

Operationalising the Nature Futures Framework for improved anticipatory governance in diverse contexts

March 2025

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Madagascar on the brink of climate change-induced famine

By Andrew Harding
Africa correspondent, BBC News

🕒 2 days ago



Climate change



South Korean flood deaths expose government indifference to climate change



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Europe battles heatwave and fires, record temperatures scorch China



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Extreme weather live: heatwave red alerts expected for more cities in Italy; Greece wildfires spread

Twenty-three of Italy's 27 main cities expected to be under red alert as temperatures continue to rise; wildfires north and west of Athens force residents to flee
Italy reports sharp rise in emergency cases as Rome

Fires and floods, heatwaves and hurricanes

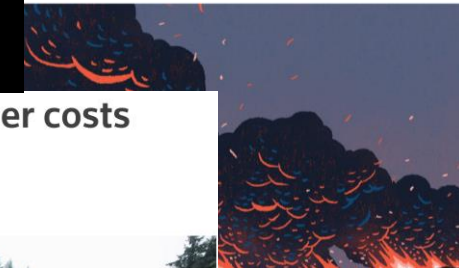
Heat Waves Grip 3 Continents as Climate Change Warms Earth

Across North America, Europe and Asia, hundreds of millions of people endured blistering conditions. The U.S. special envoy for climate change called it "a threat to all of humankind."

the new york times

The Fires in Greece Are a Terrifying Warning

Aug. 27, 2021, 1:00 a.m. ET



Climate change extreme weather costs Germany billions annually

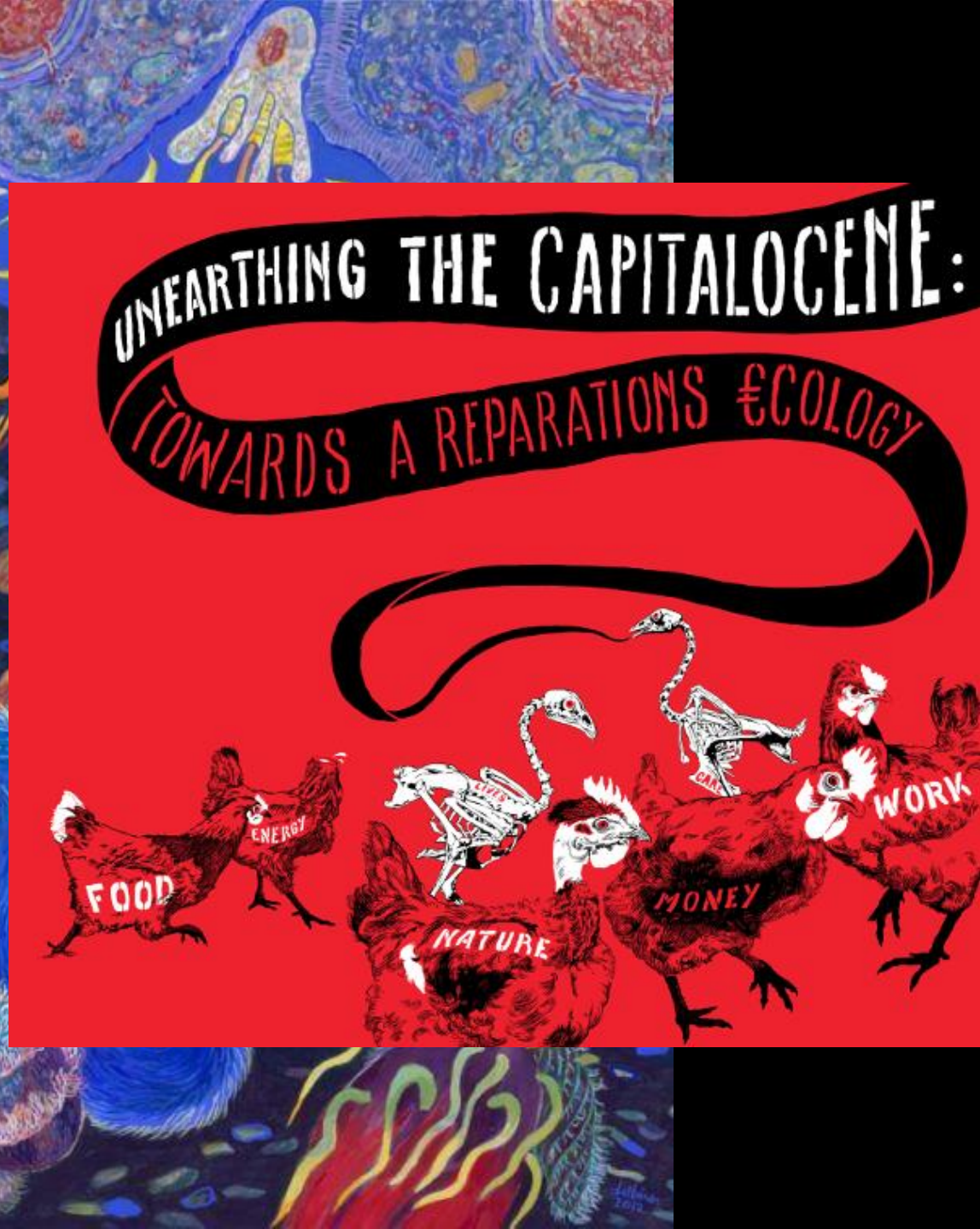
Reuters





**Anthropocene is
novel,
turbulent,
accelerating,
hyperconnected
and unequal**

Chthulucene



‘The future is already here it is just unevenly distributed’ William Gibson



What do aspirational futures for people and nature look like?



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Towards the vision 2050 on biodiversity: living in harmony with nature

The vision of the Kunming-Montreal Global Biodiversity Framework is a world of living in harmony with nature where “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”

