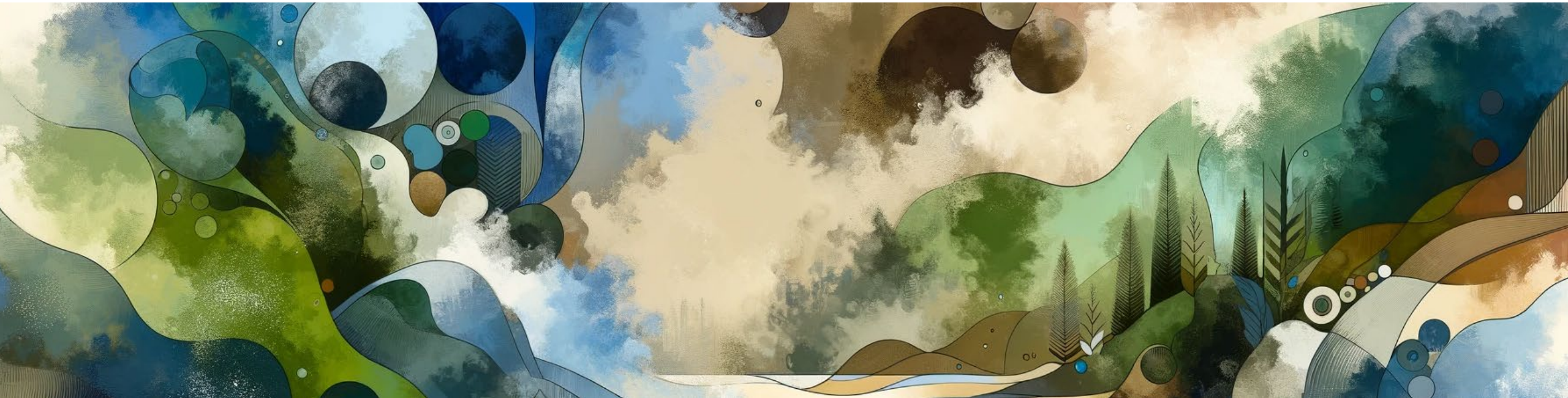


Ecosystem management under emerging novel biosphere conditions - navigating challenges, necessities and opportunities



DALL-E

Jens-Christian Svenning

- Center for Ecological Dynamics in a Novel Biosphere (ECONOVO)
- Department of Biology, Aarhus University



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CENTER FOR ECOLOGICAL DYNAMICS
IN A NOVEL BIOSPHERE



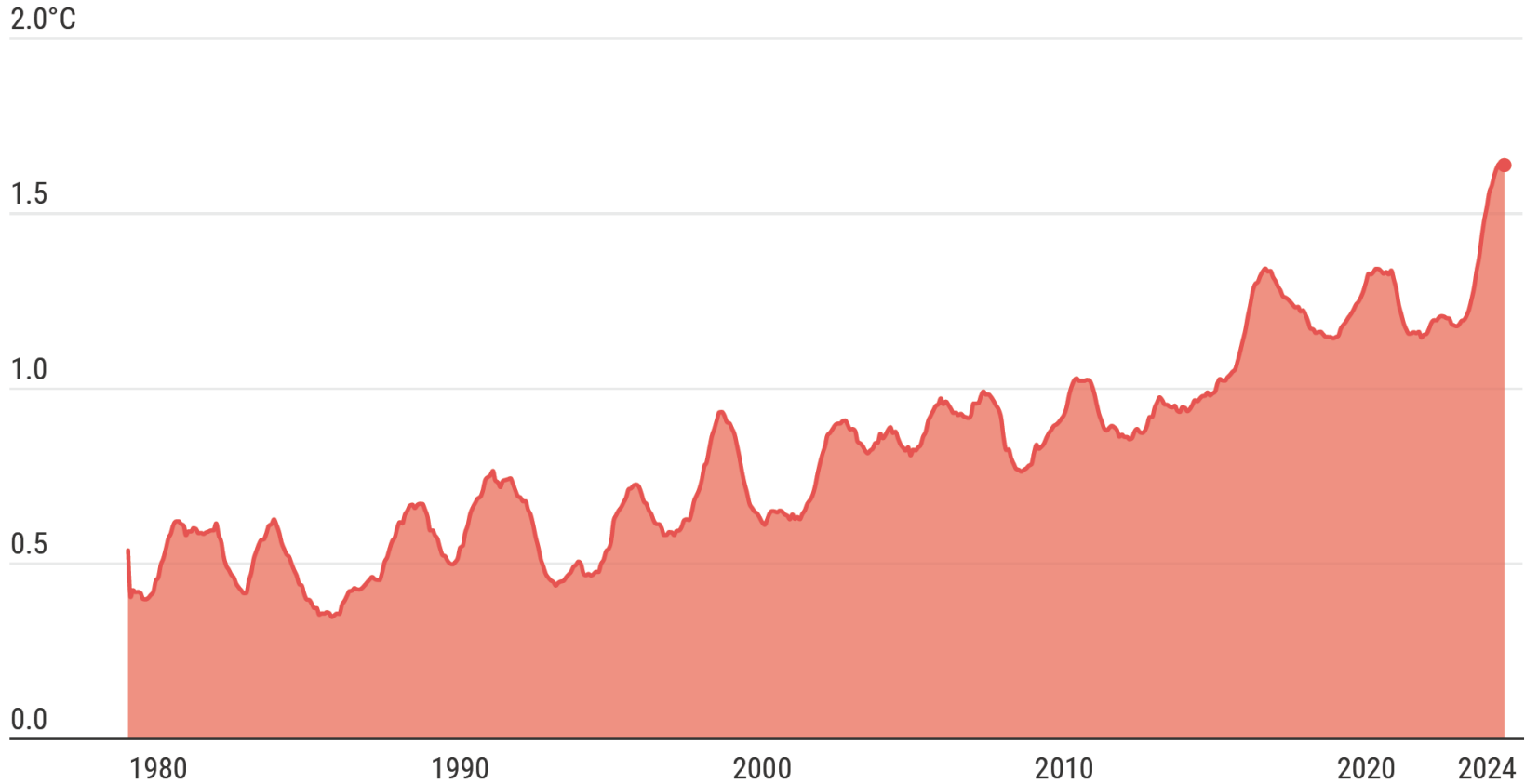
2024 is on track to become hottest year on record

