitation and sea-ice conditions review for Winter 2019/2020 and Spring 2020 and the outlook for Summer 2020 for the 8 regions (North America - Alaska, Canada, Europe - Atlantic, Barents, and Eurasia - Western, Eastern Siberia, Chukchi, Central Arctic) given correspondingly by Rick Thoman (Alaska, International Arctic Research Center (IARC)), Gabrielle Gascon (Canada, Environment and Climate Change Canada (ECCC)), Halldór Björnsson (Europe, Icelandic Meteorological Office (IMO)) and Valentina Khan (Eurasia and Central Arctic, Hydrometcenter Moscow (HMC)).

The presentation was prepared by Katherine Wilson (ECCC) with input from the ArcRCC-Network members named above. An introduction to the non-technical regional climate briefing was given by Rick Thoman. For the first time for the ACFs, each section of the outlook included an extended description of anticipated risks and impacts for wildfires, river flooding, coastal erosion and flooding, wildlife, hunting and shipping. The 'risks and impacts' section of the non-technical summary was highly appreciated by the attendees from end-user communities as seen from provided comments during the first on-line discussion with end-users titled "What impacts did your region face with changing climate conditions in winter 2019/20 and spring 2020?" and moderated by Rick Thoman, and the second on-line discussion with end-users titled "Based on the summer 2020 outlook, what other potential risks were not highlighted that could affect your region?" moderated by Bill Appleby, ECCC.

The final talk of the day was provided by Eivind Stoylen, NMI, and included a presentation of the ArcRCC Consensus Statement for the Arctic. Dr Stoylen provided an overview of the Consensus Statement, how it is created, and provided key numbers for the past (November 2019 – April 2020) and forecasted (June – September 2020) circumpolar Arctic surface air temperature, ground precipitation and sea-ice. The presentation of the Consensus Statement was followed by 'Questions from the end-users and Wrap-up', moderated by Vasily Smolyanitsky.

Results of the three on-line discussions were summarized in a 4-page document and processed by the ArcRCCN experts.

Most important items which were highlighted by end-users in their comments included

- what are the normal, where they may be found?
- whether and how additional observations from the end-user communities may support development of the ACF's products

Actual number of attendees of the first day varied between 69 – 85 people.

*May 28<sup>th</sup>, technical session*

Vasily Smolyanitsky welcomed the participants to the second day, briefed results from the non-technical session, and gave an introduction to the technical part of the forum. The review was done

separately for 2 periods: November – January (NDJ) 2019/2020 and February – April (FMA) 2020 for atmosphere variables (atmospheric circulation on a basis of analysis of mean surface pressure and geopotential heights 50 and 500 hPa, surface air temperature (SAT) and surface precipitation), sea ice variables (atmosphere and polar ocean precursors, ice extent and ice conditions, sea ice thickness and sea ice volume), polar ocean (sea surface temperature, waves and swell height or storminess, pH reflecting acidification/alkalization processes) and solid precipitation (land snow). An overview of the current conditions (SAT, winds, precipitation, sea ice, snow) was given at the end. The report was based on both surface observations and expert analysis (WMO Global Telecommunication System, Global Cryosphere Watch, sea ice charting, SnowWatch) and the modern Copernicus Climate Change Services ERA5 and Mercator reanalysis.

The review stated that the Polar vortex was very intense during the winter/spring 2019/2020, caused several ‘heat waves’ in Western and Eastern Siberia with the air temperature across Arctic mostly above normal except for Alaska, Greenland, Svalbard, some parts of Canadian archipelago and Chukchi region. The most notable positive anomalies were present across Western and Eastern Siberia, Alaska, and some parts of N Atlantic with very close to record high temperatures observed in Eastern Siberia. Maximum winter ice extent, the 11<sup>th</sup> lowest in row, 15,16 mln km<sup>2</sup> (14,89 in 2019), was reached 4 March 2020 (11 March in 2019). However, during freezing period in October – November 2019 the Northern Hemisphere ice extent appeared lowest in row due to extreme minimums in Bering, Chukchi Seas.

