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Securing the social foundation: A rights-based approach to planetary boundaries

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ABSTRACT

The 'planetary boundaries' framework identifies Earth system processes that contribute to the stability and resilience of the planet (Rockström et al., 2009a), setting out the limits to changes the Earth can support for remaining in a Holocene-like state. A key question for global sustainable development that emerges from this framework is how to secure social equity while respecting planetary boundaries. Recent efforts to quantify a 'social foundation' have drawn attention to the necessity of securing human wellbeing in a 'safe and just operating space'. Yet realising the potential of this approach, we suggest, requires addressing two substantial governance challenges: how do we define and analyse success or failure in the integration of social equity in environmental governance systems?; and how do we support the emergence of those voices that are needed to make governance equitable? We argue that human rights offer a widely accepted normative basis for responding to both these questions. The body of rights-based practice offers an analytical framing and tools for development support at a time when there is an urgent need to engage with the structural problems in environmental governance. Through a rights-based approach, it becomes possible to identify and address the social relations and mechanisms that generate inequities, and which undermine progress in addressing the unsustainable use of planetary resources at multiple scales. A decade after the planetary boundaries framework first appeared, widespread exploration of the potential of a rights-based approach is overdue.

1. Introduction

In this perspective article we draw together several strands of critical thinking to make a contribution to debates on the future direction of sustainable development (Adelman, 2018; Adelman and Paliwala, 2020; Kotzé, 2018). Recent assessments of atmospheric CO_2 (*National Oceanic & Atmospheric Administration (NOAA) Earth Systems Research Laboratory*, 2019) and global population (Gerland et al., 2014) have provided new urgency to an already active scholarly debate on the Earth system's 'safe operating space for humanity' (Hughes et al., 2013; Rockström et al., 2009a,b; Steffen et al., 2015). A key question for global sustainable development arising from this discourse is how to secure social equity while respecting planetary boundaries (Hughes et al., 2013; Leach et al., 2013; Leach et al., 2018; Steffen and Stafford Smith, 2013; O'Neill et al., 2018; Hickel, 2019).

Empirical studies have started to quantify a 'social foundation' alongside planetary boundaries (Cole et al., 2014; Dearing et al., 2014; Sayers and Trebeck, 2015), drawing attention to the necessity of securing human wellbeing in a 'safe and just space' (Raworth, 2017a, 2017b; O'Neill et al., 2018). Such efforts navigate difficult terrain. Sustainable development is itself problematic and contested in policy and programming, too easily associated with the development priorities of the most powerful, too wedded to a commitment to economic growth, and too frequently disregarding of alternative readings of and priorities for social justice (Adelman, 2018; Sachs 2015). We propose that two substantial governance challenges must be addressed if the potential of the social foundation is to be realised in practice: 1) how do we define and analyse success or failure in the integration of social equity in environmental governance systems?; and 2) how do we support the emergence of those voices that are needed to make

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governance equitable? This perspective article will argue that rights-based practice, with an emphasis on operationalising bottom-up processes of defining and claiming entitlements and rights, offers a framework for responding to both these questions.

2. The planetary boundaries concept

In 2009 a collaborative effort among scholars of global environmental change brought a new focus to the challenge of earth system governance (Biermann, 2012, 2014; Burch et al., 2019). The overall goals of earth system governance are defined in respect to Rockström et al.'s nine planetary boundaries (Biermann, 2012), which set out the limits to changes the Earth can support while remaining in a Holocene-like state. Planetary boundaries define a 'safe operating space' for humanity in which development can take place without compromising the resilience of the Earth system (Rockström et al., 2009a; Steffen et al., 2015). Since its inception, the planetary boundaries (PB) concept has been extensively debated in the academic literature (Downing et al., 2019; Montoya et al., 2018a, 2018b; Rockström et al., 2018) and developed and advanced in different ways (for example: O'Neill et al., 2018; Gerten et al., 2013; Mace et al., 2014; Hepburn et al., 2014). The concept also informed the mission statement of the UN 2015 Sustainable Development Goals.

