Governing Food and Agriculture in a Warming World

Peter Newell, Olivia Taylor, and Charles Touni*

Abstract

Understanding how, why, and whether the trade-offs and tensions around simultaneous implementation of the Sustainable Development Goals are resolved both sustainably and equitably requires an appreciation of power relations across multiple scales of governance. We explore the politics and political economy of how the nexus around food, energy, and water is being governed through initiatives to promote climate-smart agriculture (CSA) as it moves from the global to the local. We combine an analysis of how these interrelationships are being governed (and ungoverned) by key global institutions with reflection on the consequences of this for developing countries that are being targeted by CSA initiatives. In particular, we look at Kenya as a country heavily dependent on agriculture, but also subject to some of the worst effects of climate change and which has been a focus for a range of bilateral and multilateral donors with their preferred visions of CSA. We draw on strands of literature in global environmental politics, political ecology, and the political economy of development to make sense of the power dynamics that characterize the multiscalar politics of how CSA is translated, domesticated, and operationalized in practice.

We currently lack global governance institutions and processes in the area of food and agriculture capable of addressing the interrelationships between the global food system, on one hand, and environmental challenges around water, energy, and climate change, on the other. Instead, fragmentation persists across institutions and agencies with responsibility for these areas, despite growing acknowledgment of the complex interlinkages that characterize the nexus around water, energy, and food (WEF) in particular. The urgency of addressing these issues is underscored by the recognition that the Sustainable Development Goals (SDGs) cannot be achieved in isolation from one another. To simultaneously and effectively achieve goals 2 (hunger), 6 (water), 7 (energy), 13 (climate change), and 15 (life on land) presupposes an institutional capacity and willingness to act on and govern those relationships in more integrated ways across all levels of governance from the local to the global, crossing scales and sectors (United Nations Environment Programme 2007).

^{*} We are grateful for feedback on an earlier version of this article from two anonymous reviewers and the editors of this special issue.

Practitioners and scholars alike face a huge challenge in understanding whether, how, and why the trade-offs and tensions around implementing the SDGs are resolved both sustainably and equitably. We argue that such an understanding requires an appreciation of power relations across scales of governance and their interaction. We document these relations of power and suggest analytical tools for comprehending them. We focus on how the nexus around WEF is being governed through initiatives and policies to promote climate-smart agriculture (CSA) that hold the promise of triple wins by simultaneously increasing productivity, lowering greenhouse gas emissions, and enabling a more climate-resilient agricultural sector. The increasingly powerful discourse of CSA draws attention to the interdependence of food and agriculture with the climate system. Yet beyond technical fixes, it provides few clues about how to address effectively the integrated and intersectoral focus the SDGs require. This presents challenges for local, national, and global governance systems accustomed to dealing with these issues in isolation rather than addressing the ways in which they impact one another. It generates challenges in terms of moving from the horizontal governance of fragmented and siloed sectoral decision-making to ecological governance, where decision-making has to anticipate and take account of ecosystemic interconnections and reconcile the multiple resource dependencies implied by particular policy pathways. But it also generates challenges in terms of vertical governance and what we refer to in this article as the triple disconnect between the global, national, and local scales as the trade-offs inherent in dealing with the political and ecological connections between SDGs are negotiated across levels of authority. Thus, despite an international policy arena saturated with rhetoric around integration, political discussion of how these trade-offs are handled in practice has been lacking. As Rai and Fisher (2016, 7) observe, "further research is needed into the role of national and local politics in climate change responses in LDCs, and in particular how the mitigation, adaptation and development agendas can be brought together in these contexts."

This article combines analysis of how these interrelationships are being governed by global institutions, such as the Food and Agriculture Organization (FAO) and the World Bank, with reflection on the consequences of this for developing countries that are being targeted by particular CSA initiatives. To illustrate these dynamics, we explore the case of Kenya, which has been the focus of a range of bilateral and multilateral donors with their preferred visions of CSA. The research is informed by semistructured interviews in Kenya, direct participation in the development of the country's national CSA strategy, participant observation in side events at the so-called 'action for agriculture' COP (Conference of the Parties to the United Nations Framework Convention on Climate Change [UNFCCC]) (CTA 2016) in Marrakech in 2016, and discussions and personal communications with key global actors in CSA initiatives.

Our approach invites questions about how, why, and for whom CSA is being governed as it moves across scales, as well as reflection on the implications of this for more sustainable pathways and inclusive responses to the challenges of promoting food security in a warming world. We show how different outcomes are produced once refracted through intra and trans-state negotiations over how to manage the trade-offs and conflicts inherent in realigning different agricultural development pathways in response to the threat of climate change. In empirical terms, we make a contribution to emerging literatures on the SDGs and the politics of their implementation and to debates about CSA by looking at a case of SDG implementation in a context in which they have yet to be studied.

