

# Introduction to the CAPARDUS project

## (Capacity Building in Arctic Standardisation development)

08-09 June 2023, Polheim, Longyearbyen

Coordinator: Stein Sandven, NERSC



Consortium: 9 partners and 4 subcontractors – 8 countries

The CAPARDUS project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 869673.



# Objectives of CAPARDUS

- Establish a *framework for Arctic standards* to develop, understand and implement standards within selected themes
- Identify and *document standards, guidelines and practices* within observing systems, resource management, local community planning, and other themes
- Engage researchers, service providers, local communities, commercial operators and governance bodies *to design an Arctic Practice System*



Fisheries is the most important economic activity and food source for local communities in Greenland. Photo by Gerth Nielsen



Buildings in Longyearbyen threatened by thawing permafrost. Photo: L. Iversen, NERSC

# CAPARDUS themes

- Observing system and data system
- Community planning & decision making
- Natural resource management
- Shipping, tourism, safety
- Ethics, norms, responsible research
- Other issues such as health, clean food and water

How are practices, guidelines and standards evolving within these themes ?

# Activities in CAPARDUS

Support  
Community-based  
monitoring and  
Citizen Science in  
Arctic regions

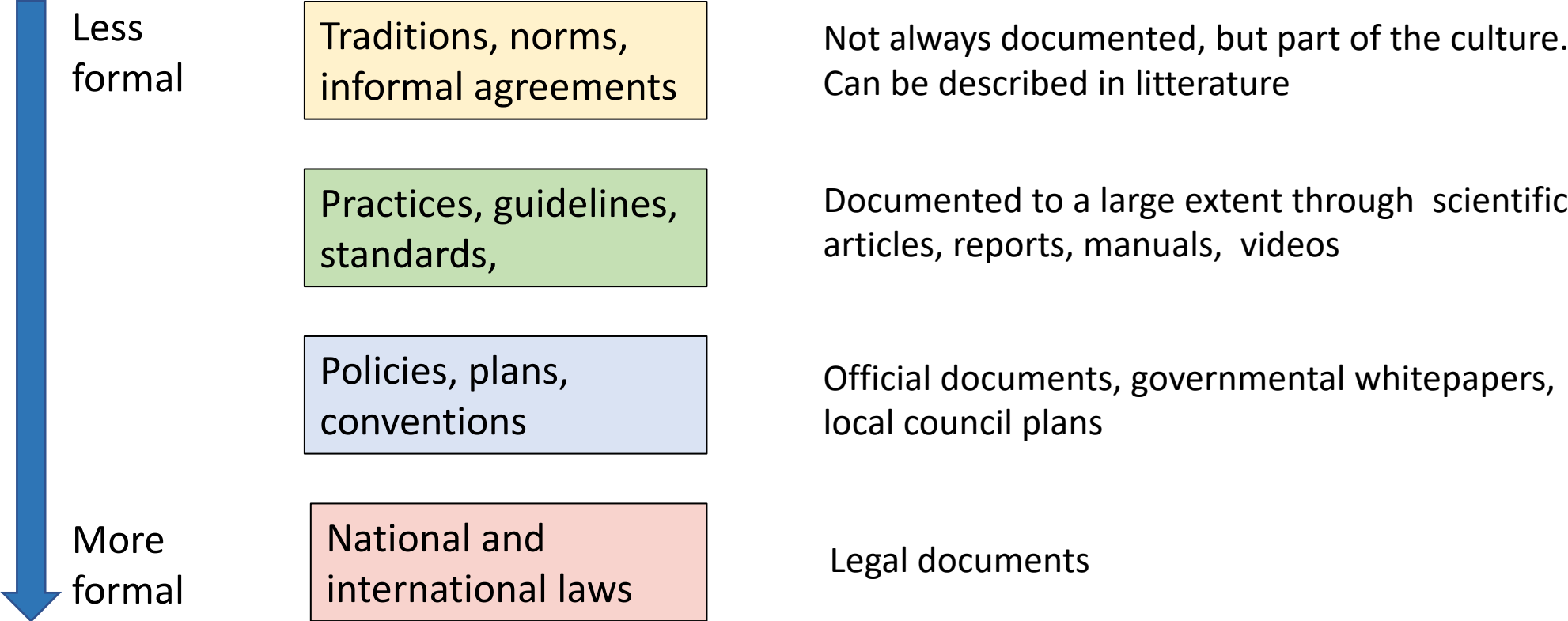
Documentation of  
practices, guidelines,  
and standards  
Develop a  
framework for Arctic  
standards