Multiple challenges arise out of this PB framing, however. Planetary boundaries are interconnected, in many cases poorly understood and may be highly nonlinear (for example, passing thresholds or tipping points may result in rapid change in one or more of the processes). To address this complexity demands urgent, coordinated action and flexibility in global governance as well as learning and innovation (Downing et al., 2019). This is a substantial challenge, raising questions around the appropriate locus for decision making (for example, in state, international, or polycentric systems) (Galaz et al., 2012a, 2016) governance structure (Galaz et al., 2012b; Ahlström and Cornell, 2018), and securing cooperation among states (Biermann, 2012). The persistence of poverty raises an additional set of concerns about global governance. To take one example, inequitable power relations in the myriad institutions of the global food system have been identified as a key source of political inertia. Here, the architecture of global governance sustains a system in which the most powerful economic actors thrive, while global hunger (De Schutter, 2014) and pressures on several planetary boundaries (climate change, biodiversity loss, phosphorus and nitrogen cycles, land use change and freshwater use) persist unabated (Rockström et al., 2009a).

Against this backdrop, the prospect of earth system governance is viewed with scepticism in many states and non-governmental networks, resisted as a mechanism that will, at best, sustain poverty within uneven global development (Steffen and Stafford Smith, 2013). Concerns such as these have motivated proposals for a social foundation, conceptualised as minimum standards for human outcomes such as human health and food, that alongside environmental limits define a 'safe and just operating space' for humanity (Dearing et al., 2014; Raworth, 2017a, 2017b; Sayers and Trebeck, 2015; Leach et al., 2013). This approach comes with inherent risks. In distinguishing the social foundation, people need to be recognised as "embedded in the environment", part of the earth system and not dislocated from it (Morrow, 2015, p.15). However, recent contributions strike an optimistic note, suggesting that there are synergies to be exploited in meeting the twin demands of global equity and planetary boundaries (Steffen and Stafford Smith, 2013; O'Neill et al., 2018; Galaz et al., 2016) and that, in practice, a safe and just operating space can be assessed and governed at regional scales (Dearing et al., 2014; Cole et al., 2014; Kahiluoto et al., 2015; Häyhä et al., 2016; McLaughlin, 2018).

3. Indicators, prescriptions and their limits

The 'safe and just space' analogy provides a powerful illustration of the complexity of social and ecological systems, and has the potential to bring much needed reform to the monitoring of sustainable development at the regional and national scales (Cole et al., 2014; Dearing et al., 2014; Kahiluoto et al., 2015; Häyhä et al., 2016; McLaughlin, 2018). Yet in so doing, attention is focused toward quantifiable indicators and limits, obscuring social relations at different scales that marginalise the poorest and structure persistent inequality and environmental degradation (Cole et al., 2014; Galaz et al., 2012a). For example, O'Neill et al.'s (2018) assessment of how far people's basic needs are satisfied at a globally sustainable level of resource use attends to macroeconomic and social indicators, but overlooks the complexity of social relations that structure access to basic services and capabilities required for wellbeing. The prescriptions that follow approaches such as these touch down on the lived experiences of people in many different contexts, with potentially disastrous effects. For example, Steffen and Stafford Smith (2013) propose that the forest scheme REDD can achieve synergies between planetary boundaries and global equity through redistribution of financial resources from North to South. Yet REDD is seen by Indigenous communities to "constitute new forms of geopolitical economic threats", failing to protect land rights and excluding indigenous voices in decision making (Latin American Indigenous Forum on Climate Change, 2010, cited in Larson, 2011, p. 541; see also Dawson et al., 2018; Tejada and Rist, 2018; Ahmed et al., 2017). The threat perceived by these communities reflects wider experiences of sustainable development as a project in which ambiguity over questions of power and social justice has opened space for the most powerful actors to further their own interests and values (Sachs 2015). As Hajer et al. (2015, p.1652) note, there is a need to move beyond the "cockpit-ism" of international projects and policies that engage in the "top-down logic of steering".

