Future research and policymaking on climate change adaptation: Where we would like to go – and where we might have to go

Carlo Aall (leader of the Norwegian Research Center on Sustainable Climate Change Adaptation: Noradapt)

Presentation at the seminar «Resilience of Ecosystems and Communities: Lessons from NOCCA2025 and Future Perspectives", Kuopio, Sokos Hotel Puijonsarvi 11.6.2025. Organised by the Ministry of Agriculture and Forestry (Finland) for the Nordic Council of Ministers for Fisheries, Aquaculture, Agriculture, Food and Forestry

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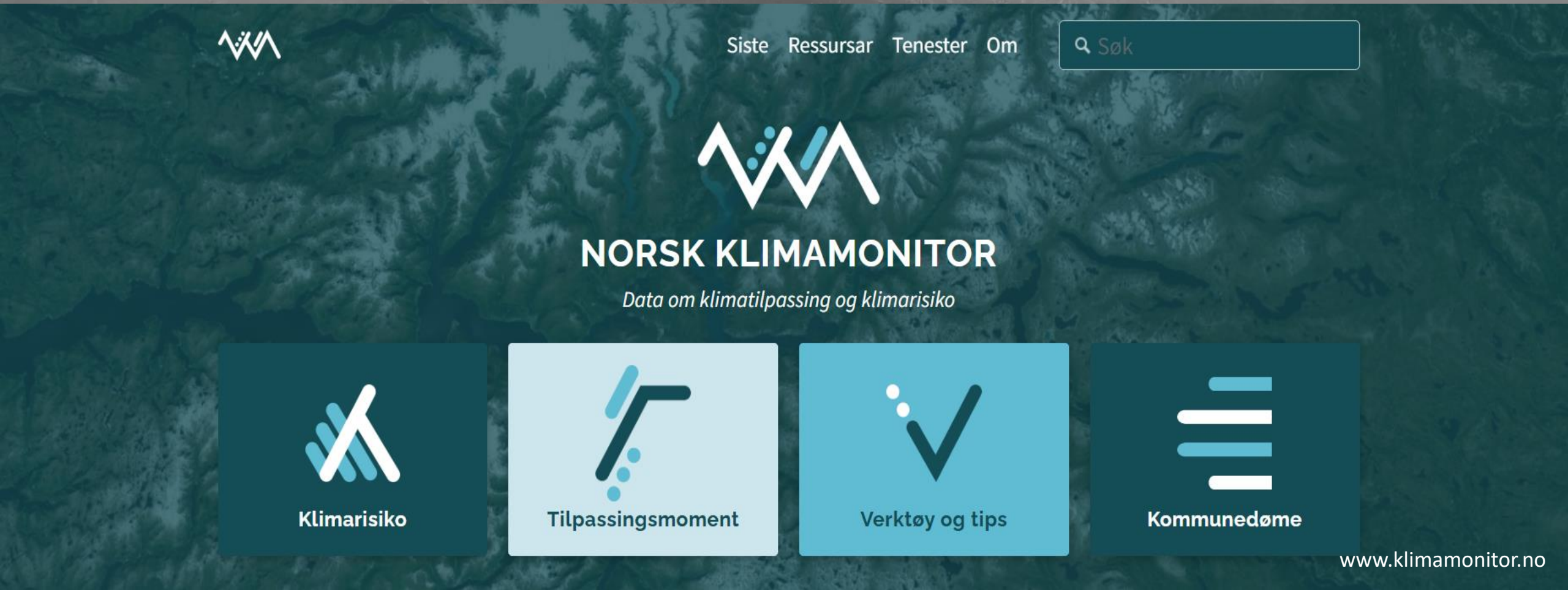

