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INTEGRATIVE FRAMEWORK FOR IMPLEMENTATION PATHWAYS

IPCC

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TWO PROPOSITIONS

- One: Global climate change has ushered in a 'Transformations Era'.
- Two: There is a 'social science of transformation' that can help contribute towards achieving 'Transformations' to the 1.5. degrees Goal



Climate Change = 'Transformations Era'

- 'Business as usual' = Threat of an anthropocene era: risks of breaking through tipping points, thresholds, planetary boundaries...all of which equals transformative change!
- **The 1.5°C Goal Scenario:** Requires different but significant transformative change on an urgent and speedy basis).
- Transformation 'ends' are deeply conditioned by 'means'. (*Scoones et al 2015. The Politics of Green Transformations*)
- Transformation: radical social, economic, political, technological and ecological change – **not incremental** – **difference between 'Transition' and 'Transformation'**.



Transformation Pathways to 1.5C Fundamental Questions

- What is to be transformed, why, how, when and by whom?
(Recognizing that transformations are inevitably multiple and contested; their pathways often interconnect and compete. E.g. maintaining 'development rights' in a carbon constrained world)
- What innovations (in science, technology, institutions, organizations and cultures) are needed to support what transformation pathways?
- What capabilities are required (among scientists, policymakers, citizens, etc) for different transformation pathways?
- What governance arrangements are needed?

(Catastrophic cusps, multiple trajectories and tipping points apply as much to governance as to natural processes – Leach et al. 2015.
Dynamic Sustainabilities: Technology, Environment, Social Justice)

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'Social Science of Transformation'

- Political Economy and Political Ecology
- Science, Technology and Innovation Studies
- Development, Area and Cultural Studies
- Anthropology and Sociology
- History and Geography
- Economics, Law and International Relations
- Philosophy of Science and Politics of Knowledge



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Transformation Pathways to 1.5C : A Preamble

- Any potential transformation pathway to 1.5 degrees will embody critical assumptions on what needs to be transformed, why, how and by whom.
- Any potential transformation pathway will also embody the politics of knowledge and power. Whose knowledge and transformation counts?
- Each transformation pathway is likely to be contested
- Because of the urgency and scale of the challenge, it is likely that transformation to 1.5 degrees will require multiple pathways

Potential 'Green' and 'Just' Transformation Pathways

- 1. Technocentric Transformations:** focuses on technoscientific innovations and investments

(e.g. geoengineering, lower carbon energy – *Stern & Ridge 2012: The new energy-industrial revolution and international agreement on climate change*)

2. Marketized Transformations

(Through pricing and property rights regimes or marketization of nature. (e.g. green growth, green economy, natural capital, PES approaches – UNEP 2011, OECD, 2011, Constanza et al. 2014. *Changes in the global value of ecosystem services*)

Some Green and Just Transformation Pathways 11

4. State led Transformations: Focuses on the role of the state in steering green investments - (Eckersley, 2004. *The Green State*; Mazzucato. 2013. *The Entrepreneurial State: Debunking Public Vs Private Sector Myths*)

5. Citizen-led Transformations: Populist grassroots movements and innovations often emphasizing 'degrowth' transitions to alternative economies (e.g. Buen vivir in Ecuador, 'citizen science', etc – Martinez Alier. 2002. *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation*).



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Governance Framework Questions

- **The scale and urgency** of achieving ‘transformation’ to the 1.5 degrees goal presents an enormous governance challenge at multiple levels – global and local.
- **The challenge:** redirecting human activity on a global scale across multiple areas in socially and biophysically dynamic, complex, diverse and sometimes un-predictable and non-linear environments
- **What potential governance frameworks** might be better suited to this challenge? Earth Governance Systems? Multi-level, polycentric, global or national based systems?



BACK TO TWO PROPOSITIONS!

- Premise 1: Global climate change has ushered in a Transformations Era.
- Premise 11: There is a ‘social science of transformation’ that can make a helpful contribution towards achieving Transformation to the 1.5. degrees Goal



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THANK YOU!