We suggest that the language of synergy and integration around the SDG objectives belies the reality of institutional jockeying for position between global governance institutions at the international level, among governmental departments at the national level, and between national and local government actors who seek to position themselves to benefit from new resource flows associated with climate finance and the SDGs. We argue that this competition tends to reproduce siloed policy practices. In relation to CSA, discourses of synergy and triple wins frame the issue as one of better understanding the links between interrelated environmental challenges and optimizing policy, which serves to downplay the conflicts between competing policy objectives. This obscures the contradictions and tensions, in ecological and social terms in particular, of pursuing these goals in tandem and results in these challenges being passed down to the local government and project level for their resolution. In relation to CSA, this manifests itself in the prior commitment to an export-led model of industrial agriculture without taking seriously whether the water, land, and energy inputs required to sustain such a model are compatible with the climate objectives of decarbonizing the global economy, or SDG objectives around securing land tenure and improving access to water. Instead, we show that interventions from donors and multilateral development banks (MDBs) and regional initiatives, such as the Comprehensive African Agricultural Development Programme (CAADP) in Africa, serve to lock in and entrench a private and marketled model of agricultural development that has the potential to impinge negatively on the achievement of the SDGs around improved access to water and energy for the poor and security of land tenure.

But the process we describe is not a one-way, top-down imposition of a particular (neoliberal) approach to CSA, as demonstrated by the discussion of CSA implementation in Kenya. Competition between agencies, differing interests, and the very ambiguity of CSA, which allows corporate and global governance actors to label diverse technologies as "climate-smart" (Newell and Taylor 2018; Taylor 2018), also create opportunities for national and local government officials to acquire authority and resources by invoking the label "climate-smart." In other words, across governance scales, a series of accommodations and negotiations take place when global and regional imperatives are brought into play with local political dynamics where they assert their preferred readings of CSA and the policy approaches and technologies by which it can best be achieved.

Theorizing the Governance of Food and Agriculture in a Warming World

How can we best account for the governance of CSA across scales? First, in terms of the horizontal governance of the interface between climate change and the food system among global governance institutions, we describe and analyze how a regime complex around food, agriculture, and climate change contributes to the formation of a discourse coalition organized around a dominant interpretation of CSA, despite deep ambiguities around the substance of CSA approaches. Here regime complexes are loosely coupled sets of regimes involving actors, institutions, and networks, public and private, that govern in particular issue areas. This allows for the tracing of the relationships and dynamics between actors within the complex. Analyses of such complexes have been produced for genetic resources (Raustiala and Victor 2004), food security (Margulis 2013), and climate change (Keohane and Victor 2011) as well as for the institutions within the climate change, food, and agriculture arena under the banner of CSA (Newell and Taylor 2018).

However, to understand how trade-offs around food, land, water, and energy are managed, it is necessary to draw on critical accounts of power in global governance (Barnett and Duvall 2005; Clapp and Fuchs 2009) that seek to explore why some institutions prevail over others. This provides us with a point of departure for understanding the horizontal flows of power between global governance institutions and the inequities and imbalances between them, for example, why some framings of CSA predominate over others and how and why global institutions engage with CSA to enhance their profile and legitimacy and to secure new revenue streams. Discursive approaches would draw attention to the existence of a discourse coalition around CSA at the global level, defined as "the ensemble of a set of story lines, the actors that utter these story lines, and the practices that conform to these story lines, all organized around a discourse" (Hajer 1997, 47). But it is still necessary to account for the material power of those actors who are part of the discourse coalition around CSA to understand why the preferred framings of more powerful actors predominate.

To explain why certain framings and ideologies prevail over others requires a deeper and more multidimensional reading of power, including its structural elements, than is afforded by liberal institutionalist analysis of regimes (Strange 1983). Literatures on "food regimes" provide useful insights in this regard (Friedmann 2016; McMichael 2016), locating the governance of food and agriculture within broader historical cycles in the organization of the global capitalist economy (McMichael 2009). This helps to explain the current dominance of a "market-liberal" approach to reconciling climate change and agriculture and moves toward the transformation of food and agriculture along neoliberal lines, as described in the next section.

Second, we engage with work on the "politics of translation" (Newell 2008) and the domestication of global commitments to sustainable development across multiple governance scales. This work builds on rich literatures in GEP on the domestication of global commitments at the national level (Schreurs and Economy 1997) and on the interplay between the local and global governance of the commons (Agrawal 2012). Here the term *polycentric governance* has been used to describe how a given policy or intervention blends together actors across different scales of implementation that fuse the agency and funds of public and private actors (Cole 2015; Sovacool et al. 2017). Interventions around CSA provide a clear illustration of how a global concept travels across governance scales and is altered in the process, mediated and refracted through national and subnational institutions and political cultures where there is scope for agency on the part of national and local elites to rework global agendas to their advantage and in line with domestic priorities.

