Westminster Energy Forum

Climate impact scenarios

Potential security gamechangers, implications for energy geopolitics and the social licence

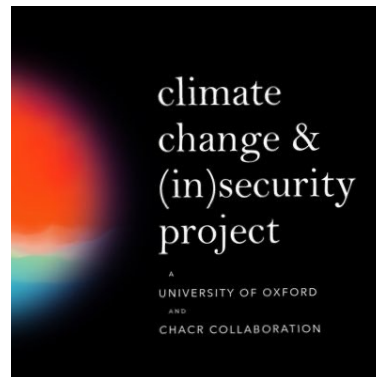## Blindspots in overlays of exponentiality and democracy

11 July 2023

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climate
change &
(in)security
project

A
UNIVERSITY OF OXFORD
AND
CHACR COLLABORATION

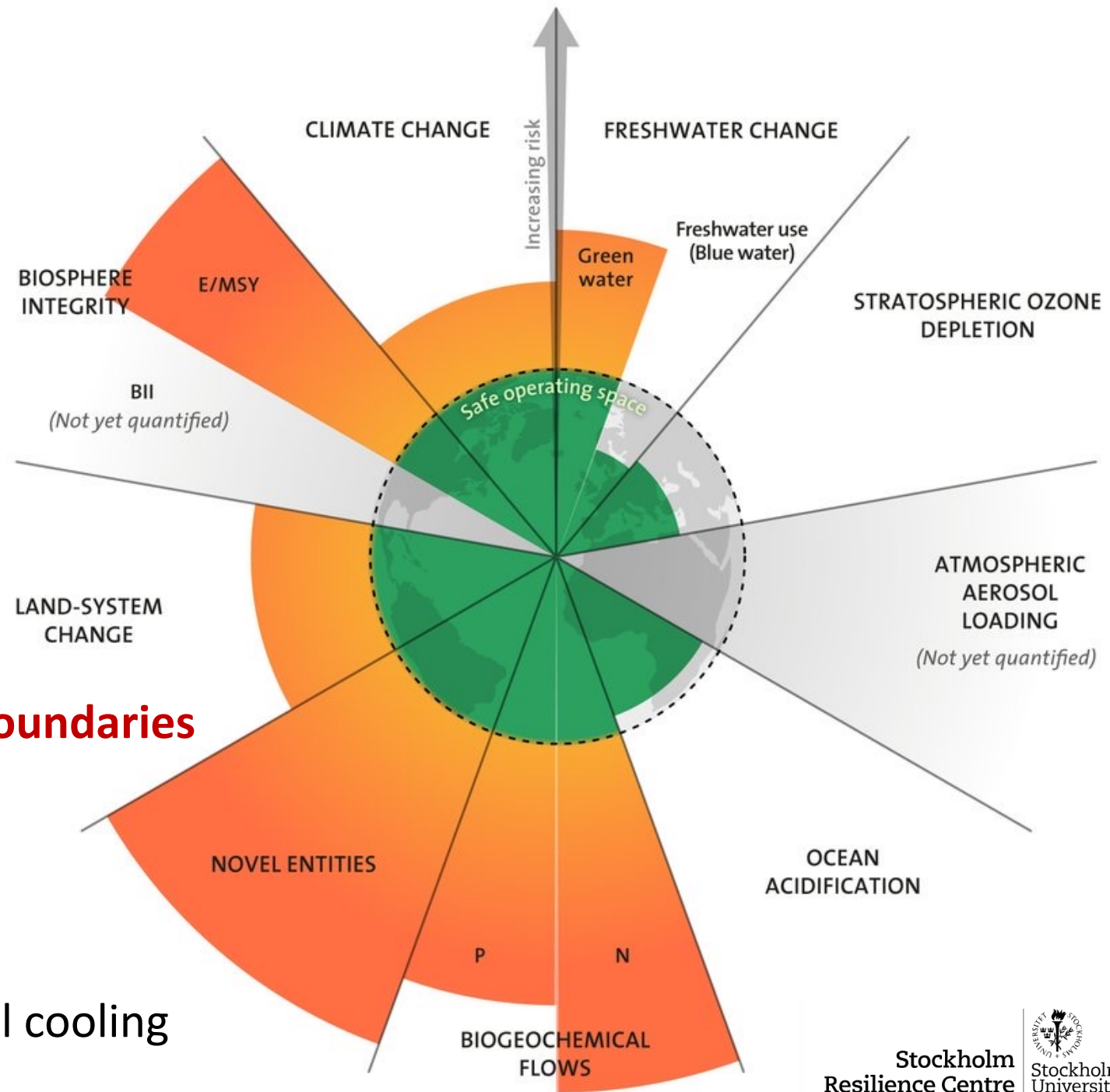*Born at 325 ppm CO2e.   Today 423 ppm.   IPCC goal: 411ppm by end of the century*

