

# Knowledge co-production in the Arctic and beyond

Lessons from APPLICATE

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**APPLICATE.eu**  
Advanced prediction in  
polar regions and beyond



# In a nutshell

Develop enhanced predictive capacity for weather and climate in the Arctic and beyond and determine the influence of Arctic climate change on Northern Hemisphere mid-latitudes, **for the benefit of policy makers, businesses and society.**



# Participatory framework for knowledge co-production

## Empowerment

Case studies  
Policy briefs



## Engagement

Website  
Social media  
Communication materials

## Involvement

User Group meetings  
Blog Polar Prediction Matters  
EU-Polar Cluster  
Workshops  
Conferences  
Early-career scientists

*Adapted from Bojovic et al. (under review)  
and WMO's guidance for good practices for  
climate services user engagement (2018)*

# Knowledge exchange



## USER GROUP

### Focus group technique

To collect and analyse qualitative data in a guided discussion among a small and diverse group of stakeholders.

### Representatives from APPLICATE target groups:

- **Key:** Business and governmental stakeholders in the Arctic within and outside the EU
- **Primary:** Scientific community, meteorological and climate national services, NGOs and local communities
- **Secondary:** Business stakeholders from mid-latitudes

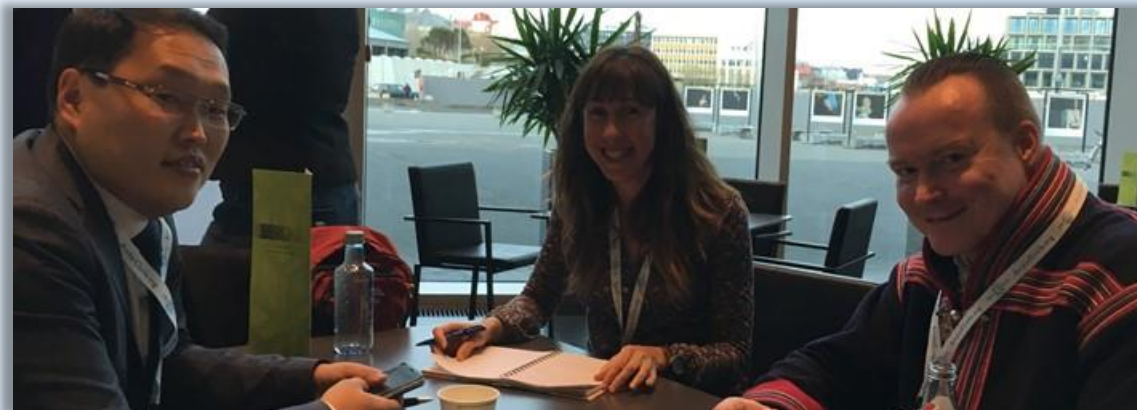


# Knowledge exchange

## USER GROUP MEETINGS



## WORKSHOP ORGANIZATION/INTERACTION IN CONFERENCES



## BLOG POLAR PREDICTION MATTERS

<https://blogs.helmholtz.de/polarpredictionmatters/>



## EU-POLAR CLUSTER

Joint event at Arctic Circle 2019



## COLLABORATION WITH ECSs

APECS-APPLICATE-YOPP Online course 2019





## CASE STUDIES

### Societal relevance

- Identified by stakeholders for being relevant for their activities (User Group, collaboration with projects)
- Interest in knowing **the causes** of the event
- Interest in knowing **the predictability** of the event

### Policy relevance (planning)

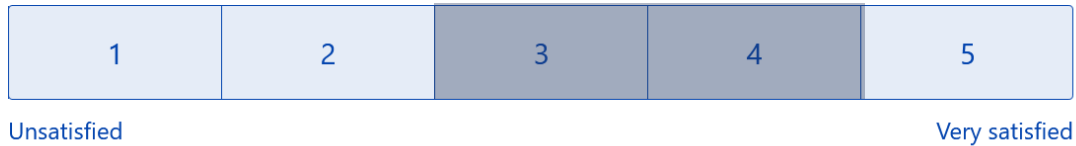
- Impacts on the society and economy
- Explore **attribution**
- Identify **research gaps**
- Build narratives/storylines** on how this type of event would look like under plausible futures

# Lessons learned from UG interactions

Lesson	Why?
<b>Involve users as project partners</b>	UG involved on a voluntary basis. Limited involvement and difficult for users to justify their time. Need to offer something else
<b>Prioritize face-to-face interactions at conferences</b>	Challenging to organize meetings with the whole UG due to different time zones. Face-to-face meetings at conferences and during GAs were prioritized, but less frequent
<b>Keep scope flexible but with sufficient scientific support</b>	Not clear what the project could offer at the beginning. This limited stakeholders' understanding. Scientific support can make intermediaries' work easier.
<b>Case studies for storytelling and engagement</b>	Case studies analysing events from the past were useful to illustrate how weather, climate and sea ice information can be relevant

# Feedback from the User Group

1 → How satisfied are you with the engagement with the User Group conducted in APPLICATE?



Being part of the APPLICATE User Group has helped you to...





# Feedback from the User Group

## Need more meetings

Nothing can replace face-to-face meetings and work

Suggest to have more online meetings on regular basis

More in-person meetings would have been helpful

Our group is small enough to meet more regularly by Zoom

## Need more information/ guidance

Still need more info about how to fully utilize opportunities arised from APPLICATE work

There is a need for more detailed information about outcomes of the APPLICATE work for User Group

Quarterly or bi-annual reports summarising research progress/findings/publications in the various workgroups would be helpful

Sometimes we need technical support to understand how to get required information about climate change research and data for example on the portal

## Dissemination efforts

I feel we could have done some information sessions in US Forums about the work that would amplify the work.

## Positive aspects

I learned much about what is going on in Europe and more ways we can collaborate with new AI analysis

I see that there are more interesting information on the website. Regular emails from APPLICATE, updates etc.

Communication has been very good

I was delighted to join the group and to come to Barcelona

# Thank You!

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