A promising response to these problems lies in environmental governance arrangements that have looked to move beyond top-down, technocratic scientific-management (for example, focused on maximum sustainable yields) to address complexity in social and ecological systems (Brunner, 2010). Adaptive governance looks to embed flexibility and learning across geographic and institutional scales by integrating a wider stakeholder community into decision making, through approaches such as collaboration, co-management and social learning. Similarly, Galaz et al. (2016) suggest a need for governance responses that link actors across scales and which provide spaces for deliberation and learning, and that these facilitate the downscaling of planetary insights in ways that are sensitive to local issues (Galaz et al., 2016). However, in practice these approaches often poorly account for underlying social relations (political, economic, cultural, social etc.), and the mechanisms that these relations sustain, which structure marginalisation, discrimination and exclusion (George and Reed, 2017). For instance, calls for an "energetic society" (Hajer et al., 2015 p.1655) to contribute to governance risk reinforcing existing relations of power and leaving politically marginalised, resource dependent communities unable to build claims for their entitlements. Similarly, failures to address issues of power, inequalities and politics have been underscored across a range of participatory and community practices (Ganuza et al., 2016), including community-based natural resource management (Lund, 2015) and participatory governance (Patel et al., 2016), for their potential to entrench or deepen existing inequities and their susceptibility to elite capture.

What is missing from this picture is a mechanism for integrating social equity into the processes of decision making that constitute the governance of planetary resources.

In this view, navigating planetary boundaries requires input from development studies and the social sciences, as well as the biophysical sciences (Weaver et al., 2014; Lövbrand et al., 2015). The social foundation that underpins the 'safe and just space' for humanity follows this logic, locating limits in reference to human rights standards and thereby reflecting the long-standing narrative linking development to social justice and economic, social and cultural rights. But policies focused on universal human rights do not necessarily lead to outcomes that reflect the interests of poor communities. For example, reference to human rights standards has underpinned donor conditionality that shuts off of aid to the poorest (Abouharb and Cingranelli, 2007) and has been used to legitimise resource privatisation in ways that ultimately entrench inequality (Sultana and Loftus, 2015). Leach et al. (2013) suggest the need for a more direct approach, that recognises sustainability as a concept and phenomenon that is also political and asks questions about winners and losers resulting from different development pathways. When viewed in this way, achieving a safe and just operating space demands a focus on the formal and informal institutions and practices that mediate decision making at different scales. It means questioning the social, economic, political or legal processes that determine access, ownership and control over planetary resources. The local scale is likely to be particularly significant if resource conservation and development objectives are to be achieved simultaneously (Baird et al., 2019). This, we suggest, means shifting attention from global equity seen in terms of aggregated outcomes, and towards the processes at different scales that determine whose interests are weighed in decision making. Rather than looking to universal and legalistic frameworks and treaties (e.g. Knox and Pejan, 2018; Kotzé, 2015), it is the adoption of a rights-based approach to development that offers a promising way forward (Piron, 2005), shifting the focus onto community-based practice and the social and political processes in which rights are defined and claimed.