Developing  
Bayesian Belief  
Network for  
fisheries  
management

Requirements and design of an Arctic  
Practice System

# How do we address standards, guidelines and practices in CAPARDUS?

Identify and document how things are done within specific themes of importance in the Arctic



# How can Practices be documented ?

Documentation can be in the form of:

- Reports and other written material (most common)
- Photos
- Video recordings (e.g. YouTube\*)
- Audio recordings
- Human experts explaining
- Other: museum exhibits



*From the exhibits in Svalbard Museum*

# Ocean Best Practice System is established under UNESCO IOC

What is Ocean Best Practice ?

“A method adopted by many people to carry out a task within ocean observation, research activities, assessment of environment, etc.”

OBPS contains a repository of more than 1700 documents, tagged with 167581 terms and 6 terminologies available at

<https://www.oceanbestpractices.org/>



# Arctic Practices Community- a test site under OBPS

The Arctic Practices Community is an initial repository for supporting CAPARDUS Arctic Practices System Design.

<https://repository.oceanbestpractices.org/handle/11329/1291>

At present the repository contains presently 212 documents, of which

- 91 are tagged “Arctic Safety”
- 71 are tagged “Greenland” and “fisheries”
- 41 are tagged “Cultural heritage”
- 31 are tagged “Svalbard” and “tourism”
- 10 are tagged “Svalbard, tourism, Longyearbyen”



