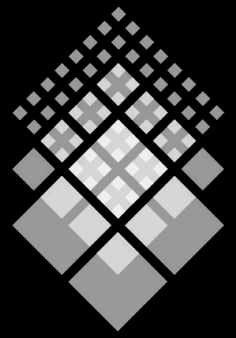
Barcelona Supercomputing Center
Centro Nacional de Supercomputación

LATEST THINKING



next GEMS

Storms & Society

Knowledge Coproduction, Dissemination and Communication

DRAGANA BOJOVIĆ, EULÀLIA BAULENAS and PAJAM SOBHANI

Content

Main themes:

- What we did
- What challenges were encountered, especially regarding data
- Main result
- Any surprises?
- What we will talk about in the Storms & Science sessions

Storms & Society - **what we did**

As announced in the
first day:

Storms & Society - **what we did**

As announced in the first day:

We did not hack…

Storms & Society - **what we did**

As announced in the first day:

We did not hack…

and on top of that, we bothered you with a **survey**…

DOBLE ESCÁNDALO!

Storms & Society - **what we need**

survey

https://www.surveymonkey.com/r/c4hackathon

Storms & Society - **why we need it**

1. Because we take very seriously:
   a. the knowledge you are creating;
   b. climate change;
   c. and the lack of climate action

2. Whilst we understand that the **scientific community** can get so far in pushing climate action

   (reason for which we are also conducting research on other factors)

Storms & Society - **why we need it**

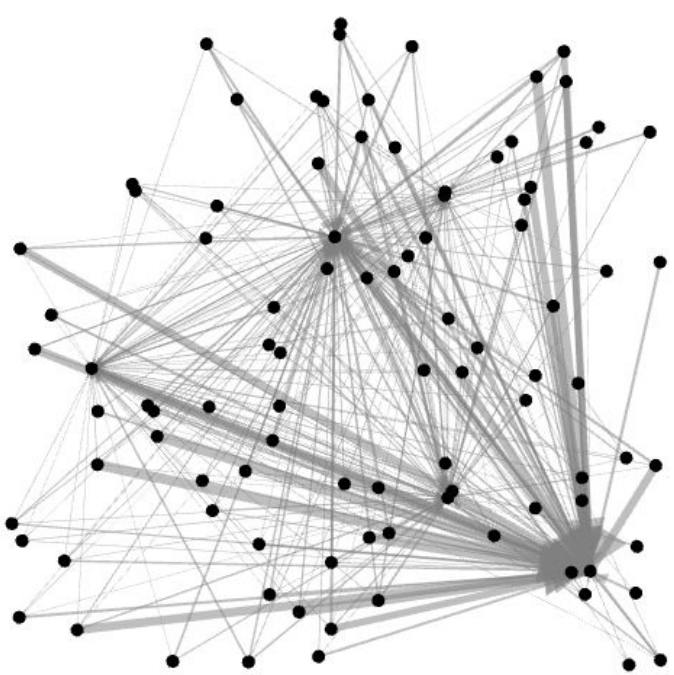
1. Because we take very seriously:
   a. the knowledge you are creating;
   b. climate change;
   c. and the lack of climate action

2. Whilst we understand that the **scientific community** can get so far in pushing climate action, we work with the following assumption:

   That during hackathons **knowledge** is translated into **action** at some level:
   a. maybe you push new scientific boundaries as a result of the interactions;
   b. maybe a joint article gets media coverage;
   c. maybe you join scientists for future;
   d. maybe you create a .gift that good that becomes the symbol of new ecologist movement

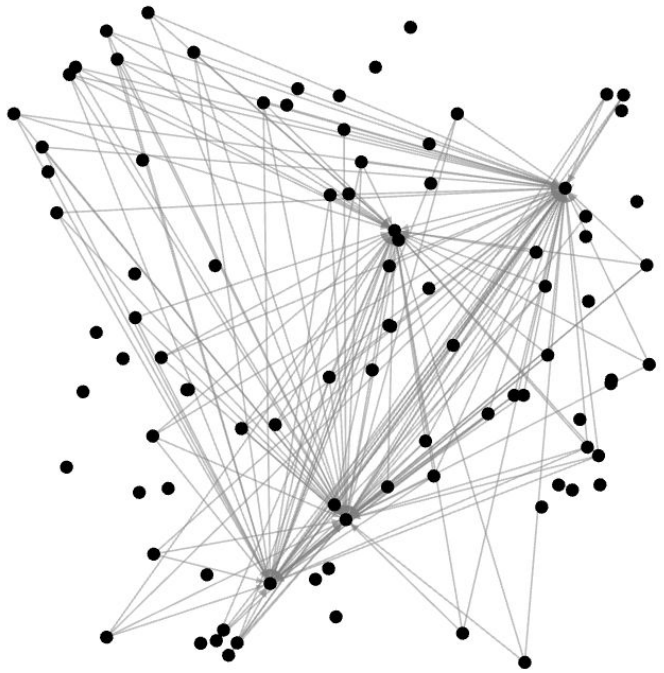
Density

- ++ Information transmission
- + Deliberation
- + Resilience
- + Single-loop learning
- – Double-loop learning



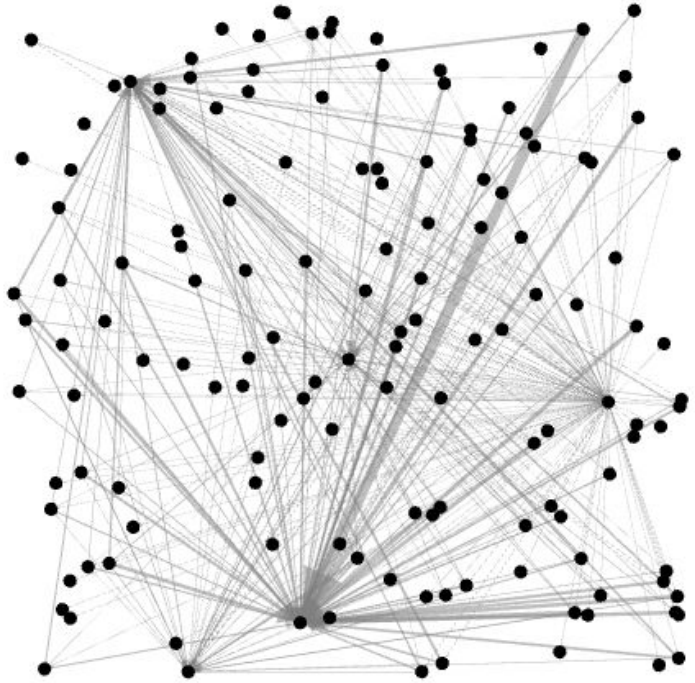
C1H

Av Degree Centrality: 4,021
Av. De Cen Mean Weight: 39
Total density: 0,083
Mean distance: 1,2