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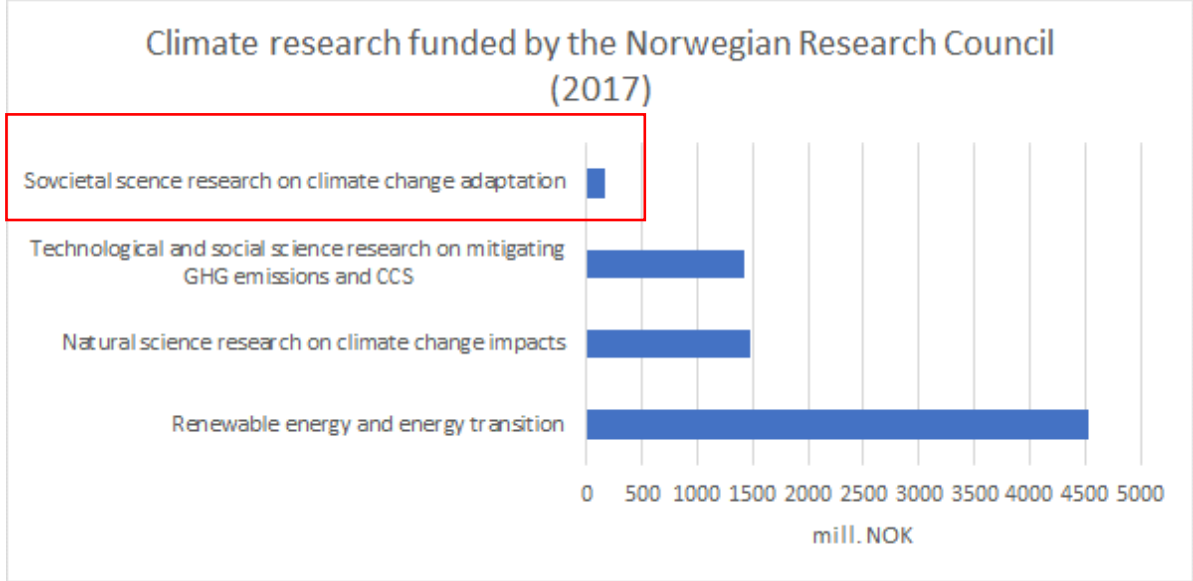
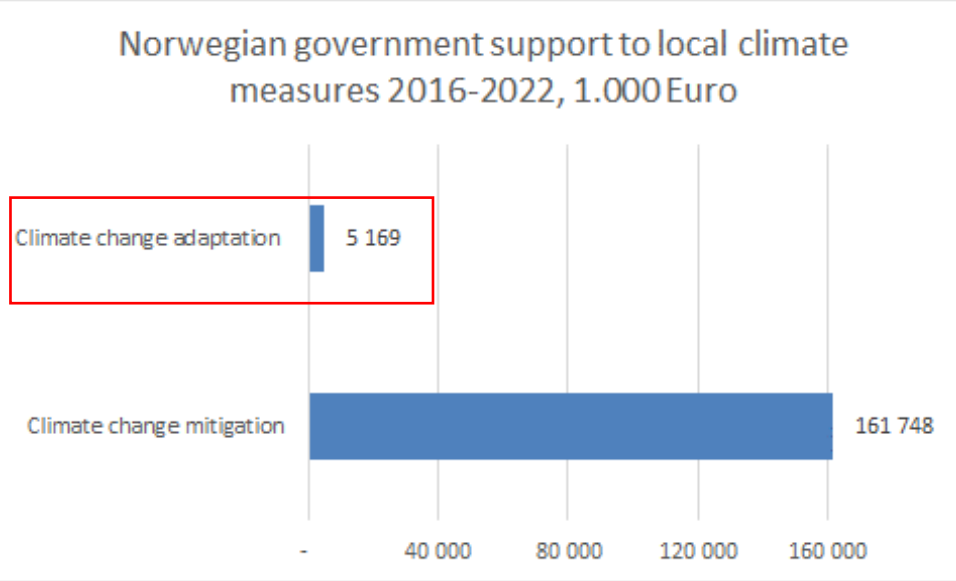
