

3rd
ARCTIC SCIENCE
MINISTERIAL
Briefing Meeting

Starting
10:00 UTC



24 June 2020

Third Briefing Meeting



Co-hosted by Iceland and Japan

Moderator: KIMURA Hajime (Ministry of Education, Culture, Sports, Science and Technology - Japan)

Agenda for the Third Briefing Meeting

UTC	JST	
9:45	18:45	Opening the online meeting room
10:00	19:00	Welcome Remarks by MEXT, Japan
10:05	19:05	Introduction of the ASM3 Organizing Committee
10:10	19:10	Current progress of the ASM3 • Brief review of the ASM3 • Updates on the Ministerial Meeting • “Request for Information” from Countries/Indigenous peoples’ organizations/International organizations • Review of the ASM3 Science Process • Timeline of the ASM3 preparation
10:45	19:45	Updates on the Arctic Funders Forum
10:50	19:50	Information from the Arctic Circle Japan Forum
10:55	19:55	Questions & Answers
11:30	20:30	Briefing Meeting concludes

Opening remarks

OKAMURA Naoko

Deputy Assistant Minister and Deputy Director General
Research and Development Bureau
Ministry of Education, Culture, Sports, Science and Technology



Government of Iceland
Ministry of Education,
Science and Culture



MEXT

MINISTRY OF EDUCATION,
CULTURE, SPORTS,
SCIENCE AND TECHNOLOGY-JAPAN

Introduction of the ASM3 Organizing Committee

Japanese Ministry of Education, Culture, Sports, Science & Technology (MEXT)

- KONO Hiroyuki
- KIMURA Hajime

Japanese National Institute of Polar Research

- KODAMA Yuji
- SUEYOSHI Tetsuo

Icelandic Ministry of Education, Science & Culture

- Ásgerður Kjartansdóttir
- Lindsay Elizabeth Arthur

Please feel free to contact us, if you have any questions or requests.

Contact: ml-asm3@mext.go.jp



Government of Iceland
Ministry of Education,
Science and Culture



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MINISTRY OF EDUCATION,
CULTURE, SPORTS,
SCIENCE AND TECHNOLOGY-JAPAN

Background of the ASM

First Arctic Science Ministerial

Washington DC, USA

September 2016

Themes

1. Arctic science challenges and their regional and global implications
2. Strengthening and integrating Arctic observations and data sharing
3. Applying expanded scientific understanding of the Arctic to build regional resilience and shape global responses
4. Arctic science as a vehicle for science, technology, engineering and mathematics (STEM) education and citizen empowerment

Second Arctic Science Ministerial

Berlin, Germany

October 2018

Themes

1. Strengthening, integrating, and sustaining Arctic observations, facilitating access to Arctic data, and sharing Arctic research infrastructure
2. Understanding regional and global dynamics of Arctic changes
3. Assessing vulnerability and building resilience of Arctic environments and societies

Brief review of the ASM3

Themes of the ASM3

“Knowledge for a sustainable Arctic”

Observe, Understand, Respond, and Strengthen: 4-steps iterative cycle

1. Observe

Observing networks; Data sharing – towards implementation

2. Understand

Enhance understanding and prediction capability on Arctic environmental and social systems and its global impact

3. Respond

Sustainable development; Evaluation of vulnerability and resilience; Application of knowledge

4. Strengthen

Capacity building; Education; Networking; Resilience – prepare the next generation

<https://asm3.org/>



ASM3

3rd Arctic Science Ministerial
Co-hosted by Iceland and Japan
NEW DATE: 08-09 May 2021
Tokyo, Japan

<https://asm3.org/>

Key Documents

- ASM3 [Concept Note](#)
- ASM3 [Themes](#)

Ministerial Background

Washington, DC First Joint Statement of the Ministers



Themes, Third Arctic Science Ministerial

KNOWLEDGE FOR A SUSTAINABLE ARCTIC

Observe, Understand, Respond, and Strengthen

"Knowledge for a Sustainable Arctic," is the theme of the Third Arctic Science Ministerial (ASM3). The themes of ASM3 are focused on taking action on the most urgent challenges facing the Arctic which can be met through international scientific cooperation.

The discussions in the past two Arctic Science Ministerial meetings demonstrates that the following four-step process is indispensable to meet the challenges of a rapidly changing Arctic: 1.) **Observe** the status of the changes, 2.) **Understand** the local and global impacts, 3.) **Respond** to the changes based on a shared understanding, and 4.) **Strengthen** these efforts through education and capacity building for the next generation.

These four steps are not independent, but rather an iterative cycle. They represent the necessary actions required to realize our overarching goal.

1. Observe

Observing networks; Data sharing – towards implementation

The desired action for this step is to provide support for the implementation of an observation and data sharing system, and to develop collaboration between scientists and Arctic communities.

Information on the status of ongoing changes in the Arctic is still limited. There are vast data gaps, especially with long-term data which has largely been observed only since the satellite era. There is also room for improvement with data sharing. As observations in the Arctic require considerable human resources and costs due to its remote and harsh environment, it is difficult for a single country alone to build and maintain a long-term observation system. It is, therefore, necessary to collaborate on a system of systems with an international platform to promote cooperation for observing and data sharing.