Planetary boundaries
- more than just climate
- more than just CO2

Perma- & poly-crises of our planetary boundaries
– biotic and abiotic:

- Food, land & agriculture (FLAG)

- Fishing, shipping, travel

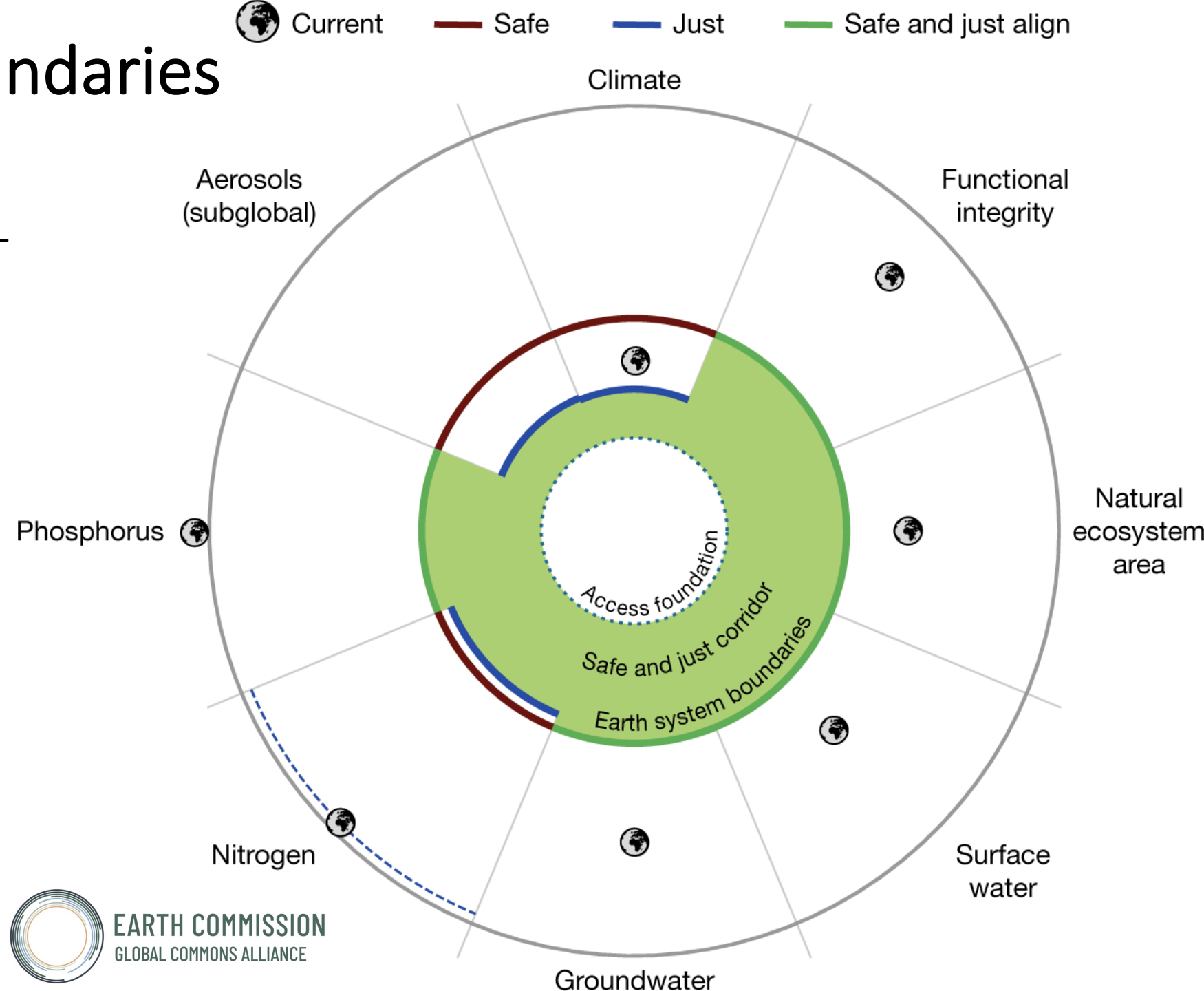- Rainfall, water availability for industrial cooling