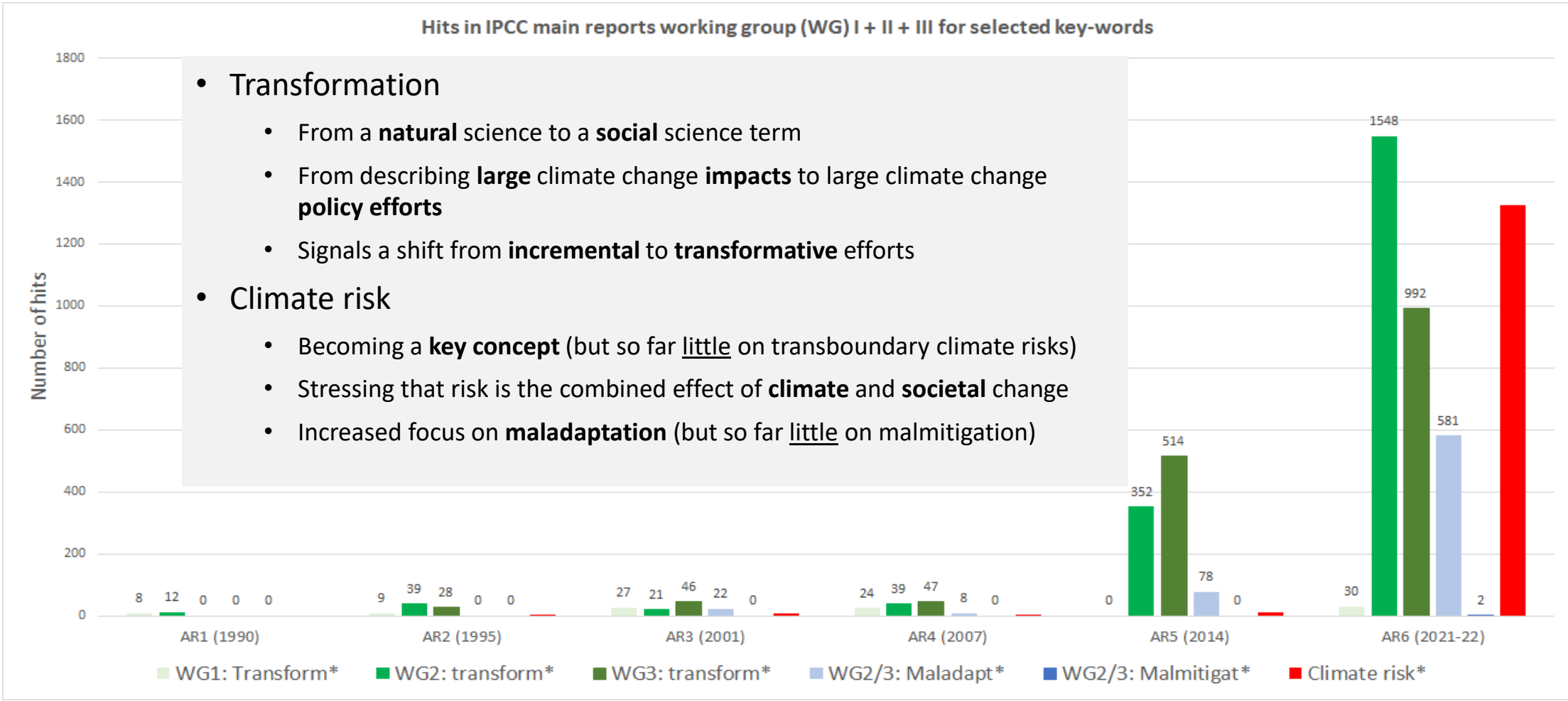
Climate change adaptation:
Still the “2 % community”