It was noted in ASM1 and ASM2 that the Sustaining Arctic Observation Network (SAON) initiative can play a key role in resolving these issues. Following the recommendations in the previous meetings, ASM3 will seek an organizational mechanism to provide support to SAON and other necessary actions. Empowering national focal points and offices in each country as well as focusing on recommendations from international assemblies would be the first step.

2. Understand

Enhance understanding and prediction capability on Arctic environmental and social systems and its global impact

The desired action for this step is to recognize the complexity of the system connecting all environmental and socio-economic components, and to encourage further interdisciplinary research.

The interconnected effects of both globalization and global climate change are impacting Arctic communities and the environment. It is increasingly understood that the Arctic environment is not only a very complex system on its own, but it is connected to the global weather and climate system as well as

the global socio-economic system. The people who call the Arctic home also depend inextricably on the Arctic environment and its living and non-living resources. The changes in the natural environment in the Arctic will have cascading impacts on the social environment, affecting the rest of the world as well. We must understand the structure and dynamics of this complex system.

Reliable predictions are essential for developing effective planning for mitigation and adaptation measures and processes. To enable informative predictions, our understanding of Arctic change needs to improve significantly. ASM3 will strengthen international collaboration for comprehensive and holistic Arctic science to improve the assessment of ongoing change and prediction for future change.

3. Respond

Sustainable development; Evaluation of vulnerability and resilience; Application of knowledge

The desired action for this step is to recognize the necessity of knowledge-based decision-making, and to establish a framework for taking effective measures.

Warming at twice the speed of the global average, the Arctic is experiencing drastic changes in both the physical and ecological environment. The changes are visible in many natural phenomena, and their impacts to culture and society are also becoming clearer. It should be noted, as reported in the IPCC Special Report on the impacts of global warming of 1.5°C, that further warming will continue at least until mid-century, and will likely occur regardless of any prompt action taken to reduce carbon emissions.

It is, therefore, a matter of urgency to consider and implement adaptation and mitigation measures for the sustainable future of the Arctic including taking global action to slow down climate change, seeking compromise between development and protection in the Arctic, and supporting adaptation and mitigation strategies for Arctic residents. This approach requires making full use of the Arctic Knowledge system. ASM3 will emphasize the necessity of active response based on the best available knowledge and evidence, which we obtain through observation and understanding.

4. Strengthen

Capacity building; Education; Networking; Resilience – prepare the next generation

The desired action for this step is to recognize the urgent need and identify gaps in capacity building, education and networking, both in Arctic and global communities, and provide pathways of support.

The problems triggered by warming in the Arctic are long-lasting and will impact culture and society for generations. It is the responsibility of the current generation to pass on the knowledge needed to meet the challenges of the changing Arctic and to establish the network and infrastructure required for supporting the work of future generations. ASM3 will encourage and strengthen these efforts in capacity building, education, and networking with participating countries in order to build resilience.

It is necessary to encourage and support young scientists and knowledge holders who will become the next generation of leaders. It is critical that people around the globe see the Arctic as linked to their lives and not as a distant and irrelevant place. It is also crucial to build capacity in education for Arctic residents, including Indigenous communities, acknowledging the importance of practicing their knowledge within their education system. Adapting education systems to include traditional and local knowledge is essential for Arctic residents in building resilience within their changing environment. Empowering citizens is also important for fostering a stable observation system that includes community-driven observation.

Science Advisory Board

The Science Advisory Board (SAB) supports the Organizing Committee with their expertise. The SAB will provide consultation on the development of the ASM3 **Science Summary** as well as the **Joint Statement**. The SAB reflects the ASM3 values: transparency, inclusiveness and engaging in a bottom-up approach to science.

- Icelandic Representative: Embla Eir Oddsdóttir
- Japanese Representative: Hiroyuki Enomoto
- AOS Representative: Hajo Eicken
- APECS Representative: Mia Bennett
- ASM1 Representative: Fran Ulmer
- ASM2 Representative: Karin Lochte
- IASC Representative: Henry Burgess
- IASSA Representative: Andrey Petrov
- Indigenous Arctic Knowledge Holder Representative: Liza Mack
- Indigenous Science Representative: Eva Kruemmel
- SAON Representative: Sandy Starkweather
- UArctic Representative: Arja Rautio

Ex Officio

- Jenny Baeseman (Science Consultant)
- Hajime Kimura (MEXT)
- Lindsay Elizabeth Arthur (MRN)
- Þorsteinn Gunnarsson (RANNÍS)
- Yuji Kodama (NIPR)
- Tetsuo Sueyoshi (NIPR)

Updates on the Ministerial Meeting

The ASM3 was originally scheduled to take place on 20-21 November 2020, in Tokyo, Japan.

Considering the unpredictable and ongoing global effects of the COVID-19 pandemic, Ministerial Meeting has been postponed.

