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Guest Editorial, part of a Special Feature on Transforming Conflicts over Natural Resources in the Global South for Social-Ecological Resilience

Transforming asymmetrical conflicts over natural resources in the Global South

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ABSTRACT. This Special Feature re-examines the relationship between natural resources and processes of conflict and cooperation as they occur in the Global South. Here we introduce key issues and reflect on learning from recent research. While covering a range of resources, contributions share an emphasis on middle-range theory in terms of moving from empirical phenomenon to analytical understanding. What emerges are nuanced understandings of conflict and cooperation, as embedded within specific contexts and wider processes of power and accumulation. In considering how social-ecological resilience can emerge for the poorest and most marginalized groups in the Global South, middle-range theory built upon comparative case study research and data-rich analyses brings issues of environmental (in)justice in resource access and distribution to the fore. Our conclusions reiterate a view of conflict transformation whose dynamics are locally situated with complex drivers that negate any conjuring of simplistic solutions and underline the important role research can play in informing appropriate development action.

Key Words: *conflict; cooperation; Global South; natural resources; social-ecological resilience*

INTRODUCTION

Both scarcity and abundance of natural resources, plus the processes that produce them, have long been conceived as fuelling social conflict (Richards 2004, Mildner et al. 2011, Ide 2015). For instance, scarcity in water resources required for agriculture, industry, and human well-being, has been heralded as resulting in water wars (GRO 2014). Likewise, the depletion of fish stocks, partly induced by overfishing of the world's oceans, has been identified as a cause of fishery clashes (Pomeroy et al. 2007, Muawanah et al. 2012). On the other hand, abundance has also been cited as a driver for conflict, particularly in relation to the extractive industries and high value mineral, gemstone, and oil deposits (Auty 2001, Le Billon 2001, Ross 2015).

Continuing on this argument, scholars have recently added climate change to the repertoire of conflict drivers. In a widely reported study, Kelley et al. (2015) have argued that climate change and a resulting long-term drying trend played a causal role in the Syrian uprising and the resulting civil war. Other scholars present a more nuanced analysis of the conflicts occurring in the Fertile Crescent (De Châtel 2014). However, the simplicity of the claim made by Kelley and coauthors speaks strongly to the public imagination. Indeed, perceptions of climate change acting as a "multiplier of many other threats," in the words of the United Nations Secretary General (UN 2017), feed into securitization agendas promoting peace alongside climate resilience.

From the perspective of environmental conflict, social-ecological resilience—defined as "the ability of people, communities, societies, and cultures to live and develop with change, with ever-changing environments" (Folke 2016)—intuitively seems far away. Conflict points to the incidence of human dissatisfaction, contrary objectives, and societal tensions, thus probably, at the system level, undermining the very qualities essential to resilience. However, although the concept of resilience is all-too-often imbued with positive characteristics (see Hahn and Nykvist 2017), they cannot be assumed (Adger 2006, Coulthard 2012). Indeed, conflict may provide an entry-point to more equitable forms of transformation that build greater resilience through challenging existing inequalities and established new ways of acting. In this vein, recent work on equity and resilience offers perspectives on issues of power and distributional justice with relevance for approaches to conflict transformation (Fisher et al. 2018, Matin et al. 2018). This background begs the need to scrutinise our assumptions about the relationship between resilience and natural resource conflict and cooperation within real-world situations.

The starting point for this Special Feature is a conclusion reached in a review of the literature that "[a]t present, scholarship tends to promote a multi-causal, multi-level and multi-actor perspective in which the role of environmental factors is mediated through or combined with other factors, often of a socio-political nature" (Frerks et al. 2014:17). We will note below that this position was the result of a period of polarized academic debate and search for universal explanations, to which Kelley et al. (2015) have returned. We will argue that the approach taken by Frerks et al. (2014), although useful as an interim position, is actually too modest. We propose a middle-range theory approach (Merton 1967, Hedström and Udehn 2009), which seeks the middle ground between a universalist explanation and the need for empirical contextualization. Its methods are comparative case study research and thick, data-rich analyses.

