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# Beyond scarcity: Rethinking water, climate change and conflict in the Sudans

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### ABSTRACT

This article develops a new framework for understanding environment-conflict relations, on both theoretical grounds and through a qualitative historical analysis of the links between water and conflict in the states of Sudan and South Sudan. Theoretically, the article critiques the dominant emphases on 'scarcity', 'state failure' and 'under-development' within discussions of environmental security, and proposes an alternative model of environment-conflict relations centring on resource abundance and globally-embedded processes of state-building and development. Empirically, it examines three claimed (or possible) linkages between water and conflict in the Sudans: over trans-boundary waters of the Nile; over the links between internal resource scarcities and civil conflict; and over the internal conflict impacts of water abundance and development. We find that there exists only limited evidence in support of the first two of these linkages, but plentiful evidence that water abundance, and state-directed processes of economic development and internal colonisation relating to water, have had violent consequences. We conclude that analysts and policymakers should pay more attention to the impacts of resource abundance, militarised state power and global political economic forces in their assessments of the potential conflict impacts of environmental and especially climate change.

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## 1. Introduction

Mainstream academic and policy accounts of the relations between environmental change and conflict, including the conflict potential of global climate change, are usually organised around three sets of ideas: 'scarcity', 'state failure' and 'under-development'. Scarce resources are envisaged as challenging livelihoods, fomenting grievances and competition, and spurring civil and perhaps even inter-state conflict. Weak state authority is held to facilitate, or do little to mitigate, the development of these dynamics. And widespread poverty and a low level of development are equally thought to be crucial contextual factors, on the grounds that resource scarcity primarily affects the lives of poor people in poor countries. These motifs have not gone unchallenged, of course. Scarcity discourse, in particular, has been extensively critiqued on both theoretical and empirical grounds, with some finding scant evidence of links between environmental scarcity and conflict (esp. Theisen, 2008), and others calling attention to the problematic political agendas associated with, and the negative

consequences of, scarcity framings (Leach and Mearns, 1996; Mehta, 2010). Yet 'scarcity', 'state failure' and 'under-development' remain the dominant policy and academic ideas. And critical scholarship on these themes has been more oriented to critiquing these constructions, especially 'scarcity', than proposing alternative models of environment-conflict relations.

This article seeks to advance just such a new model, on both theoretical grounds and through a qualitative historical analysis of the links between water and conflict in the states of Sudan and South Sudan. The two Sudans (or, prior to southern secession in 2011, the single state of Sudan) have long served as textbook cases within environmental security thinking. Images and headlines of drought, famine and conflict dominate Western public, and to a degree expert, understandings the two countries. Both chronic and environmental shock-induced water scarcities are often identified as important contributory factors to their high levels of political violence (Assal, 2006; Bromwich, 2009). And Sudan is regularly portrayed as site of the world's first global climate change-induced war, in the troubled western region of Darfur (Mazo, 2010, pp. 73–86; Mjos, 2007). Sudan generally and Darfur specifically are often held up as providing paradigm-defining evidence of our looming future of climate change-induced conflicts. 'Let Darfur stand as the starkest of warnings about what the future could bring,' claims one report (Christian Aid, 2007, p. 2). Moreover, both of the Sudans are

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regularly characterised as ‘failed’, ‘failing’, ‘fragile’ or ‘weak’ states (Ellis, 2005), and as desperately under-developed (Keen, 2001), these failings in turn being understood as important contextual or contributory factors in their experiences of scarcity-induced conflict. The Sudans thus serve as a perfect case for testing mainstream environmental security (and specifically water and climate security) thinking, and for suggesting an alternative model of environment–conflict relations.

The article is structured as follows. Immediately below we provide a cursory overview of contemporary environmental conflict discourse; critique on theoretical grounds its overwhelming emphases on scarcity, state failure and under-development; and outline an alternative model of environment–conflict relations. We then briefly summarise our case study methodology. Thereafter we turn to the Sudans, considering three different sets of claimed (or possible) links between environmental change and conflict: (1) over the trans-boundary resources of the Nile; (2) over internal water scarcities; and (3) over internal water abundance and projects of agricultural and water development. We find that there exists only limited historical evidence in support of the first two of these linkages, but plentiful evidence that water abundance, and state-directed processes of economic development and internal colonisation relating to water, have had violent consequences. The conclusion expands on this core finding and also considers the potential purchase of this model under future circumstances of global climate change.