Earth Systems Boundaries
- more than ecological
- also about justice
i.e. what is SAFE and JUST

Affected people are demanding equitable, sustainable governance

- Impact management

- Social return on investment
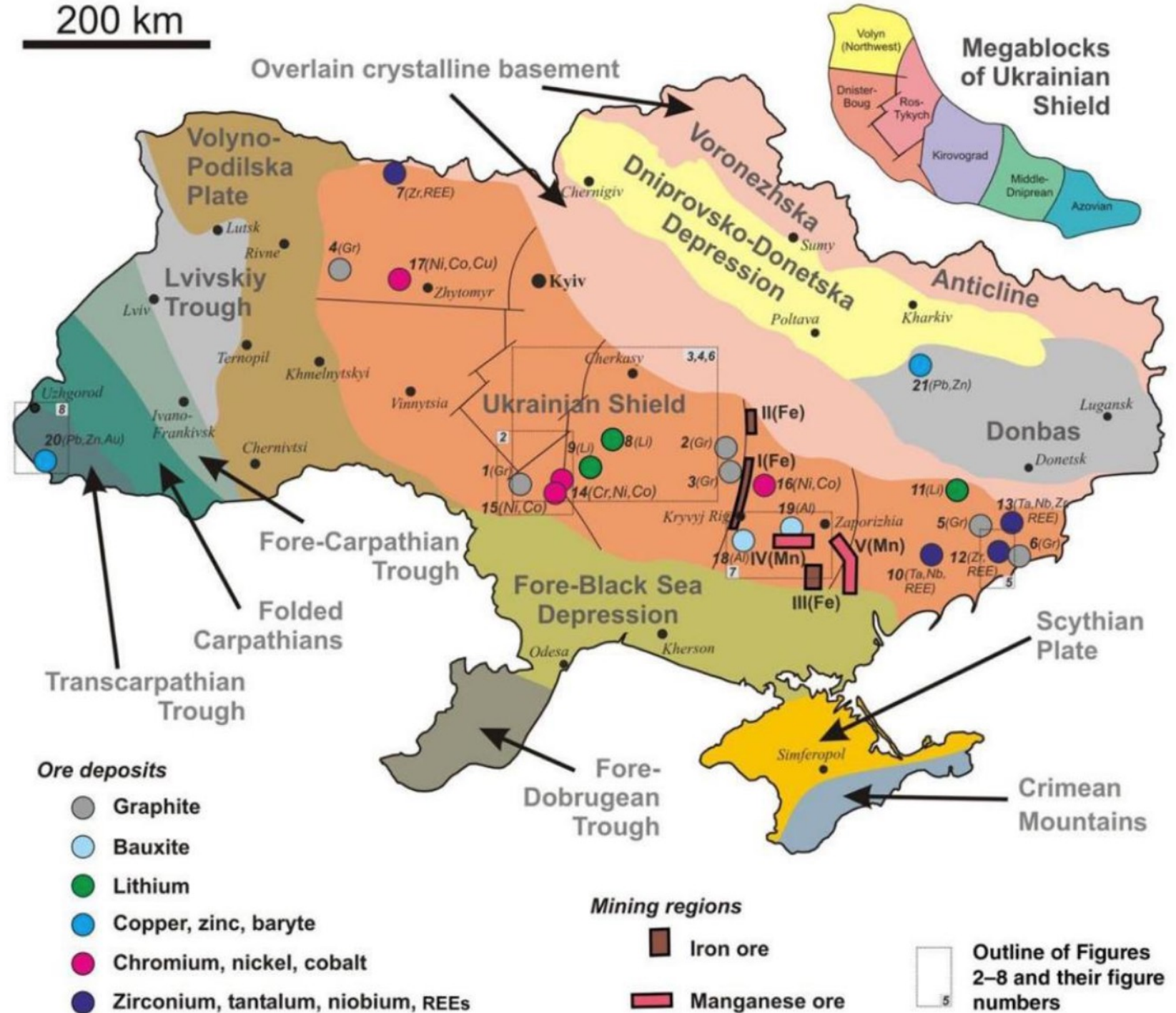
- 2000+ cases of climate litigation