The social-ecological conflicts at center stage in this Special Feature may be national and/or local in nature; they also occur across resource sectors and regions of the Global South. Importantly, they share the characteristic of being asymmetrical in the sense that the parties involved possess different capacities to influence the course of events. The protagonists are poor, generally rural, populations that rely on their natural surroundings for habitation, livelihoods, and well-being. They

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are, in a basic sense, "ecosystem people" (Gadgil and Guha 1995), threatened by events that bring them into competition with stronger players such as industry and government.

The authors contributing to this Special Feature generally take a political position. Sympathizing with the poor involved in natural resource conflicts, they aim to better understand prevailing situations and their dynamics, and thereby pave the way for conflict transformation (Feola 2015). Moving beyond the confines of analytical science into what Aristotle called *phronesis*, they strive to contribute to society's practical rationality "in elucidating where we are, where we want to go, and what is desirable according to diverse sets of values and interests" (Flyvbjerg 2001:167). This implies drawing the positionality of researchers to the fore, because the choice of specific research goals and action partners has inevitable consequences. As we highlight below, three articles reflect on the process of conducting research while producing desirable development outcomes.

The majority of the material presented in the contributions to follow derives from two unique and related research programs funded by the Netherlands Organisation for Scientific Research (NWO). The first program, Conflict and Cooperation over Natural Resources with the acronym CoCooN, lasted from 2010 to 2016 and included projects in the fields of mining, petroleum extraction, fisheries, water usage, and biofuel production. The second program, Conflict and Cooperation in the Management of Climate Change with the acronym CCMCC, intends to strengthen the evidence on the impact of climate change and climate change policies on conflict or cooperation in developing countries. CCMCC was funded in collaboration with the UK Department for International Development (DFID). It commenced in 2013 and ends in 2018. Both programs aimed not only to improve the scientific understanding of resource conflicts and the available opportunities for resolution, but also to facilitate cooperation by engaging development partners and other relevant stakeholders. To this end, the project consortia consisted not only of academics but also of practitioners.

Conflict, natural resources, and social-ecological resilience
The environment became an important thematic domain within global development cooperation in the 1980s, driven by international actions such as the United Nations-led World Commission on Environment and Development, which released the Brundtland Report in 1987 (WCED 1987). Concern over resource-related conflicts fed into this policy arena in the 1990s. The end of the Cold War created a geopolitical space in which environmental security filled a vacuum, with concerns over a coming anarchy underlining linkages made between environmental scarcity, weak states, and conflict.

Intellectual debates on conflict and natural resources at this time were dominated by "broad brush explanatory archetypes," which were vigorously marketed in policy circles and influenced new strategic thinking about security and development in the Global South (Peluso and Watts 2001). These concerns gave credence to causal theories on the relationship between conflict and either resource scarcity or resource abundance, with discussion pitched at a macro-level of analysis.

In this vein, were the two comparative projects of political scientists, Baechler and Homer-Dixon. Outputs of Baechler's (1998) Environmental Conflicts Project included 40 case studies

and a typology of conflicts. Homer-Dixon's (1999) Environmental Change and Acute Conflict Project formulated 16 case studies, each with a strong debt to neo-Malthusian thinking on population and resources. Such work stimulated studies that averaged and homogenized conflicts across countries, with weak demonstration of the complexity of subnational conflict. This put war and violence as a function of self-regulating social-ecological systems on the table in a way that, arguably, became both naturalized and depoliticized (Peluso and Watts 2001). The postulated trajectory of change was one of movement from cooperation to conflict (see also Collier and Hoeffler 2005).