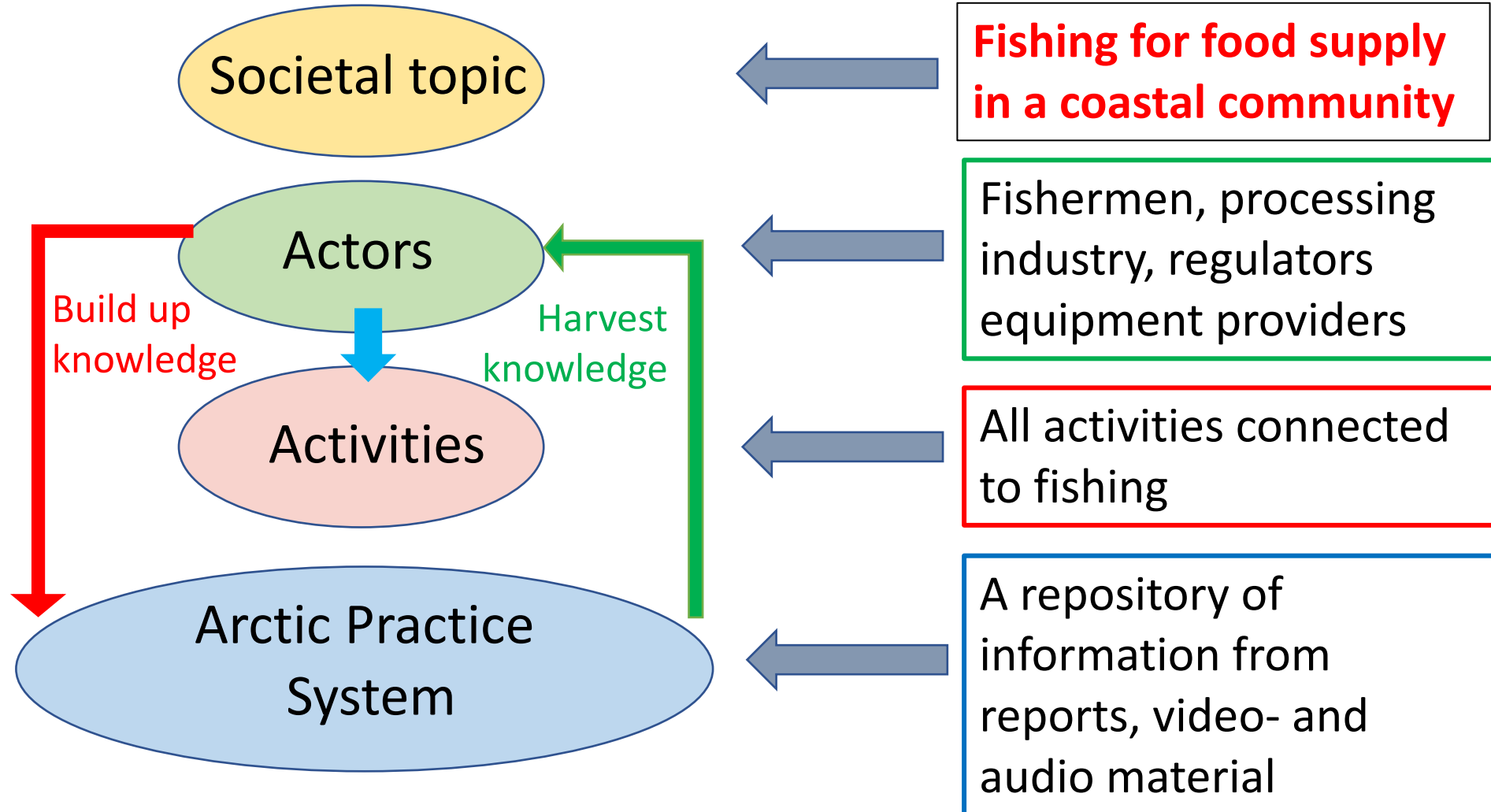


# What should an Arctic Practice system be ?

- APS is planned to be a **digital database** about practices used by people living and working in the Arctic
- APS will hold documents **describing how things are done**, for example how environmental data is collected and what methods are used, etc.
- APS will be **populated by people who want to share** their knowledge with others by inserting documents into the database

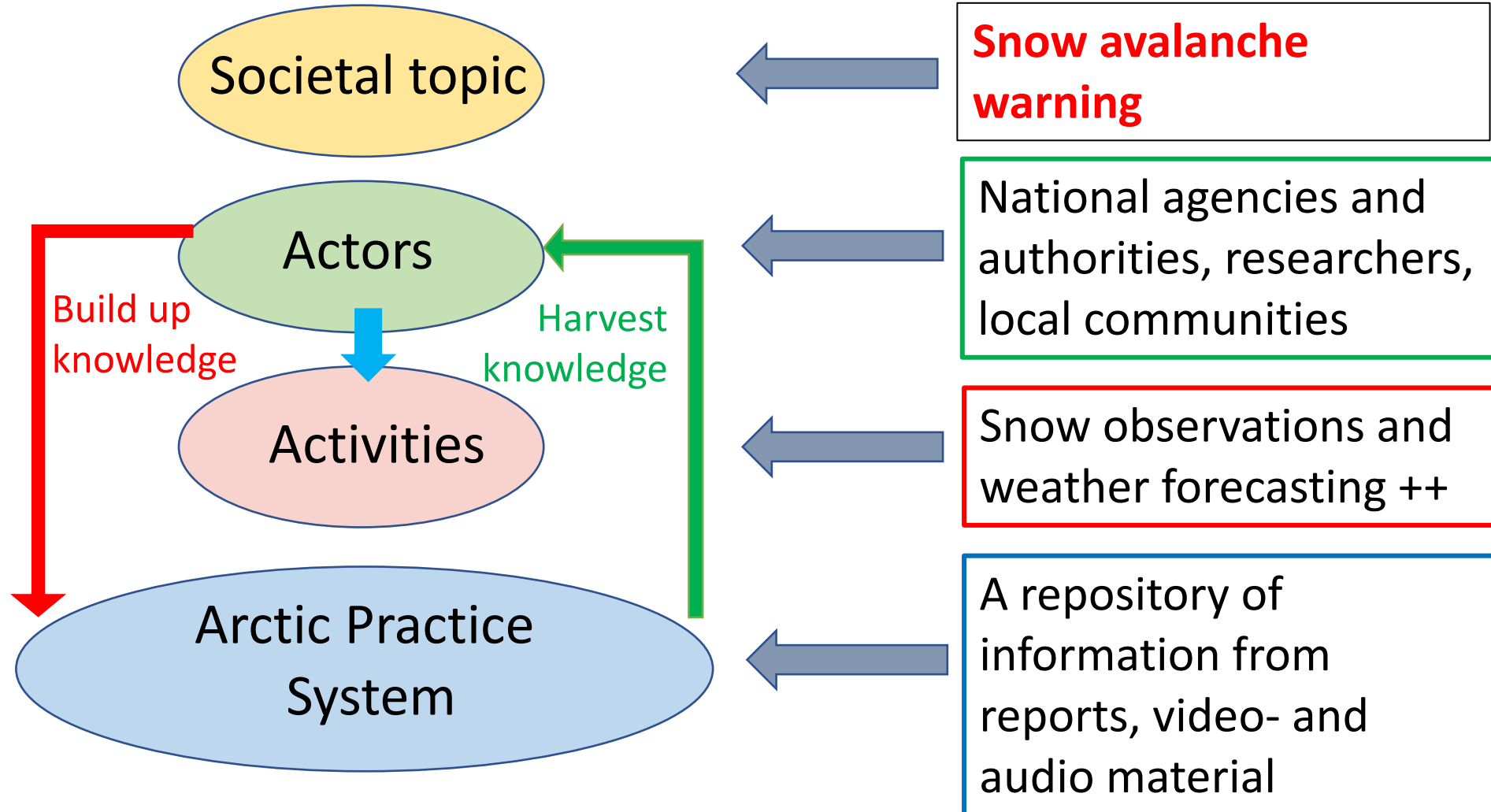
# The societal context of an Arctic Practice System