The boundary seas of the Arctic Ocean were, in general, warmer and stormy during winter-spring 2019-2020. Numerical models showed both positive (Arctic Basin, Chukchi Sea) and negative pH (Barents, Kara Sea, Canadian Arctic) anomalies for the last 20 years, which points to the occurrence of both alkalization and acidification processes in the Arctic with subsequent current no obvious effect to wildlife in this respect.

A report on past conditions was complemented by a short presentation on “Using INTAROS project results for North Eurasia node: Access to seasonal summary data” done by Evgenij Vyazilov, All-Russian Research Institute of Hydrometeorological Information - World Data Center (RIHMI-WDC). The presentation included information on how the Russian observing systems and databases may be assessed and are integrated with the INTAROS system and what applications are supported. A link to this portal is available at the main ArcRCC web-site.

An additional on-line discussion with end-users on the seasonal summary was moderated by Shanna Combley, NOAA National Weather Service. The content proposed for discussion included “Is the content of the summary appropriate (details, variables)?”, “What parameters are missing?” and “What regions are missing”.

Temperature and Precipitation outlook for June – August (JJA) 2020 was provided by Marko Markovic, ECCO, and included an introduction to the multi-ensemble method, validation of the outlook for winter 19/20 and spring 2020 and review of model confidence for summer 2020 outlook. The presenter reminded that the Multi Model Ensemble (MME) approach is used to calculate seasonal forecast, but a probabilistic approach is used to communicate seasonal forecast results and that a combination of observations and model results, referred to as re-analysis, is used for evaluation over the Arctic. The overall result for the past February – April 2020 received a subjective score of 50-60% for the temperature and a very good subjective score of ~70% for precipitation. For the JJA 2020 season, above-normal temperatures are expected over all Arctic regions with above-normal precipitation expected over the Alaskan Arctic, Chukchi, East Siberian and west Siberian regions Other Arctic regions mostly have equal chances for precipitation except the Canadian Archipelago where above-normal precipitation in JJA 2020 is expected. It was also

noted that, historically, we do not have a high confidence in the precipitation forecast over the Arctic in JJA.

An on-line discussion with end-users on the seasonal SAT and Precipitation outlooks was moderated by Valentina Khan. The topics for discussion were “What additional parameters in the outlook can be included to meet the user needs”, “Beyond precipitation, surface air temperature and sea-ice characteristics, what meteorological parameters are of primary interest?”, “What kind of extreme climate events cause major risk and hazards in your activity sector?”.

A review of the 2019/20 winter Sea-Ice Outlook and the 2020 Summer Sea-Ice Outlook was presented by Scott Weise, Canadian Ice Service. It was noted that the outlook is based on the comparison of experimental forecasts from the outputs from four WMO Global Producing Centers: France - ECMWF, United States- NOAA/CPC, Canada - ECCC/CCCMA and the UKMetOffice. The actual ArcRCC Sea-Ice Outlook for summer 2020 included an Experimental ECCC Ice-Free Date Probability Forecast for Summer 2020, Sea-Ice Break-up Outlook for 2020, Sea-Ice Extent Outlook at the period of Summer 2020 minimum (September) and an overview of the ice condition in 2020 Summer for eight key shipping areas produced by the national ice services (based on forecaster experience and statistical methods). Key shipping areas included the Bering Sea, coastal Beaufort Sea, Northwest passage, Baffin Bay, Svalbard area, Northern Sea Route, Hudson Bay and Hudson Strait.

An on-line discussion with end-users on the sea-ice outlook was moderated by Scott Wiese and Vasily Smolyanitsky and included questions of whether the content of the outlook was appropriate, whether additional parameters are necessary, and whether enough details were provided for key shipping areas for the examined period.

Final thoughts and wrap-up of the Forum included impressions of the meeting from the host – Vasily Smolyanitsky, ArcRCC coordinator – Helge Tangen, and the WMO Secretariat – Anahit Hovsepian and Wilfran Okia.