In recent years, neo-Malthusian thinking finds a resurgence in what Verhoeven (2011) points to as dystopian accounts that posit climate change will lead to more conflict and cause state failure and population movement. The danger hereof is that these global Malthusian narratives are susceptible to the manipulation of national elites, who benefit at the expense of local populations. Feeding into these debates has been a voluminous literature on the "resource curse," with one of its central tenets being that mineral wealth in the hands of poorly governed states provides the means for these states to circumvent dependency on taxation from its citizenry, allowing them to bypass the responsiveness of the electorate (Bryceson and Fisher 2014). Despite heavy critique of its "structuralist straightjacket," the notion of the resource curse continues to hold sway today (Haslam 2016).

Scholars in the realm of legal pluralism studies, a field that takes the existence of multiple sources of law in society as point of departure (von Benda-Beckmann 2002), have also engaged with the issue of conflict over natural resources. Thus, in a seminal contribution on the socio-legal role of law in natural resource management, Spietz and Wiber (1996) point out that: "[u]nder the pluralistic condition, people are constantly struggling to know what diverse rules apply to them in their everyday life [...], to understand what those laws mean [...] and to work out what to do when the rules come into conflict with each other" (Spietz and Wiber 1996:3). Bavinck and Gupta (2014) add to this ground-level perspective a systemic approach, highlighting competition as one specific type in the range of possible relations between legal systems coexisting and vying for influence in a particular social field. Such legal systems, and the parties adhering to them, are often of unequal power, thereby influencing the direction of affairs in their favor. Taking yet another angle, Bavinck et al. (2014), writing about fishing conflicts in South Africa and South Asia, conclude that as the parties involved relate to different legal systems, "conflicts are now more explosive, of longer duration, and more difficult to resolve than they were before" (Bavinck et al. 2014:65). The perspective of legal pluralism has influenced various contributions to this Special Issue, and we return to it below.

Political ecology has been acute at capturing the nuance of subnational conflict. In this vein are studies that stress the potential of conflict to act as a positive force by stimulating civil society change toward greater social or environmental justice (e.g., Peet and Watts 1996, Peluso and Watts 2001, Büscher and Arsel 2012). Feeding into this, and influenced by subaltern studies, notions of resistance have been brought to the fore (Moore 1998, Wayland and Kuniholm 2016). Ingalls and Stedman (2016) have recently made an attempt to integrate political ecology into resilience thinking, thereby allowing for a "deeper treatment of power" (Ingalls and Stedman 2016; cf. Stone-Jovicich 2015). This follows

wider social-science critiques of resilience thought in which issues of power, agency, and politics are supposed to be neglected (Cote and Nightingale 2012, Olsson et al. 2015, Weichselgartner and Kelman 2014). Hahn and Nykvist (2017), however, argue that the existence of conflicting interests is actually incorporated into much resilience scholarship, albeit implicitly.

Research traditions focusing on collective action and natural resources act as a counterpoint to a focus on conflict because they place cooperation, including movement from competition to cooperation, at center stage. Of note is the substantial body of work on common pool resources stimulated by the work of Elinor Ostrom (1990, 2005). In this context, institutions come to the fore within people-environmental relations, to help avoid tragedy of the commons scenarios in the production of resource management outcomes. Emphasis is placed on the design principles necessary to build people's capacity to transform rules in order to lead to desirable collective outcomes (e.g., Meinzen-Dick and Di Gregorio 2004, Cinner et al. 2012, Ratner et al. 2013, 2017).

The above overview provides a backdrop to the long-standing criticism of macro-level abstraction, namely that it led to inappropriate policy prescriptions (Murshed 2014). In the 1990s and early 2000s what were absent, in terms of policy influence although not within academic research per se, were perspectives on conflict that brought heterogeneity to the fore and placed value on the significance of contextualized knowledge and a recognition of complexity for informing policy action. It is against this background that the NWO-funded CoCooN program emerged in the 2010s. The CoCooN and later in 2013 CCMCC programs were formulated by a group of academic-practitioners who were influential within the Dutch policy sphere. In developing the program, they drew on social science traditions within geography, anthropology, development, and conflict studies. Academic work within these traditions sought to unpack the reasons for and manifestations of conflict without resorting to singular causal explanations (Frerks et al. 2014). Strong emphasis was placed on the value of insight from field-based empirical research to inform development interventions and policy in developing countries.