Rescheduled date of the ASM3 ► 08 - 09 May 2021

Location: Tokyo, Japan

Contact: ASM3 Organizing Committee
(ml-asm3@mext.go.jp)

◆ Opening Ceremony

08 May, afternoon

- Photo session of the Ministers
- Science Fair

◆ Ministerial Meeting

09 May, all day

Ministerial format: COVID-19 Response

1. An in-person meeting in Tokyo with a 5-person delegation for Countries, and 3-person delegation for Organizations is preferred.
2. A reduced delegation size and/or hybrid Ministerial may be necessary.
3. An online-only Ministerial format could take place if no other safe options are available in May 2021.

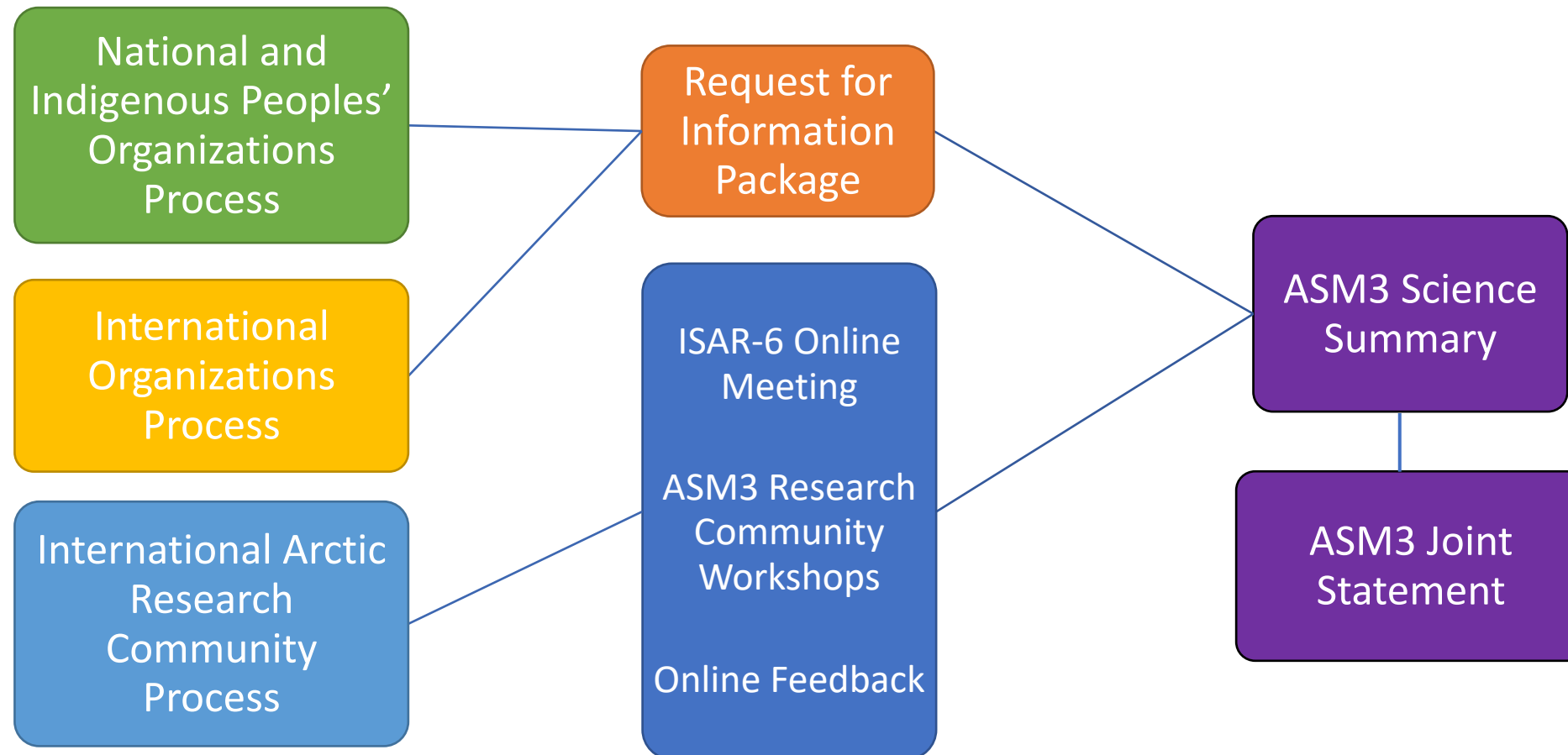
A decision on the format of the Ministerial will be made by the hosts in early 2021.

Science Fair

The Science Fair will be an integral part of the opening ceremony where Ministers and Delegations can learn more about what other countries are doing, interact with researchers who are working on international projects that are having a major impact, and learn science concepts through direct dialogue.

- Each country/organization will have their own poster, based on the Arctic Research Overview submitted via the request for information. These posters will be prepared by the meeting organizers.
- A few international projects from each theme that demonstrate the importance of international cooperation and showcase the advances that come from working across borders will be highlighted.
- The Fair will provide a program to create personal dialogue between Ministers and the Arctic research community.
- The draft program for the Fair will be shared with the official invitation to ASM3.