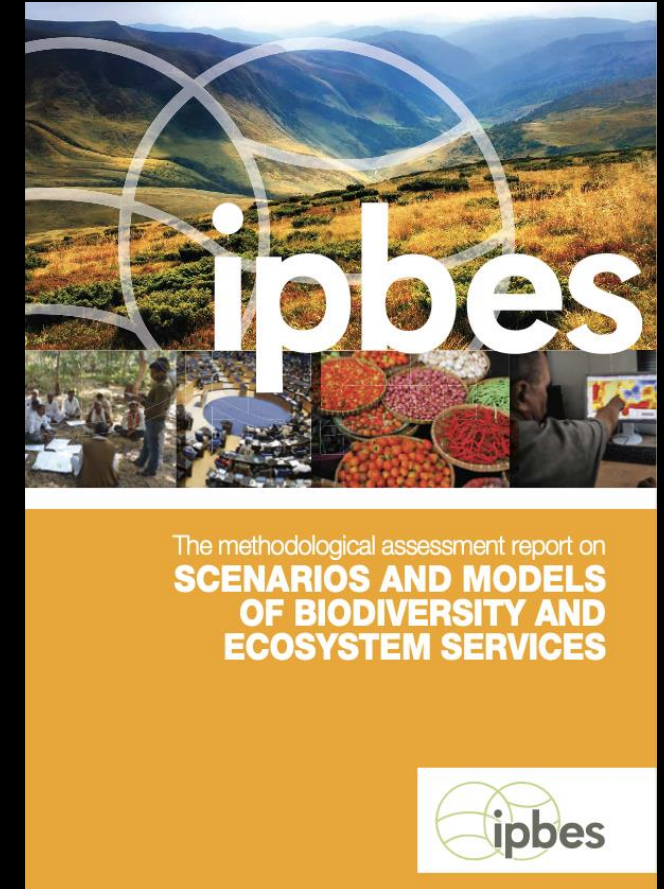


Using scenarios for global biodiversity

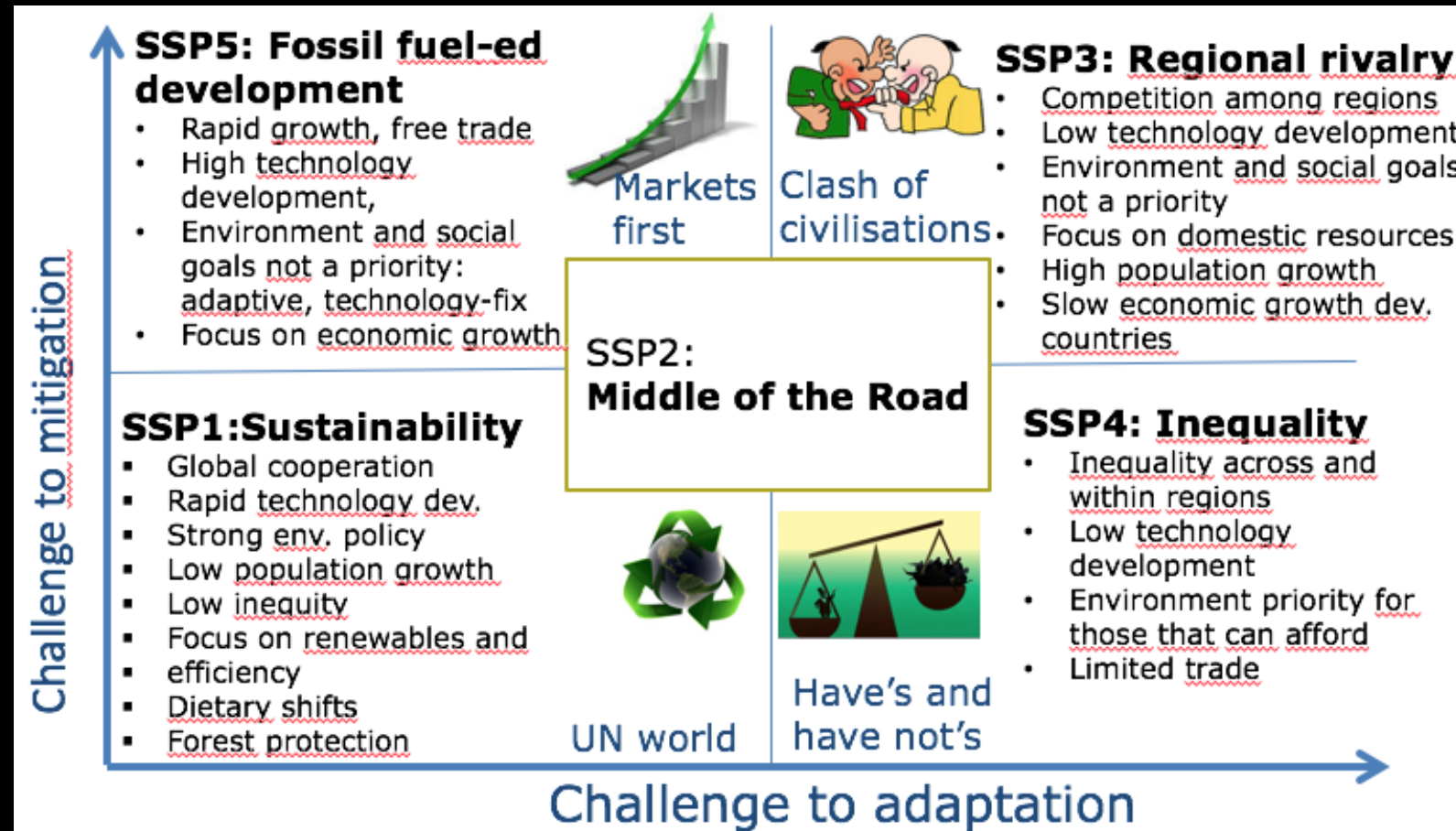
2016 IPBES Methodological Assessment

Scenarios are available and they are useful tools for policy support, but:

- Most global scenarios are developed for other purposes, e.g., climate change and its impacts
- Few scenarios detail 'positive' futures - most global scenarios are limited to assessing only impacts on nature, and tend to be negative
- Most global scenarios lack a participatory approach
- Different policy and management responses relating to nature are often not well represented



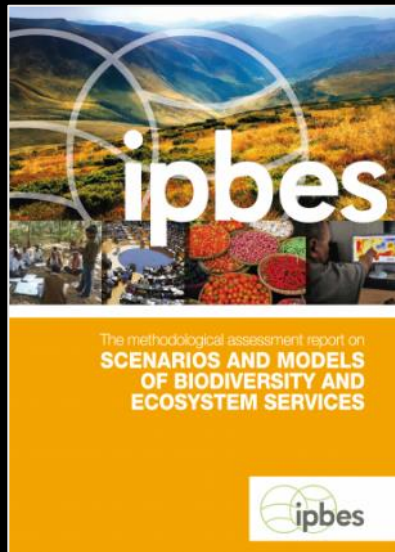
IPCC Shared Socio-economic Pathways: Findings from 2019 Global BES assessment



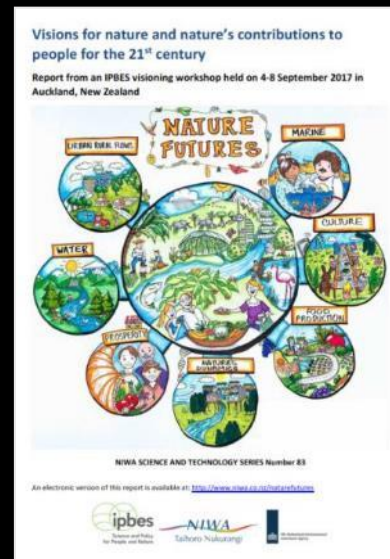
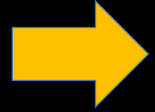
Nature is not a focus in the SSP-RCP framework

O'Neill et al. 2017 *Climate Change*

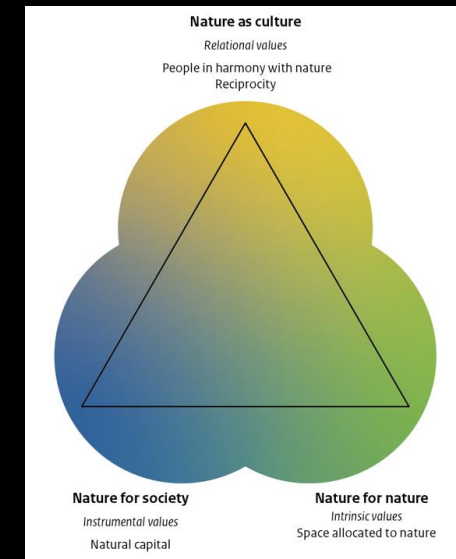
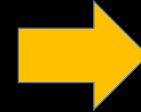
IPBES Task Force on Scenarios and Models of biodiversity and ecosystem services