Third, by emphasizing the politics and power relations that run through this process, the article strengthens insights from applying global political ecology to GEP (Newell and Bumpus 2012; Sovacool et al. 2017), political ecology and political economy to climate change adaptation in particular (Sovacool and Linnér 2016; Taylor 2015), and to climate-resilient and climate-compatible development in general (Nunan 2017; Rai and Fisher 2016). We highlight the value of political ecology approaches that "situate local processes within a multiscalar series of causal forces" (Taylor 2015, 5). Our analysis affirms the finding in this literature that local actors can, at times, navigate spaces of contestation to govern resources, advance rights, and access claims in ways that align with their priorities despite national, regional, and global disciplinary pressures to pursue a preferred pathway. This reveals the more unruly and political nature of negotiations around SDG implementation than suggested by the depoliticizing language of synergy and consensus. In this sense, our argument reinforces Taylor's (2015, xii) argument that the consequence of the "biopolitical impetus to make climate change governable ... lends itself to a technocratic politics that seeks to contain the perceived threats posed by climate change within existing institutional parameters."

Finally, taking the case of Kenya, we draw on insights from the political economy of development to show that the ways in which trade-offs between SDGs are resolved is a function of factors such as a country's location in the global political economy (e.g., level of aid dependence and flows of foreign direct investment [FDI]) and how much policy autonomy exists to address the tensions inherent in the SDGs in ways that accord with domestic priorities rather than the preferences of donors and transnational agribusiness actors (Gallagher 2005). Different national policy processes structure the possibilities and openings for global governance actors to shape priorities and implement projects. Where they are heavily aid dependent and tied to the agendas of development banks, it becomes easier to understand how the predominance of market-liberal framings that we observe globally gets replicated regional and nationally through CAADP and national CSA strategies.

Food and Agriculture in a Warming World

From SDGs to CSA

Fifteen years after the launch of the Millennium Development Goals, the international community announced the seventeen SDGs, distinguishable by their focus on sustainability and the agreement that the goals would be universally applied. Perhaps most notably, the SDGs are novel because of the extent to which the goals are framed as "integrated and indivisible" (United Nations 2015), breaking down the traditionally siloed approach. Consequently, while there has been growing emphasis on "synergies" and "nexuses," the SDGs serve as a watershed for the significance of this approach. However, meeting the SDGs simultaneously brings into sharp relief the trade-offs between them and presents potentially unprecedented challenges for governments in terms of how to design policies and processes that afford a holistic view of their interaction and impact on other resource areas. As Biermann et al. (2017, 26) put it, "while the SDGs hold a great potential, their collective success will depend on a number of institutional factors, such as the extent to which states ... strengthen related global governance arrangements, translate the global ambitions into national contexts, integrate sectoral policies, and maintain flexibility in governance mechanisms." Moreover, the capacity of states to implement global goals in response to interconnected global crises such as the crisis around food and energy is further called into question by Sexsmith and McMichael (2015, 581), who point to "an epistemic blind spot that foregoes an opportunity to reorient planning to accommodate the global dimensions of these crises."

Indeed, despite the compelling nature of synergy and nexus thinking, a number of scholars have sought to caution about the effectiveness of such approaches. Cairns and Krzywoszynska (2016) have argued that the nexus has become a new buzzword, combining ambiguity of meaning with strong normative resonance to express an "integrative imaginary," while assuming that policy integration is both desirable and possible. In relation to CSA, there is similar concern that the triple-win rhetoric serves to downplay the conflicts between competing policy objectives and obscures the contradictions and challenges associated with them (Newell and Taylor 2018). Furthermore, as Weitz et al. (2017, 165) argue, while the WEF nexus literature identifies barriers to achieving coherence, it "does not clearly explain why the barriers are present, what influences them, and how they can be acted upon. These gaps disconnect the nexus literature from the governance processes it ultimately seeks to influence." Our contribution supports the work of those scholars who suggest that the key barriers to policy coherence include the unequal distribution of power, voice, access to information, resources, and capability among actors and institutions that inevitably derive from a political process of negotiation among unequal partners (Allouche et al. 2014). By looking at these dynamics across scales, we challenge the way in which the "non-linearity and complexity of governance and decision-making ... tends to be ignored" (Weitz et al. 2017, 166).