C2H

Av Degree Centrality: 1,804
Av. De Cen Mean Weight: 12,8
Total density: 0,039
Mean distance: 1,867

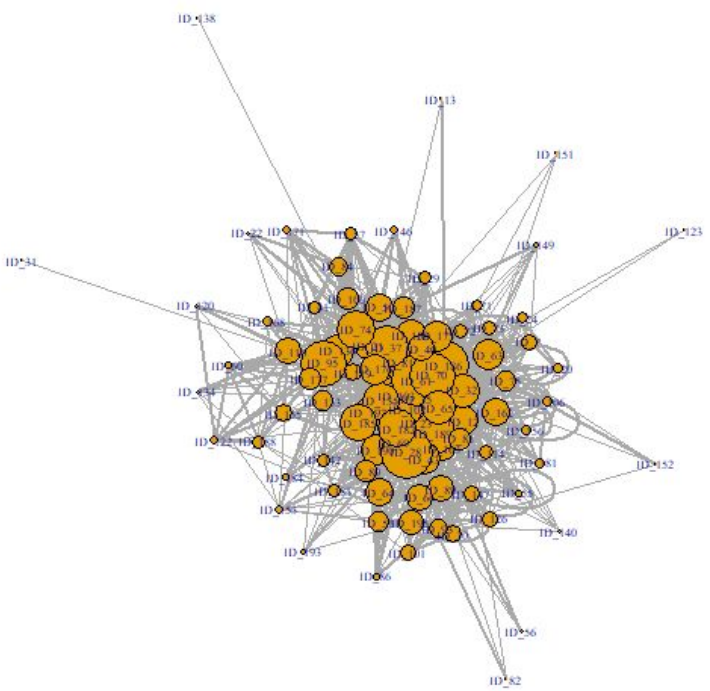


C3H

Av Degree Centrality: 2,483
Av. De Cen Mean Weight: 13,392
Total density: 0,035
Mean distance: 1,965

Centrality

- \+ Information transmission
- \- Deliberation
- \- Resilience
- \+ Single-loop learning
- \+ Double-loop learning



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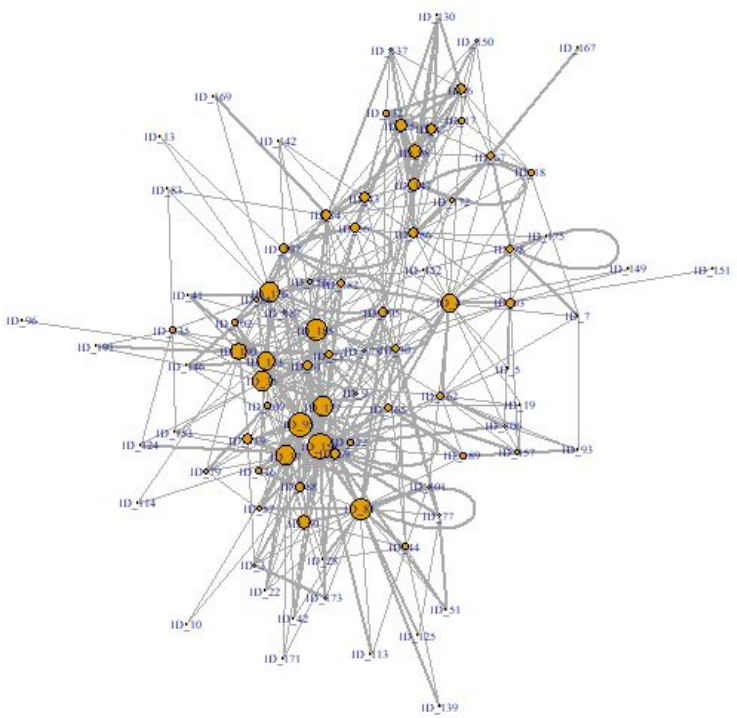

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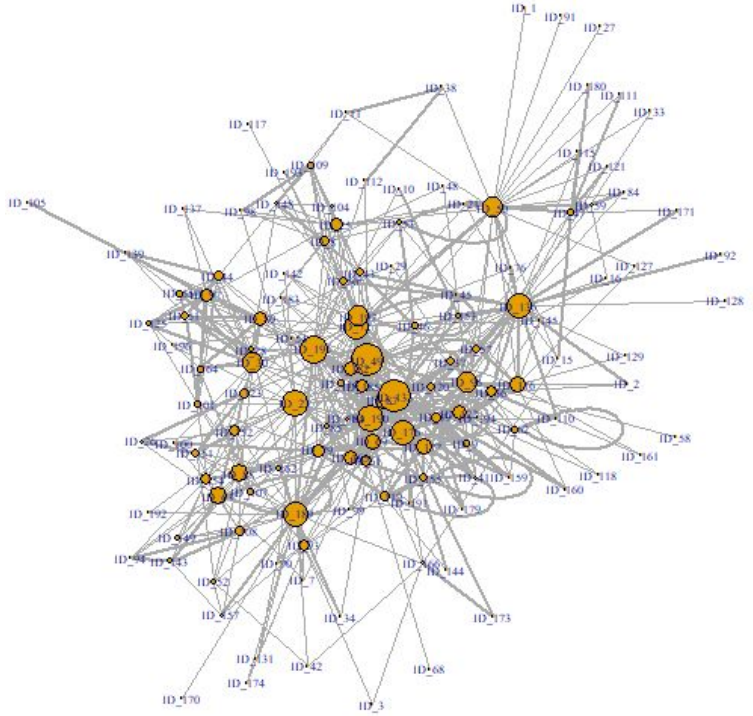