## Example 1:



# The societal context of an Arctic Practice System

## Example 2:



# Previous workshops: 6-9 August 2022 and 7-8 February 2023

## **Presentations and discussions:**

- Cultural heritage work in Svalbard – collaboration with NIKU ++
- Tourism development in Svalbard - presentations by Ronny Brunvoll, AECO ++
- Citizen science – link to tourism and cultural heritage protection – Svalbard Museum
- Dialogue between scientists and the local community – Svalbard Social Science Initiative

## **Document types:**

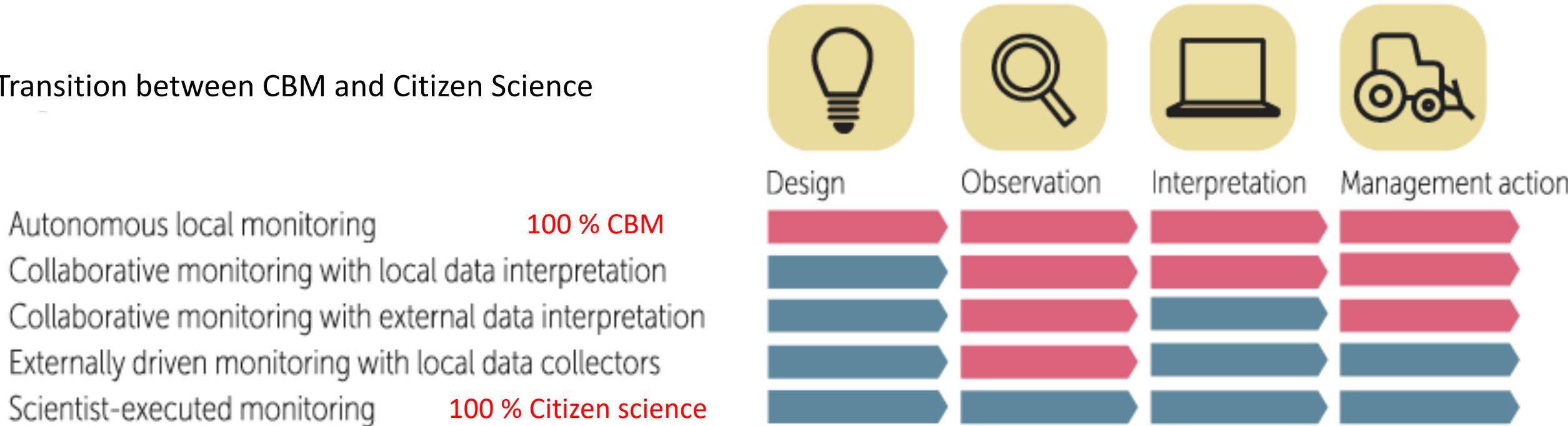
- Legal and regulatory documents: focus on Svalbard
- Policy and strategy documents: International, national and Svalbard
- Research and assessment documents: many and much more is coming
- Practical guidelines and standards: not so many, but more is coming

