

Energy governance histories and futures - empirical analysis of shale gas, nuclear energy and electricity access cases

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Association of Environmental Studies and Sciences
Conference

15th-17th July 2020



Environmental justice histories and futures

- Focus on the relationship between environmental history (and memory) and the imagination of just environmental futures
- Present ideas from four funded projects:
 - Histories of Nuclear Energy and Society (HoNESt) – EU Horizon 2020
 - Benchmark review of shale gas policy – localism and devolution (NERC)
 - A political-economic analysis of electricity grid access histories and futures in Mozambique (POLARIZE) – UK Aid
 - Imagining environmental futures: art, ethics and public deliberation (Toyota Foundation)
- Theoretical and methodological insights from an historical institutionalist perspective



Background

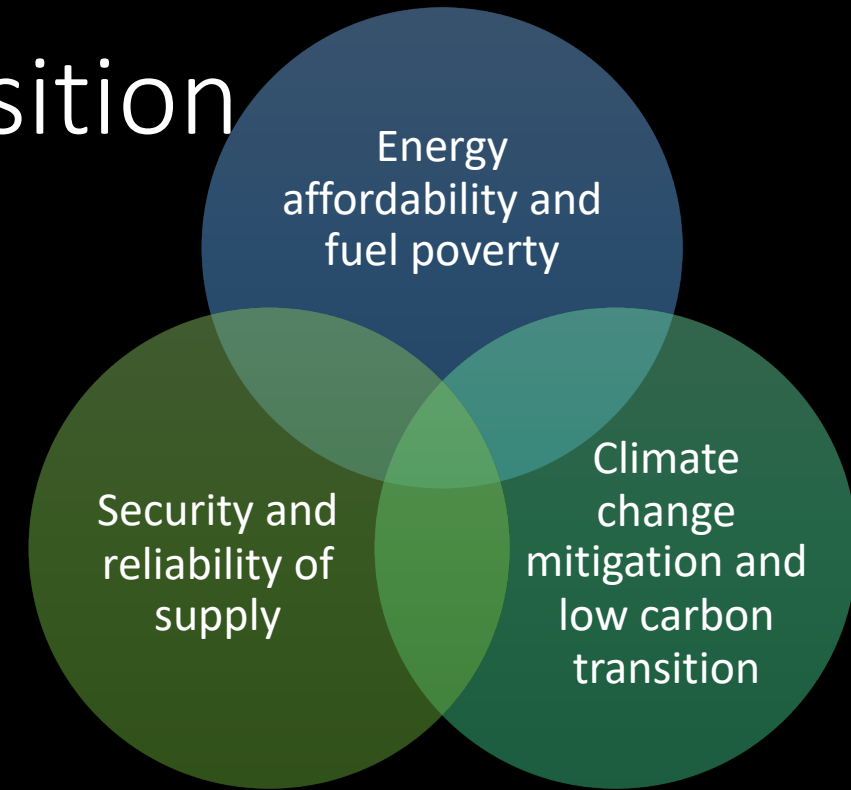


- Environmental/energy/climate justice
 - Procedural (how are decisions made)
 - Distributive (who wins and who loses)
 - Recognition (whose voices and identities are honored)
- Low carbon transition -> just transition
- Energy futures in context
- Historical institutionalism
 - **Path dependencies**
 - Conditions under which no or only incremental change occurs
 - Fossil fuel lock-in
 - **Critical junctures**
 - Crisis points that create 'policy windows'
 - Failure of Copenhagen COP15 -> Paris Agreement
 - Greta Thunberg/XR
 - Post-COVID-19 economic reconstruction?
 - Ecological tipping points?

Image credit: Industry-all Union.
<http://www.industriall-union.org/a-just-transition-to-sustainability>