Changes in the international research agenda

- Transformation
  - From a **natural** science to a **social** science term
  - From describing **large** climate change **impacts** to large climate change **policy efforts**
  - Signals a shift from **incremental** to **transformative** efforts
- Climate risk
  - Becoming a **key concept** (but so far <u>little</u> on transboundary climate risks)
  - Stressing that risk is the combined effect of **climate** and **societal** change
  - Increased focus on **maladaptation** (but so far <u>little</u> on malmitigation)



Does the nordic research agenda differ?

- Emerging research on **malmitigation** (case: climate risks from the transition to a renewable energy system)

Climate Risks of the Transition to a Renewable Energy Society: The Need for Extending the Research Agenda

Carlo Aall, Tarje Wanvik, and Brigt Dale

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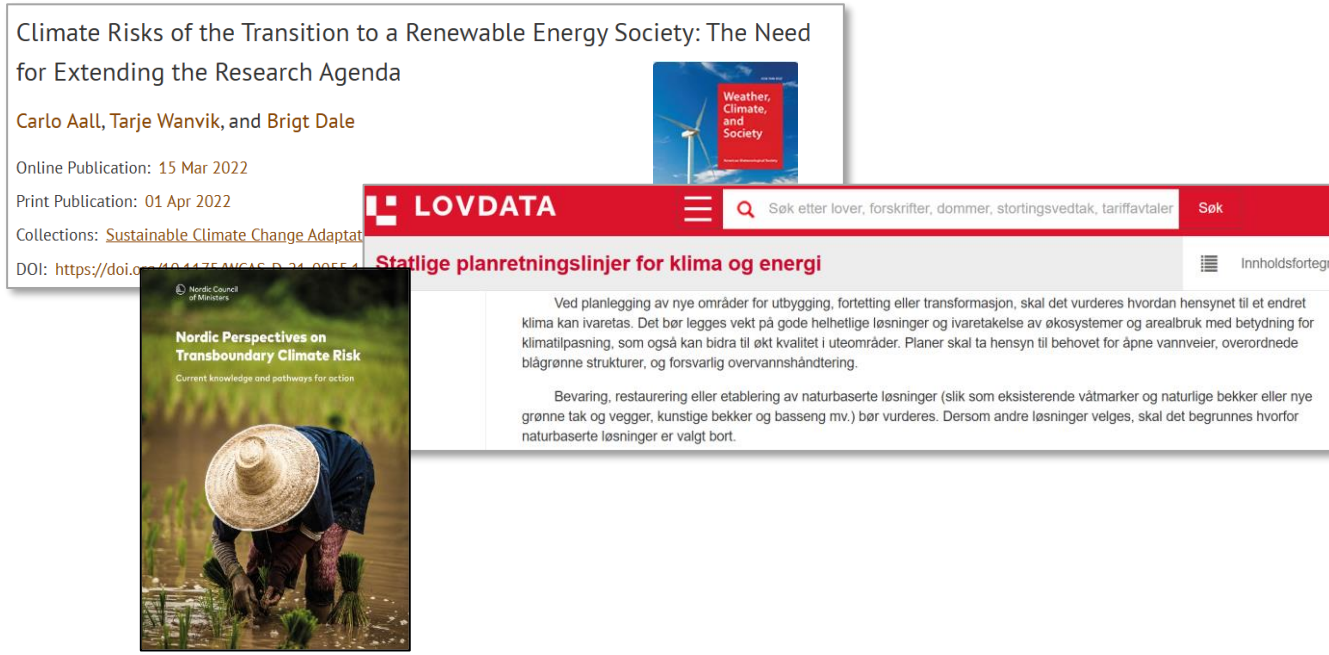


Impacts of including TBCs on the food and climate agenda in Norway

- **Stage 1 (up to 2010): Economic modelling of climate related opportunities - POSITIVE**
  - "In Norway, a moderate temperature increase is expected, and …. this could **increase production**"