Actual number of attendees of the second day of the Forum varied between 61 – 64 people.

Overall impression of the Forum by the end-users, expressed in comments and messages received following the Forum, was strongly positive and productive (see also report on participants evaluation and feedback available at the <https://arctic-rcc.org/acf-spring-2020>).

Action items of the ACF5 are summarized by the ArcRCC members as annex 3.

The ACF was recorded, and the video can be viewed at <https://arctic-rcc.org/acf-spring-2020-video-recording> (see annex 4 for attendees photos). The presentations from ACF-5 can be found at <https://arctic-rcc.org/acf-spring-2020-presentations>.

The ACF5 press-release developed jointly by the ArcRCC members and the WMO Secretariat, is available at <https://public.wmo.int/en/media/news/arctic-climate-forum-expects-above-normal-temperatures>.

Users at national levels were advised to consult their respective National Meteorological and Hydrological Services who can add more detail to the regional outlooks in the national context.

The next session of ACF will be held again as a virtual two-day meeting in late October 2020 to consider the outlook for boreal autumn - winter of 2020/2021.

<b>ArcRCC Non-Technical Regional Briefing Agenda</b> Wednesday May 27, 2020, 16:00 – 17:40 UTC To determine your local time go to: <a href="https://www.timeanddate.com/worldclock/timezone/utc">https://www.timeanddate.com/worldclock/timezone/utc</a> <b>Intended Audience:</b> Users interested in general climate conditions and forecasts for their region		
TIME	ITEM	DETAILS
16:00 (10')	<b>Welcome</b> (session outline: <a href="#">ppt</a> , <a href="#">pdf</a> ) <ul style="list-style-type: none"> <li>– Introduce the Arctic Climate Virtual Forum</li> <li>– Agenda for next two days</li> <li>– Format, how to ask questions and make comments using the chat function</li> <li>– Where to find the ArcRCC products and presentations</li> </ul>	Vasily Smolianitsky, Arctic and Antarctic Research Institute (AARI), Russia
16:10 (10')	<b>Background on the ArcRCC-Network</b> ( <a href="#">ppt</a> , <a href="#">pdf</a> )	Helge Tangen, ArcRCC Network Coordinator Norwegian Meteorological Institute (NMI)
16:20 (20')	<b>ArcRCC Non-technical regional climate briefing</b> ( <a href="#">ppt</a> , <a href="#">pdf</a> ): Temperature, precipitation and sea-ice conditions North America (Alaska, Canada), Europe and Eurasia and Central Arctic - Review of winter 2019/2020, spring 2020 and Outlook for Summer 2020	<ul style="list-style-type: none"> <li>– Rick Thoman (Alaska), International Arctic Research Center (IARC), Alaska</li> <li>– Gabrielle Gascon (Canada), Environment and Climate Change Canada (ECCC)</li> <li>– Halldór Björnsson (Europe), Icelandic Meteorological Office (IMO)</li> <li>– Valentina Khan (Eurasia and Central Arctic), Hydrometcenter Moscow (HMC)</li> </ul>
16:40 (15')	<b>On-line discussion (with end-users):</b> What impacts did your region face with changing climate conditions in winter 2019/20 and spring 2020?	Rick Thoman (moderator), IARC
16:55 (15')	<b>On-line discussion (with end-users):</b> Based on the summer 2020 outlook, what other potential risks were not highlighted that could affect your region?	Bill Appleby (moderator), ECCC
17:10 (10')	<b>ArcRCC Consensus Statement for the Arctic:</b> What it is and how it's created ( <a href="#">ppt</a> , <a href="#">pdf</a> , / <a href="#">doc</a> , <a href="#">pdf</a> )	Eivind Støylen, NMI
17:20 (20')	<b>Questions &amp; Wrap-up</b>	Vasily Smolyanitsky, AARI
17:40	<b>End of the day</b>	
<b>ArcRCC Technical Regional Briefing Agenda</b> Thursday May 28, 2020, 16:00 – 18:10 UTC To determine your local time go to: <a href="https://www.timeanddate.com/worldclock/timezone/utc">https://www.timeanddate.com/worldclock/timezone/utc</a> <b>Intended Audience:</b> Users interested in specifics of the climate observations and models		
TIME	ITEM	DETAILS
16:00 (10')	<b>Welcome</b> <ul style="list-style-type: none"> <li>– Introduce the Arctic Climate Virtual Forum</li> <li>– Brief review of yesterday's agenda</li> <li>– Format, how to ask questions and make comments during the forum using the chat function.</li> <li>– Where to find the ArcRCC products and presentations</li> </ul>	Vasily Smolianitsky, AARI
16:10 (20')	<b>Arctic winter 19/20 and spring 2020 Seasonal Summary:</b> <ul style="list-style-type: none"> <li>– Temperature, precipitation, sea-ice, polar ocean and land hydrology</li> <li>– Review of observational and reanalysis data</li> </ul>	Vasily Smolyanitsky, AARI Gabrielle Gascon, ECCC