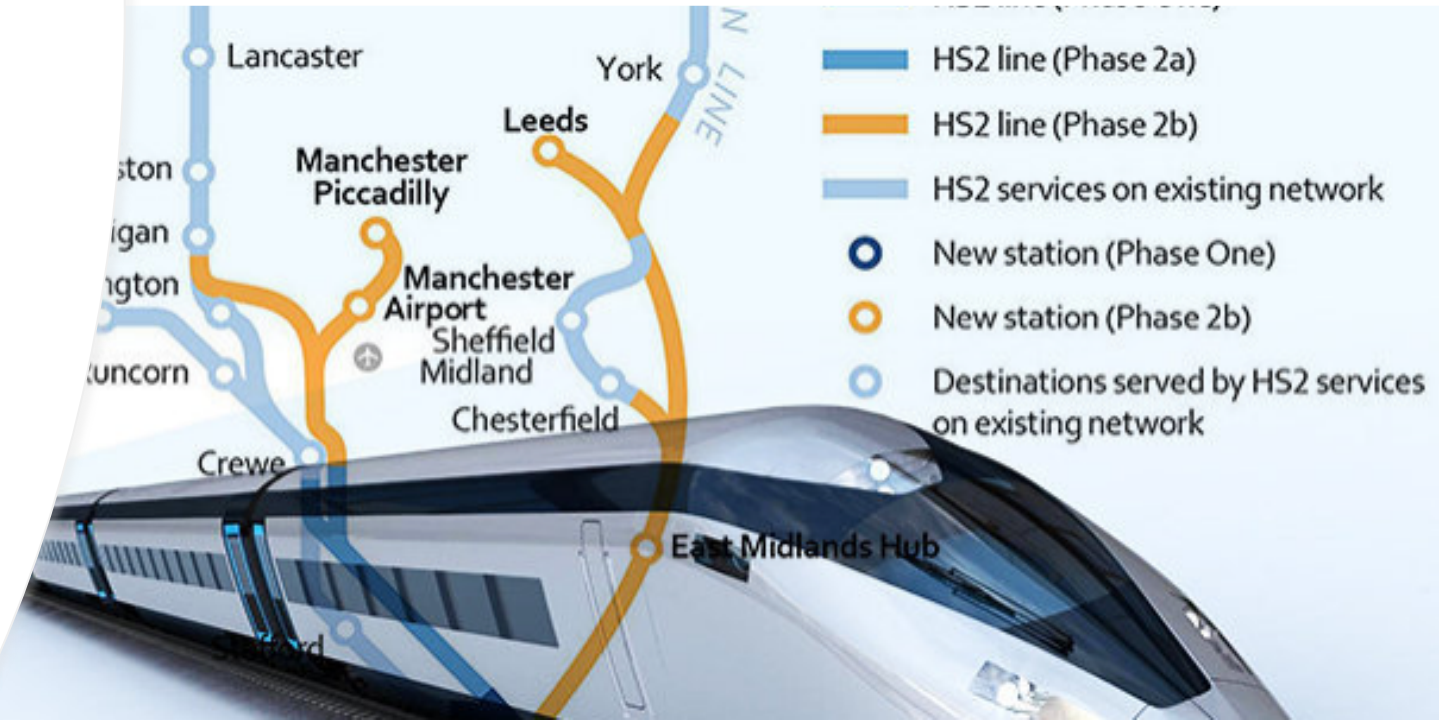
Critical juncture – low carbon transition

- The energy trilemma
- Political (and ecological) *urgency*
- Securitisation framing
- Emphasis on big infrastructure - technofix solutions, ecological modernization
- Curtailing political rights and procedures around land use planning
 - Developer led planning laws
 - Sacrifice zones
 - Indigenous rights
 - Contested conception of sustainable development



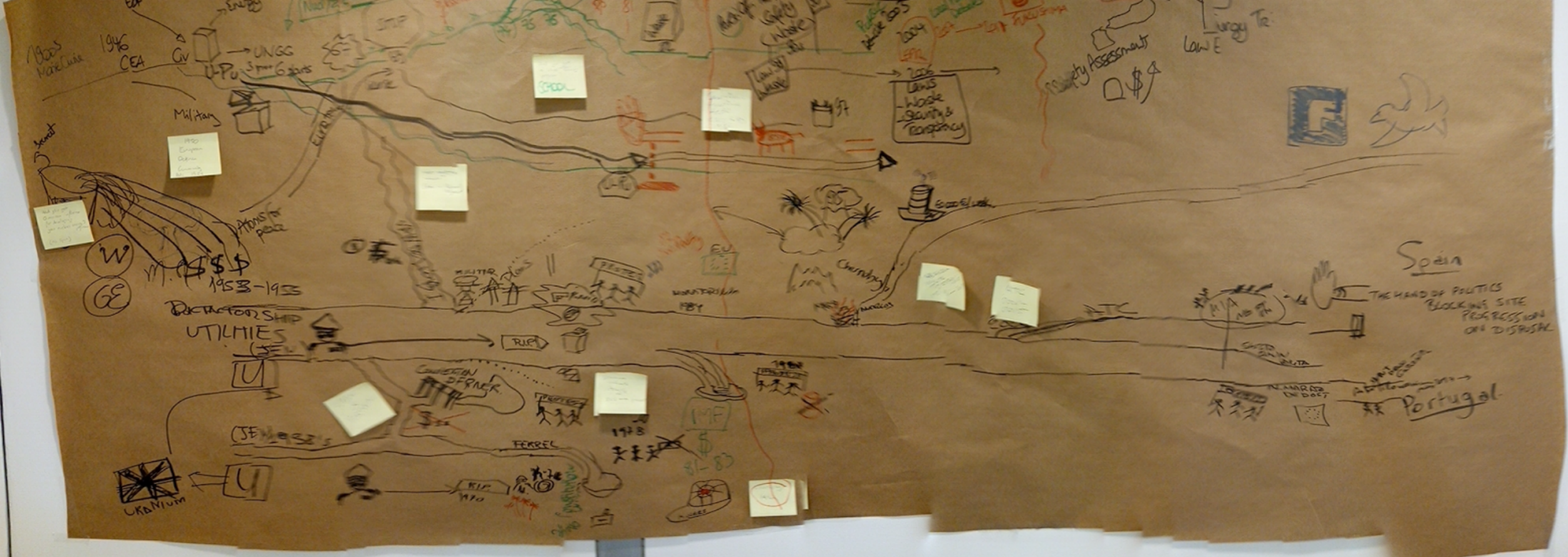
Critical juncture – UK case – the major infrastructure renaissance