Climate-Smart Agriculture: Emergence and Debates

CSA, which was first articulated in 2009 in an FAO publication (Mann et al. 2009), emerged as a way to square the goals of climate change mitigation and adaptation with the need to increase productivity in the agricultural sector through the promise of a "triple-win solution." It is not hard to understand why this is thought to be necessary. Agriculture is directly reliant on natural resources and the climate, consuming some 70 percent of global freshwater and occupying 40 percent of global land area (Braimoh 2013). However, it is among the most significant contributors to climate change, accounting for 56 percent of global non-CO₂ greenhouse gas emissions through the production of methane and nitrous oxide (Vermeulen et al. 2012). Globally, 2.5 billion people depend on agriculture for their livelihood (Food and Agriculture Organization 2013b), and it is a mainstay of employment in sub-Saharan African countries like Kenya, employing more than 80 percent of the rural workforce, yet is also one of the sectors most vulnerable to the effects of climate change (World Bank and CIAT 2015). Given the importance and vulnerability of water and energy inputs in food production, attempts to deliver CSA in practice afford useful insights into the governance of the nexus around WEF and the ways in which trade-offs relating to the relevant SDGs are handled or overlooked.

The CSA paradigm has gained such momentum that it has become the key concept for organizations working at the nexus of climate change, agriculture, and development (Taylor 2018; Clapp et al 2018). Despite the undoubted value of trying to locate projects that help reduce rural poverty, and to do so in a way that is less carbon intensive and more resilient to the effects of climate change, the paradigm of CSA has received significant critique. For example, it is ambiguous when it comes to specifying particular techniques for sustainable agriculture, despite claims that it constitutes "a new approach ... to guide the needed changes of agricultural systems" (Food and Agriculture Organization 2013a, 27). CSA serves as a broad discursive umbrella to accommodate differing agendas, aligning itself broadly with preexisting approaches like sustainable intensification and agroecology by emphasizing their shared goal of integrating climate change imperatives with agricultural productivity, while obscuring their substantive differences (Newell and Taylor 2018). It has also been critiqued for failing to adequately recognize trade-offs. The three pillars of CSA (adaptation, mitigation, and increasing productivity) are very loosely defined, and there are no set metrics for monitoring progress in any of these domains. Consequently, mitigation can be defined in CSA variously as total GHG emissions reductions or as GHG intensity reductions, and in some iterations of the concept, it is described merely as a co-benefit to be addressed "where possible" (Food and Agriculture Organization 2013a). For critics, this ambiguity allows agribusiness interests to "greenwash" technologies and tools, such as genetic engineering, biochar, and biofuels, as being climate compatible (GRAIN 2015).

The Global and Regional Landscapes of CSA: Horizontal Governance of Climate and Agriculture

As noted previously, the regime complex for climate change and agriculture provides a point of departure for understanding the horizontal flows of power between global governance institutions and the inequities and imbalances between them. The CSA regime complex spans multiple governance actors, ranging from the UN climate regime to multilateral environmental organizations, such as the Consultative Group on International Agricultural Research (CGIAR) research consortium and civil society organizations (Newell and Taylor 2018). The complex is also notable for the extent to which it incorporates organizations critical of some framings of CSA but that lack sufficient power to challenge the dominant discourse coalition. This diversity within the complex is key to its ability to accommodate criticism and bolster its legitimacy by building consensus and stability for dominant framings.

In analyzing the distribution of power between actors, it is clear that the FAO, World Bank, and CGIAR are the most significant institutions when it comes to advancing policies and influencing the debate on CSA. For example, the FAO founded three of the landmark programs for advancing CSA: Mitigation of Climate Change in Agriculture, Economics and Policy Innovations for CSA (EPIC), and the most well known, the Global Alliance for Climate Smart Agriculture (GACSA). These programs are also heavily underpinned by other UN institutions, such as the United Nations Development Program, while the most recent UNFCCC CoP 22 in Marrakech served as a showcase for the newfound profile of agriculture as a critical site for the adaptation to, and mitigation of, climate change. Throughout, one of the key vehicles for the promotion of this work is the CGIAR and its numerous partner research centers as well as its research program focusing on Climate Change, Agriculture, and Food Security (CCAFS). Through these means, the UN institutions and CGIAR-affiliated research bodies make up a closely connected network of actors and institutions that exert significant influence over the research agenda on climate change and agriculture.

This is not to suggest, however, that the dominant framing of CSA is uncontested. Different degrees of emphasis are placed on the role of the private sector between the GACSA program of the FAO and the "4 par 1000" soil carbon sequestration program launched at CoP 22 by the French government, for example. There have also been responses to a number of the early critiques of the CSA approach, such as increasing the attention paid to the equity and gender components of CSA (Collins 2018). The CCAFS Phase II programmatic structure also now devotes two additional "learning platforms" to addressing "CSA, gender and social inclusion" (Climate Change, Agriculture, and Food Security 2016). Moreover, CCAFS appears to be shifting away from the maxim of the triple win to a more flexible and holistic approach that seeks to build on synergies and cobenefits wherever possible but that is notably less simplistic. This is exemplified in recent publications led by CCAFS authors who acknowledge that "it is very unlikely that there are silver bullets that can deliver 'climate smartness' in all contexts" (Thornton et al. 2017, 149). A CCAFS representative in an open forum similarly acknowledged that "triple wins are not always possible, two is enough, three is great." ¹