A starting premise, reinforced by a substantial body of evidence, was that a linear trajectory from conflict to cooperation was too simplistic; moreover, conflict was not taken as inherently bad and cooperation inherently good. It was considered that conflict may lead to strife but can also reveal pathways for transformation and cooperation; likewise, cooperation may provide inclusive access to resources but it may also be forced, resulting in the unhealthy muting of dissent or adverse incorporation into institutional structures on terms that are not on people's own terms. An important issue was how to research these processes and how to feed learning into meaningful action with the potential to transform marginalized people's lives for the better.

NATURAL RESOURCES AT THE NEXUS OF EVERYDAY STRUGGLES

In developing perspectives on conflict transformation rooted in sound empirical understanding, contributors to this Special Feature reject mono-causal explanations and question the value of interventions uninformed by local specificity. Instead, much in line with the position of Frerks et al. (2014), they place emphasis on multicausal perspectives that position environmental factors within broader, development-oriented frameworks for understanding conflict. As Frerks and colleagues argue, "the environment and associated factors like environmental degradation, resource scarcity and more recently climate change do or may play a role in the rise and continuation of conflict, but are seldom the only or most important factors" (2014:17). In addressing what consequences these conflicts have for marginalized people, questions of environmental justice come to the fore.

The notion of conflict transformation is here understood to be different from change per se. We use the term transformation to refer to conscious efforts of governance, undertaken by a variety of possible actors (Kooiman 2003). These can be state agencies, private industries or civil society organizations operating at different, interacting scale levels. Frequently it is a combination of such actors acting and interacting according to their own images, powers, and interests. Collective action or civic-driven change is recognized to be a powerful driver of transformation in a direction that seeks to shape access to and control over natural resources in ways that recognize the livelihood needs and human rights of poor and marginalized people in the Global South. We note this perspective on transformation places emphasis on empowerment and organization building; it does not sit within transformative approaches that seek radical disjunction as an alternative to adaptation.

At times resource struggles may be part of direct, violent conflict but more commonly they take place within the habitus of everyday life, provoking strife far more wily and implicit than overt confrontation (Scott 1985). The dynamics of cooperation are also embedded in these processes; as people build relationships, knowledge, practices, and experience to accommodate one another in the sharing of the resources on which lives, livelihoods, and cultures depend. We stress that conflict over natural resources in the south, whether dealing with renewable or nonrenewable resources, are often asymmetrical, in the sense that the parties involved possess different abilities to influence the course of events. For poor people, questions arising from a developmental perspective are whether conditions of marginalization and negative conflict can actually be reversed, building greater distributional justice, and whether these processes might contribute to resilience.

Transformation of the conditions of access to natural resources is a relational phenomenon with regard to how societal parties associate. By way of transformation, the underlying party achieves more access than it did before, at the expense of previously dominant parties. Transformation thus implies change in the existing balance of power and opportunities in ways that challenge existing inequalities and disturb the status quo (c.f. Pelling et al. 2015). It necessarily takes place at different locations and scale levels. Given that in situations of protracted conflict space for development action may be created at one scalar level, e.g., with communities or within international action, but not at others (e.g., Bavinck 2015, Menon et al. 2016, Castro 2018), questions arise regarding how to address conflict and cooperation at different scales in ways that positively reinforce one another.

Merton (1967:39) proposed theories of the middle range as "theories that lie between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory

that will explain all the observed uniformities of social behaviour, social organization and social change" (1967:39). That is to say, he suggested "a clear, precise and simple type of theory which can be used for partially explaining a range of different phenomena, but which makes no pretence of being able to explain all social phenomena" (Hedström and Udehn 2009:5).