- 2008/09 – post-crash austerity policy
- Emphasis upon *nationally significant infrastructure projects* to revitalize economic growth and low carbon (win-win)
 - Inward investment (e.g. China)
 - HS2, the Northern Powerhouse model
 - Nuclear renaissance
 - Shale gas as “game changer”



Path dependencies

- Socio-technical imaginaries (Jasanoff and Kim) – major centralized energy projects as a matter of state-building and nationhood
- Shale gas as “game changer” – disruptive energy technology, and as “bridge fuel” to low carbon transition
- Lock-in to centralized systems based upon non-renewable resources.
- Changing planning systems in presumption of sustainable development, and removal of planning inquiries through which participants might challenge proposals.
- And yet...
- Hinkley Point C most expensive power plant in the world.
- MP Kwasi Karteng “We had a moratorium on fracking last year and frankly the debate’s moved on. It is not something that we’re looking to do.”

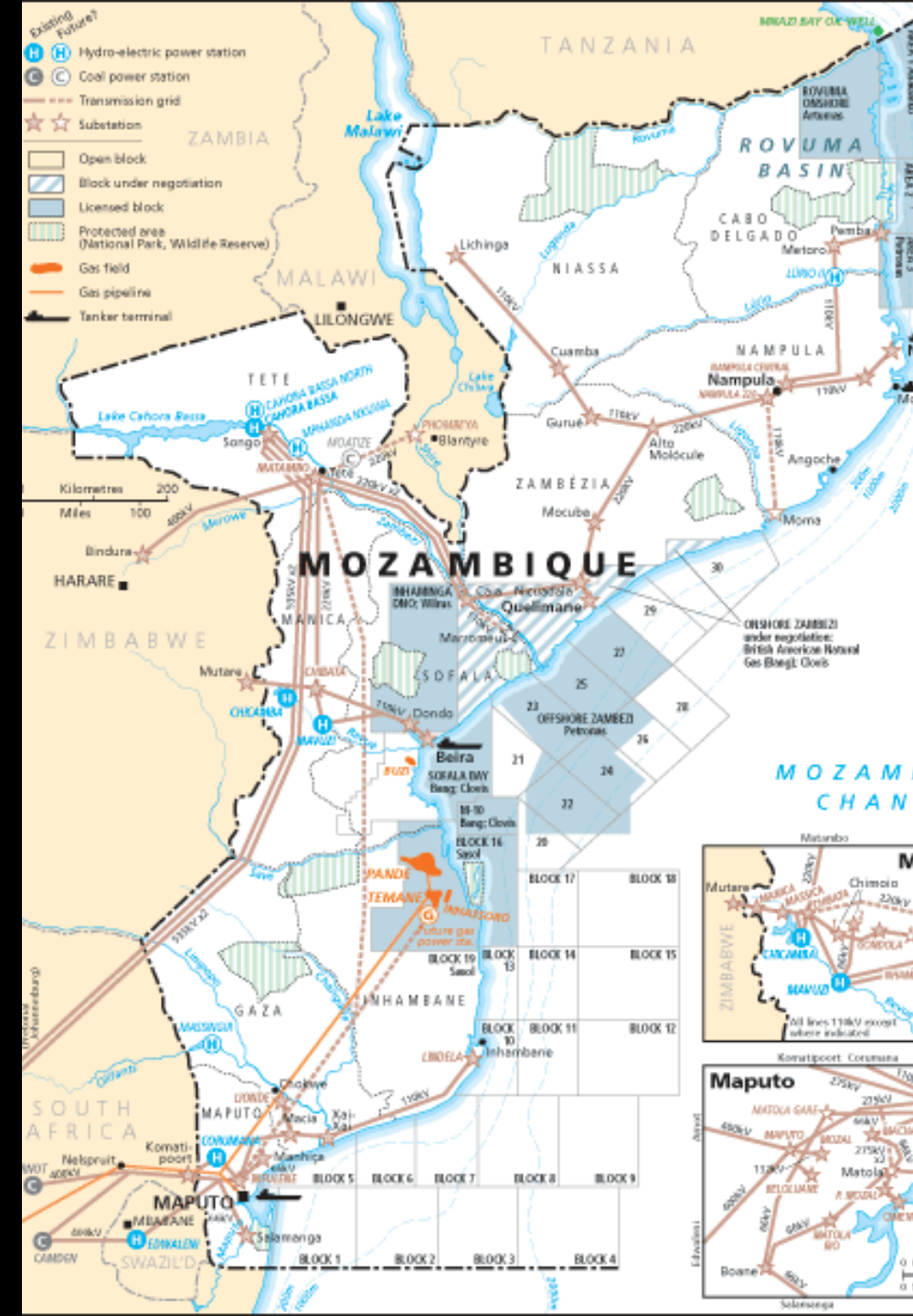


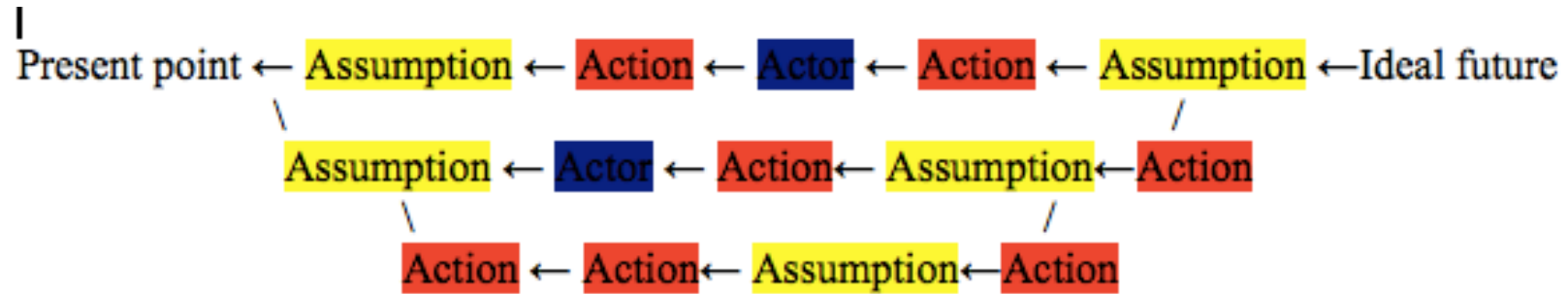
Understanding historical change

The "River of Life" method – HONEST project

Understanding institutional context – POLARIZE project

- Mozambique – rich in energy resources (hydro, fossil fuels, solar, wind and wave)
- Energy access low (particularly rural access)
- Colonial context Portuguese rule in the 19th and early 20th centuries
- Territory (later Mozambique) divided into separate concession areas governed by charter companies (mostly British), until 1942.
- Geographical constraints to an integrated national development strategy – location of the capital Maputo in the far south