These attempts to accommodate critique provide insights into how the CSA regime complex legitimates itself and retains an underlying purpose despite the fragmentation between actors. In particular, the "clever ambiguity" of the particular definitions and metrics of CSA (Lilliston 2015) and the limited evaluations of projects to date (Arakelyan et al. 2017) smooth over the fractures and disparate interpretations between institutions and hold together the loose coalition behind CSA. Thus, despite these adjustments in rhetoric, a very broad consensus remains around climate-proofing existing agricultural strategies and expanding the development and uptake of practices labeled as "climatesmart." The enabling environments to support these interventions are those consistent with the further commercialization of agriculture, such that any latent indictment climate change poses to the agro-industrial system disappears from view. As Taylor (2015, 99) observes, "for the institutions of global governance, climate change simply confirms what they already knew. Agriculture in the developing world needs to become more intensive, efficient and technologically advanced. To do so, it needs better integration into internationalized circuits of commodity exchange." As successive World Bank (2007, 2009) and International Fund for Agriculture and Development (2010) reports make clear, climate-resilient agriculture is to be achieved through "sustainable intensification," market expansion, and livelihood diversification. Therefore, structurally, the power across the regime complex continues to reside with major institutional actors, bilateral and multilateral funding organizations responsible for financing CSA, and the private sector, because of their required buy-in to the approach as the primary implementers of CSA projects.

Regional Governance

At the regional level in Africa, another set of actors plays a key role in advocating certain agricultural pathways over others. Framings of the need to "modernize" and industrialize African agriculture and to "scale-up agro-based industry and commerce" run through policy documents and reports of regional actors, such as the New Economic Partnership for African Development and CAADP, which play a significant part in guiding national agricultural strategies. These reports are replete with calls for neoliberal modes of governance, such as public–private (and private–private) partnerships (PPPs) and the need for positive "enabling environments for the private sector" to unlock "transformations" and "revolutions" in African agriculture (African Union Commission 2015). The African Union's Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods, for example, calls for a doubling of

^{1.} Meeting with CCAFS representative June 7th 2017.

productivity (focusing on inputs, irrigation, and mechanization). Demands for "sustainable intensification," agricultural growth corridors, and the "transition into modern family farms," in which resources will be used more efficiently through "economies of scale," take their cue from the World Bank's emphasis on integrating smallholders into global agro-food commodity chains (World Bank 2007). This global integration is seen as necessary in order to "deepen the commercialization of agricultural production, facilitate more market opportunities for producers and allow them to better access investment and technology" (Taylor 2015, 102-3). National Agriculture and Food Security Investment Plans, meanwhile, are the vehicles for aligning implementation and mobilizing financing, which are then reviewed regionally for compliance. Locking in state compliance is both necessary and consistent with the World Bank's (2007, 8) view that the state "corrects market failures, regulates competition and engages strategically in publicprivate partnerships to promote competitiveness in the agribusiness sector and support the inclusion of smallholders and rural workers."

Regional institutions in this regard become important conveyor belts for providing buy-in for the framings of market-liberal global governance institutions. For example, one of the strategic action areas outlined in the CAADP Implementation Strategy focuses on "market infrastructure, regional trade and integration and value chains development," whereas another relates to enhancing "innovative financing models for increased public and private sector finance for agricultural investments along the value chain." The need to domesticate global trade disciplines is explicit in the call to "harmonize trade regimes, measures and standards, and remove non-tariff barriers within and across regional trade blocs and domesticate and implement regional and continental trade agreements at national level." In the latter regard, a Continental Free Trade Area is envisaged. Harmonization is considered to be key because "inconsistent or non-supportive agricultural policies at continental, regional and national levels stagnates the pace of transformation" (African Union, Comprehensive Africa Agriculture Development Programme, and New Economic Partnership for African Development 2015, 5-22). Although a nonstate actor (NSA) coalition was formed in 2014 to participate in the CAADP process involving farmers' organizations, civil society, and grassroots movements alongside business and private-sector actors, their role is narrowly confined to "advocating for best practices" and to "effectively engage the private sector as a critical partner in transforming African agriculture through policy and institutional reforms that encourage and support private investments in agricultural value chains" (African Union Commission 2015).²

This framing of the problems facing African agriculture and the preferred solutions align with other interventions and initiatives within the region, such as the New Alliance, Grow Africa, and Green Revolution for Africa, which seek

^{2.} For a more critical civil society perspective from African civil society, see the "Statement of the African and US Food Sovereignty Summit," Seattle, WA, October 13, 2014 (Community Alliance for Global Justice 2014).