Taking this perspective forward, we propose a middle-range theory approach insofar that we do not aim for grand explanation, but rather move inductively from empirical phenomena that are observed within the data to an analytical understanding that facilitates cross-case identification of dimensions of conflict transformation. For some authors these processes of developing analysis from the empirical is facilitated by the use of frameworks (such as those presented by Hellin et al. 2018 and Salman et al. 2018, as highlighted below). Such frameworks facilitate dialogue across disciplines and/or, as Hellin et al. demonstrate, between scientists and development practitioners.

Let us now return to the connections between concepts of conflict and cooperation, on the one hand, and of resilience, on the other. We argue that notions of resilience have utility for understanding how robust are the natural resource use strategies of poor and marginalized people within processes of conflict transformation. However, placing these concepts together can spark intuitive discontent because they are underpinned by epistemological differences between academic disciplines. The concept of resilience emerged from a positivist tradition within the ecological sciences and mathematics and was subsequently introduced to the social science realm, while social theory and in particular social constructivism, have been influential within the debates on conflict and its transformation (c.f. Miller et al. 2010).

Folke (2006:258-9) has defined resilience as "the capacity of a system to avoid disturbance and re-organize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks." From this perspective, disturbance, a phenomenon that can be grouped under the heading of conflict, is a negative feature to be overcome and, at the very least, adequately handled. However, an important caveat is raised: "resilience is not only about being persistent or robust to disturbance. It is also about the opportunities that disturbance opens up" (Folke 2006:259). This statement allows for a perspective on conflict that locates it as a phenomenon that is potentially beneficial to the achievement of sustainability.

Some social scientists have seriously questioned the use of resilience as a universal concept (Olsson et al. 2015). The notion of more or less integrated social systems, which raises spectres of the functionalist school of thought that dominated social sciences in the 1960s, in particular is problematic. Other social scientists, however, are more pragmatic, recognizing the relevance of diversity in how concepts are used (Janssen and Ostrom 2006). As Brown (2015:107) highlights, there are multiple, contested interpretations of resilience. To this end a growing body of work uses social theory to inform approaches to resilience, or vice versa (e.g., see Armitage et al. 2007, Tschakert 2012, Béné et al. 2014, Pelling et al. 2015, Maconachie and Hilson 2018, Matin et al. 2018). This includes resilience scholars who introduce and discuss resource conflicts directly (Galaz 2005, Ratner et al. 2013). Such work provides entry points to including conflict, or contestation,

as a real, and perhaps necessary element in societal dynamics that may improve human resilience.

In linking resilience theory to analysis of conflict and cooperation over natural resources, we take the pragmatic view that it is helpful for understanding how marginalized groups of people in the Global South are affected by shocks, stresses, and events linked to competition over natural resources and the resulting conflict. When focusing on asymmetrical conflicts, one value of an expanded conception of resilience, incorporating divergent social and cultural perspectives, is a strengthened analytical ability to interrogate issues of power and to trace the nuances of people's livelihood practices as they respond to new shocks and stresses (e.g., Hirons et al. 2018, Maconachie and Hilson 2018). An important question is thus how to build resilience through conflict transformation in ways that ensure greater ability for poor and marginalized people to become more robust in the face of threats to their livelihoods.

Conflict transformation often brings in other societal actors, such as government agencies, media, and academia. In the case of CoCooN and CCMCC projects, transformation was largely attempted through coalitions between academic institutions and civil society organizations (NGOs). The transformative approaches (strategies) chosen in these projects can be divided into two broad categories: policy revision and empowerment. The first approach aims at affecting policy change in government, with the end goal of changing the parameters of conflict. The other focuses on organization-building, with the aim of achieving countervailing power. Each approach is rooted in particular world views and academic schools.