<b>16:30 (5')</b>	<b>Access to seasonal summary data</b> – North Eurasia node web-portal ( <a href="#">ppt</a> , <a href="#">pdf</a> )	Evgeny Vyazilov, RIHMI-WDC, Obninsk
<b>16:35 (15')</b>	<b>On-line discussion (with end-users)</b>	Shanna Combley (moderator) U.S. National Weather Service (NWS)
<b>16:50 (20')</b>	<b>Temperature and Precipitation</b> - Introducing the multi-ensemble method - Validation of the outlook for winter 19/20 and spring 2020 - Review of model confidence for summer 2020 outlook	Marko Markovic, ECCC
<b>17:10 (15')</b>	<b>On-line discussion (with end-users)</b>	Valentina Khan (moderator), HMC Moscow
<b>17:25 (20')</b>	<b>Sea-Ice Outlook for Summer 2020</b> - Introducing the models - Validation of outlook for winter 19/20 and spring 2020 - Review of model confidence for summer 2020 outlook	Scott Weese, ECCC
<b>17:45 (15')</b>	<b>On-line discussion (with end-users)</b>	Vasily Smolyanitsky, AARI Scott Weese, ECCC
<b>18:00 (5')</b>	<b>Final thoughts &amp; Wrap-up</b>	Vasily Smolianitsky, AARI Helge Tangen, ArcRCC Network coordinator Anahit Hovsepyan, WMO
<b>18:10</b>	<b>End of ACF-5</b>	