4. Towards rights-based practice

For some, human rights exemplify the 'cockpit-ism' of top-down international institutions, enacting 'doctrinal mandates, prescribing fixed rules for behavior' (Miller 2010, p.918) through an international legal order. This tendency has led some to question the appropriateness of human rights as a framing for development (Uvin, 2007) or as a tool that can support and empower the poorest (Grugel and Piper, 2009; Grear, 2006, 2010; Hickey and Mitlin, 2009). Yet rights claims are also advanced by disenfranchised and marginalised groups, such as rural populations (Claeys and Edelman, 2020; Hoddy and Ensor, 2018) and indigenous peoples (Kotzé, 2015), to demand accountability of state and private sector actors. In this reading of the relationship between human rights and development, the content of human rights law and its integration into operations of UN agencies and international organisations is secondary. Instead, the emphasis is on human rights as a source of inspiration for the creativity of activists, organisations and movements that use the human rights standards and principles established in international law when seeking to realise social and political change in favour of the most vulnerable (Gready and Ensor, 2016; Ensor et al., 2015). In this way, the language of human rights frameworks, documents and standards becomes localised and context specific, reflecting community understandings of inequities and patterns of marginalisation and exclusion, and sets the scope and trajectory for community action. Intrinsically aspirational and generative (Gready and Ensor, 2016), rights-based claims are often made in response to failures to respect or protect access to natural resources. Claim-making seeks to secure recognition of entitlements and frame demands for self-determination, which are translated into social and political action by communities, civil society organisations and popular movements in diverse cultural and historical contexts. For example, claims to autonomy and self-determination for rural populations are at the heart of the food sovereignty movement (Claeys, 2015). In this way, human rights are (re)claimed by the poor, securing relevance in the language of local struggles in localised claims for justice.

Rights-based approaches to development have responded to this trend, aligning programmes to focus on the most vulnerable and the social and political processes through which rights and entitlements are claimed, accessed or denied (Gready 2008; Gready and Ensor, 2005; Ensor et al., 2015). Anchored in an understanding that claiming rights means modifying or subverting existing power relations embedded in inequitable structures and systems, human rights law has been distilled into principles that can inform participatory development action. While varying between agencies, common elements include accountability, equality and non-discrimination, transparency and empowerment (Gready, 2008). Development action informed by human rights principles aim to transform relationships of accountability, such as between local government and communities, by supporting and creating spaces for amplifying the voices of the poorest and building support for entitlements. As such, these principles reinvent the discourse and practice of both development and human rights, as the focus is placed on the advocacy work of communities and groups that reflexively deliberate and strategise in relation to the constraints and opportunities afforded to them in their social relational contexts (Gready and Ensor, 2005). The definition of outcomes and minimum standards are secondary issues, subordinate to the drive for more equitable processes.

This approach recognises that entitlements are secured or denied in a diversity of contexts, in which rules and norms are enforced by different, often overlapping, legal, normative and administrative orders, including through the power and authority of (for example) customary or religious law. As such, attention is drawn to the plurality of institutions that are employed in defining rights, from the formal institutions of the state (for example, national constitutions) to informal processes at the local level. Rights-based strategies may, then, seek to have entitlements recognised through contestation and/or negotiation in social and political processes (such as advocacy led by women's solidarity organisations or social movements), or through appeal to legal or administrative systems (such as negotiation with religious leaders or local government officials) (Ensor et al., 2015). In Odisha, India, for example, local NGOs have used RBAs in work with marginalised groups affected by large-scale development projects (Mishra and Lahiff, 2018). Capacity building and awareness raising by NGOs around land rights was accompanied by lobbying, confrontation with more powerful economic actors, and negotiations between communities and state representatives. While the core demands were around the right to land and forests, the uptake of RBAs saw these expand to include other locally defined rights, including in relation to water and food sovereignty, reducing damaging patterns of dependency on the state and market (Mishra and Lahiff, 2018). This emphasis of rights-based approaches on local social and political processes, and on participation and accountability in particular, converges with a shift in the last 10 years or so towards demand-led governance, offering the potential for linking actors and institutions across scales, where 'bottom-up' activist and civil society initiatives meet with 'top-down' global governance (Grugel and Uhlin, 2012). These linkages can be promoted by rights-based approaches, such as through coalition building, public

engagement and mutual problem solving initiatives (Gready and Ensor, 2005; Gready and Vandenhole, 2014), in turn providing "opportunities for justice claims by, and on behalf of, vulnerable and marginalised groups in the Global South" (Grugel and Uhlin, 2012, p.1714).