Phase I (2014-2016):
Assessment of the use
of scenarios and
models of BES



Phase II (2016-2019):
initial participatory
development of the
Nature Futures
Framework



Phase III (2019-2023):
further development of
Nature Futures
Framework scenarios

2021: Online Dialogues with National focal points and ILK Task Force workshop



Choti Tekam (Africa)

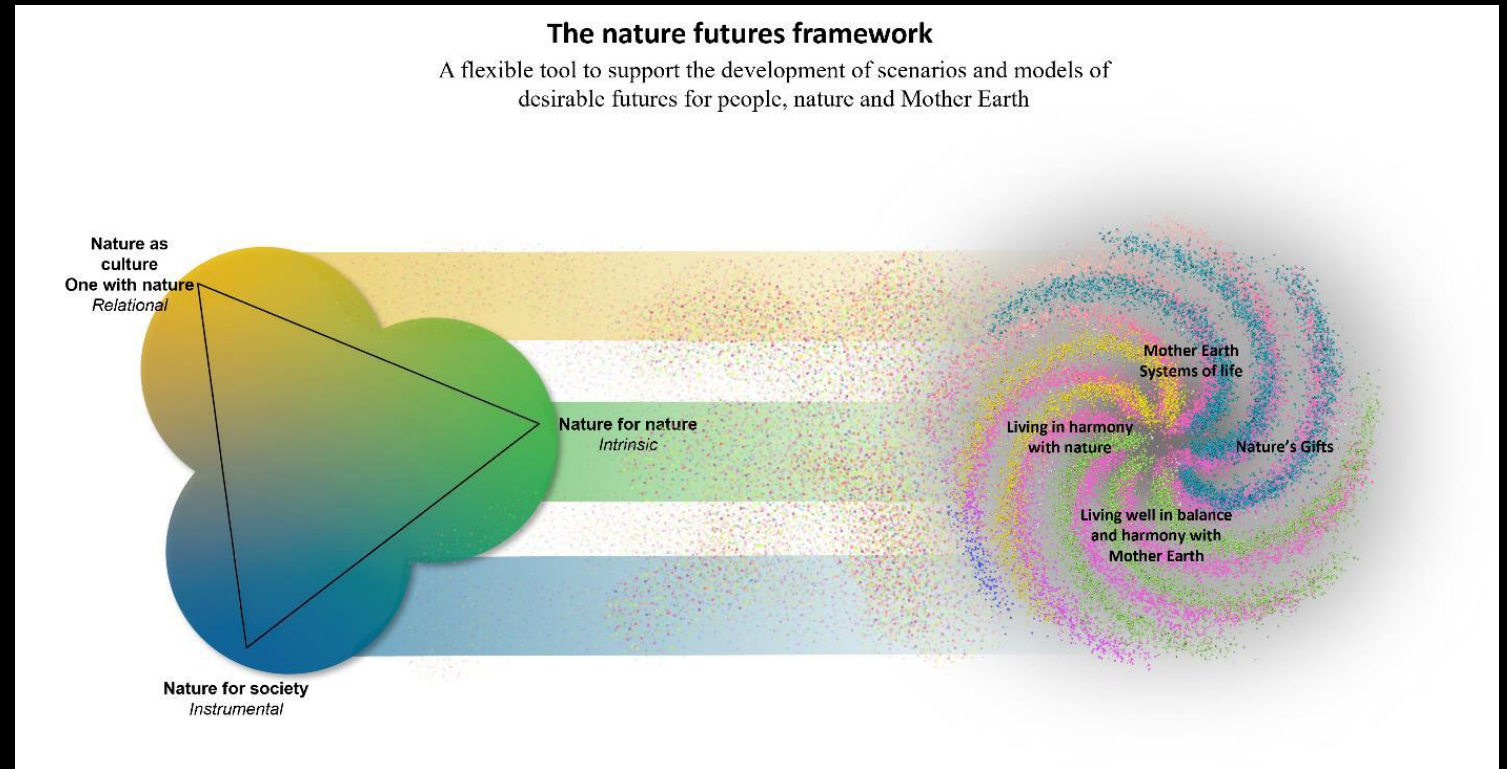
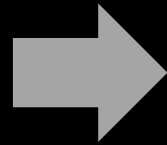
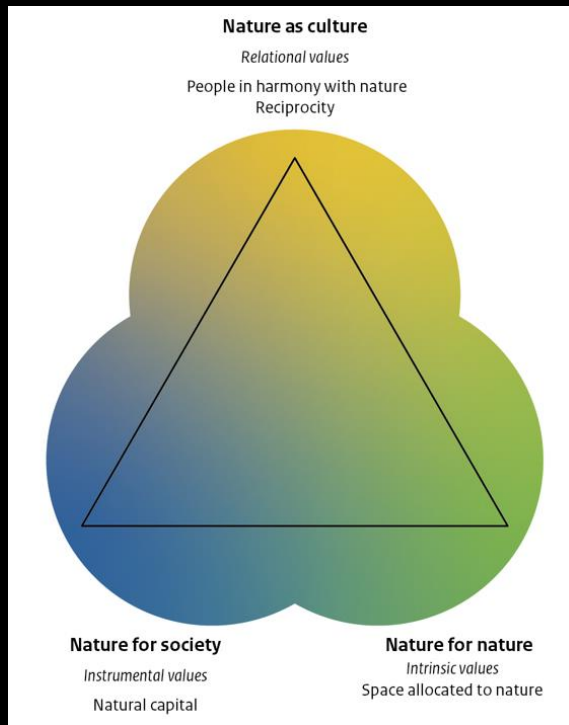


Anjali Choudhary (Asia)



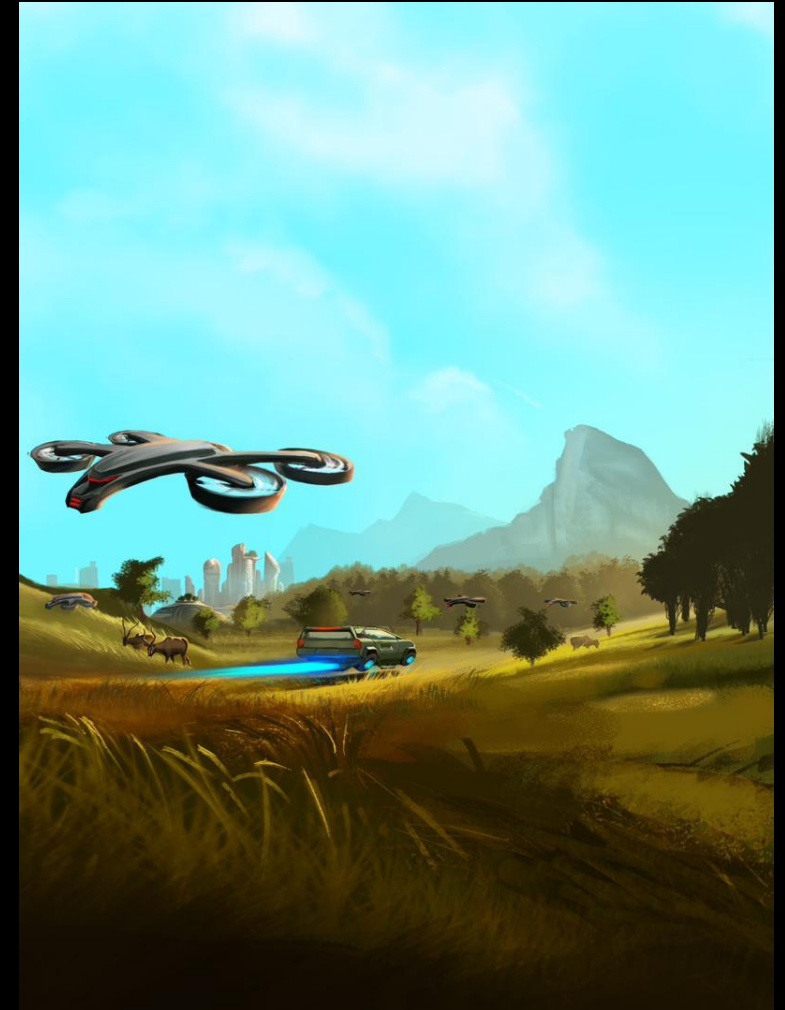
Naresh Bhoje (Americas)