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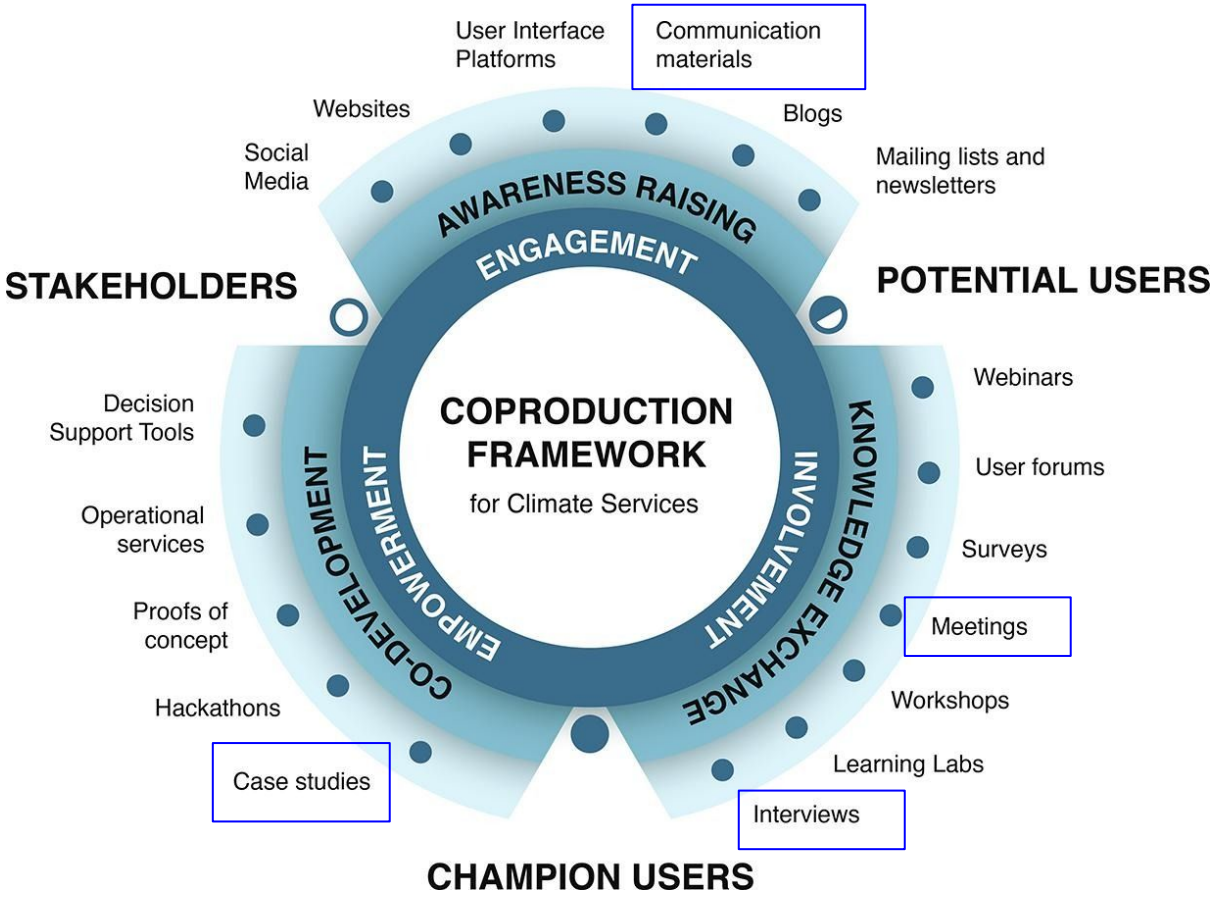
Storms & Society - **what we did**