## 2. The environment and conflict revisited

The idea of ‘scarcity’ provides the central organising concept within contemporary environmental conflict discourse, including on the conflict potential of water stresses and global climate change. Understood sometimes in Malthusian terms (as arising when population growth and consumption approach natural limits) and sometimes through the lens of neo-classical economics (as an inherent property of all economic goods), scarcity is assumed to generate frustration, competition, grievances, and in turn, potentially, conflict. Thus the UN Secretary General has recently claimed that, within the context of climate change, [c]ompetition between communities and countries for scarce resources, especially water, is increasing, exacerbating old security dilemmas and creating new ones’ (Ban, 2011). Many scholars have broadly concurred. The central thesis of the leading exponent of post-Cold War environmental security discourse, Thomas Homer-Dixon, is that ‘environmental scarcity causes violent conflict’ (1999, p. 93). Peter Gleick, leading authority on water and international security, presents water’s scarcity as the primary characteristic that makes it a likely ‘source of strategic rivalry’ (1993, p. 84). And the Intergovernmental Panel on Climate Change has concluded that climate change ‘may exacerbate resource scarcities in developing countries,’ in turn potentially generating ‘scarcity disputes between countries, clashes between ethnic groups, and civil strife and insurgency’ (2001, p. 950); and that ‘climate change may become a contributory factor to conflicts in the future, particularly those concerning resource scarcity, for example scarcity of water’ (2007, p. 443). More recent quantitative scholarship has tended to find only limited support for the scarcity–conflict thesis (see e.g. Gleditsch, 2012; Johnson et al., 2011 for overviews); and the mainstream concern with scarcity has also been extensively critiqued by political ecologists on theoretical, political and evidential grounds (e.g. Peluso and Watts, 2001; Benjaminsen, 2008). Nonetheless, the belief that scarcity can cause or contribute to conflict, and will do so increasingly in future, remains the core framing idea and reference point – even when this is only a point of departure – within environmental conflict debates.

Alongside but secondary to this, most academic and policy discourse on environmental conflict also places significant emphasis on institutional and economic factors as important intervening or contextual causes of scarcity-related conflict. Specifically, economic ‘under’ or ‘low’ development, and ‘failed’ or ‘weak’ statehood, are routinely depicted as pivotal in determining whether resource scarcities generate conflict or not. In some academic accounts, ‘constrained economic productivity’ and ‘disrupted institutions’ are considered effects of environmental scarcity, and thus important pathways to conflict (Homer-Dixon, 1999, pp. 81–103). In others, by contrast, these institutional and economic factors are viewed as independent variables which typically precede but then interact with scarcity crises (Baechler, 1999, pp. 41, 103; Kahl, 2006, pp. 24–26). For most, low economic development is such a crucial variable that the analysis of environmental security challenges can be restricted, a priori, to poor countries: as Nordas and Gleditsch observe, this assumed connection between environmental conflict and poverty ‘is not a point of great controversy in the literature’ (2007, p. 635). Likewise, state failure, weakness and contraction are typically viewed as key. This is especially the case within policy discourse (e.g. CNA Corporation, 2007, p. 44; UK Cabinet Office, 2008, p. 18), but also holds true of much of the best academic analysis: Barnett and Adger observe, for instance, that ‘when states contract ... violent conflict [over scarce resources] is more likely’ (2007, p. 647). The basic assumption operative here is that the environmental conflict problematique is to a significant degree caused or mediated by political and economic weaknesses that are internal to non-Western states.

For the purposes of this article, there are five problems with the above that need highlighting. First, the widespread assumption that environmental conflicts should be analysed through the lens of ‘scarcity’, when other resource conflicts are generally seen as arising from ‘abundance’ (Koubi et al., 2013), is paradoxical and indeed flawed. Within the extant literature on the political economy of civil wars, resource ‘abundance’ is generally seen as the key variable, the high prevalence of diamonds, oil, and other non-renewable resources being closely linked to conflicts, in Sub-Saharan Africa in particular (e.g. Collier and Hoeffler, 2005; Fearon, 2005). This is puzzling: the mechanism linking rare minerals and non-renewables with conflict is held to be the ‘resource curse’ of ‘abundance’, while the condition linking water – the most abundant renewable resource on the planet – with conflict is thought to be ‘scarcity’. This latter linkage is typically justified on the grounds that disruptions in the availability of environmental resources such as water can contribute to economic decline, social discontent, competition and in turn conflict – a causal chain which is theoretically plausible, if often contested. Even if it is valid, however, water could also be associated with conflict through abundance. The resource curse literature typically argues that local abundance can lead to conflict by creating incentives for parties to engage in conflict, by providing the state and especially rebels with the financial means to sustain conflict, and/or by weakening state institutions and transforming state–society relations (e.g. Collier and Hoeffler, 2005; Fearon, 2005). There is little reason, in principle, why these or some other abundance-related causal dynamics could not also apply to water.

Second, the assumption that some resource conflicts are associated with ‘scarcity’, whilst others are caused by ‘abundance’, is theoretically incoherent – for the simple reason that scarcity and abundance are relational concepts, which, like the terms ‘master’ and ‘slave’, only make sense in relation to one another. Approached thus, ‘scarcity’ does not refer to an objectively small quantum of resources, but instead to a circumstance in which some individuals or groups have less than others (i.e. socially), or than they have in other places (i.e. spatially), or than they had at other times (i.e.

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