dramatic shifts in production, technology, and financing, with an explicit preference for market-led agricultural development. Their diagnosis of the problem is a deficit of private capital, conducive regulatory and legal frameworks, and investment in research and infrastructures of interest to investors. These are assumed under the a priori goals of accelerating export-led growth through agreed commitments to increased expenditure, new infrastructures, and constructing agricultural growth corridors, as noted previously. While the World Bank, the FAO, and USAID have actively supported CSA in national-level strategies in Rwanda, Kenya, and Tanzania, there is little mention of climate change under the CAADP themes (Morton 2017). Regarding the implications in terms of energy and water inputs of the imagined leaps in productivity through "sustainable intensification" and what this means for the ability to deliver on all the SDGs, there is deafening silence. What this is likely to mean for the simultaneous expectations from the SDGs to improve land tenure security and access to water and energy for the poor is, unsurprisingly, not made clear. The consequence of this is that the way in which the overriding significance of agriculture is reduced to its ability to accelerate growth forms a metanarrative by key global and regional policy actors that inevitably skews any serious balancing of this objective with concerns for the social and environmental sustainability of the new pathways imagined for African agriculture.

Governing Climate-Smart Agriculture in Practice: Insights from Kenya

Governing CSA in practice is characterized by multiscalar power dynamics and tensions as policy is translated from the international and regional to the national and subnational levels. This is further complicated in the case of Kenya by political devolution and tension between national and county governments. Here we advance several arguments by following the policy of CSA from the global to the local, tracing how CSA is domesticated and how international donor agendas are translated in a domestic context.

One of the most significant factors influencing the domestication of international policy for an aid-dependent country like Kenya is donor pressure. Two interrelated issues emerge here: first, how this finance shapes bureaucratic turf wars in response to funding opportunities, and second, how this can shape policy itself. Because CSA is associated with major streams of finance for climate change mitigation, adaptation, and carbon sequestration, it incentivizes organizations to position themselves to benefit from these new resource flows. In the Kenyan climate change and agricultural policy context, this is exemplified by Maina et al. (2013, 15), who argue that donor funding has influenced local priorities: "with the potential for existing ODA [Overseas Development Assistance] funds to be relabeled as climate funds (rather than as additional sources of finance), an understandable and indeed necessary response is for some actors to position themselves as worthy recipients."

Yet the disconnect between international policy rhetoric around synergy and triple wins and how policy is being implemented by policy makers is very clear. Although preexisting agriculture and climate change policies are increasingly being relabeled as "climate-smart" at a national level, when it comes to implementation, they are referred to simply as best practice. Many interview participants noted that the original CSA paradigm of the triple win as defined by the FAO (2013a) has very little resonance with their approaches. For example, researchers at a national agricultural research organization acknowledged that they have been "doing resilience work for many years—the challenge is in the issue of narrative.... If you get the narrative right then you're speaking the same language," whereas a Ministry of Agriculture (MoA) official noted that "CSA has become synonymous with best practice agricultural interventions.... Arguably every project in Kenya is climate linked and is therefore 'climate smart.' ... Nowadays even the roads have to be 'climate smart!'"

Despite the power of donor framings, in the case of CSA in Kenya, the government has been able to carve out a policy space to domesticate the concept of CSA in its own way. CSA is not interpreted homogeneously across scales and different contexts. As it moves further from the scientific and technical lens of the FAO (Chandra et al. 2017), there is a much broader interpretation of the meanings of CSA. Beyond the relabeling of a variety of resilience and adaptation initiatives as "climate-smart," the government's Kenya Climate Smart Agriculture Strategy reframes the goals of CSA in the Kenyan context as (1) adaptation and building resilience; (2) mitigation of greenhouse gas emissions; (3) enabling policy, legal, and institutional frameworks; and (4) addressing crosscutting issues that adversely impact CSA (Government of Kenya 2017, 23)—goals that break away from the core triple win of the original CSA definition. Here the ambiguity of CSA facilitates the relabeling of preexisting activities as "climatesmart" by the Kenyan MoA and other policy makers to better suit the domestic context. In particular, the Kenyan CSA Strategy highlights the institutional capacity needed to tackle synergies across the climate change and agriculture nexus, noting the "inadequate CSA knowledge management system to collect, store, process and disseminate developed knowledge" (GoK 2017, 45) as well as being cognizant of broader development priorities. In this way, the Kenyan MoA uses CSA as a platform from which to identify and build exactly the sort of holistic approach that the original CSA approach had been criticized for lacking.