ASM3 Science Process



Review of the ASM3 Science Process

Intended science feedback process from 4 international science conferences.

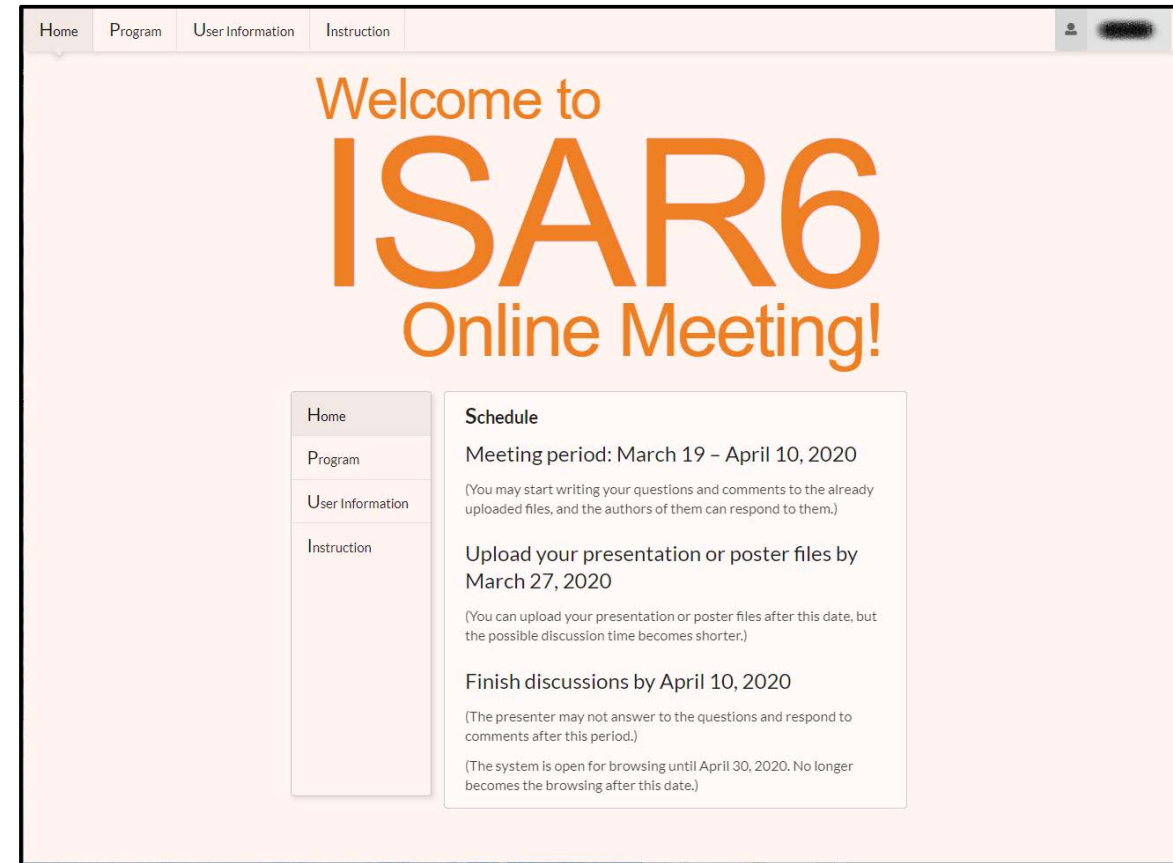
- [6th International Symposium on Arctic Research \(ISAR-6\)](#)
originally scheduled on 2-6 March 2020 in Tokyo, Japan → Online
 - [Arctic Science Summit Week 2020 \(ASSW\)*](#)
originally scheduled on 27-30 March in Akureyri, Iceland → Online
 - [Arctic Observing Summit 2020 \(AOS\)](#)
originally scheduled on 31 March - 2 April in Akureyri, Iceland → Online
 - [10th International Congress of Arctic Social Sciences \(ICASS X\)*](#)
originally scheduled on 15-20 June 2020 in Arkhangelsk, Russia → Postponed: 15-19 June 2021
- * Alternatively, [ASM3 Research Community Workshops](#) was held online on 15 June, coordinated by IASC, IASSA, and APECS.

Sixth International Symposium on Arctic Research (ISAR-6)

- *Originally* scheduled Mar. 3rd - 6th, 2020
 - 380 participation from 29 countries
 - Special session S20 for ASM3
 - Breakout session (individual themes)
 - Plenary session (Summary discussion)

→ Online format

- “Discussion Paper” style
- Meeting period: Mar 19 – Apr 10
- Presenters uploads their presentation files, participants can ask questions or make comments.