The Nature Futures Framework: A flexible tool to support the development of scenarios and models of desirable futures for people, nature and Mother Earth

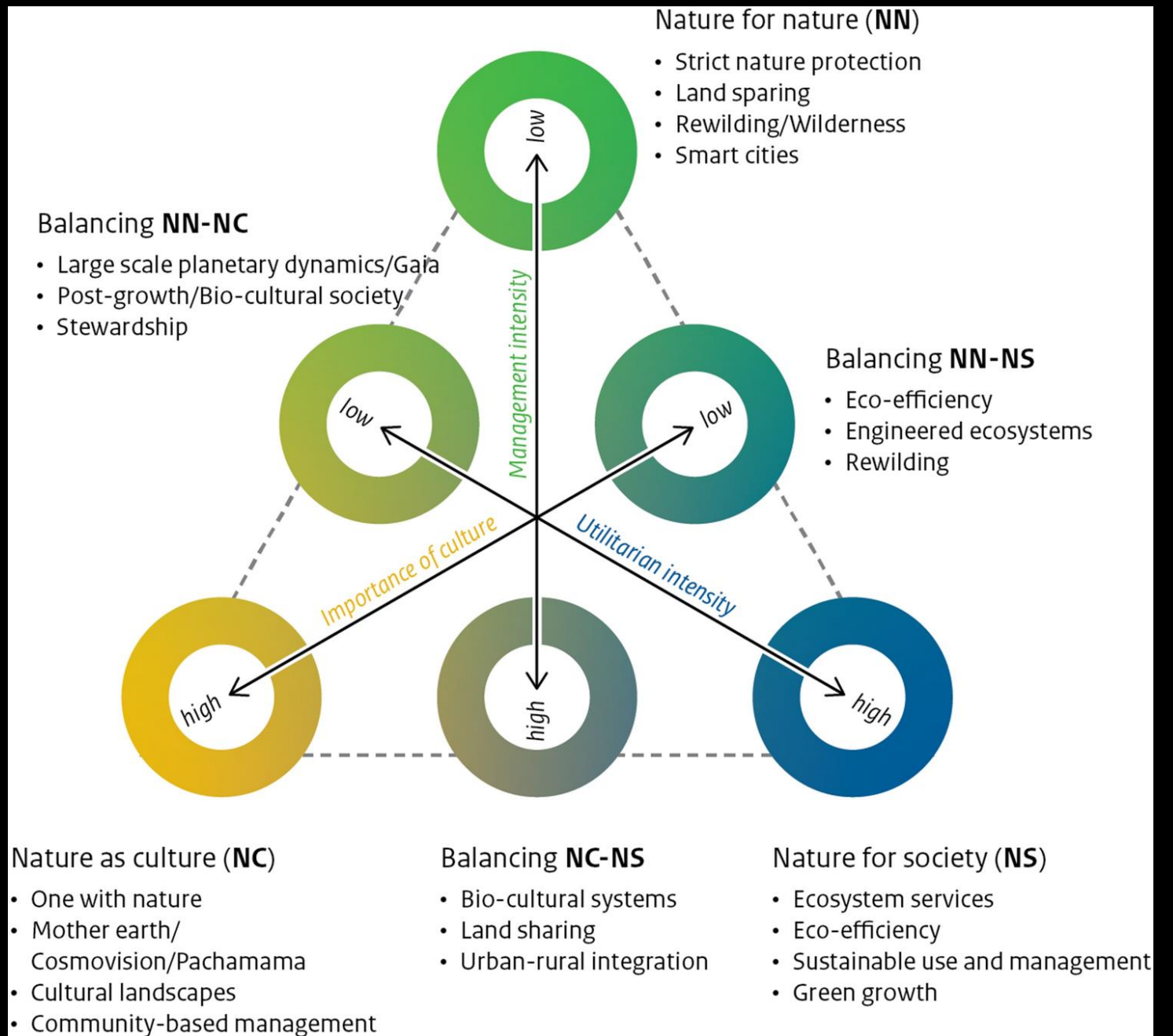


Many uses for the Nature Futures Framework

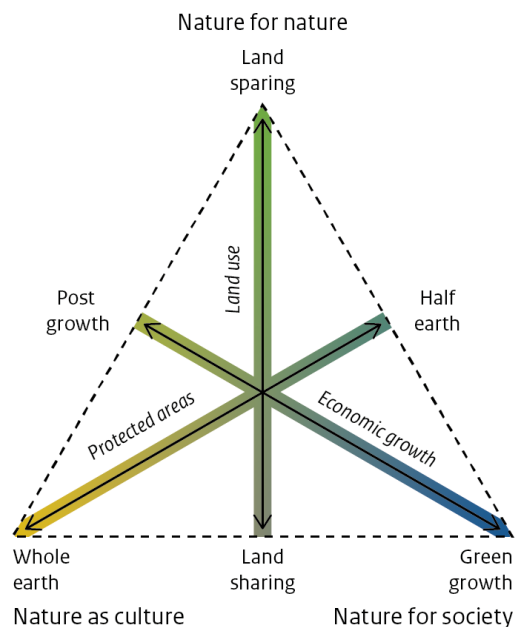
- Visioning
- Identifying pathways to positive futures
- Narrative development
- Qualitative modelling
- Quantitative modelling
- Developing indicators of pluralistic nature values



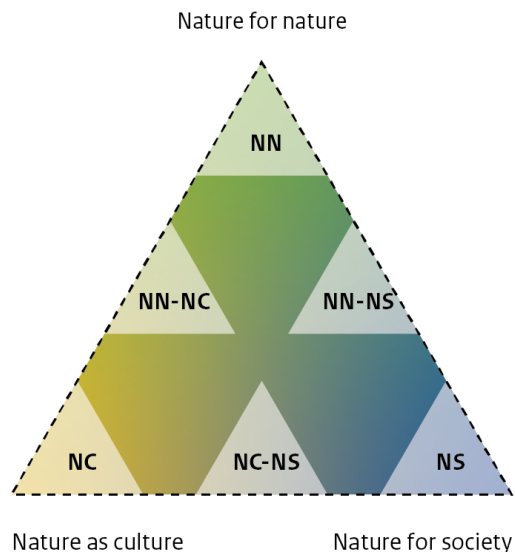
NFF illustrative narratives: Characterizing six areas of the NFF space