Turning to policy implementation, it is clear that complex interorganizational and ministerial power dynamics characterize the policy landscape in Kenya and that the challenge of making climate-smart agricultural policy is testing existing institutional structures and mandates. Indeed, "inadequate structures in Intergovernmental relations for implementation of CSA related policies and legislations" and "weak inter- and intragovernmental linkages among other organizations" (GoK 2017, 40) are highlighted in the Kenya CSA Strategy as potential threats to the successful implementation of CSA. The key policy actors in the climate change and agriculture field in Kenya are the Deputy President's

Office and the Climate Change Secretariat in the Ministry of the Environment (MoE) as well as the Ministries of Finance, Planning, and Devolution and of Agriculture. Stakeholder interviews revealed that the Deputy President's Office is seen to have both the greatest interest in climate change and the greatest ability to mobilize resources. The MoE has the technocrats and expertise, whereas the Ministry of Finance manages both national and bilateral funds. However, overall, it is felt that the most significant actor is the Office of the Deputy President; as one interviewee put it, "when all is said and done, the Office of the President is key here." What results is a disconnect between climate policy and agricultural policy and a siloed working style between ministries working in this area (Muok et al. 2012). This resonates with Morton's (2017, 106) analysis of three other African countries where "agricultural stakeholders have limited participation in national climate policy processes dominated by environment ministries," while, at the same time, "agricultural policies may not give adequate priority to ... climate change."

Devolution now also plays a key role in influencing the Kenyan policy landscape, following the introduction of a new constitution in 2010. Although government ministries have the responsibility to set the policy agenda in relation to CSA, agricultural policy is an issue that has been devolved to the county level. Because of this, the ministries at a national level carry no responsibility for implementing CSA and are solely responsible for developing policy and strategy, such as the Kenya Climate Smart Agriculture Strategy (Government of Kenya 2017). CSA projects fall to the county level, where they are implemented through County Integrated Development Plans. Because of this, the national government does not have to reconcile the triple wins of CSA or deal with the inconsistencies and disconnects between regional and international policy and, in many ways, can pass on the baton of mediating between competing policy goals. As one ministry official put it, "we cannot direct how counties respond [to our policies]." The impact is that the hard choices of reconciling the triple wins of CSA are being passed down to a more local level, where more contextspecific choices can be made but where there is less technical and administrative capacity. Moreover, given the geographic, ecological, and economic variations across counties in Kenya, devolving all decision-making to a local level potentially hinders the ability to balance synergies or trade-offs across the agricultural sector nationally. As Scott (2017, 13) notes, reflecting on the context in Kenya and elsewhere, "even when many responsibilities have been devolved from central government, imbalances in power and resources between central and local government could mean that strong coordination leads to more decisionmaking at the centre."

Finally, the fragmentation inherent in the county system can complicate negotiations with external donors and policy implementation where the global and local interact, requiring mediation by national or regional institutions. For example, one of the flagship CSA projects in Kenya is the World Bank–funded Kenya Climate Smart Agriculture Project, which will provide US\$ 250 million to

a variety of climate change and agriculture initiatives broadly described as CSA (World Bank 2017). According to one interviewee, the county system made the negotiations for this project fraught with difficulty, due to competing demands for additional funding: "county governors demanded they get their extension and upscaling funds.... The World Bank was not amused because people were behaving like this is a country within a country." The resulting funding allocations in the Kenya Climate Smart Agriculture Project demonstrate the perceived need to build institutional capacity at a county level, providing US\$ 24 million to "Building Institutional Capacity and Strengthening Service Delivery" (World Bank 2017, 8), thus responding to the concerns noted earlier from the Kenyan MoA and others about the capacity of counties to implement such policies.

What the Kenya case reveals, then, is how global and regional imperatives get reworked through intrastate competition between competing state agencies and their preferred visions of CSA where there is scope to exercise autonomy in articulating a vision of CSA that departs from the dominant interpretations of international organizations like the FAO. The trade-offs that are necessarily implied when seeking to implement CSA projects and broader SDGs are brought into acute relief at the county level and below, where devolution intensifies struggles over resources and authority. Understanding and accounting for these dynamics are critical to evaluating how countries will address the challenge of realizing the ambition of the SDGs in practice.

Conclusions

We have sought to document and account for the ways in which global systems of food and agriculture and their interrelationships with the climate system are being governed across scales. Drawing on evidence from Kenya, we explored how the power dynamics that shape the governance of trade-offs between competing policy goals around climate change and agriculture play out in a particular regional, and then national and local, context. Combining analysis of both the horizontal relationships of power that operate among and between global institutions active in this area, including the World Bank and the FAO most prominently, and the vertical relationships of power between global and regional actors and those national governments and counties that are home to "climate-smart" agricultural projects and programs, we were able to explain the patterns of governance that we observe. We have seen how responsibility for delivering the SDGs simultaneously, and for resolving the trade-offs among them, is globally diffused and often obscured behind the rhetoric of the triple win when it comes to CSA. Ultimately, however, this responsibility lands in particular local contexts in the Global South where concrete choices have to be made about which agricultural pathway to choose and how far it is climate compatible.