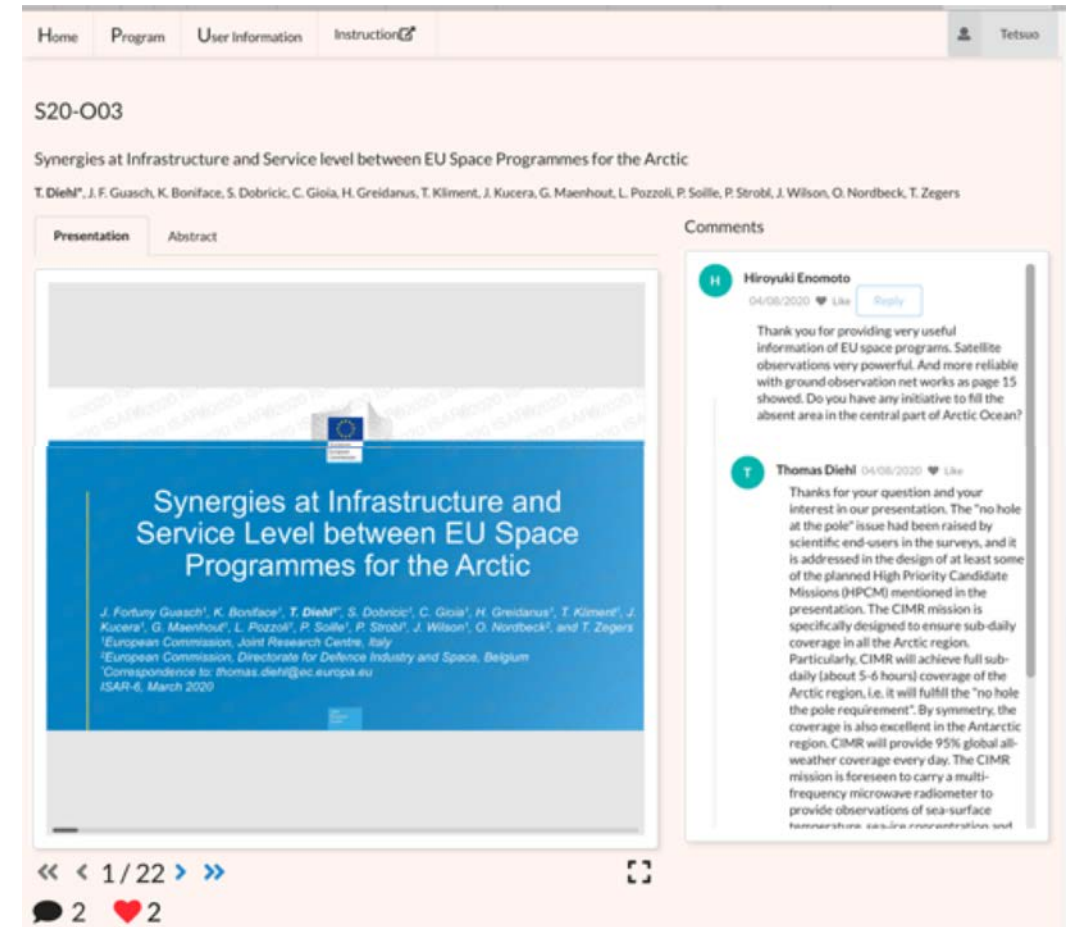


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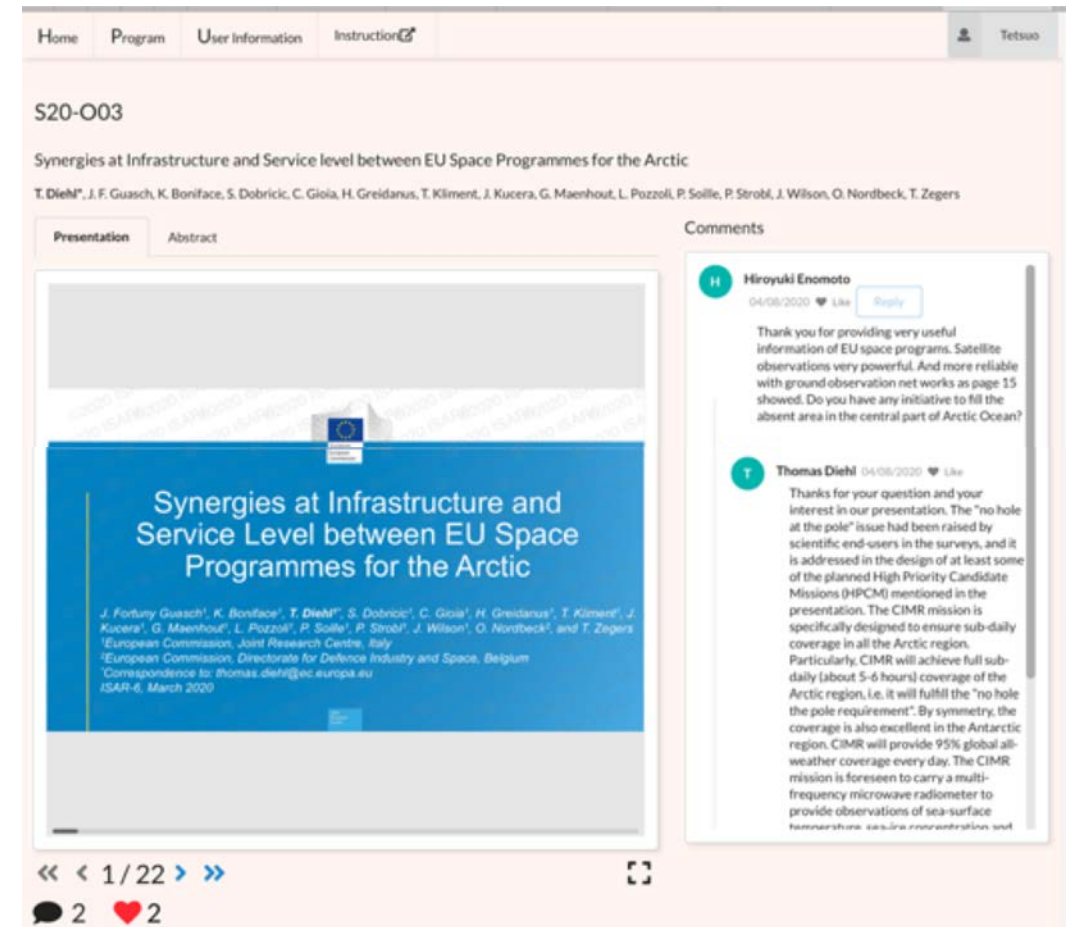
→ Online format