Global surface air temperature anomalies



Anomalies relative to the pre-industrial (1850–1900) reference period for:

August all months 12-month average

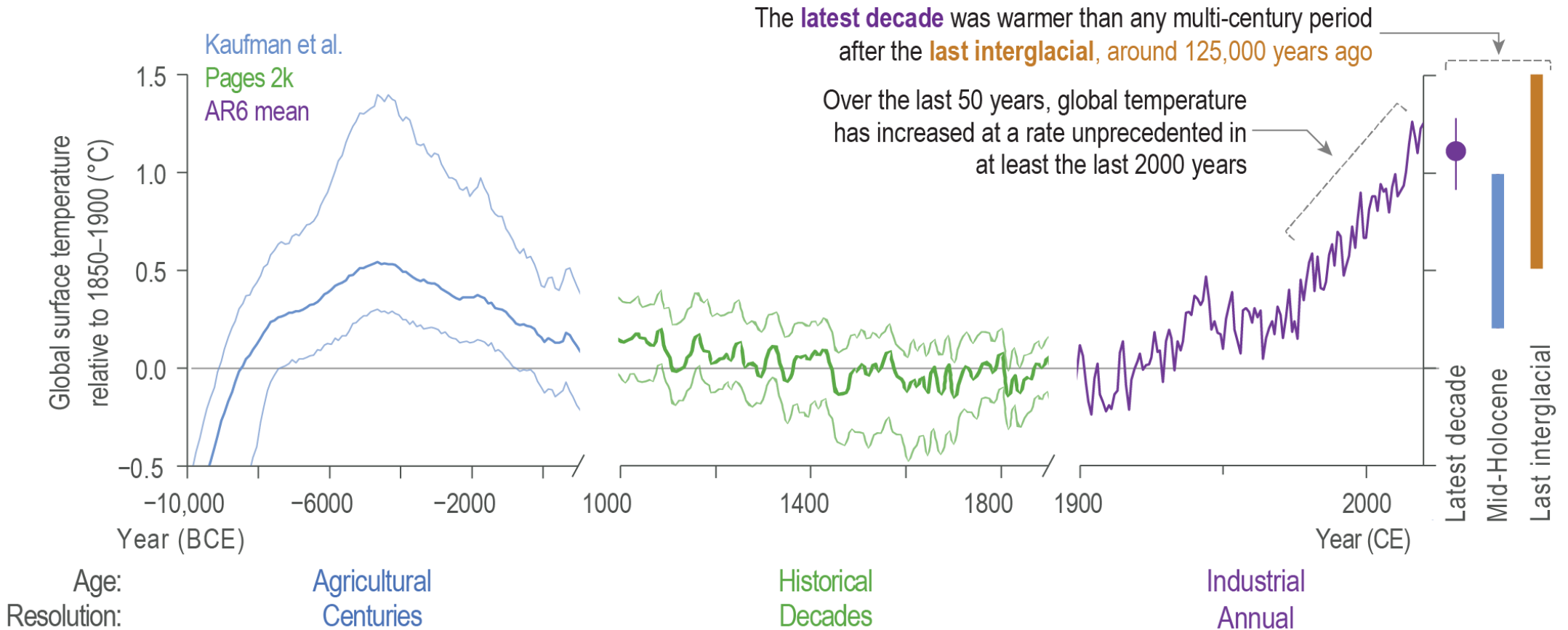