the **co-production process**

- Science explainers
- Policy brief
- Storylines



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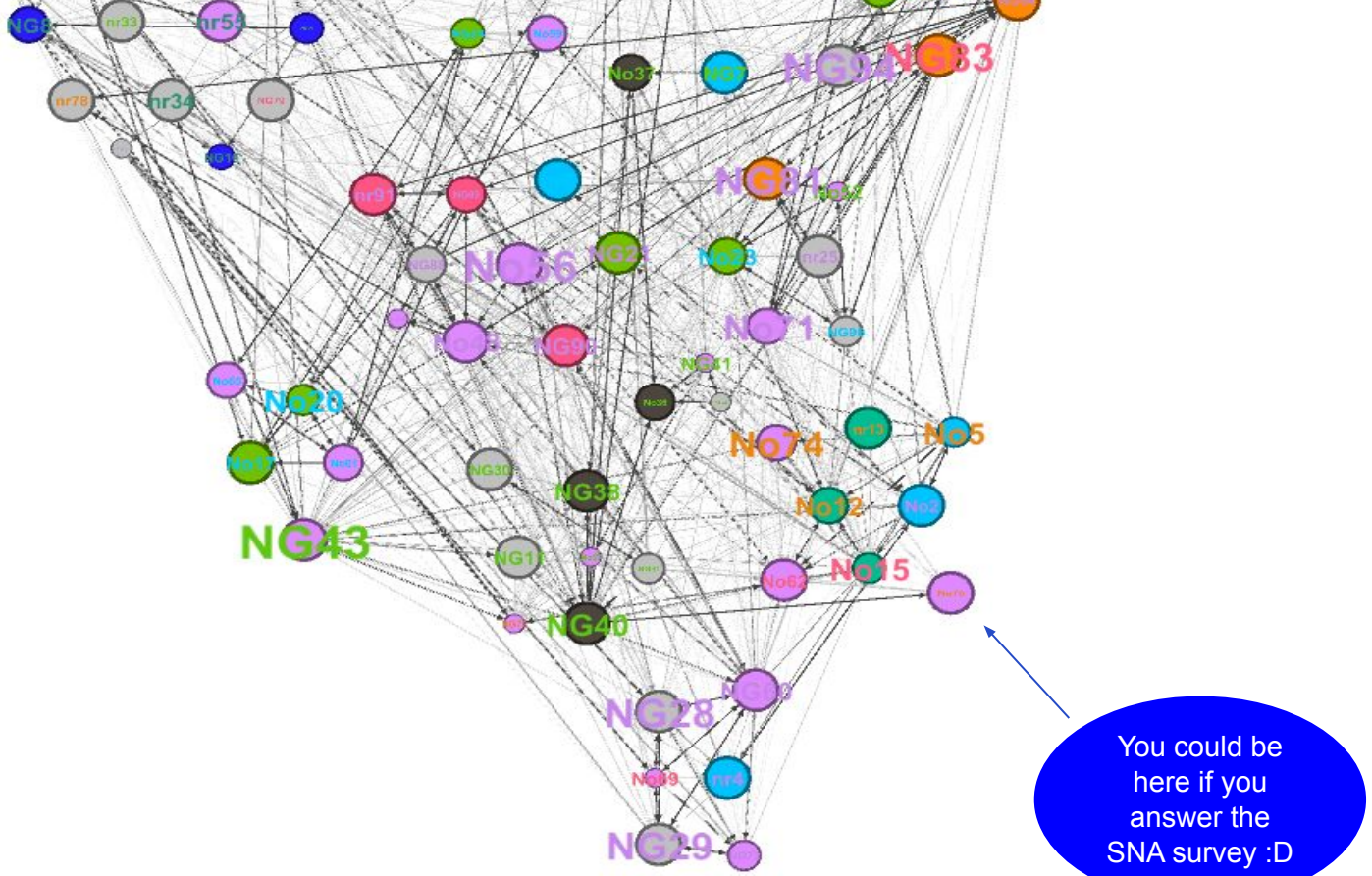
Engagement, involvement and empowerment: Three realms of a coproduction framework for climate services. *Global Environmental Change*, *68*, 102271.

Storms & Society - **what we will present**

- **Social network analysis**: evolution of the interactions during 4 hackathons
- **Policy brief**: km-scale resolution
- **Storylines**: renewable energy - supporting the next generation decision-making



Thank you ☺

LATEST THINKING

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Content

Main themes:

- Storms & Society's role during the hackathon
- Science communication & dissemination
  - Science explainers
  - NextGEMS videos
- Policy brief on high-resolution modelling
- Other:
  - Storylines (for fisheries, for renewable energy)
  - Social network analysis

Storms & Society's role during the C4H

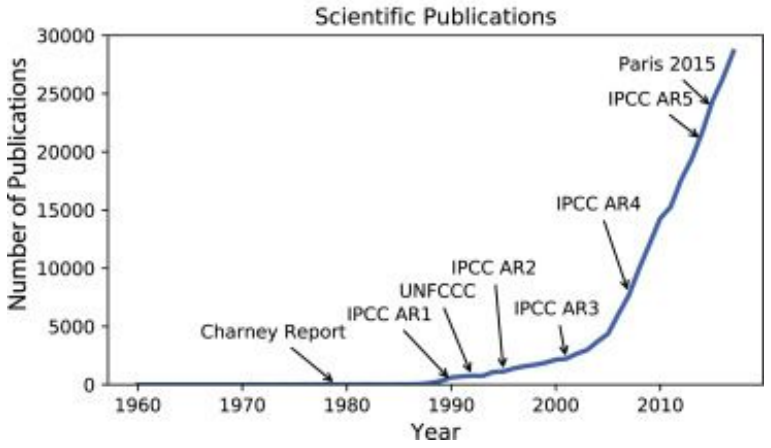
We do not hack…

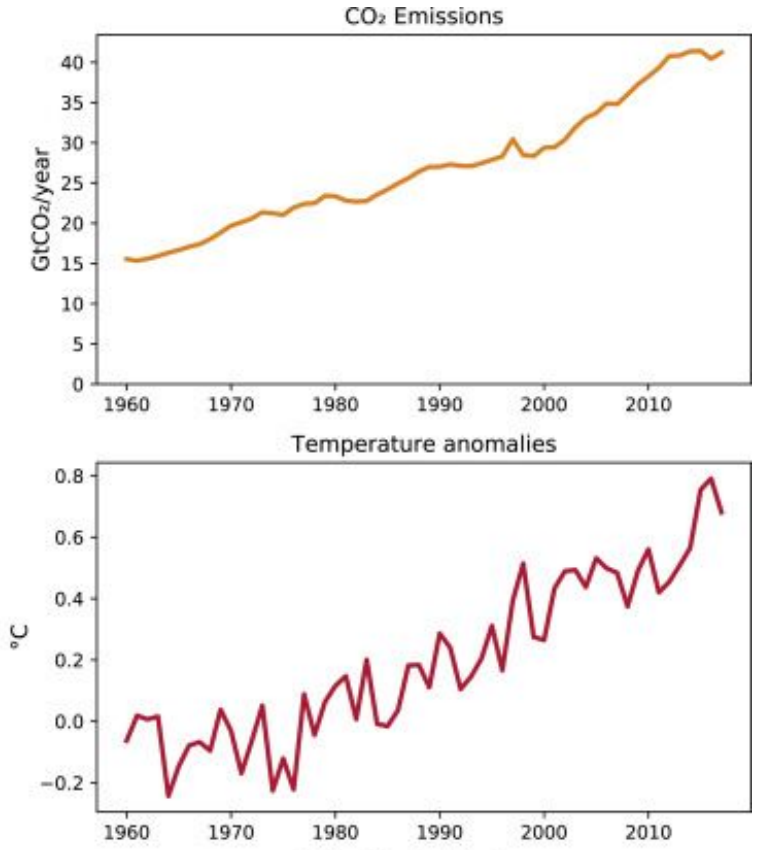
Storms & Society's role during the C4H

We do not hack…
but we move forward
the **coproduction**
process

Storms & Society's role during the C4H

the **coproduction process** is one of the keystones expected to help reduce the knowledge-action gap