- “Discussion Paper” style
- Meeting period: Mar 19 – Apr 10
- Presenters uploads their presentation files, participants can ask questions or make comments.



Sixth International Symposium on Arctic Research (ISAR-6)

- S20: Scientific Contributions to the Third Arctic Science Ministerial (ASM3)
- Symposium Statement will be prepared (work in progress) based on:
 - Online S20 Discussion (May 14th)
 - Comment form for the S20 presenters
 - Comment form for the ISAR-6 conveners



ARCTIC OBSERVING SUMMIT (AOS)

arcticobservingsummit.org



GOALS: Design, implementation, coordination and sustained operation of international, pan-Arctic observing system

- Collaborative: Arctic observing system of systems
- Comprehensive: cross-disciplinary
- Community-driven (needs considered; engagement)
- Science-based guidance

■ Fostering:

- Communication, international collaboration & coordination of long-term observations to improve understanding of and response to system-scale Arctic change
- Exchange among researchers, agencies, Northern Peoples, NGOs, the private sector and others involved/interested in long-term observing activities

ARCTIC OBSERVING SUMMIT (AOS)

arcticobservingsummit.org



1st: AOS 2013: Vancouver, Canada

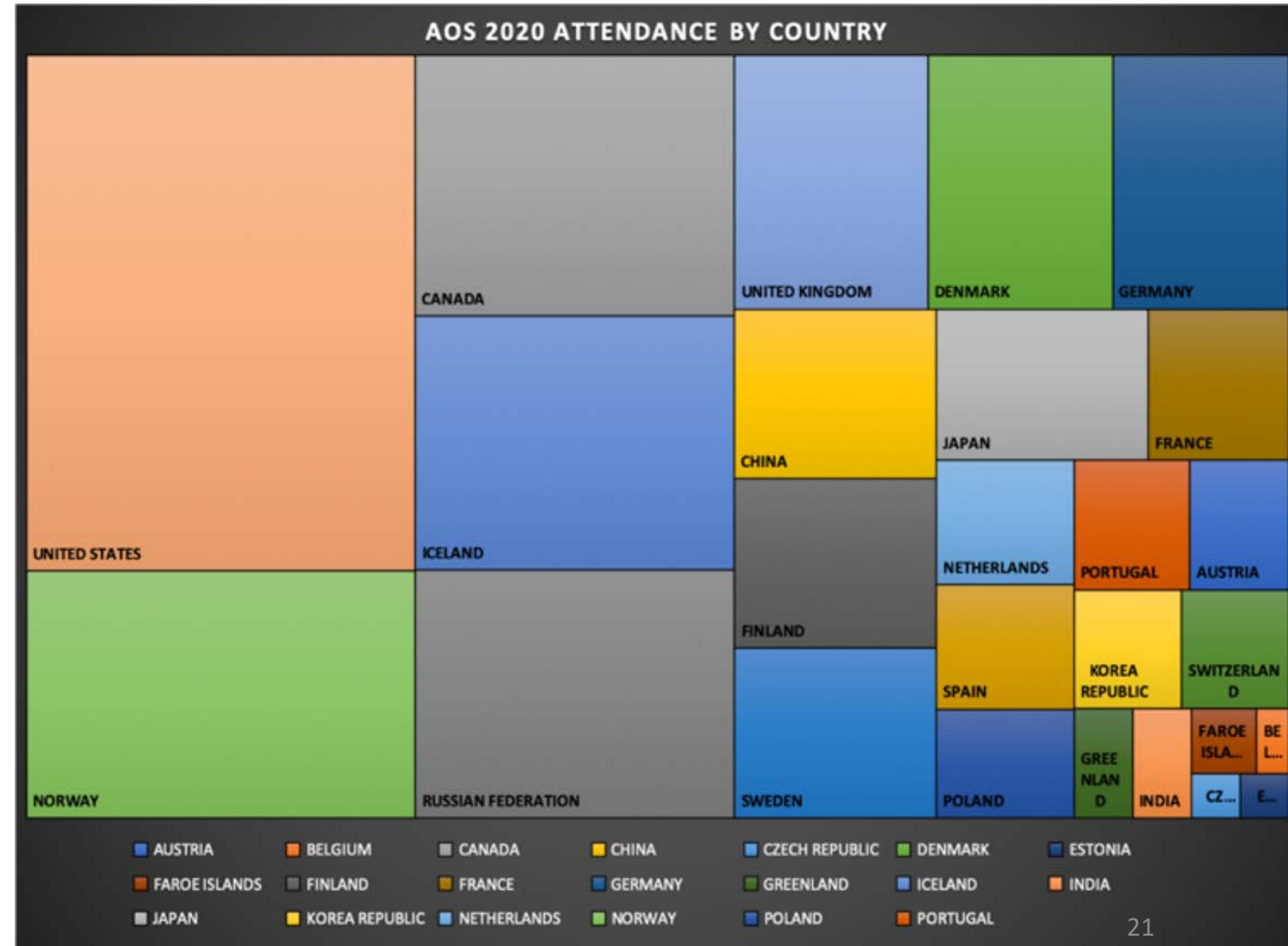
2nd: AOS 2014: Helsinki, Finland

3rd: AOS 2016: University of Alaska, Fairbanks

4th: AOS 2018: Davos, Switzerland

5th: AOS 2020: Held online*

- 350 participants from 28 countries
- More than 40 Indigenous experts and representatives of Indigenous Peoples and organizations





AOS 2020

Theme: Observing for Action

arcticobservingsummit.org

Working Group Outcomes/Highlights

1. WG 1: Design, Implementation & Optimization

The value of the Arctic observing system (and key outcome of ROADS) would be in the cross-sector information and requirements sharing: Shared Arctic Variables

2. WG 2: Observing in support of Adaptation and Mitigation

The successful use of observing partnerships in aiding adaptation and mitigation efforts is linked to an inclusive participatory process that weaves Indigenous and local expertise with scientific knowledge