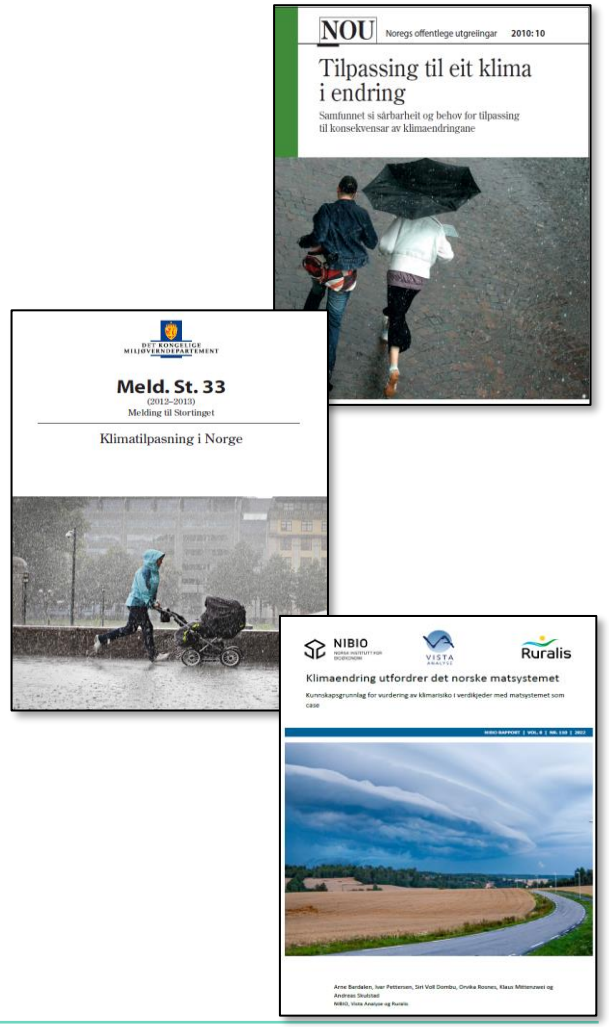
Government Green paper on climate change adaptation, 2010, p. 132

- **Stage 2 (after 2010): Inclusion of ecological assessments of climate risks – ZERO-SUM**
  - ".. increased temperature and rainfall [in Norway] could cause **greater damage** caused by existing and new plant pests such as insects, viruses and fungi"

Government White paper on climate change adaptation, 2013, p. 21

- **Stage 3 (2022): Inclusion of TBCs in assessing climate risks - NEGATIVE**
  - "Climate change combined with other events may in extreme cases require **rationing of food**, also in Norway"

Press release from the Norwegian Environment Agency in connection with the launch of a report on climate change and food security in Norway, 2022