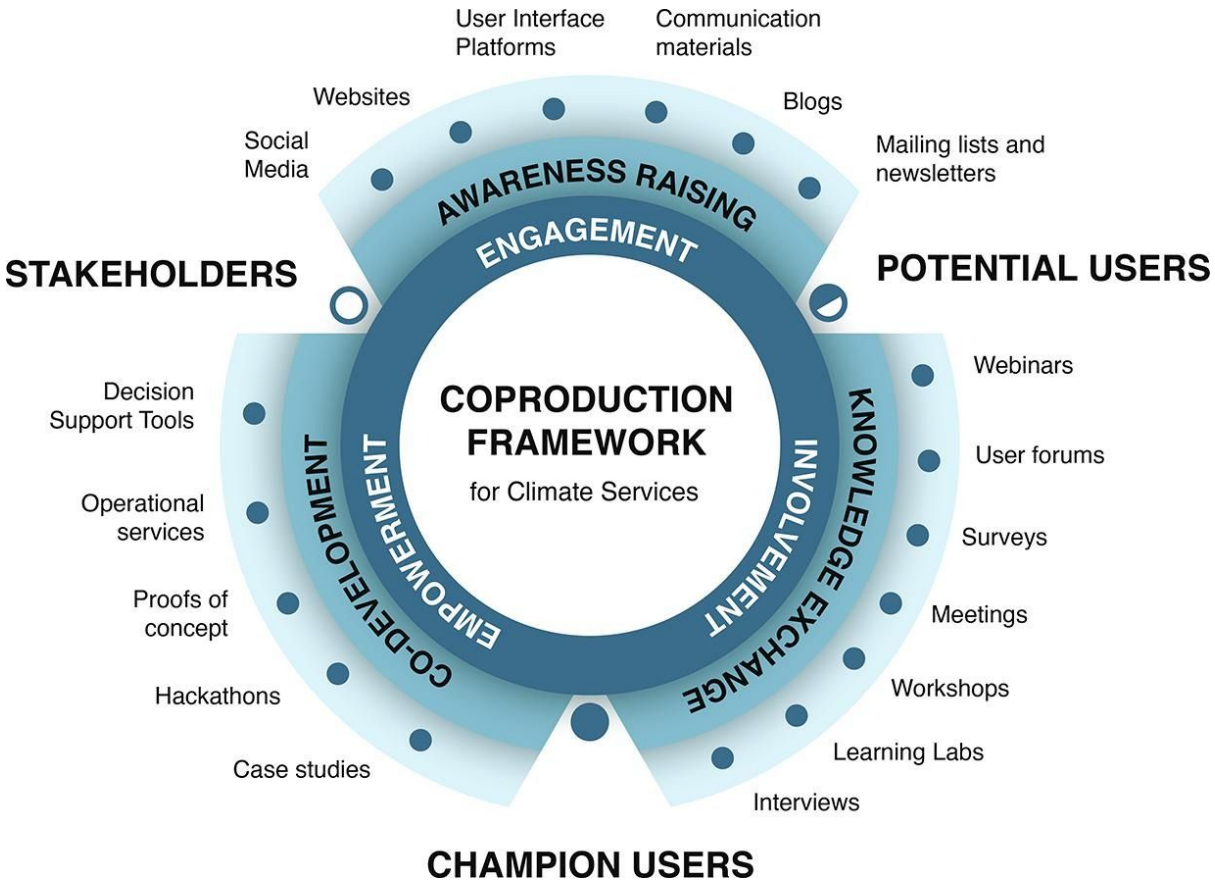




Knutti, R. (2019). Closing the knowledge-action gap in climate change. *One Earth*, 1(1), 21-23.

Storms & Society's role during the C4H

the **co-production process**



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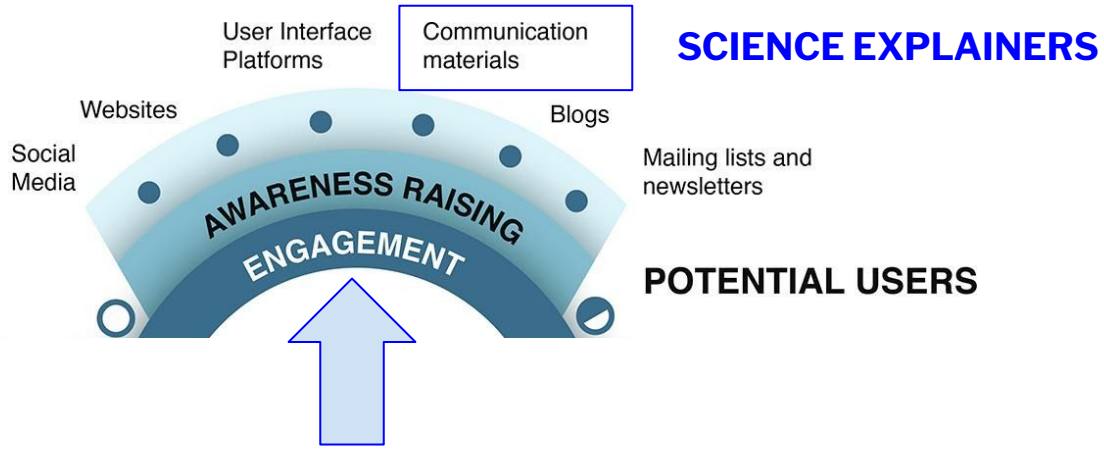
Science communication & dissemination



SCIENCE EXPLAINERS

- 1-2 pager summarising your research
- Very useful to communicate in plain language and reach a wider public
- If you have 15' time to sit down for a coffee, we can build the skeleton