3. WG 3: Indigenous Food Security and related needs

Support community-driven research and monitoring; and view food security through an Indigenous lens

4. WG 4: Data Interoperability and Federated Search

Embrace the connection between “community” and technology (“data ecosystem”)

5. WG 5: Arctic Observations in the context of Global Observing Initiatives

Arctic observing systems should make use of the single domain observations of those global observing systems that extend into the Arctic



Conference Statement & Input to ASM-3

- COVID-19 highlights the need to strengthen partnerships & capacity-building between Arctic Indigenous communities and observing programs
- SAON's coordinating role critical → ROADS comprehensive expert panel to prioritize health & well-being
- Transitioning of AOS from meeting into process in support of SAON Roadmap for Arctic Observing and Data Systems
- Linking Arctic local/regional observing efforts to global programs: Shared Arctic Variables, Indigenous/local community collaboration essential, formal engagement processes as next step.
- Focus on shared variables, including near-real time efficient sharing of data products critical to advancing understanding and prediction of Arctic system
- Direct support of Arctic Indigenous community-driven observing efforts essential, along with focus on holistic approaches (e.g., food security, health & well-being); funding & support of capacity building & engagement of youth highest priorities
- Data technologies & methods supporting observations need to address pressing problems, in particular those aligning with Indigenous community concerns in a co-production approach.



AOS 2020: Observing for Action

Helpful links

- Conference statement
 - <https://arcticobservingsummit.org/>
- White papers
 - <https://arcticobservingsummit.org/aos-2020-white-papers-and-short-statements>
- Call for contributions to special issue of ARCTIC
 - <https://tinyurl.com/y7rrmpg4>
- Video recordings of AOS Plenaries & Working group discussions
 - <https://www.youtube.com/channel/UCCILR3yDjdvMP1E6VS1NuTQ>