A. Scenarios of protected areas, land use and economic growth in the Nature Futures Framework



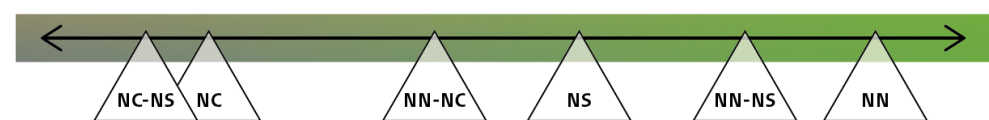
B. The 6 narrative points in the Nature Futures Framework



C. The 6 illustrative narratives along the axes of 3 scenarios

Land use

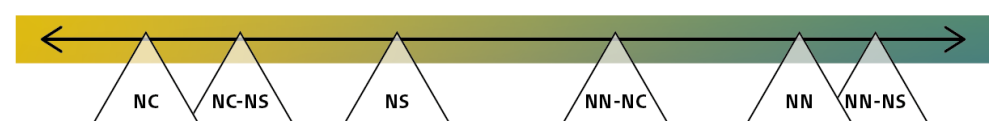
Land sharing



Land sparing

Protected areas

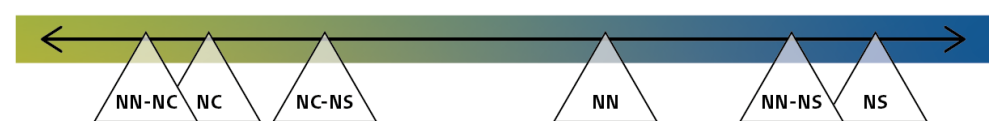
Whole earth



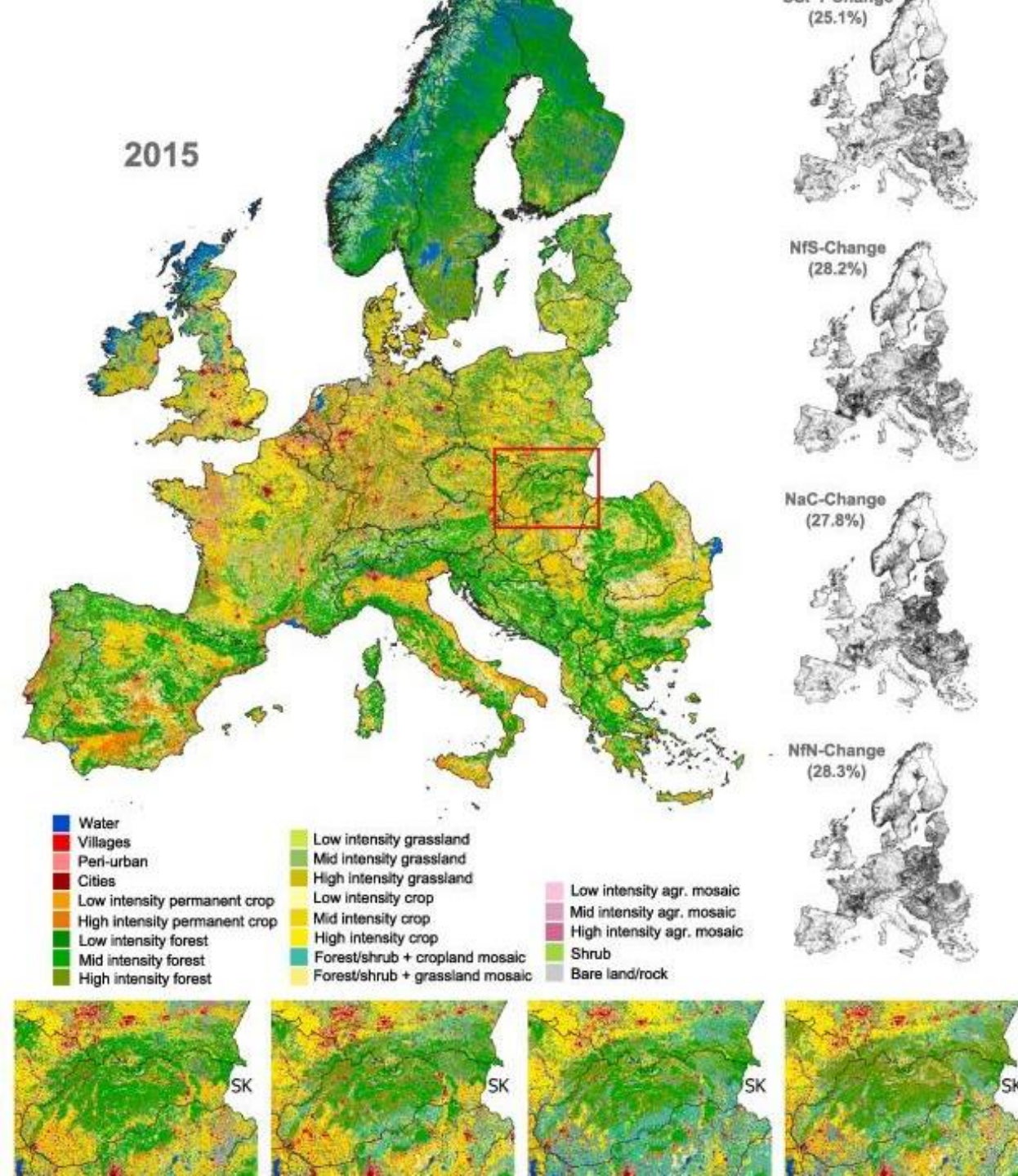
Half earth

Economic growth

Post growth

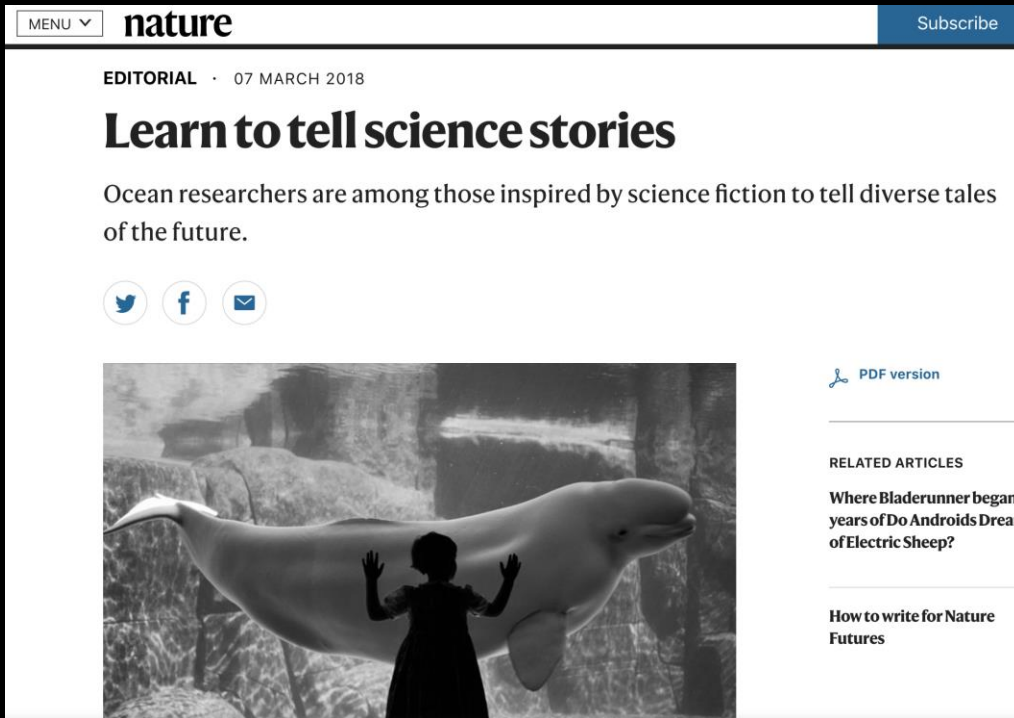


Green growth



Using the Nature Futures Framework as a lens for developing plural land use scenarios for Europe for 2050

