

Key insights from the EU-PolarNet White Papers

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Antonio Quesada



„At the frontline of climate change” Science for Policy-Making hosted by
Christel Schaldemose MEP
European Parliament Brussels, 26th September 2018



Purpose of EU-PolarNet

Antonio Quesada



Integrated European Polar Research Programme

Societal Relevance & Research Needs



Co-design process



On-going dialogue with the European Commission

Integrated European polar research programme

Infrastructure access and usage plan

International cooperation
Transatlantic Research Alliance

Developing an Integrated European Polar Research Programme

Distilling what is already there....



...and extracting key priorities.

Getting stakeholder input.



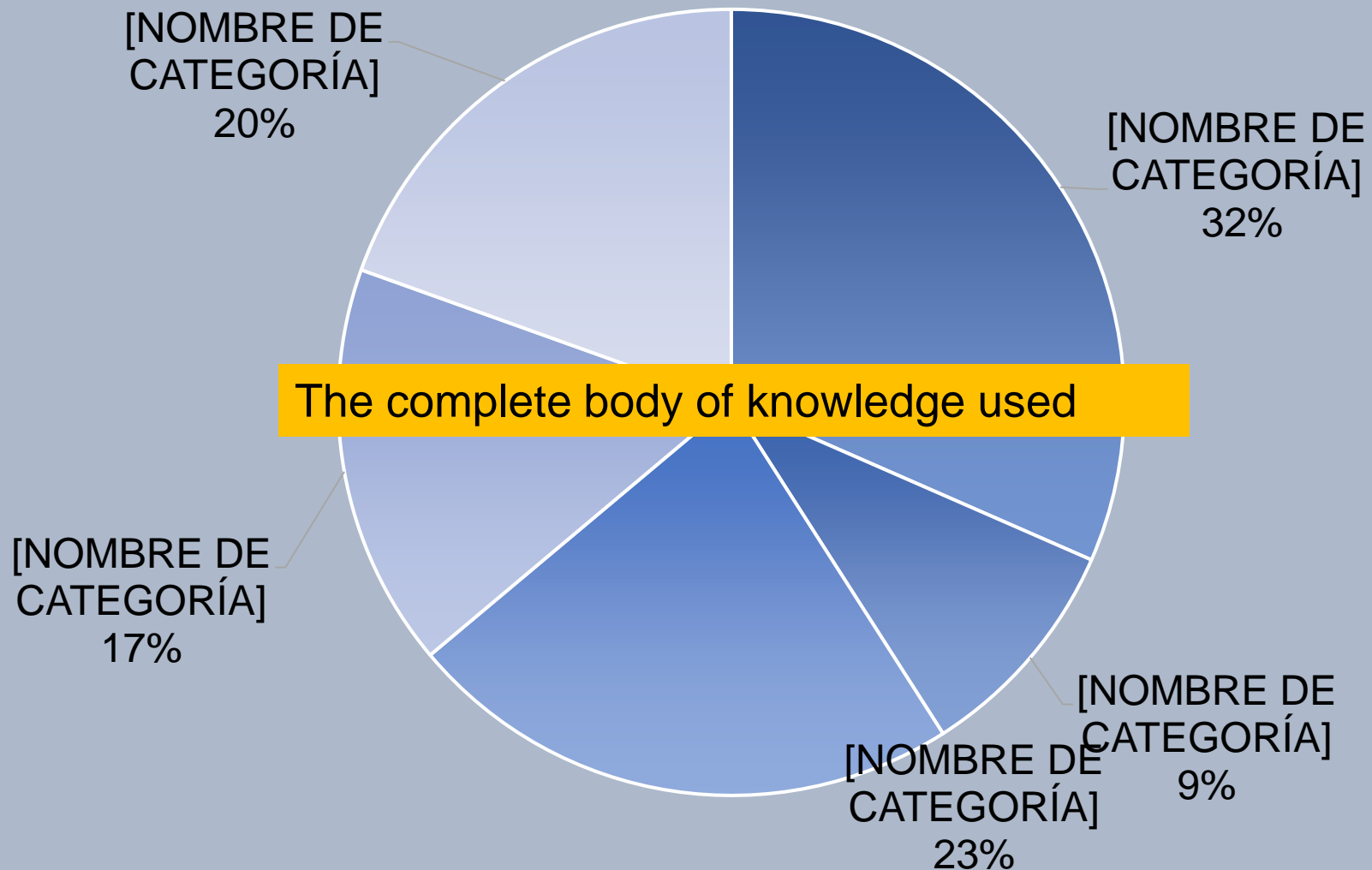
Clustering input into research priorities.



Getting stakeholder input.

Writing the Research Programme.

Society consultations: *connecting science with society*



White Paper workshop at La Cristalera (Madrid)



David Vaughan
(British Antarctic Survey)

Task leads and chairs

Antonio Quesada
(Spanish Polar Committee)



Executive Summaries



Summary of the
EU-PolarNet White Papers
White Paper No.