**5<sup>th</sup> Arctic Climate Forum (virtual)**  
**May 27-28, 2020, Final list of participants**

N	Name	Organization
<b>Network members</b>		
<b>North America node</b>		
<i>Canada</i>		
1.	<b>Bill Appleby</b>	ECCC, MSC-PSO-Atlantic & Ice, <b>ArcRCC North America Node Lead</b>
2.	Matthew Baglole	ECCC, Ambassador for climate change office
3.	Lo Cheng	ECCC, Canada Centre for Climate Services
4.	Normand Gagnon	ECCC, MSC-CCMEP
5.	<b>Gabrielle Gascon</b>	ECCC, S&T-MRB, <b>ArcRCC Seasonal Summaries and Consensus Statement</b>
6.	Gilles Langis	ECCC, MSC-PSD- Atlantic and Ice
7.	<b>Marko Markovic</b>	ECCC, MSC-CCMEP
8.	Bill Merryfield	ECCC, S&T - Climate Research Branch
9.	David Neil	ECCC, Weather Preparedness Meteorologist NL
10.	Sharon Ribero	ECCC, MSC - Policy, Planning and Partnerships
11.	Brian Seiben	ECCC, Canada Centre for Climate Services
12.	Michal Sigmund	ECCC, CCCMA University of Victoria
13.	Anne Walker	ECCC, S&T, Climate Research Branch/Global Cryospheric Watch
14.	<b>Scott Weese</b>	ECCC, MSC-PSD- Atlantic and Ice, <b>ArcRCC Sea-ice forecasting lead</b>
15.	<b>Katherine Wilson</b>	ECCC, MSC-PSD- Atlantic and Ice, <b>ArcRCC coordination and non-technical summary</b>
16.	Ram Yerubandi	ECCC, Water Science and Technology Directorate
<i>USA</i>		
17.	Shanna Combley	National Oceanic and Atmospheric Administration
18.	Arun Kumar	National Oceanic and Atmospheric Administration
19.	Renee Tatusko	National Oceanic and Atmospheric Administration
20.	Rick Thoman	University of Alaska Fairbanks, Alaska Center for Climate Assessment and Policy
21.	Taneil Uttal	National Oceanic and Atmospheric Administration
<b>Nordic node</b>		
<i>Denmark</i>		
22.	Martin Stendel	Danish Meteorological Institute
<i>Finland</i>		
23.	Johanna Ekman	Finnish Meteorological Institute
<i>Iceland</i>		
24.	Halldór Björnsson	Icelandic Meteorological Organization
<i>Norway</i>		
25.	Jelmer Jeuring	Norwegian Meteorological Institute
26.	Lene Østvand	Norwegian Meteorological Institute
27.	<b>Eivind Støylen</b>	Norwegian Meteorological Institute, <b>Node Lead</b>
28.	<b>Helge Tangen</b>	Norwegian Meteorological Institute, <b>ArcRCC Network Coordinator</b>
<i>Sweden</i>		
29.	Amir Mirbashiri	Swedish Meteorological and Hydrological Institute
<b>Northern Eurasia node</b>		
30.	Genrich Alekseev	Arctic and Antarctic Research Institute
31.	Anna Danshina	Arctic and Antarctic Research Institute
32.	<b>Vasily Smolianitsky</b>	Arctic and Antarctic Research Institute, <b>Node Lead</b>
33.	Anna Timofeeva	Arctic and Antarctic Research Institute
34.	<b>Valentina Khan</b>	Hydro meteorological Research Centre of the Russian Federation, <b>NEACC Lead</b>
35.	Valentin Meleshko	Main Geophysical Observatory
36.	Evgenij Vyazilov	RIHMI-WDC, data management
<b>WMO</b>		
37.	Anahit Hovsepyan	World Climate Applications & Services Division
38.	Tero Jokilehto	Marine Services Division
39.	Rodica Nitu	Global Cryosphere Watch - Earth System Monitoring, Infrastructure Department
40.	Wilfran Moufouma Okia	World Climate Applications & Services Division, Chief
41.	Michael Sparrow	WCRP Joint Planning Staff
42.	Paolo Ruti	World Weather Research Division
<b>Invited experts</b>		
<b>Australia</b>		
43.	Jeff Wilson	YOPP / International Coordination Office for Polar Prediction (ICO)