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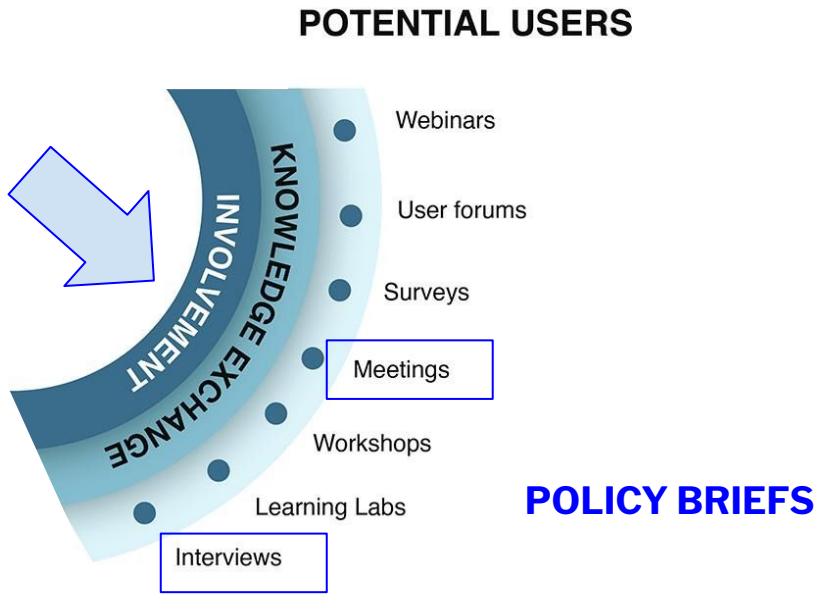
Policy brief on high-resolution modelling

POLICY BRIEF

- Directed towards policy makers
- Advocacy for a specific issue
- Theme of this hackathon: **KM-resolution**



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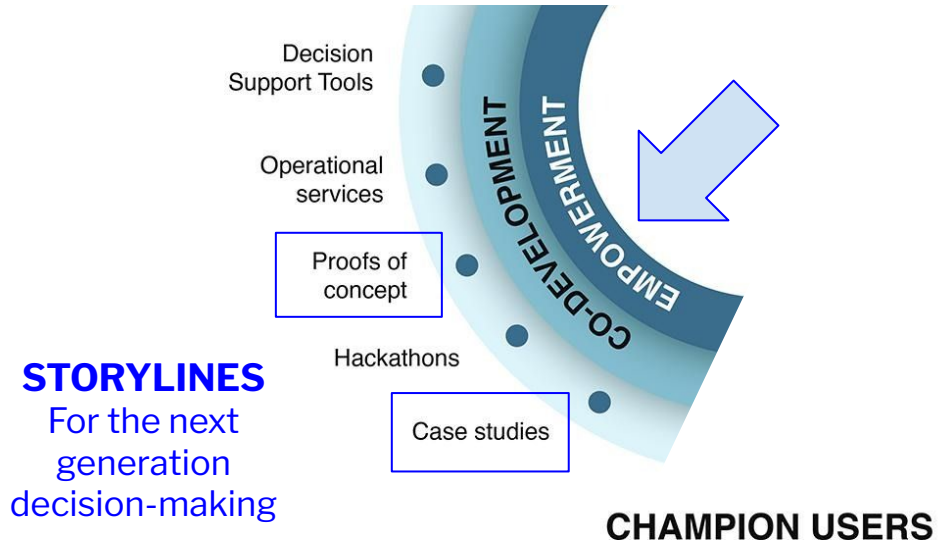
Storylines for NextGEDM

STORYLINES

- **Fisheries**
- **Renewable energy**: using NextGEMS data to support policy-making



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Storms & Society's other **research lines**

Studying the role of

knowledge networks

to help reduce the knowledge-action gap

Knutti, R. (2019). Closing the knowledge-action gap in climate change. *One Earth*, 1(1), 21-23.