Ukraine

"The eighth challenge is ecocide, the need for immediate protection of environment."

President Zelensky

China

Ecological civilisation written into the PRC constitution

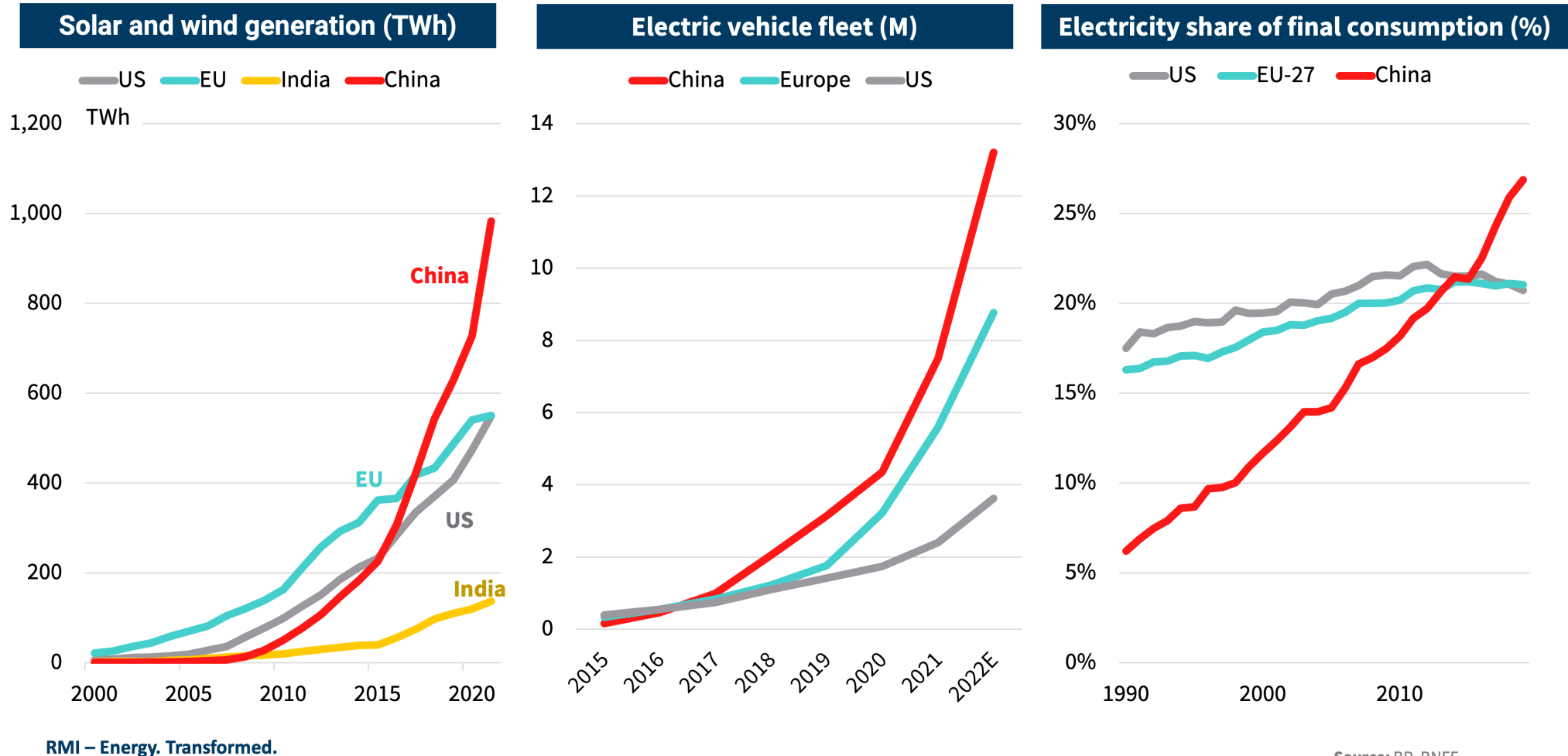Small–island states being driven into security partnerships with China: eg Solomon Islands