We need to learn to tell better science stories



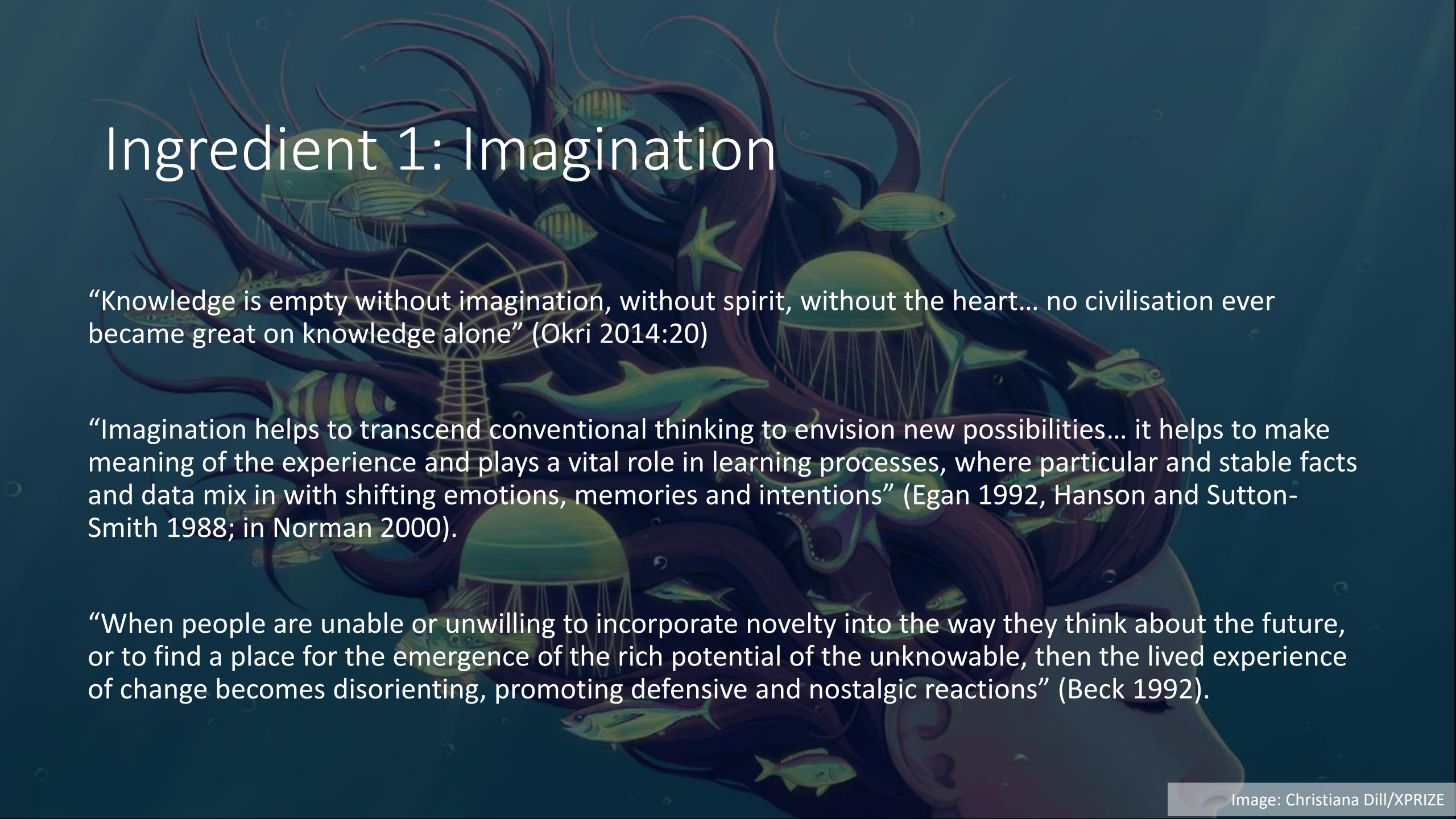
<https://www.nature.com/articles/d41586-018-02740-5>



Image: Simon Stålenhag/Radical Ocean Futures

Science-fiction Prototyping (Merrie et al 2018, *Futures*)

Ingredient 1: Imagination



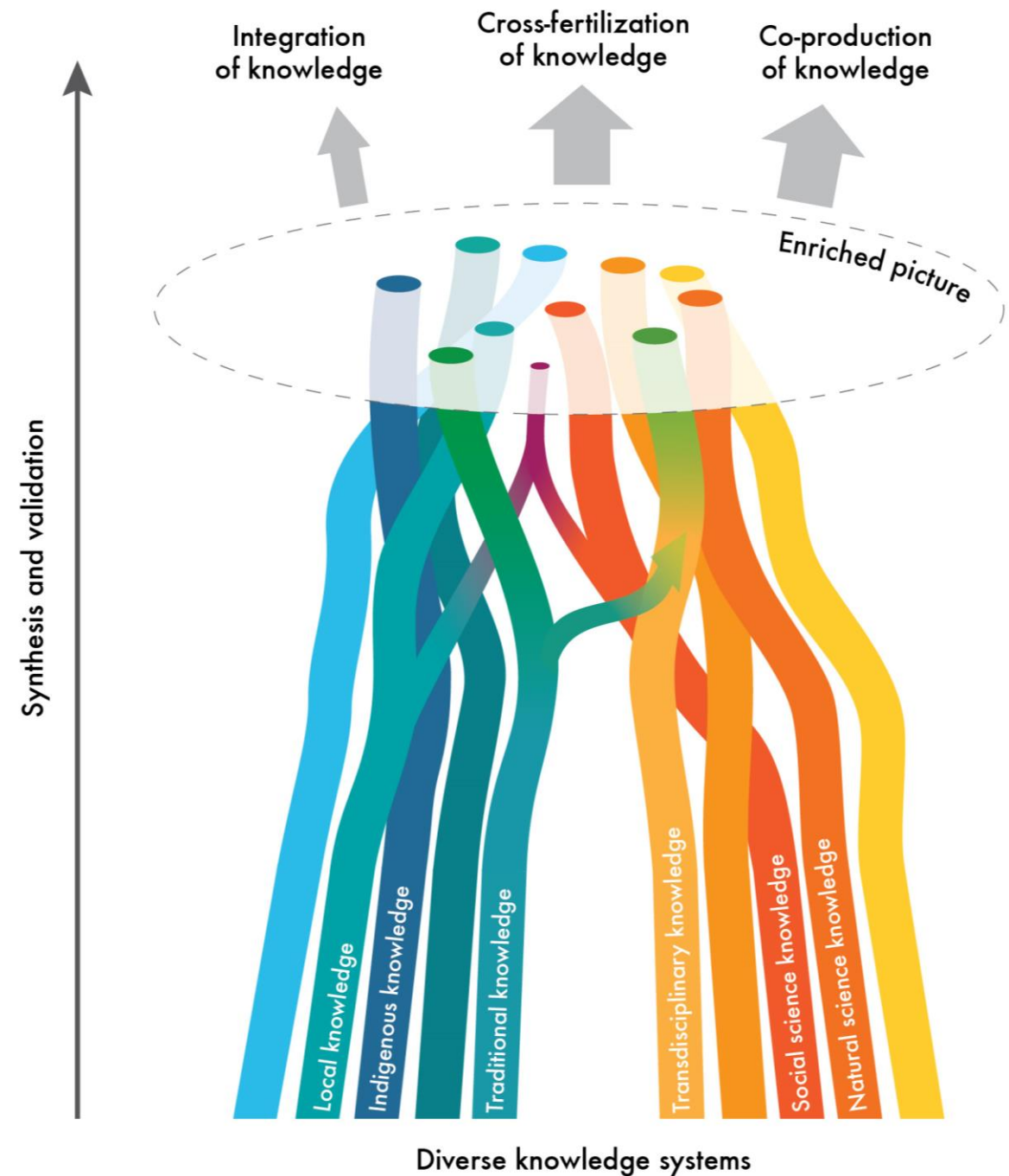
“Knowledge is empty without imagination, without spirit, without the heart... no civilisation ever became great on knowledge alone” (Okri 2014:20)