Cases illustrate how rights offer both a tool for analysis (Ensor et al., 2015), and a mechanism for framing and supporting the legitimate claims that are identified (Buergin, 2015; Stevens, 2009). Buergin's (2015) examination of conflicts over biocultural diversity in a Karen ethnic minority community in Thailand for instance identifies local conceptions of community rights and claims that draw on external discursive and legal frameworks. Community claims to access land, natural resources and identities both express community experiences of historical marginalisation and exclusion and are framed to contend with competing claims by more powerful "modern actors and institutions with nationally or globally framed interests in the conservation, management, and use of the same resources" (Buergin, 2015, p.2059). The claims of communities and their civil society partners are responsive to changing discourses and policies at the national and international level/higher scales, providing them with new "instruments and chances for local minority groups not only to claim and enforce rights supported in this international context, but also to improve their chances to influence or even participate in national legislative processes and discourses" (Buergin, 2015, p. 2049). As this case also demonstrates, bottom-up claims for voice and accountability challenge established, often hierarchical structures within society and are likely to be contested (Ensor et al., 2015).

Embedding this thinking into efforts to secure a safe and just operating space means shifting attention towards the degree to which the rights-based principles of equality and non-discrimination, transparency, accountability and empowerment are found in environmental governance (metagovernance) at different scales, and expressed in and through its practices (Pahl-Wostl, 2019). For example, to what extent are decision makers accountable to those affected? Who represents the interests of those relying on scarce natural resources? Are they provided with the resources (time, space, technical support and funding) to advance their claims on an equal footing with others? Do international organisations and states focus on rights claims that emerge from below, from vulnerable or marginalised groups or communities? How are competing claims for access to resources/ecosystems services etc. resolved? The political dimension of these questions is unavoidable, as those used to authority may be asked to cede power in questions over ownership, access, and control over resources.

While there is a role for the law in securing action against states on global environmental issues by holding responsible authorities to account when they fail to meet their obligations (Peel and Osofsky, 2018), governance remains crucial. A reformed 'earth system law' has been suggested as an essential component of effective earth system governance (Kotzé and Kim, 2019). Yet there is a need for governance practices to work through approaches that embody rights-based metagovernance that can balance top-down planetary boundaries with entitlements defined from the bottom-up. Rights values and principles at a metagoverning level can inform institutional decision making and problem solving in local settings, both in terms of future-oriented activities and as a criteria for evaluation (Kooiman and Jentoft, 2009), with their content reflecting the governance challenges confronted locally and how these are defined and appraised.

The argument we put forward does not suggest that rights-based approaches on their own are an answer to the challenge of realising an equitable and just development approach that addresses planetary boundaries. Rather, the body of rights-based practice offers an analytical framing and tools for community-based development practice at a time when there is an urgent need to engage with the structural problems in environmental governance (Galaz et al., 2012a, 2016). By adopting a rights-based perspective it becomes possible to identify and address the social relations and mechanisms that generate inequities and which undermine progress in addressing the unsustainable use of planetary resources at multiple scales.

5. Conclusion

A decade after the planetary boundaries framework first appeared, widespread exploration of the potential contribution of a rights-based approach is overdue. Contributions from a rights-based perspective hold the promise of supporting efforts at securing human wellbeing in a 'safe and just space' by 1) helping define and analyse progress on social equity in environmental governance and 2) by supporting the emergence of processes and practices for equitable governance. Analytically, they can offer a useful corrective to existing approaches to the social dimensions of planetary boundaries because they seek to hone-in on the social contexts of environmental governance and render transparent the relations, mechanisms and structural problems that pertain there. Analysis of such settings is inherently post-disciplinary, attuned to the complexity of practical problems faced by particular communities and their practical contexts for action. The approach requires disciplinary knowledge and methods from the critical social sciences (from, for example, human geography, development sociology, political economy, and socio-legal studies) being leveraged in concert with the natural sciences on the basis of how they can help enhance understanding of problems and processes, in context.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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