**Sub-Theme 1: The Need for the Observing System**

Working Group 1: Societal Benefits over the short, medium and long-term perspectives. Strategies and examples for observations guided by assessment, prioritization frameworks that link to Societal Benefit Areas, Value-Tree Analysis or UN Sustainable Development goals will be addressed. Group discussions will also focus on strategies and examples for observations that are driven by local information needs, responses and local adaptations to rapid Arctic change, operational needs, resource co-management, emergency preparedness and response.

Co-chairs: Dr. Andrea Tilche (European Commission); Dr. Eva Kruemmel (Inuit Circumpolar Council, Canada)

Rapporteur: Dr. Matthew Ayre (University of Calgary)

Thematic Working Group members: Dr. Srdan Dobricic (European Commission, Joint Research Centre); Mikko Strahlendorff (Finnish Meteorological Institute).

**Sub-Theme 2: Implementing and Optimizing a Pan-Arctic Observing System**

Working Group 2: The success of a pan-Arctic Observing System relies on a robust implementation strategy, from the overall design to use of innovative technology at appropriate spatial and temporal resolution, and successful transition to system operations. Working Group 2 will focus on key aspects of implementation, including system design, optimization of existing platforms, and adaptation of new technologies. How to ensure the necessary efficiency, reach and impact of sustained Arctic observations will strongly factor into the Working Group's deliberations.

Co-chairs: Dr. Hajo Eicken (University of Alaska, Fairbanks); Dr. Sandy Starkweather (Earth System Research Laboratory, NOAA)

Rapporteur: Dr. Alice Bradley (Dartmouth College)

Thematic Working Group members: Dr. Nicole Biebow (Alfred Wegener Institute, Germany); Dr. Melissa Chierici (Institute of Marine Research, Norway); Claire Eaton (University of New Hampshire, USA); Dr. Vladimir Ivanov (Arctic and Antarctic Research Institute, Russia); Dr. Sung-Ho Kang (Polar Research Institute, Korea); Dr. Shichang Kang (Chinese Academy of Sciences, China); Dr. Yuji Kodama (National Institute of Polar Research, Japan); Dr. Hank Loescher (National Environmental Observing Network, USA); Dr. Lisa Loseto (Fisheries and Oceans Canada); Dr. Roberta Pirazzini (Finnish Meteorological Institute, Finland); Jake Sobin (Kongsberg Underwater Technology, USA).

Working Group 3: We invite discussion at AOS 2018 on sustained support and funding models/strategies that will enable the development of an integrated plan for Arctic observation. Examples and strategies for public-private partnerships, international funding models, entrepreneurship, or in-kind support will be explored in detail.

Co-chairs: Dr. Peter Schlosser (Arizona State University); Dr. Volker Rachold (Alfred Wegener Institute)

Thematic Working Group members: Dr. Thorsteinn Gunnarsson (The Icelandic Centre for Research/Sustaining Arctic Observing Networks)

Working Group 4: Participants of this group will focus on the role of data management in observing system implementation.

Co-chairs: Dr. Peter Pulsifer (National Snow and Ice Data Center); Dr. Oystein Godoy (Norwegian Meteorological Institute)

Thematic Working Group members: Mikko Strahlendorff (Finnish Meteorological Institute).

**Sub-Theme 3: Leveraging Observing Systems and Networks**

Working Group 5 will focus their discussions on the uses of data and information derived from observing systems, in particular as relevant to demonstrating a business case for pan-Arctic sustained observing, such as community-based monitoring, or community-based enterprises. Examples that illustrate value derived from public domain data through generation of products addressing societal or business needs are particularly relevant.

Co-chairs: Dr. Barbara Ryan (Group on Earth Observations); Jan Rene Larsen (Arctic Monitoring and Assessment Programme, AMAP/Sustaining Arctic Observing Networks (SAON)

Rapporteur: Dr. Shridhar D. Jawak (National Centre for Antarctic and Ocean Research)

Thematic Working Group members: Dr. Andrew Brierley (University of St. Andrews); Dr. Lisa Loseto (Fisheries and Oceans, Canada); Dr. Mike Sparrow (World Climate Research Programme);

Working Group 6: The success stories of technologies in support of public and private interests that help empower Arctic communities to respond effectively to rapid Arctic change will be expanded on in WG6.

Co-chairs: Dr. Maribeth Murray (Arctic Institute of North America, University of Calgary); Dr. Bill Turrell (Scottish Government)

Rapporteur: Dr. Ravi Darwin Sankar (University of Calgary)

Thematic Working Group members: Dr. Trevor Bell (Memorial University of Newfoundland)