<b>Canada</b>	
44. Christine Barnard	Université Laval
45. Christina Béland	Qaujigiartiit Health Research Centre, Climate Change Community Research
46. Richard Boudreault	École Polytechnique Montréal /Board for Polar Knowledge Canada
47. Silvina Carou	ECCC, Climate Research Division
48. Ryan Connon	Government of the Northwest Territories, Water Management and Monitoring Division
49. Laura Eerkes-Medrano	University of Victoria, Northern Weather Research
50. Russell Emery	Meteorological Service of Canada, Client Service Operations Atlantic
51. John Falkingham	International Ice Chart Working Group, Secretariat
52. Maya Gold	Department of Fisheries and Oceans Canada, Global and Northern Affairs/PAME
53. Sara Holzman	Government of Nunavut, Climate Change Program
54. Andreane Lussier	Government of Nunavut, Climate Change Secretariat
55. Joanna MacDonald	Inuit Circumpolar Council, Climate Change and Health Officer
56. Maginda Magendrathajan	ECCC, Canadian Centre for Climate Services
57. Shannon Nudds	Fisheries and Oceans Canada, Bedford Institute of Oceanography
58. Annika Ogilve	Fednav Shipping, Arctic Operations
59. Brian Park	Inuvialuit Regional Corporation, Climate Change Program Coordinator
60. William Perrie	Bedford Institute of Oceanography
61. Alison Perrin	Yukon Research Centre, Northern Climate Exchange
62. Logan Rudkevitch	Government of Northwest Territories, Climate Change Information Management Specialist
63. Bruno Tremblay	McGill University, Associate Professor, Department of Atmospheric and Oceanic Sciences
<b>Germany</b>	
64. Thomas Krumpfen	AWI
65. Stefan Rösner	DWD
<b>Iceland</b>	
66. Ingibjörg Jónsdóttir	University of Iceland, School of Engineering and Natural Sciences
67. Andri Gunnarsson	Landsvirkjun Power
68. Haraldur Olafsson	Professor University of Iceland
69. Ólafur Rögnvaldsson	CEO <a href="http://www.sarweather.com">www.sarweather.com</a>
70. Einar Sveinbjarnarsson	Blika Consulting Meteorologists
<b>India</b>	
71. M. Ravichandran	National Centre for Polar and Ocean Research / AntRCC-N
72. Rupa Kumar Kolli	International CLIVAR Monsoon Project Office, Indian Institute of Tropical Meteorology
<b>Italy</b>	
73. Vito Vitale	National Research Council / AntRCC – N
74. Enrico Brugnoli	National Research Council
<b>Norway</b>	
75. Gunn-Britt Retter	Saami Council, Head of Arctic and Environmental
<b>Russia</b>	
76. Andrey Popov	YamalSPG
77. Aleksandr Kalashnikov	Northern Sea Route Administration
78. Nikolai Kondratov	Northern (Arctic) Federal University, Arkhangelsk, Associate Professor
79. Ivan Vozhikov	Aleut International Association
80. Andey Sharonov	Admiral Makarov State University of Maritime and Inland Shipping
81. Capt. Igor Zlodeev	Admiral Makarov State University of Maritime and Inland Shipping, Makarov training centre
<b>Sweden</b>	
82. Isabella Grönfeldt	SMHI, Ice Service
83. Pasha Karami	SMHI, Research department
<b>USA</b>	
84. Christine Bassett	NOAA Affiliate
85. Uma Bhatt	Univ of Alaska Fairbanks, Cooperative Institute for Alaska Research
86. Thomas Cuff	NOAA National Weather, Service Office of Observations, director/ IICWG co-chair
87. Robert Grumbine	NOAA/PPP SG/ NWS/Environmental Modeling Center
88. Jeff Key	NOAA, Supervisory Physical Scientist/ GCW
89. Heather Quilenderino	National/Naval Ice Center, director



**Abbreviations:**

AARI	Arctic and Antarctic Research Institute, Roshydromet
AntRCC-N	Antarctic Regional Center - Network
DMI	Danish Meteorological Institute
ECCC	Environment and Climate Change Canada
FMI	Finnish Meteorological Institute
IARC	International Arctic Research Center, Alaska
IMO	Icelandic Meteorological Office
Hydrometcenter Moscow	Hydro meteorological Research Centre of the Russian Federation, Roshydromet
MGO	Main Geophysical Observatory, Roshydromet
MSC	Meteorological Service of Canada
NMI	Norwegian Meteorological Institute
NOAA	National Oceanic and Atmospheric Administration
NSIDC	National Snow and Ice Data Center
NWS	U.S. National Weather Service
RIHMI-WDC	All-Russian Research Institute <i>of</i> Hydrometeorological Information- World Data Centre
Roshydromet	Russian Federal Service for Hydrometeorology and Environmental Monitoring
SMHI	Swedish Meteorological and Hydrological Institute