“Imagination helps to transcend conventional thinking to envision new possibilities... it helps to make meaning of the experience and plays a vital role in learning processes, where particular and stable facts and data mix in with shifting emotions, memories and intentions” (Egan 1992, Hanson and Sutton-Smith 1988; in Norman 2000).

“When people are unable or unwilling to incorporate novelty into the way they think about the future, or to find a place for the emergence of the rich potential of the unknowable, then the lived experience of change becomes disorienting, promoting defensive and nostalgic reactions” (Beck 1992).

Ingredient 2: Diversity Multiple Knowledges

- Knowledge co-production:
- We cannot 'sacrifice equity on the altar of integration' (Ritodhi Chakrabaty)
- Historical power dynamics bias some knowledge systems over another





Ingredient 3. A Creative, Participatory process

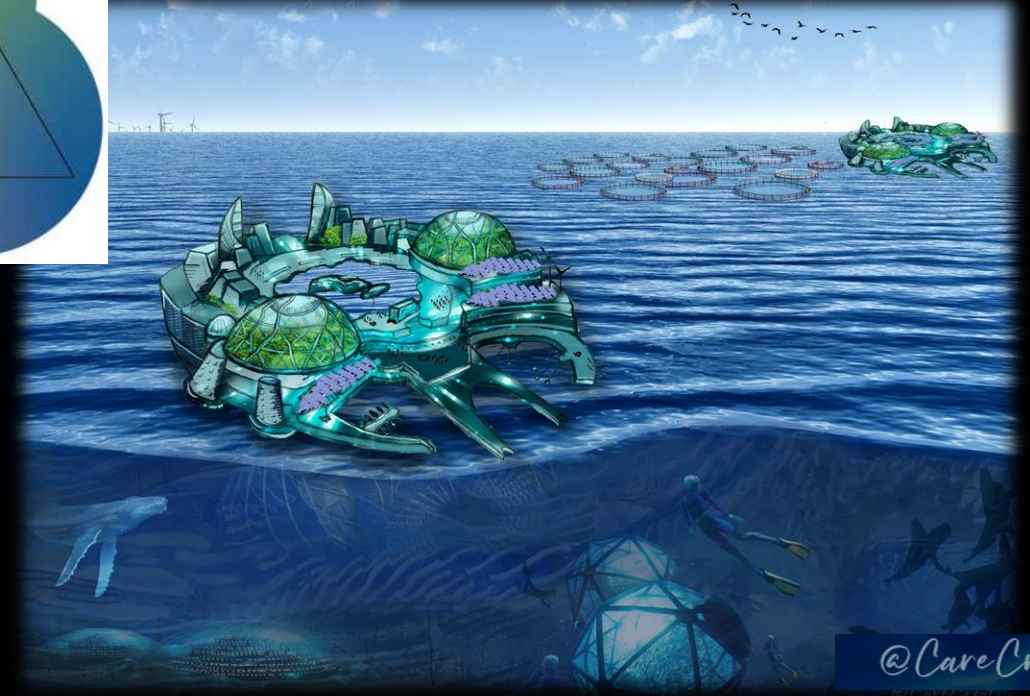
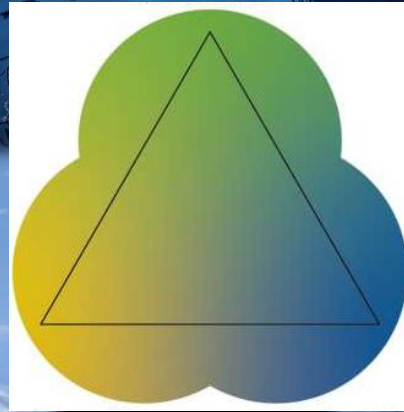


“Sci-Fi is the only genre that enables African writers to envision a future from our African perspective... The value of this envisioning cannot be overstated nor negated. **If you can’t see and relay an understandable vision of the future, your future will be co-opted by someone else’s vision, one that will not necessarily have your best interests at heart**” (Hartmann, 2012: 111).”

Nature Futures with the Ngoni Kingdom, Malawi



NFF for the High Seas



Safe and Just Boundaries for Coral-Reefs

Creating Inspirational Visions and Transformative Pathways

Ignacio Gianelli, Laura Pereira,

Victor Brun, Joachim Claudet

Reefoir Power

Prioritizes the cultural heritage and conservation values

- **NN:** Restoration of coral, regardless immediate benefits
- **NC:** Traditional management and culinary practices, Heritage connection
- **Challenges:** Balancing innovation and conservation, Managing ecological processes

Reeftopia

Prioritizes the intrinsic value of nature and the utilitarian benefits of ecosystems

- **NN:** Beauty and resilience of corals
- **NS:** Nature contribution to wellbeing
- **Challenges:** conservation regardless human benefits, alignment of local needs with global governance

Pao Pao Bay Revolution

Prioritizes the cultural heritage and the use of nature to build a sustainable and independent future

- NC:** Community cultural ties, customary tenure rights, traditional practices
- NS:** Pragmatic use of nature (wind farms, tourism) for economic thriving
- Challenges:** Rapid expansion, Influx of companies, cultural dilution



West Africa Case study: Mono Transboundary Corridor (Benin-Togo)