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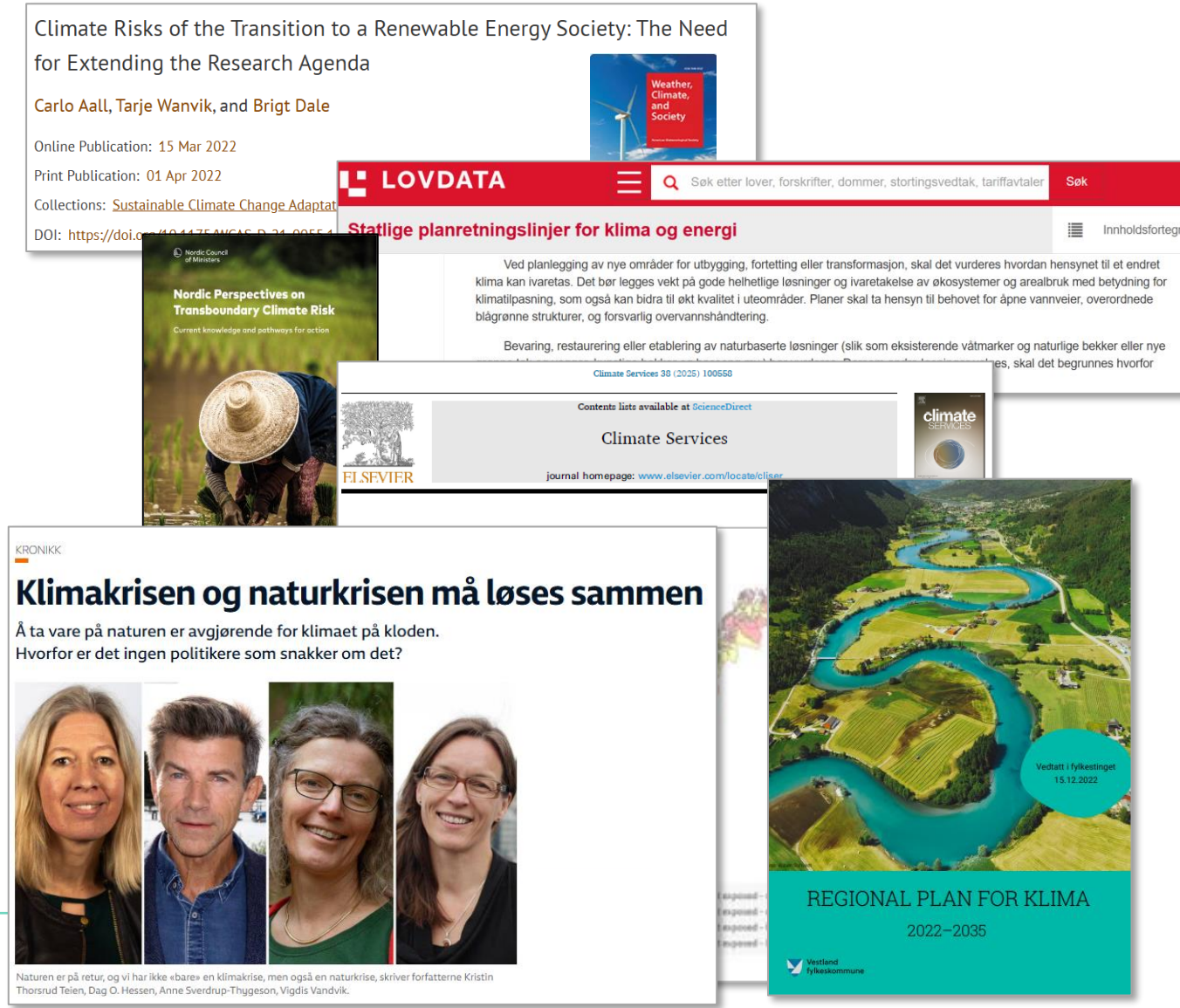

Where we might have to go

- Increasing political unrest
  - **Dismantling** of **climate policy** and **climate research** in the US (and possible other countries to follow)
  - **Distrust** in and **withdrawal** from **international political agreements** (Paris agreement) and **organisations** (WHO, UN)
  - A global increase in acts of **war**
  - A global **setback** of liberal **democracy**
- Impacts on the climate policy & research agenda
  - Leveling up **worse case scenarios** in the upcoming IPCC 7th main assessment report
  - Forced to address the "impossible" question on how to adapt to "unthinkable" **tipping point** futures
  - **Climaticization** of the **security** agenda and **securitization** of the **climate adaptation** agenda
  - **Transboundary climate risks** with **global food security** and **mas-migration** becoming key research topics
  - **Degrowth** becoming a part also of the adaptation agenda (already a part of the mitigation agenda)

The way ahead

- The important idea that we must **transform**
  - "There is growing debate on the need for **transformational** approaches to tackle the challenges facing development in the face of climate change. If current **incremental** approaches to preventing dangerous climate change and adapting to the change we are already locked into are **insufficient**, then more **radical** approaches may be required"

Bahadur and Tanner, 2012

- The critical question of whether to **transform** or **become** transformed?
  - "Thus, the critical question is whether society is able to **actively** 'transform' (i.e. to perform a directed, desirable process) or passively to '**become**' transformed (i.e. the effects of inadvertently crossing thresholds).
  - The former is a planned, deliberate process, whereas the latter is an uncontrolled process, which results from insufficient system resilience; and one would expect that **inadvertent transformation** is more likely to lead to **undesirable system states** with low productivity and less human well-being"

Nelson et al., 2007

Thanks for your attention!

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