Green Belt & Road

Saudi-Hong Kong tech partnership 2023
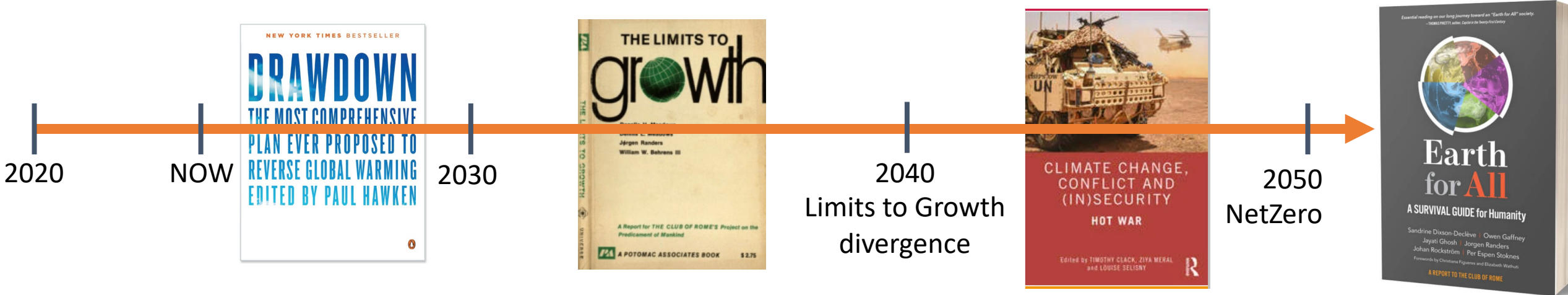
Dominating seabed mining licences

China dominates deployment of renewables

Solar and wind generation (TWh)

US — EU — India — China

- China
- EU
- US
- India

1,200 TWh

Electric vehicle fleet (M)

China — Europe — US

Electricity share of final consumption (%)

