SIOS at Arctic Frontier 2019

22 - 29 Jan 2019

Poll results
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- In one word, describe the most important aspect of innovation in science
In what capacity are you attending Arctic Frontiers?

- Researcher - natural science: 36%
- Researcher - social science: 9%
- Government: 27%
- NGO: 0%
- Indigenous Arctic community: 0%
In what capacity are you attending Arctic Frontiers?

- Industry: 9%
- Other: 18%
If other, please specify:

- Funding agency
Multiple-choice poll

Interest (1/2)

What is your main interest in the Arctic? (1/2)

Research
- 60%

Monitoring
- 10%

Politics
- 10%

Tourism
- 0%

Shipping or other transport
- 10%
Interest (1/2)

What is your main interest in the Arctic?

(2/2)

Industry

0 %

Other

10 %
Multiple-choice poll

Do you consider innovation (e.g. use of new technology and monitoring strategies) important in research in vulnerable Arctic areas?

Yes 91%
No 0%
I don't know 9%
What are the most important reasons to promote innovation in the Arctic (multiple choices possible)?

1. Better data - 83%
2. Smaller environmental footprint (including lower emissions) - 58%
3. Cheaper - 25%
4. Better spatial coverage - 58%
5. Sustainability - 33%
Promotion (1/2)

What are the most important reasons to promote innovation in the Arctic (multiple choices possible)?

(2/2)

None
- 0%

I don't know
- 0%

Other
- 8%
Promotion (2/2)

If other, please specify:

- To help people.
Barriers (1/2)

What, if any, are the barriers to introducing new technology into science in Svalbard (multiple choices possible)?

(1/2)

Environmental regulations: 23%

Environmental conditions: 31%

Costs: 69%

Lack of suitable technology: 23%

Lack of infrastructure: 38%
What, if any, are the barriers to introducing new technology into science in Svalbard (multiple choices possible)?

- Resistance to or suspicion towards new technology: 31%
- There are no barriers except in your mind: 8%
- I don't know: 0%
- Other: 23%
Open text poll

Barriers (2/2)

If other, please specify:

- Risk
- Underestimate how difficult it can be
- Assuming that innovation = technology only, and so forgetting about the people and social innovation.
What are the conditions that create opportunities for using new technology in science in Svalbard (multiple answers possible)?

Tourism 8%

Engaged local population and visitors 33%

Existing good infrastructure, e.g. high bandwidth broadband 50%

Well established international and multidisciplinary research community 100%
What are the conditions that create opportunities for using new technology in science in Svalbard (multiple answers possible)?
Open text poll

Opportunities (2/2)

If other, please specify:

- Poor communication infrastructure
- Funding and education
Open text poll

Which research topics in Svalbard have the greatest potential to make better use of technology (multiple answers possible)?

- Natural science in general. Climate Research, safety, Tourists save
- Do science activities and application of technology support, hinder, or be neutral with respect to peace, conflict, and diplomacy?
- SAR
- Biology, oceanography
- Oceanography
- Sea ice
- Glaciology Mammal behaviours
- Chemical oceanography
- Glaciology, ecology, Cryoscience, biology, geophysics
- Understanding people-technology interactions to create safer, healthier, and more engaged communities.
Open text poll

Which specific technologies could SIOS use to improve research in Svalbard (multiple answers possible)?

- Remote sensing
- Machine learning
- Although Svalbard does not have indigenous peoples, could indigenous technologies from elsewhere around the Arctic be applied in Svalbard to support research?
- Artificial intelligence proposal writing machine
- IOT
- Better databases and software infrastructure for data sharing and collection
Survey (1/2)

What is most important when developing an Arctic observing system (multiple choices possible)?

(1/2)

Increasing the spatial coverage of observations 58%

Increasing the integration of observations at existing sites 50%

Increasing the number observations at existing sites 8%

Making better use of remotely operated monitoring techniques 58%
Survey (1/2)

What is most important when developing an Arctic observing system (multiple choices possible)? (2/2)

- Coupling measurements on the micro and meso scale with remote sensing data on the macro scale: 50%
- Other: 33%
Open text poll

Survey (2/2)

If other, please specify:

- Identifying absolutely key sites where there is currently no observational capacity
- Balancing free, open access to all data with the understanding that all data need to be processed and interpreted before being applied and used for analysis.
- Coupling with models
- Ensuring that long term measurements are continued and coordinated
In one word, describe the most important aspect of innovation in science.