Data source: ERA5 • Credit: C3S/ECMWF

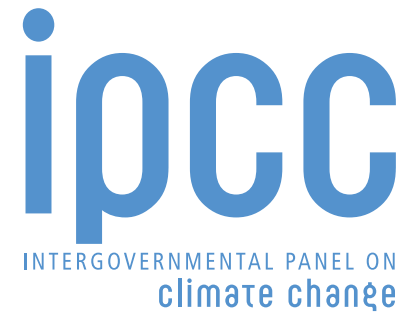
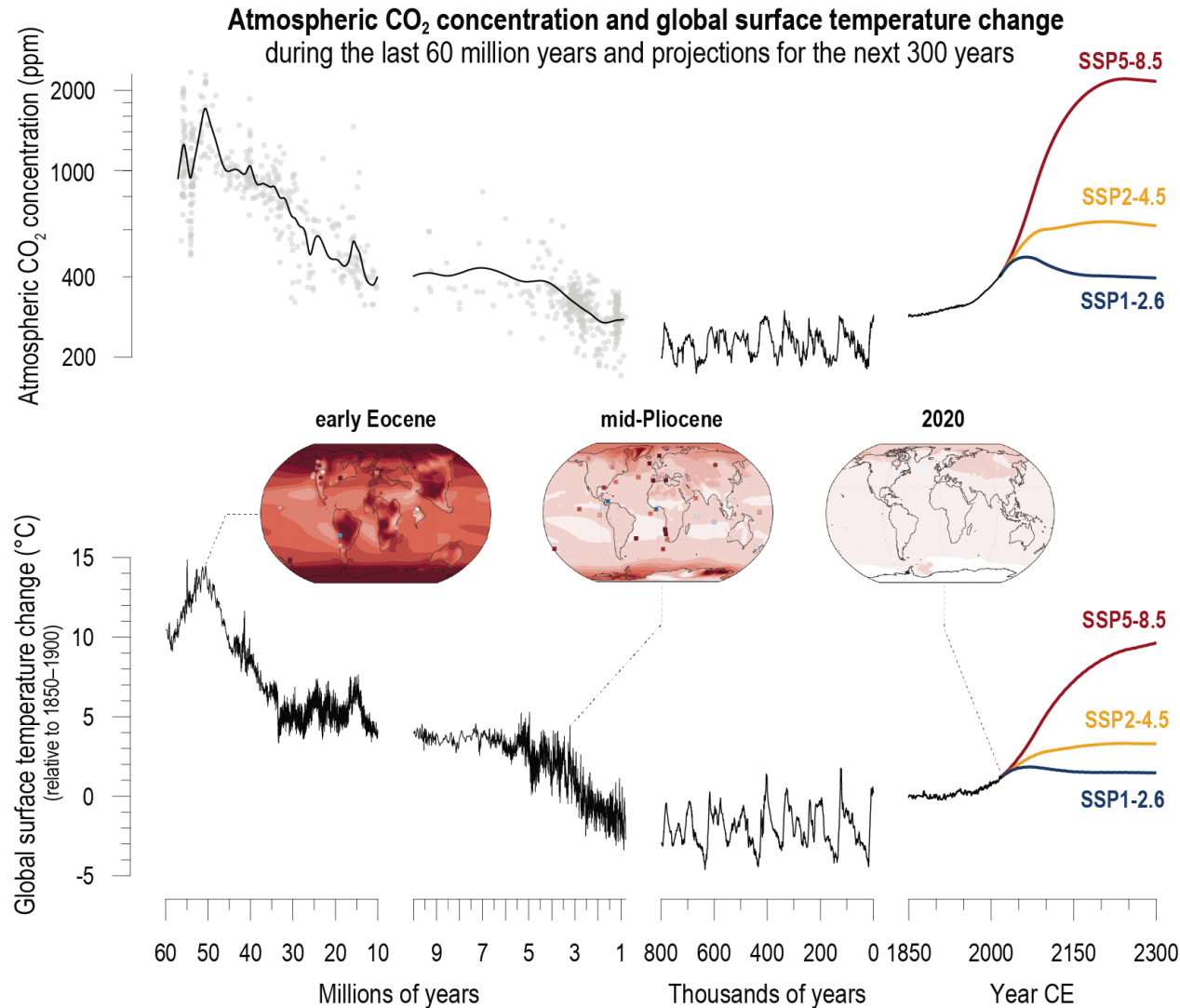
Climate is already warmer than ever in the history of civilization