CONTRIBUTIONS TO THIS SPECIAL FEATURE
As we have stated, this Special Feature presents perspectives on conflict transformation drawn from research closely interwoven with practical engagement in development processes. Together, contributors demonstrate how processes of conflict transformation are context and location specific, and embedded within social and power relations that are framed by local histories and connected to wider economic and political processes. In effect, natural resources and their environments become a locus for struggle, with benefits claimed, contested, and distributed in multiple ways. Questions of equitable distribution of resources and of social and environmental justice come to the fore in ways that put power relations and socioeconomic inequalities in the spotlight.

At the heart of issues contributors are grappling with are questions over how to transform conflict through efforts of governance that stimulate greater justice for poor and marginalized groups. Issues of resilience emerge through these processes. Conflict may involve outright violence or be situated in wider histories thereof, with acts of conflict expressing themselves in a sequence of nonviolent power plays. Authors note that conflict is connected to processes of accumulation and globalization in ways that are multilayered and played out at different governance scales.

This orientation gives value to complexity and contextually specific understanding as essential to inform practice on conflict transformation. It implies an approach that binds the generation of empirical evidence to development action and capacity

building. From an academic perspective, the value of middle-range theory is that it enables researchers to bridge social science and development practice. Fulfilling these different objectives creates a balancing act for those involved that has lent uniqueness to the research evidence on conflict transformation; after all, while being academically robust, both the research process and the emerging knowledge are oriented toward producing real world outcomes to societies and governance actors in the Global South.

The Special Feature is divided into three parts. First, a set of four articles presents different academic perspectives on the evolution of conflicts and processes of conflict transformation. Second, three articles are oriented toward development praxis and strategies for cooperation and negotiation. And, finally, three articles reflect on the tripartite process of undertaking research while also building capacity and seeking to achieve development outcomes.

Part 1: Analyzing conflict dynamics
To start the contributions, Ton Salman, Marjo de Theije, and Irene Vélez-Torres (2018) put forward a model to facilitate research on the "tempos" of conflict, directing attention to the different speeds or paces within which conflict transformation occurs. They home in on the way conflicts evolve over time, shifting variously from low to high intensity or vice versa, sometimes remaining latent, at others becoming manifest as visible conflict. To facilitate analysis of conflict processes, three aspects are outlined: structural dimensions embedded within the social fabric; events that form the immediate dynamics of the conflict, alongside actors' organization and mobilization strategies; and finally, the actors' themselves, including actors' background, skills, aspirations, knowledge, and experience. Application of the model to case material on fishing conflicts in South Asia and mining conflicts in South America demonstrates its utility for comparing and contrasting processes of conflict transformation. This approach, which the authors characterize as having both inductive and deductive elements, lends itself to middle-range theory building in ways that are practical for development action, in fact demonstrated by the outcomes of the GOMIAM and REINCORPFISH projects, used as examples in the article.

Martí Orta-Martínez, Lorenzo Pellegrini, and Murat Arsel (2018) explore the temporal, evolving dynamics of conflict in research on the "conflict imperative" within the extractive industries in Peru. Writing within a political ecology tradition, they argue that the boundaries between conflict and negotiation require rethinking; direct action may be required, with grievance and complaint exposed through open strife. From this perspective, dialogue may be neither peaceful nor of utility for communities affected by extractive industries development. As they acknowledge, this orientation toward conflict transformation may take place over a long period and be open-ended, without necessary resolution. Conflict is thus located as a "recurrent leitmotif" creating productive and creative solutions to intractable problems, but with potential for greater environmental justice to emerge.

The third article by Ajit Menon, Merle Sowman, and Maarten Bavinck (2018) uses a wide canvas to present a comparative perspective on the capitalist transformation of fisheries in South Africa and India. Taking a historical view of the capitalist transformation of fisheries, in which industrialized and small-scale fisheries are both perpetuated, the authors argue for the need to understand the resulting asymmetrical conflicts in relation to how a precapital "need economy" has become entangled with capitalism's growth. Although the state's project of transformation has resulted in significant expansion of capitalist fisheries in both regions, the authors make a case for a more sustainable and equitable use and development of marine resources that incorporates small-scale fishers' livelihood pathways.