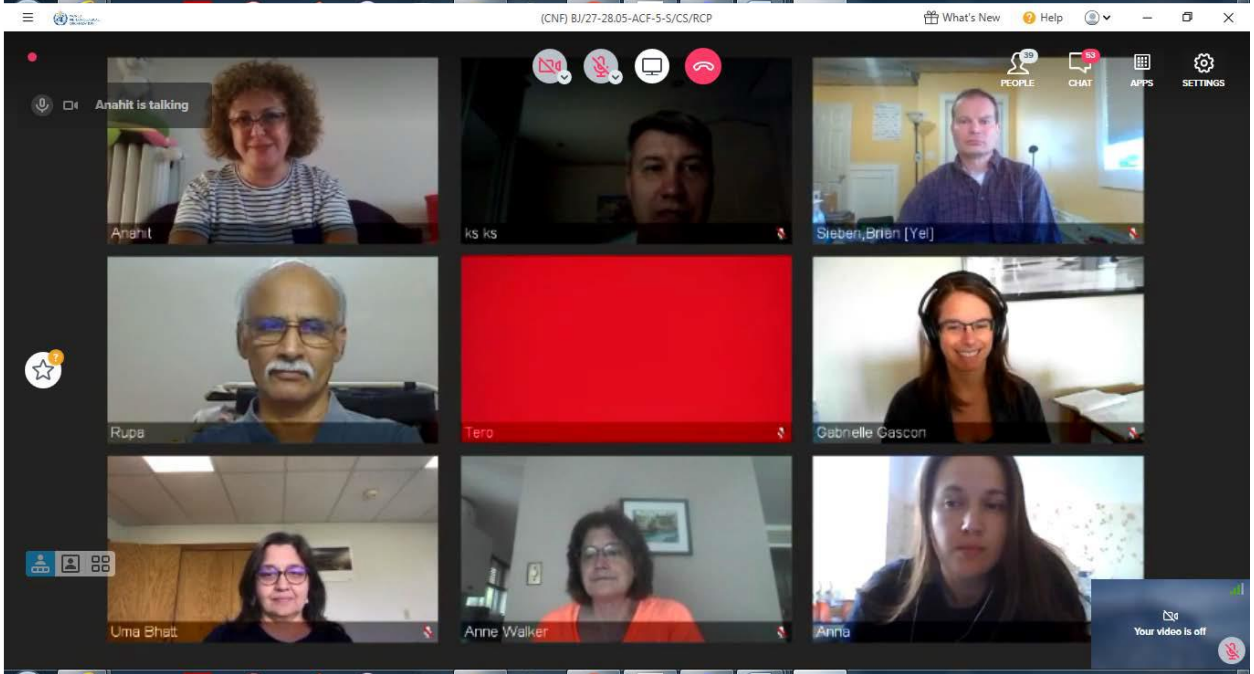
## Action items after ACF-5 (27-28 May, 2020)