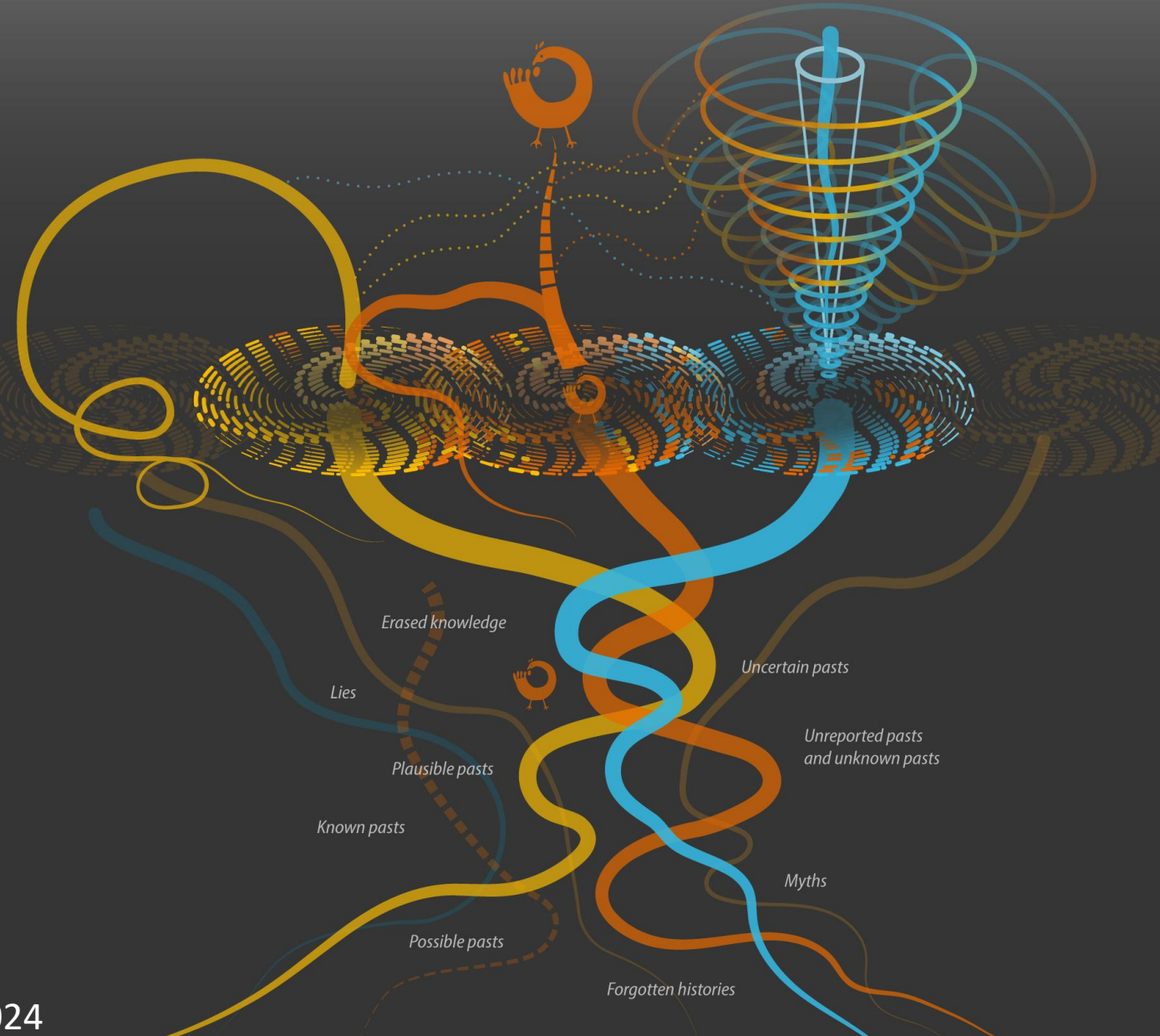
Sènkankpon Tcheton, Cyrielle Lâm, Nicolaise Sonon, Laura Pereira

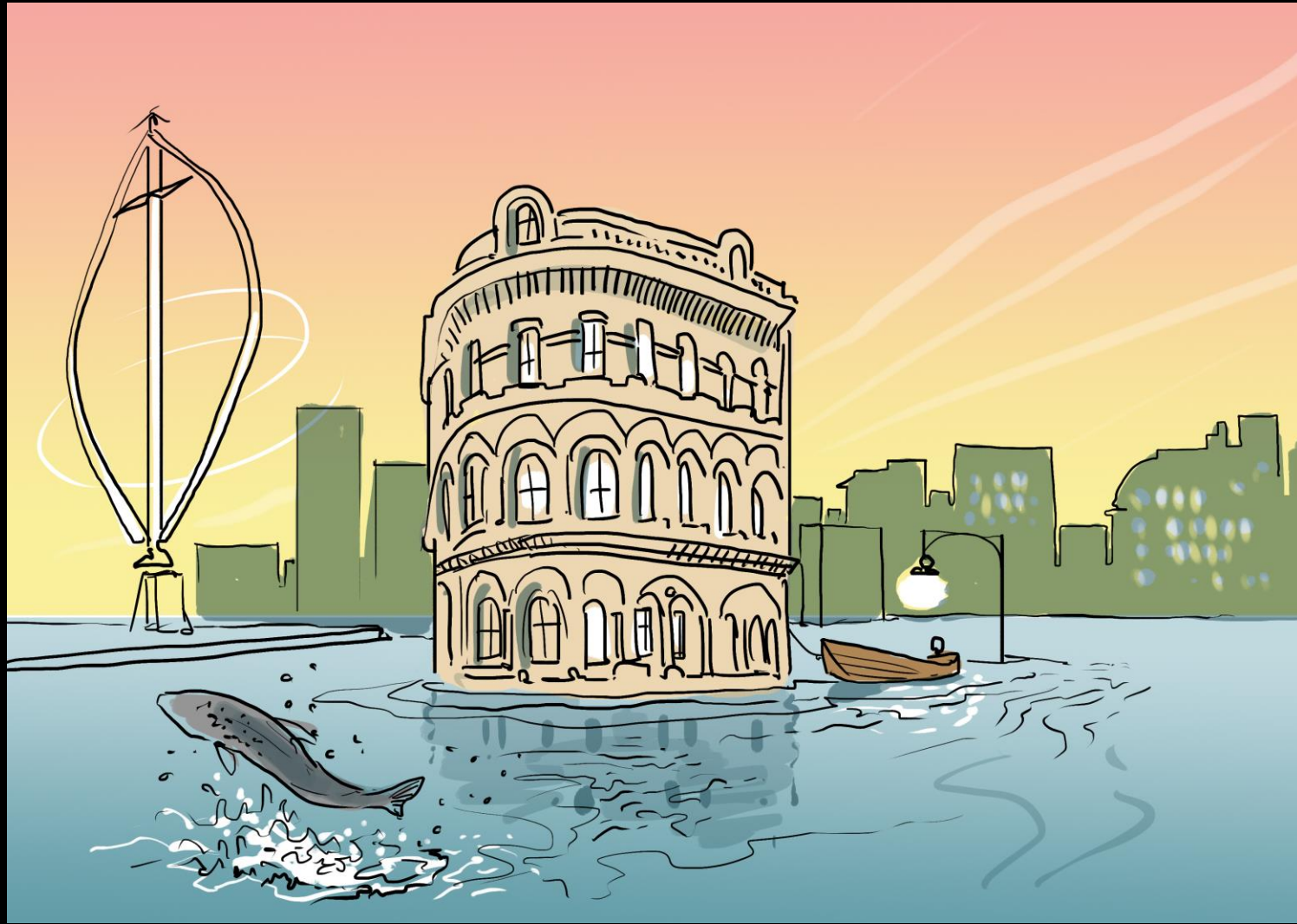


MULTIPLE
FUTURES

MULTIPLE
PRESENTS

MULTIPLE
PASTS





*Humans have changed the way the world works.
Now they have to change the way they think about it too.*
- The Economist, 2011