Storms & Society's other **research lines**

Studying the role of **knowledge networks**

↓

to help reduce the knowledge-action gap

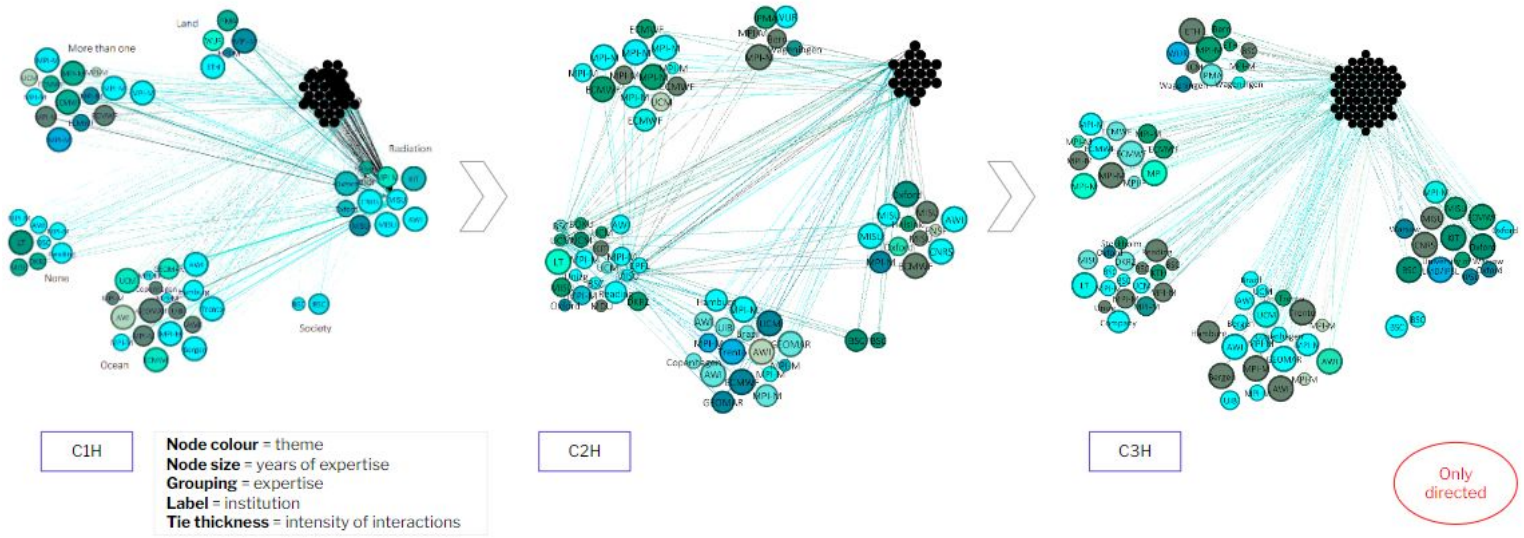


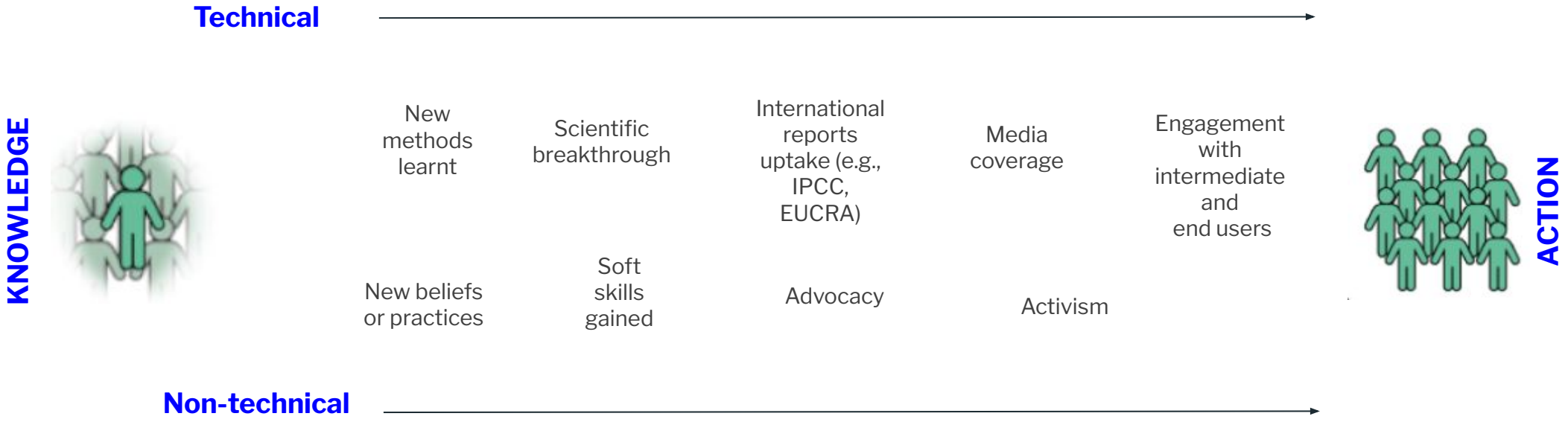
Figure: Evolution of the network across hackathons. For illustrative purposes.

Knutti, R. (2019). Closing the knowledge-action gap in climate change. *One Earth*, 1(1), 21-23.

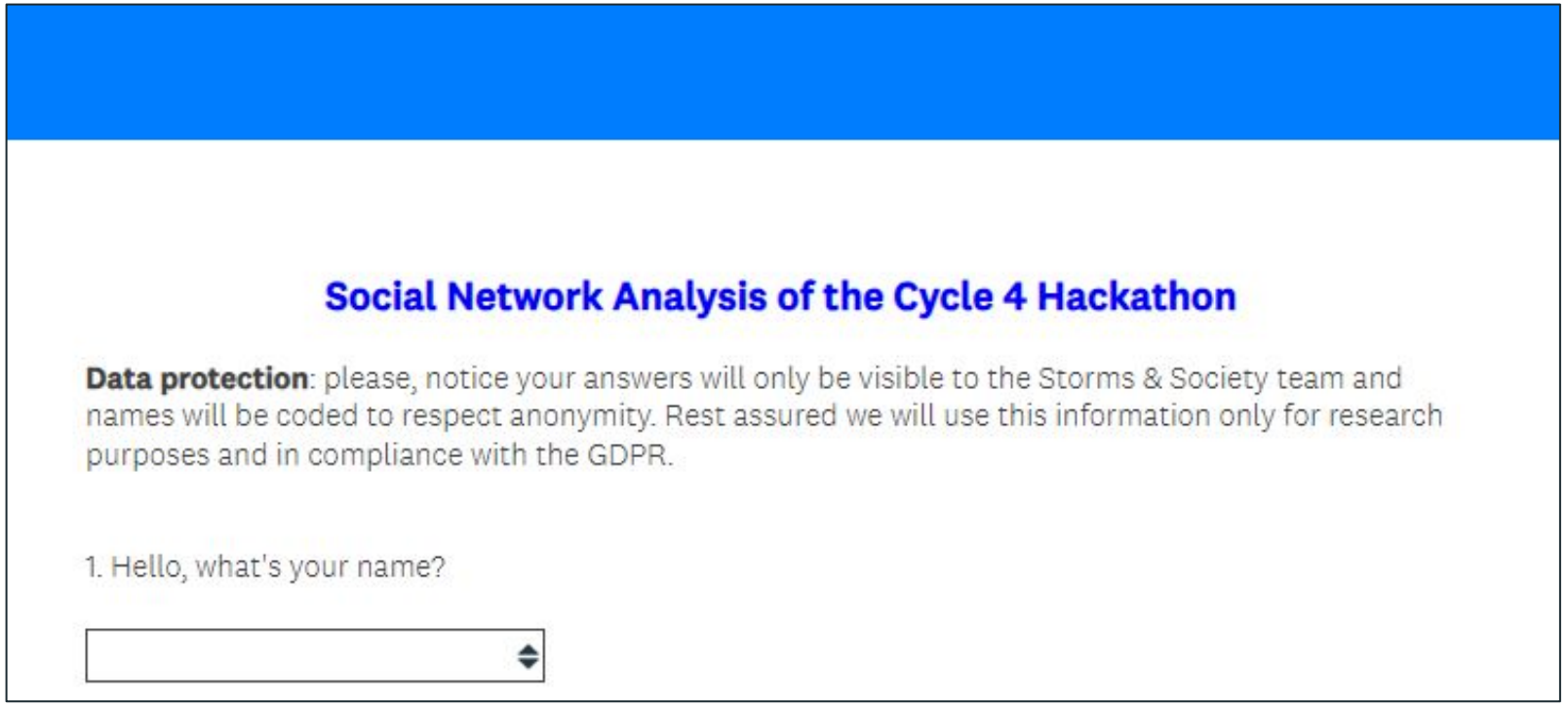
Storms & Society's other **research lines**