Action item	Action	Responsible	Deadline
1	Consider more time for questions and discussions	Shanna Combley (SC)/ planning committee for ACF-6	ACF-6
2	Investigate how we can connect with silent participants, e.g. by developing predefined list of Qs for ALL planned on-line discussions, get lingering questions after the forum	Planning committee for ACF-6	ACF-6
3	The way we put up the slides, a lot of info on each slide. Could each topic (e.g. temperature) be highlighted when spoken about?	Planning committee for ACF-6 and presenters	ACF-6
4	Clarify what “normal” mean, provide short explanation(s) of normals for non-technical day and references (links) to norms for technical day	Presenters in ACF, ArcRCC-N	ACF-6
5	Is terminology such as “agreement between models/accuracy” understandable? If not, more explanation or different wording	ACF presenters	ACF-6
6	Is categorization of impacts ok, or should we not mix wildfire and shipping?	ACF-6 planning committee	ACF-6
7	Create wider visibility/outreach of ArcRCC: Twitter or other way to communicate to non-participants, both during and in between ACFs	ArcRCC-N node leads and coordinator	Fall 2020
8	Follow-up with participants after ACF-5: a) Develop a distribution list based on ACF-5 registrants and mailing facilities  b) Prepare the survey, process and distribute its results  c) Develop feedback to proposal from the Inuit Circumpolar Council on additional observations	Vasily Smolyanitsky (VS), Eivind Støylen (ES), ArcRCC Katherine Wilson (WS), Jelmer Jeuring (JJ)  KW, VS, ES, SC	July 2020  July 2020  July 2020
9	Consider to present (part of) the content before the forum, e.g. on website	ACF-6 planning committee and Node Leads	ACF-6
10	Broadcast part of the sessions to non-present participants in face-to-face meetings	Node Leads/Coordinator/ planning committee for ACF-7	ACF-7
11	Have 1-2 moderators to monitor/steer the questions and discussion in the chat messages and assist the concerned chair in consolidating them in the plenary	SC/ planning committee for ACF-6	ACF-6

12	Ensure a greater visibility to the partners (such as GCW, CliC, Arctic Council, etc.) in the session proceedings, and highlight the forum activities via other channels/organizations	Node Leads/ Coordinator/WMO Secretariat	ACF-6
13	Finding more end users	ArcRCC-N	ACF-6
14	Consider changing the terms «Non-technical» and «Technical» briefs – to not scare users away. E.g. "overview presentations" and "detailed presentations" Or Day 1 "Setting the scene", Day 2 " In-depth presentations".	Planning committee for ACF-6 / Node Leads/ Coordinator	ACF-6
15	Send reminder to first-timers 3-4 days ahead of ACF	Planning committee for ACF-6	ACF-6
16	Consider making the non-technical brief to a product	ArcRCC-N	ACF-6
17	Consider removing the validation part in the Consensus statement presentation during the non-technical forum.	Planning committee for ACF-6	ACF-6
18	Consider having 2 sessions of each day, to accommodate better for the spread in time zones	Planning committee for ACF-6	ACF-6
19	10 minutes break in the sessions?	Planning committee for ACF-6	ACF-6
20	Develop an explanatory section in non-technical summary including physical background (like that in outlooks) and its relation to other int'l reports and WMO statements	VS, Valentina Khan, Rick Thoman / Planning committee for ACF-6	ACF-6
21	Finalize the new schema of regions	Coordinators	September 2020
22	Restructuring the “highlights” section of the consensus statement to separate the previous season’s summary and next season’s outlook	Gabrielle Gascon, Node Leads	ACF-6
23	Investigate the possibility of creating infographics to make the highlights more appealing and readily interpretable	Node Leads	ACF-7/ ACF-8










### Attendees photos







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 Eivind MET Norway	 Jelmer Jeuring (MET Norway)	 vito vitale CNR-ISP Italy
 Wilfran Moufouma Okia	 Helge	 Valentina Khan
 SMHI- (SE) Amir Mirbashi	 Vasily Smolyanitsky	 Gunn-Britt Retter

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 Heather Quilenderino	 Eivind MET Norway	 Arun Kumar
 Jelmer Jeuring (MET Norway)	 Uma Bhatt	 Valentina Khan
 Halldór Björnsson	 Sieben, Brian [Yel]	 vito vitale CNR-ISP Italy

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Yang, Daqing [NHRC] Anne Walker Appleby, Bill [Dartmouth]  
Gunn-Britt Retter Helge Rupa  
SMHI- (SE) Amir Mirbashi Sieben, Brian [Yel] Martin Stendel

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Valentina Khan  
Gabrielle Gascon Anne Walker Tero  
Rupa ks ks Anna  
Sieben, Brian [Yel] Uma Bhatt

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Vasily Smolya...

Gabrielle Gascon

Rupa

Anna

Sieben, Brian [Yel]

Uma Bhatt

Shanna Combley

Valentin Meleshko

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