# Community-Based Monitoring and Citizen Science

“Community-based Monitoring” - Monitoring where community members are the drivers and contribute with more than just observations (e.g. knowledge, interpretation)

“Citizen-science” - Research and monitoring involving community members (often used when community members, citizens, only contribute with data gathering)

Transition between CBM and Citizen Science



# Citizen science on Arctic cruise ships

(CRUISE#SCIENCE)

Børge Damsgård

Anna Vader

Janne Søreide

Kirsa Nørregaard



©Sine Astad

Courtesy: Janne Søreide and Børge Damsgård, UNIS

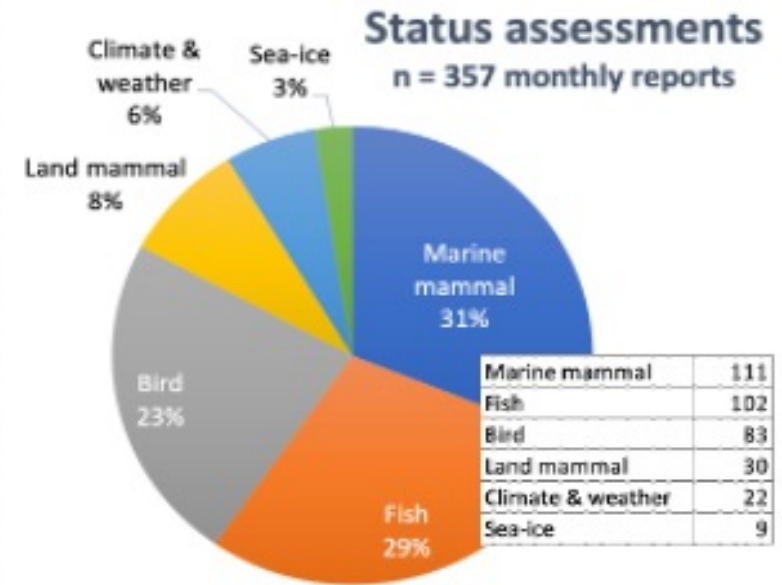




Data collection during a year at Bamsebu for several science programs: GLOBE (NASA), AURORASAURUS ++



# Community-based monitoring in Greenland: collection of data on environment and marine resources



- Community-based monitoring (CBM) is a method where indigenous and local communities are directly involved in environmental data collection. Example above is from North-West Greenland



# Community-based monitoring in Alaska: coastal risks and hazards

- What types of information used in short and long-term decisions and planning for coastal risks/hazards ?
- What is the role of existing CBM programs compared to other information used in risk and hazard mitigation?
- How do we understand standardization in connecting CBM with decision processes ?
- What are the benefits and drawbacks of greater standardization for different actors ?



# Workshop 6-9 Aug 2022:

## Community-based monitoring and Citizen science in the Svalbard area



Joint workshop between CAPARDUS H2020 project and Norwegian Institute for Cultural Heritage Research (NIKU) as part of the CULTCOAST project

- ca 20 participants – excursion to Hiorthhamn
- Review of practices, guidelines, standards and regulations
- Discussion – group work on Arctic Practice System concepts