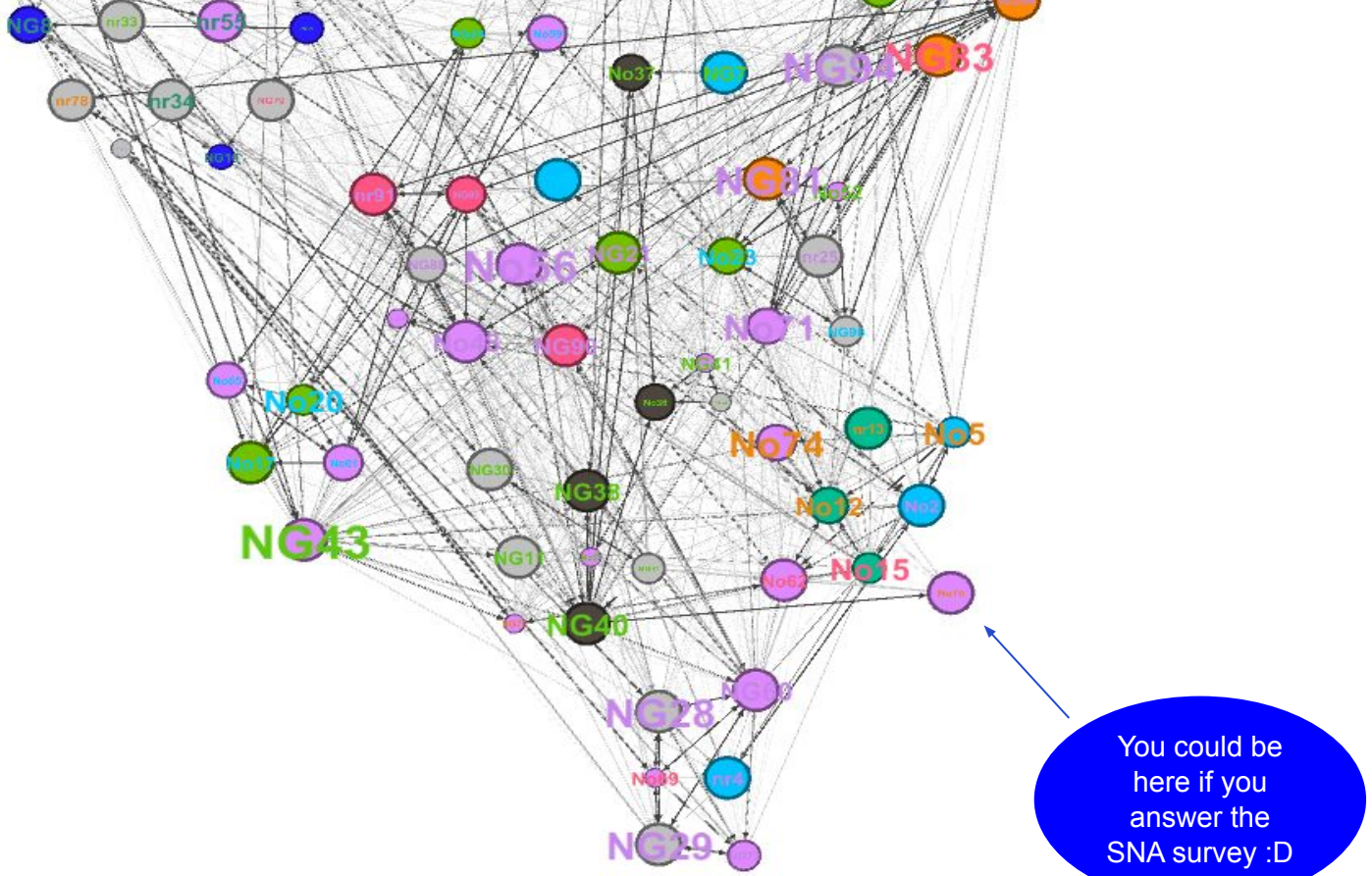
What is needed to transform knowledge into action?

At the **individual level** and as a function of interactions in venues such as **CxH**



Storms & Society's other **research lines**





Thank you ☺

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NextGEMS & Science communication

Complete list of science explainers:

- *Tracking fast-forming and dissipation clouds*
- *Knowledge networks in NextGEMS*
- *Scientific and technical challenges of extending a weather model for climate studies*
- *Understanding aerosols and clouds with storm-resolving simulations*
- *Tackling the biases of tropical mixed layer depth in ocean models*
- *Retuning the ocean vertical mixing scheme for storm-resolving models*

Videos planned during this C3H hackathon:

BY LATEST THINKING

- *Progress videos: science explainers*
- *Research videos: articles published*

Videos started during this C3H hackathon:

BY BSC - Guillermo Marín

- *Results video: data-driven display of outputs*

NextGEMS **society** theme

The Storms & Society theme works on several fronts on this regard, as you know:

*on **application communities** and integrating **potential users***

*We have a coproduction process expect to start mid 2023, on **fisheries and marine productivity in West Africa**. Representatives from national and inter-governmental organizations on the topic are identified as well as several professional and civil society organizations to co-build the type of **storylines** we want to operationalize.*

The goal is to find applications of NextGEMS output data with a special attention to marginalised stakeholders in the West African fisheries socio-ecosystem.