US — EU-27 — China

Timeline 2040

2020   NOW   2030   2040
Limits to Growth
divergence

2050
NetZero

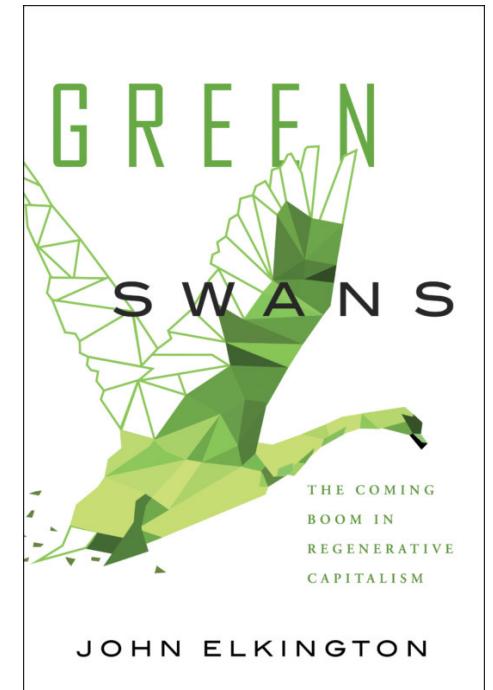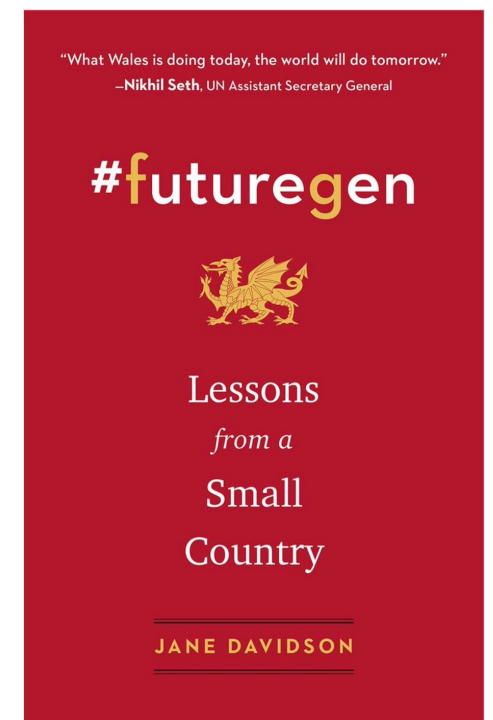| Food	Energy	Water	Displacement
25 harvests remaining in over-farmed soils	Maladaptation from linear race for more	Eutrophication of water from fertiliser runoff (eg Mississippi)	Sinking cities
Heat limit of crops	Developmental justice	Water scarcification	Uninsurable property
Chronic & acute disease	Whole system efficiency	Hydrological cycle collapse	Demographic decline
			Migration rise

Social license is the new market currency

Sub-sovereign deep democracy and future generations are holding companies to account in unprecedented ways

Shift perspective to find solutions in what has been seen to date as collateral damage, such as water, indigenous populations, justice
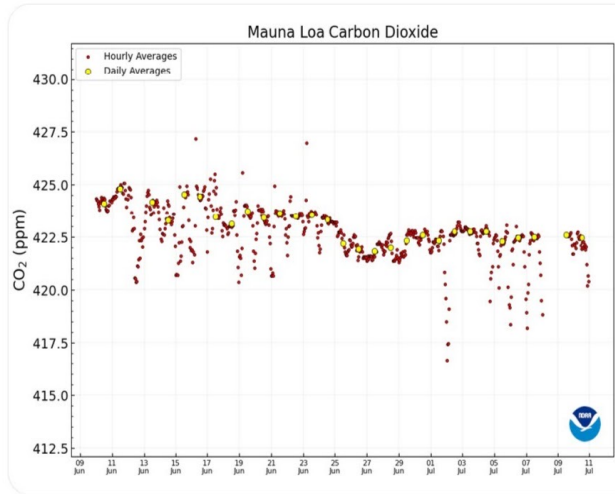
- **Whole systems thinking** – include the rising cost of externalities
- **Gender empower your planning team** – and bring in #futuregen
- **Skate to where the puck is going** – regenerate circular ecosystems