For more information visit us at
arcticobservingsummit.org or aos2020agenda.org



ASM3 Research Community Workshops

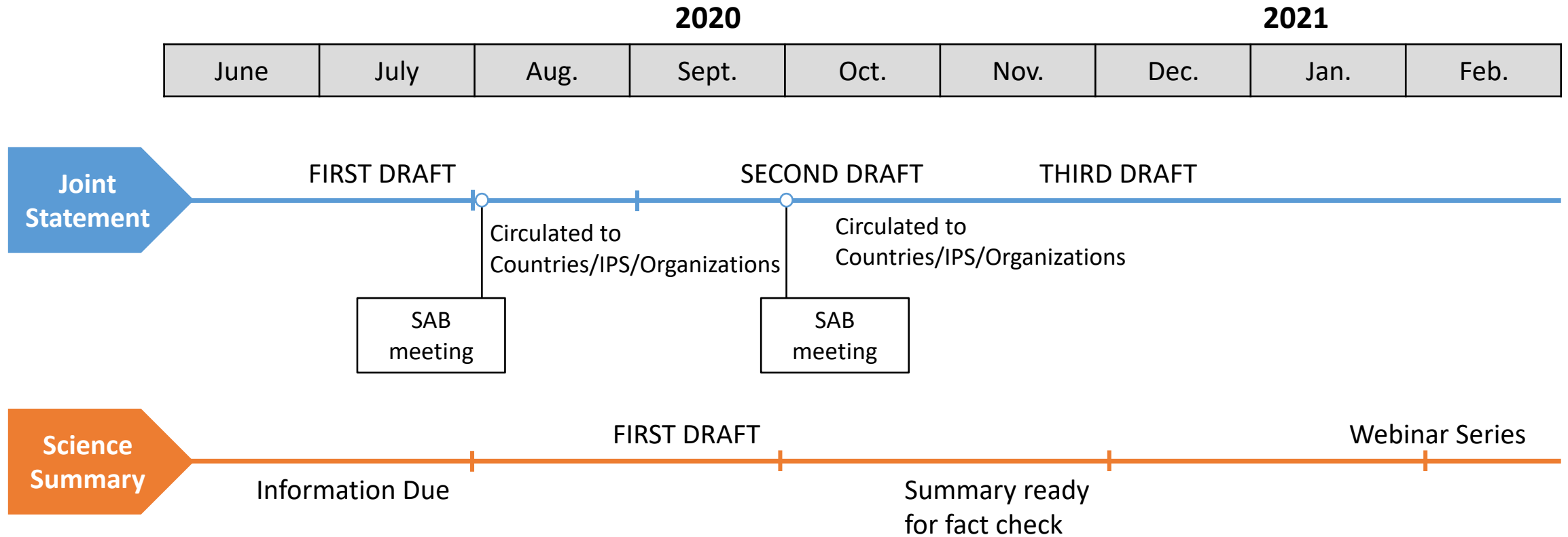
15 June 2020, coordinated by IASC, IASSA, and APECS

- Workshops replaced the ASM3 science process for ASSW2020 and ICASS X
- 300 registered participants from around the world participated in 2 workshops on 15 June 2020.
- An online feedback form was also available for those who could not participate in-person

Next Steps:

- Conveners will produce an Executive Summary including key actions for policy-makers.
- Executive Summary will highlight overarching actions as well as actions unique to each theme.
- Executive Summary will be published on the ASM3 website in the coming weeks.
- Executive Summary is a direct deliverable for the ASM3 Science Summary and Joint Statement.

Timeline of the ASM3 preparation



Key dates

Science Process

- ASM3 themes released: Apr. 2020
- Request for Information: 27 Apr.
- Information Due: ~~30 June~~ **31 July**
- Science Summary v1: 30 Sept.
- Fact Check of Summary: 30 Nov.
- ASM3 Online Meeting Series: early 2021.

ASM3 Briefing Meetings

- 1st Briefing Meeting: 19 Sept. 2019, Tokyo
- 2nd Briefing Meeting: 31 Jan. 2020, Reykjavík
- 3rd Briefing Meeting: 24 June 2020, Tokyo (online)
- 4th Briefing Meeting: early Oct. 2020, Reykjavík
- 5th Briefing Meeting: TBD
- 6th Briefing Meeting: TBD

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Update on the Arctic Funders Forum

- Two pre-meetings of the Arctic Funders Forum:
 1. Arctic Circle 2019
 2. ASSW 2020 (online)
- Iceland accepted the role as Chair of the Arctic Funders, effective April 2020
- The first meeting of the Arctic Funders Forum will take place online in the early Autumn 2020
- All attendees from either of the pre-meetings of the Forum are included as current members of the Forum
- If you would like to be engaged with the Funders Forum and have not either attended the pre-meetings, please reach out to us by email:

lindsay.elizabeth.arthur@mrn.is

Arctic Circle Japan Forum

Questions & Answers



Questions

Reporting from countries/organizations

- How do you plan to use updates on ASM2 projects and new project proposals for ASM3?
- The Request for Information process is taking us longer than expected, can we have an extension?
- What measures is the ASM3 organizing committee taking to ensure that Indigenous stakeholders, especially up-and-coming leaders and representatives, can participate in ASM3, either virtually or in-person?
- Are any steps being taken to integrate Early Career Researchers into the ASM3 process more than has been done in the past?

Joint Statement/Science Summary

- What is the process for the Science Summary? Will countries have the opportunity to comment before it is final?
- Will the SAB report be a standalone document or feed into the overall ASM3 report and/or the Joint Ministerial Statement?
- What is the process for finalization of the Joint Ministerial Statement?
- Would it be possible to look forward to a possible timeline for the preparation of the joint statement?

Questions

Science Fair

- What is the draft agenda for the Science Fair?
- What advance preparation do countries need for planning for the science fair?
- Can my organization participate in a session like we did at the ASM2 Science Forum?

Arctic Funders Forum

- Would it be an option to explore synchronous timing of a (high level) meeting of the Arctic Funders Forum in anticipation of the ASM3?
- Is it too late to join the Arctic Funders Forum?

Other Questions from participants of today's Briefing Meeting

Thank you



Government of Iceland
Ministry of Education,
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