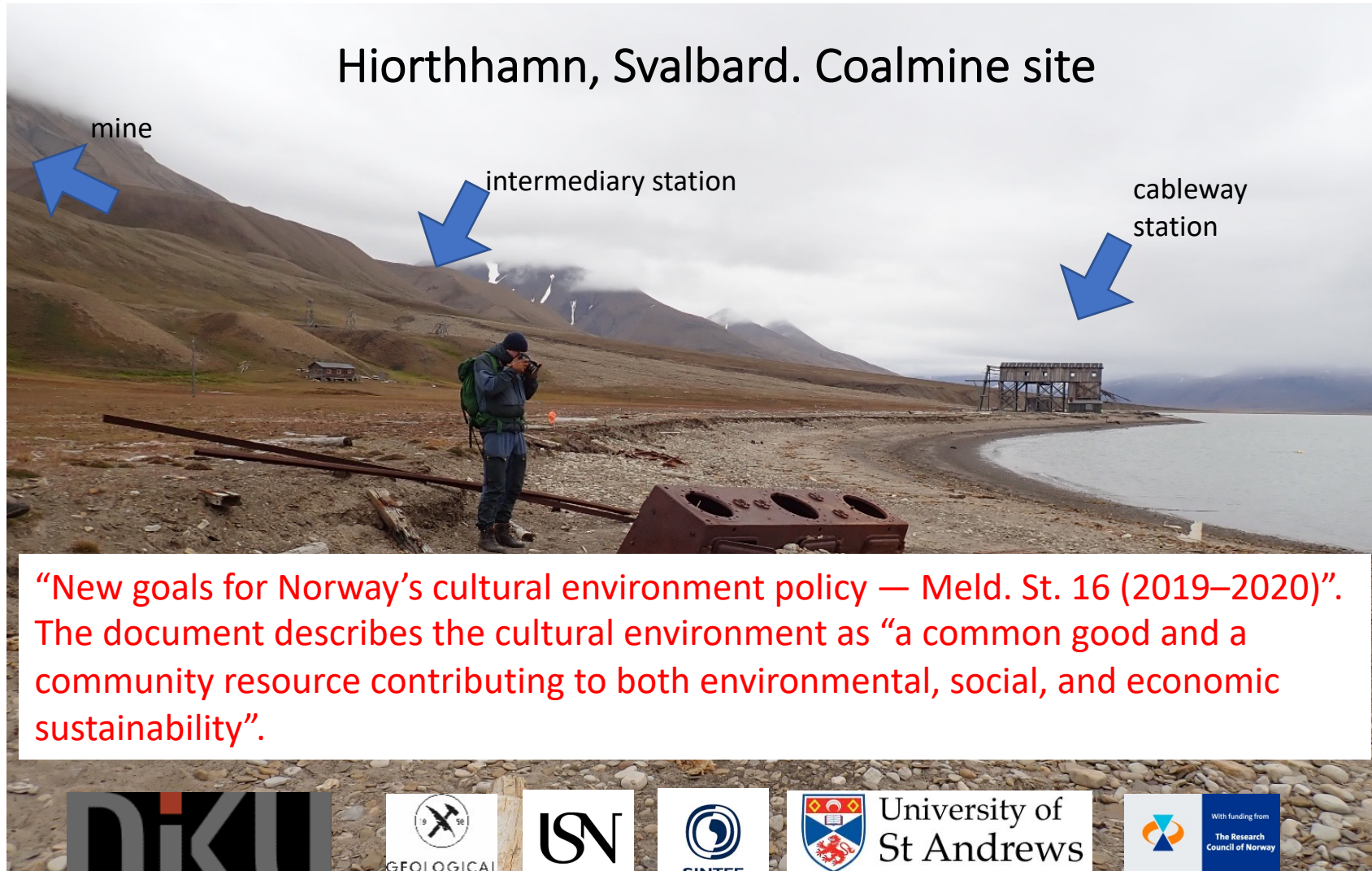
# Protection of cultural heritage in the Arctic

Can tourists and citizen science contribute ?