The next article in the Special Feature focuses on cultivation of the biofuel feedstock, *Jatropha curcas* in Ethiopia. Fekadu Tufa, Aklilu Amsalu, and E. B. Zoomers (2018) provide a portrait of the political economy of *Jatropha* production in which the trajectory of conflict transformation is toward local resistance and heightened conflict. This is a tale without a happy ending. The article encapsulates how a large-scale agricultural investment driven by the political interests of an authoritarian regime, failed either to assess the conditions needed to grow Jatropha successfully or to adequately consult local people. The result was a development failure devoid of either social equity or economic profit, and with the seeds of mistrust and future conflict firmly sown. One is left with a sense of all-too-often repeated failings within the political economy, with the burden of negative impacts falling once again on marginalized groups drawn into asymmetrical conflict on terms dictated by others.

Part 2: Building mechanisms for conflict transformation
Moving to the second section of the Special Feature, Jon Hellin, Blake Ratner, Ruth Meinzen-Dick, and Santiago Lopez-Ridaura (2018) focus on mechanisms to build cooperation. Presenting the case of the Buena Milpa agricultural development project in the Western Highlands of Guatemala, their article reflects on how to identify intervention points to mitigate climate-related conflict over renewable natural resources in the agricultural sector. The effects of violent historical conflict on maize production are outlined, as conflict contributed to the disruption of farming practices in peasant communities (see also Arias et al. 2018). Against this background, new mechanisms for grassroots collective action are being encouraged to facilitate use of climate-adapted maize varieties with potential to enhance farmers' social-ecological resilience (see also Hellin et al. 2017).

For Hellin et al.(2018), a key issue is how to create positive impact for peasant communities through identifying opportunities to manage resource competition, as well as building resilience to climate-related agricultural change. Drawing on an institutional analysis and development model developed by Ratner et al. (2013; see also Oakerson 1992, Ostrom 2005, Poteete et al. 2010) they stress the significance of contextual factors as influencing an action arena in which actors, resources, and use rules are situated. The dynamics hereof feed into incentives for collective action to manage resources.

Mirjam Ros-Tonen and Mercy Derkyi (2018) also focus on building cooperation for conflict resolution through social capital as a conflict mitigation strategy. To do so, they take the case of timber reserves in Ghana. Focusing on situations in which there are multiple demands on land-use and resources, they demonstrate how the construction of social capital—i.e., relations between individuals or institutions bonded by trust, reciprocity,

and exchange generating connectedness within social networks and groups—can play a role in preventing conflict. This, they argue, can be strategically capitalized on for conflict resolution.

Anushiya Shrestha, Dik Roth, and Deepa Joshi (2018) explore contestations and conflicts that emerge as new demands are made on available water in peri-urban Kathmandu, Nepal. Identifying water as a fluid resource that is embedded within land rights, the authors explore how changing dynamics of use, access, and entitlements stimulate new water-related conflicts and (in) securities. Focusing on property rights provides an opportunity to explore the sociality of water within new "hydro-social networks," which reveal institutional complexity and shifting power relations. Although pressure on water gives rise to increasing competition with potential for conflict, the case demonstrates how people actively seek to avoid conflict and build cooperation. In this context, past experiences of state violence against protesters, and awareness of unequal power relations between user groups, leads to a search for negotiated solutions based on local norms and rights. These processes, they argue, can be best understood through in-depth, contextually specific research on conflict transformation, as opposed to normative or linear models of change that ignore the very local specificity from which they identify negotiated solutions as emerging.

Part 3: Positioning research within development praxis
The final three articles in this Special Feature reflect on research projects that have also involved development and capacity-building dimensions in situations of natural resource conflict and cooperation. In a context of marked asymmetrical conflict, in which marginalized fishers in postwar Sri Lanka contend with the incursions of trawler fishers from the Indian state of Tamil Nadu, Joeri Scholtens and Maarten Bavinck (2018) explore the role of civil society efforts to empower these marginalized fishers. Scrutinizing the development outcomes that the CoCooN REINCORPFISH project sought to achieve, and bringing the positionality of researchers to the fore, the article provides a critical reality check on ambition for what is possible in a postwar context (Sri Lanka). Space for bottom-up governance and for the role of civil society as an agent of change cannot be assumed and may work at certain scales and in particular locations and not others.