1

The coupled polar climate system:
Global context, predictability and regional impacts

Glacier front, Alpefjord, Northeast Greenland National Park (Photo: Peter Prokosh)



Summary of the
EU-PolarNet White Papers
White Paper No.

2

Footprints on changing polar ecosystems
Processes, threats, responses and opportunities
for future generations

Arctic Fox (Pupper Logopus), Lena Delta (Photo: Peter Prokosh)



Summary of the
EU-PolarNet White Papers
White Paper No.

3

**Managing human impacts, resource use
and conservation of the Polar Regions**

Research vessel in the Arctic Ocean (Photo: Alfred-Wegener-Institut / Mario



Summary of the
EU-PolarNet White Papers
White Paper No.

4

**The road to the desired states of social-
ecological systems in the Polar Regions**

Reindeer herd (Rangifer Tarandus) in Finnmark, Norway (Photo: Lawrence Håstop)



Summary of the
EU-PolarNet White Papers
White Paper No.

5

**Advancing operational informatics¹
for Polar Regions**

Wind Generator (Photo: Alfred-Wegener-Institut / Thomas Steuer)

The coupled polar climate system: Global context, predictability and regional impacts

Research needs

- The coupled polar climate system in a global context
- Limitations of the predictability of the polar climate system
- Regional impacts and adaptation pathways in response to polar climate change

The way forward

- Increased policy and public awareness
- Coordination of existing data
- Implementation and clustered use of infrastructures
- Strengthening the polar observation infrastructure
- More accurate understanding of the coupled polar climate system



WHITE PAPER 2

Footprints on changing polar ecosystems

Processes, threats, responses and opportunities for future generations



Research needs

- Improve the understanding of current structure and function of polar ecosystems
- Identify the most relevant ecological indicators
- Provide relevant and timely scientific advice to decision-makers

The way forward

- Publishing coordinated calls for seed funding
- Leading concerted international actions
- Supporting capacity building
- Nurturing public education and outreach



WHITE PAPER 3

Managing human impacts, resource use and conservation of the Polar Regions



Research needs

- The direct and indirect impacts of human impacts
- Choices about resource use, conservation and related impacts
- Linking knowledge and decision making

The way forward

- Engage iteratively with policy makers
- Identify available data sources for environmental and social variables
- Integrate available environmental and social knowledge
- Use topic areas involving resource conservation and use

WHITE PAPER 4

The road to the desired states of socio-ecological systems in the Polar Regions

Research needs

- Identify and agree the desired future states envisioned by stakeholders and rights-holders
- Create guidelines for sustainable monitoring
- Provide guidance on optimal pathways

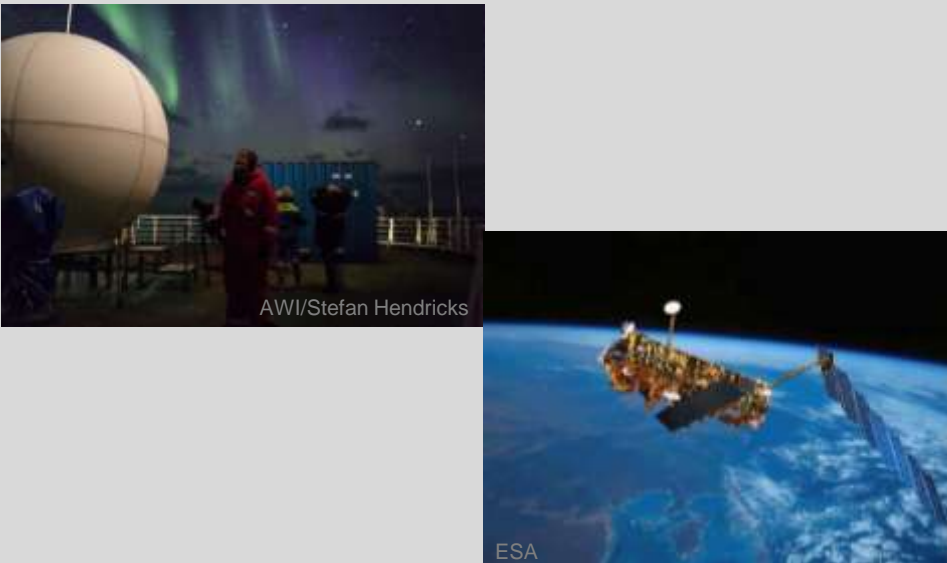
The way forward

- Examination of the existing SDGs indicators' framework
- Examination of other indicators
- Assessment of existing data



WHITE PAPER 5

Advancing operational informatics for Polar Regions



Research needs

- Communication systems
- Linking observations and models
- Information and interoperability



The way forward

- Identify existing and required communications systems
- Link measurements of the natural environment with models
- Study how informatics in the Polar regions can enable interaction and interoperability

Informatics studies the representation, processing and communication in natural and engineered systems. It has computational, cognitive and social aspects.

(University of Edinburgh, School of Informatics 2017)



Our thanks to all participants at the retreat for their enthusiasm and work to support the white paper process.

Thank you!