- Development of infrastructure networks (e.g. railway corridors, roads and later power transmission lines), linked regions of the country to their inland neighbours (South Africa, Zimbabwe, Malawi) rather than to interior regions.
- Post-civil war democratic reconstruction – energy access is a vote-winning issue at the district level.
- Under conditions of poor governance and heavy debt within the state-controlled electricity company (EDM), energy transition is “obdurate” locked into major hydro power, power sharing agreements (with South Africa) and poor profitability of rural grid connections.





Constructing just future transitions

Backcasting analysis – HoNESt project

Getting creative – Art, ethics and public deliberation project

- Imagining the future as a form of ‘dramatic rehearsal’ (Dewey, 1918; Cotton, 2013).
- ‘Trying on’ imagined futures and reflecting upon the consequences of current action.
- Using a range of artistic methods, serious games, and the development of ‘future artefacts’ to imagine environmental futures.





Concluding thoughts

- Research on environmental/energy future transitions must necessarily be comprehensive, creative and adaptive
 - Future scenarios only make sense when grounded within historical context, contemporary socio-economic conditions, and with full understanding of the limitations of futures thinking
 - By using a combined historical institutionalist and backcasting approach – this combination of context, socio-technical imaginaries, path dependency and the opportunities of critical junctures for change can be thoroughly explored.
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