Just transitions are contested on unequal terms: insights from Africa

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Transitions generate controversies

Individuals and institutions have different interpretations of the right balance between social, economic, and environmental sustainability, different priorities of environmental problems, and different views about the (dis)advantages of solutions or the most appropriate policy packages (Geels, 2010). Just transitions that promise a 'collective good' should not crowd out inevitable trade-offs nor obscure complexities and uncertainties in transition processes. Nothing is more certain than uncertainty in systems and conditions, and spatial interconnectedness ensures that no geography or society is independent of others. Uncertainty refers to the inability or lack of information and knowledge to estimate and adapt to the probabilities of outcomes of events (Stirling and Scoones, 2020). Yet, many sustainability transition initiatives operate on the assumption of a better future with a high level of certainty, despite the widespread vulnerability of people, systems, resources, and institutions to ever-changing/uncertain global-local interactions. SGD7 – universal access to modern, affordable, and sustainable energy *for all* – assumes a universality to energy justice and the pathways to achieve it, downplaying contested and varying entitlement notions in specific geographies (Boamah and Rothfuß, 2020). The nebulous concept of 'sustainability' remains contested whenever it is mobilised, interpreted, and appropriated by different actors.

Fairness is contested, on unequal terms

Fair distribution of the benefits and burdens of energy systems *for all groups* is certainly germane to the just energy transition initiatives (Jenkins et al., 2020; Healy and Barry, 2017;

Newell and Mulvaney, 2013). Yet 'fairness' or fruitful balance between obligations and entitlements are always contested. Thinking about just transitions requires critical reflections on systems, practices and structures that perpetuate injustices/vulnerabilities and stabilise regimes, as well as on governance mechanisms guiding obligation-entitlement interrelations in specific geographies. Transitions require dramatic regime shifts, which cannot be a seamless process because existing regimes are characterised and stabilised by lock-ins and path-dependencies related to sunk investments in infrastructure, machines and competencies, consumer preferences, vested interests, behavioural patterns, favourable subsidies, and regulations (Unruh, 2000; Geels 2011). Lock-ins may also operate in the form of shared discourses (at multiple levels or scales), institutional and political commitments, strategic political lobbying, etc. intended to perpetuate and defend existing systems and regimes (Unruh, 2000). Vested interests and lock-ins that stabilise regimes do not easily give way to radical shifts, except for incremental transformations.

Identifying which interests should be disrupted in the name of justice is not trivial
The promotion of renewable energy technologies by the global north is often experienced in Africa as bullying behaviour (Boamah, 2020), yet 'energy bullying' can also be misleading. Why, where, and how? Industrialised countries certainly bear historic responsibility for climate change but also have the necessary technical knowledge, strong institutions, and financial resources for more effective adaptive capacity to the impacts of climate extremes compared to African economies and agricultural systems (see Rothfuß and Boamah, 2020; Phillips 2019). Furthermore, the 'small carbon footprint' label of Africa masks high carbon emissions from individual African countries, notably South Africa, Egypt, Algeria, Morocco, and Nigeria. In this sense, the framing of just transitions should not be reduced to ecological guilt or comparisons between nations, but responsiveness to the differential vulnerability of countries, regions, and social groups to broader systems (Rothfuß and Boamah 2020).

Support for renewable energy generates justice and injustice together
Sustainable energy transitions in Africa are potentially disruptive, but may operate through different relations, particularly where the regulatory frameworks that support niche innovations elsewhere may not play the same role (Baker and Phillips 2019). Many African governments have promoted renewable energy technologies (mini-grids, net metering, decentralised solar PV systems, wind energy infrastructure) primarily to complement intermittent power supply in urban areas or meet energy needs where electrical grids are unavailable or unreliable (Boamah, 2020). National and provincial/local governments are typically reluctant to promote renewable energy technologies that would break the monopoly and reduce revenue inflows of cash-strapped state-owned electricity distributors, until cost-

competitive conditions exist, or special funding and technical support are provided from the global north (Boamah et al., 2021). Meanwhile, subsidies for decentralised solar PV systems can reinforce spatial energy injustices due to the lower energy output of small systems, varying energy needs of different social groups and classes, and in some cases exploitative acts of private solar energy service providers (Monyei et al., 2018). Incentives for solar PV in urban areas of Ghana and South Africa provided 'surplus energy' for wealthy households to meet their high energy demands (Boamah and Rothfuß, 2020; Van der Merwe, 2017). In short, neither universal energy access nor renewable energy necessarily reduce energy inequalities, which many people identify as a requirement of fairness. And yet, subsidies for the wealthy may be judged more favourably if they deliver public goods, for example by protecting emerging low carbon industries, or reducing costs for early adopters of clean technology. Fossil fuel industries have a long record of lobbying against support for renewable energy by hiding behind the poor.

The failures of biofuel investment illustrate how urban and rural communities of justice are connected

These social, spatial, and temporal aspects of transition have been evident during two decades of biofuel investment in Africa. Investors from the global north and within the global south (including Africa) sought to gain a foothold in Africa to access so-called underutilised land or wasteland resources at the peak of global financial, fuel, and food crises. Many African governments promoted biofuel production to reduce expenditure on oil imports. Private investors sought to produce biofuels (bio-ethanol and biodiesel) predominantly for exports and also for domestic markets. Biofuel Sustainability certification initiatives were introduced to govern the production of biofuel feedstock (corn/maize, soybean, jatropha nuts, sugarcane) in ways that would not compromise food security, ecological integrity, and livelihoods, particularly in least-developed countries (Franco et al., 2012; Matondi et al., 2011; Carmody, 2011; German et al., 2013). These were underpinned by just transition considerations, especially following claims that the conversion of food crops for biofuel production serves the interest of the wealthy in the global north to the detriment of the poor in the global south (Shiva, 2008; Ferret, 2007). Empirical studies revealed that unexpected cuts in external funding for biofuel investments, poorly defined demand-supply chains, weak regulatory frameworks, and a sharp decline in oil prices caught biofuel investors unaware, causing biofuel companies to collapse without significant improvement in low-carbon energy provision as envisioned. The effects were primarily felt in rural areas: large-scale land allocations for biofuel investments reinforced social injustices and population displacements, generating public agitations due to lack of transparency, and prior and informed consent. The justice implications of urban energy reach far beyond traditional city limits. The framing

of trade-offs and pinch points should be understood in relation to spatial variations of entitlements and uncertainties.

> *Recommendations:*
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> - While the greatest responsibility for greenhouse gas emissions lies outside Africa, African governments may promote national interests through strategic use of international climate and energy finance and development of domestic technological capabilities.
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> - Energy planning should address the practical energy needs of different social groups, rather assuming the needs of a homogenous population of energy users.
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> - Future large-scale agricultural investments should be preceded by thorough scientific studies on land politics and entitlement notions in both rural and urban geographies.