Push the industrial policy spectrum to *regenerate* ecosystems to *protect and recycle* resources – find green swans to avoid black swans and grey rhinos
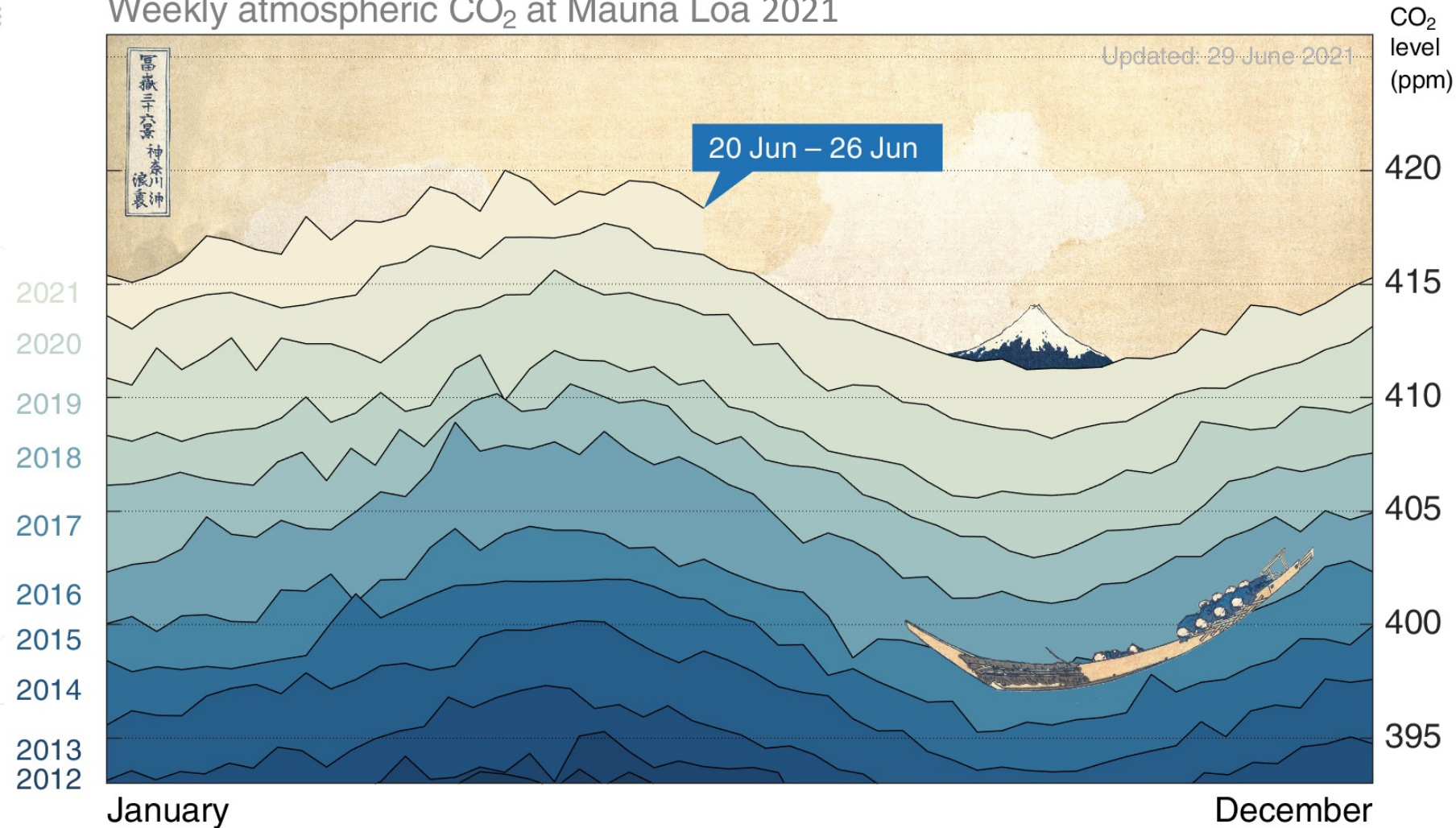

"What Wales is doing today, the world will do tomorrow."
—**Nikhil Seth**, UN Assistant Secretary General

#futuregen

Lessons *from a* Small Country

JANE DAVIDSON

GREEN SWANS

THE COMING BOOM IN REGENERATIVE CAPITALISM

JOHN ELKINGTON

Thank you for your attention

* Target 350 ppm

Weekly atmospheric CO₂ at Mauna Loa 2021

@robbie_andrew • Data: Tans & Keeling (2019)