Changes in surface temperature

(a) Global surface temperatures are more likely than not unprecedented in the past 125,000 years



Future climate risk being extremely “abnormal”



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**EARLY HUMAN IMPACTS
- INSIGHTS FOR THE FUTURE**

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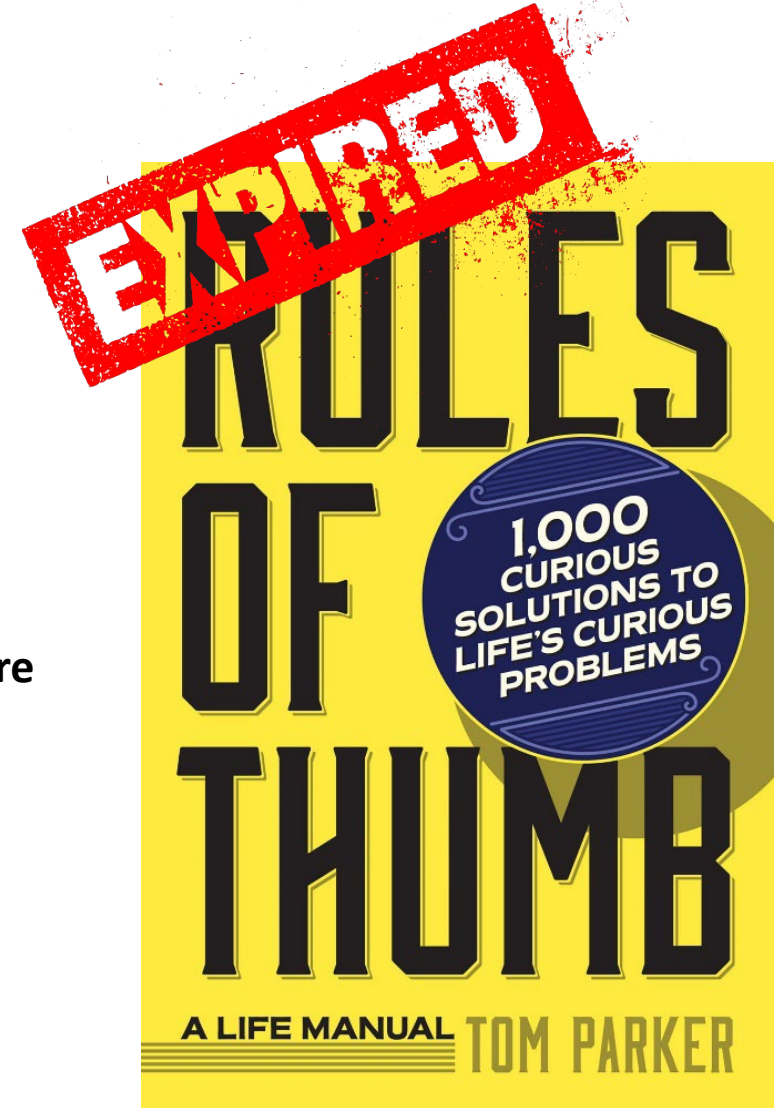
**PLANETARY STEWARDSHIP & TROPHIC REWILDING
UNDER EMERGING NOVEL BIOSPHERE CONDITIONS**

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Conclusions

- **We are entering unprecedented biosphere conditions**, not least climate-wise – with big risks
- **Achieving positive future requires intensified, integrative efforts** to solve the climate and biodiversity crises alongside **sustainable, democratic development**
- **Ongoing ecological change will be the norm**
 - Climate change
 - Rising atmospheric CO₂
 - Biotic globalization
- **Trophic rewilding w/ megafauna with potential key role in upgrading space for biodiversity & maintaining ecological functioning also in an unprecedented future**
 - Promoting habitat diversity & dispersal
- Facing unprecedented conditions, crucial to **question dogma**:
- “Rules of thumb, from Holocene to Anthropocene”:
 - “The success of rules of thumb and heuristics are typically contingent on the stability of environments”
 - “As environments change, decision-making strategies can quickly face disequilibrium – old heuristics can become obsolete, and new ones may have to be developed in their stead”



Deltag venligst i spørgeskema om rewilding i Danmark

Scan QR koden

Eller benyt: <https://survey.au.dk/LinkCollector?key=QL395EQRU116>



Foto: Joanna Olsen

Pil Pedersen, SustainScapes, AU: pil.pedersen@bio.au.dk

Danske samarbejdspartnere: Jens-Christian Svenning, Rasmus Ejrnæs og Signe Normand

Thanks!

- Collaborators, students and support team!
- Funding
- **Many new activities & opportunities in the coming years**
 - PhD & postdoc positions
 - Open to collaboration!



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svemming@bio.au.dk



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