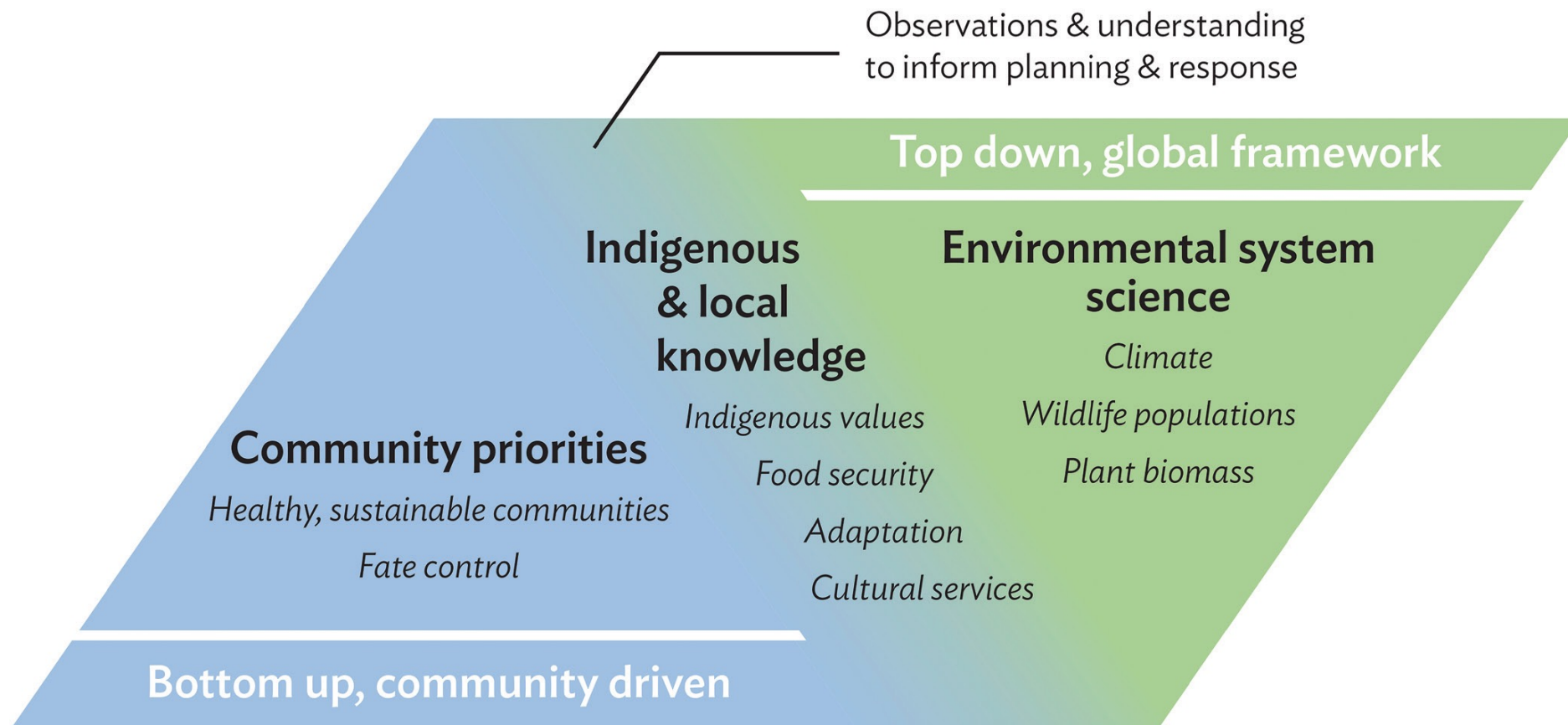


# Protection of cultural heritage in the Arctic

Can tourists and citizen science contribute ?



# Connecting Top-Down and Bottom-Up approaches in environmental observing



Scope of spatial scale

<b>Local</b>	<b>Regional</b>	<b>Global</b>
Hazards & opportunities Adaptation & mitigation	Ecosystem processes	Policy assessment

Eicken et al., 2021



# Questions for discussion

- Which safety challenges are important in your business/activity and how are the safety measures described (in documents, websites, etc.) ?
- How are the safety challenges managed and how do you work to improve the safety measures ?
- Which communication systems are used in your business/activity today and what do you suggest is most important to improve ?
- How are the safety measures communicated to the people involved in your business/activity?
- How should an information system (e.g. an Arctic Practice System) be made to be useful **for** your business/activity and **the local community in general** ?