Although Scholtens and Bavinck (2018) capture governance limitations, including those that impinge on the research process itself, they nonetheless also identify how committed civil society networks, incorporating actors with clever strategies, can play an active role in challenging an unjust status quo, with its norm of power plays, ethnic tension, and suspicion of NGOs. Research in such contexts is by no means easy, and the article underlines very nicely how action research needs to include other, prevailing conflicts that coexist with struggles over resources, and that it would be conceptually and practically flawed to treat them in isolation. Again, this foregrounds the value of a middle-range theory approach that draws empirical insight into the process of theory building to facilitate critically informed development action.

The difficulties of the production of research outcomes in situations with long and complex histories of conflict are underlined by Femke Brandt, Jenny Josefsson, and Marja Spierenburg (2018), as they reflect on a research project on game

farming in South Africa. The thrust of their argument relates to the need to take power and politics into account when researching conflict transformation. Nuanced reflection on the role of stakeholder workshops in research highlights how different and perhaps unpredictable factors within local contexts can shape stakeholders desire and ability to engage. This includes the terms of engagement in situations, such as postapartheid South Africa, imbued with histories of asymmetrical power. Thus, their article traces the difficulties of facilitating farm workers to be recognized as stakeholders in research, the majority remaining "invisible others." Fascinating is their account of how historical differences between the Eastern Cape and KwaZulu-Natal provinces are played out within stakeholder engagement today; drawn into these differences is the influence of Christian evangelical groups, shifting terms of engagement to downplay aggressive conflict.

The final contribution to the Special Feature by Kate Berry, Bhanumathi Kalluri, and Antonio La Vina considers south-to-south exchanges to understand their value within research on conflict transformation. To do this they focus on how the NWO-funded (Dutch) CoCooN and CCMCC projects incorporated researchers from the Global South. Identifying a practice in which northern actors tend to drive exchange and communication processes and outputs, the authors reflect on how south-to-south exchanges can be better facilitated and opportunities capitalized on, so as to forge new pathways for engaged research to address natural resource and climate-change driven conflicts.

CONCLUSIONS
To have an impact on the lives of poor and marginalized people, it is widely recognized that there is the need for development policy to take into account the roots of the complex development problems that underpin natural resource conflicts. The use of middle-range theory, in which theoretical analysis is strongly informed by empirical observation and, indeed, by development practice, can facilitate framing and approaching conflict in ways that better tailor interventions to the reality of poor people's lives and circumstances. Other than Frerks et al. (2014), who in their analysis of the causes of conflict and cooperation on natural resources were responding to a wave of overly simplistic, mono-causal approaches, and as a consequence emphasized "the complex and nuanced interplay between environmental and other factors" (p. 18), we have highlighted the need, and the possibilities, for developing theories that are "capable of partially explaining phenomena observed in different social domains" (Hedström and Udehn 2009:5). The "partiality" of our attempts draws attention to the limitations social scientists face (Flyvbjerg 2001), as well as to the opportunities that do exist for generalization.

Our analysis identifies underlying factors leading to better potential for conflict transformation and resilience building, based on the empirical evidence. These include improved capacities, better awareness among relevant actors, the existence of platforms for debate or negotiation, improved understanding of the causes and impacts of the conflict, the introduction of better technologies, pressure on power actors by legal actions, and inputs to improved policies and institutional environments. These are all factors upon which contributors have worked and linked to development practice either through organization building or through policy change. The range of factors underlines a general conclusion that conflict transformation trajectories take time and are always multifaceted dynamic and involve a range of actors.

Responses to this article can be read online at:
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