We noted in particular the ways in which dominant framings serve to read climate change not as an indictment of agro-industrialism but as both a potential barrier to accumulation, by raising the costs of some pathways and technologies, and also an opportunity to generate new sites of accumulation through the relabeling and promotion of modern agricultural technologies and market-led trajectories as climate-smart. As Taylor (2015, 104) notes, "the spectre of climate change is inserted into this vision not as a challenge to its embedded assumptions but as a confirmation of its existing biases." There is resistance to this framing by other global actors, such as NGOs and social movements, and by skeptical governments that seek to rework mantras about CSA in ways that align with national priorities and preferences and alternative visions of agricultural development. Without diminishing the material power of donors and multilateral and regional development banks and agencies that circumscribe the developmental space of governments in Africa, the relationship is not a one-way imposition but rather a negotiation between unequal partners. Even the best resourced and most vociferously promoted global interventions look different once translated into diverse domestic political and economic settings and refracted through local institutional processes. Moreover, the very ambiguity of CSA, which makes it attractive for the purposes of corporate social responsibility, allows local development actors to play the discursive game by labeling their own preferred interventions "climate-smart."

Theoretically, this suggests the need for scholars of GEP to engage in multilevel analysis to understand how power dynamics operate across scales, not in linear and uniform ways, but mediated by the nature of institutions and the material and discursive practices of power. Insights from global political ecology are useful in understanding the macro–micro power dynamics linking global environmental politics to local outcomes. Methodologically and analytically, this highlights the need to find ways of understanding and tracing up and down the consequences of decision-making in GEP for particular regions and groups of people. Rather than leave analysis at the international level, the challenge is to read and locate the global locally, and vice versa.

Following the policy in this way also provides a more contextualized and nuanced account of how and why countries take up global initiatives, of which features of their institutions and political economies make them more likely to do so and more or less vulnerable to pressure from global governance actors. In understanding these interactions, we drew on ideas about policy autonomy. Our analysis further suggests the need not to take dominant framings of issues as given. The reality of how different regions and social groups deal with these challenges on the ground is often very different from the way projects are imagined, and discursively constructed, by donors and MDBs. Triple wins, promoted through CSA, often disguise complex trade-offs around the simultaneous pursuit of policy objectives around food and agriculture, water and energy. Site-specific research helps to challenge the articulation of policy orthodoxies and points to the need for scholars of GEP to do more of this work, alongside studying what global institutions do, and claim to be doing, as an end in and of itself.

Peter Newell is a professor of international relations at the University of Sussex and a visiting professor in the School of Political Science and International Studies at the University of Queensland, Australia. His research currently focuses on the global political economy of climate change and energy, while earlier work explored the political economy of agricultural biotechnology. He is author and coauthor of the books Climate for Change (CUP, 2000), Governing Climate Change (Routledge, 2010), Climate Capitalism (CUP, 2010), Globalization and the Environment (Polity, 2012), Transnational Climate Change Governance (CUP, 2014), and The Effectiveness of EU Environmental Policy (Palgrave, 2000). He sits on the board of the journals Journal of Peasant Studies, Global Environmental Politics, and Journal of Environment and Development.

Olivia Taylor is a research assistant and doctoral candidate at the University of Sussex. She holds a BA in geography from the University of Cambridge and a MA in environment, development, and policy from the University of Sussex. She has particular interests in political ecology and the political economy of the environment, especially with regard to climate change and adaptation.

Charles Touni is a research assistant at the African Centre for Technology Studies in Nairobi, Kenya, working mainly in the Climate Change, Water, and Food Security program. He actively participates in climate change discussions at local, national, regional, and international levels, and he has coauthored several articles on climate change impacts and adaptation, especially in relation to agriculture. He holds a BSc in environmental science from Egerton University and is currently pursuing a MA in environmental planning and management at Kenyatta University.

References

- African Union, Comprehensive Africa Agriculture Development Programme, and New Economic Partnership for African Development. 2015. Implementation Strategy and Roadmap to Achieve the 2025 Vision on CAADP. Addis Ababa: African Union.
- African Union Commission. 2015. The Programme of Work: Operationalising the Malabo Declaration on African Agriculture and CAADP Implementation Strategy and Roadmap. Addis Ababa: African Union.
- Agrawal, Arun. 2012. Local Institutions and the Governance of Forest Commons. In Comparative Environmental Politics, edited by Paul Steinberg and Stacy D. VanDeVeer, 313-341. Cambridge, MA: MIT Press.
- Allouche, Jeremy, Carl Middleton, and Dipak Gyawali. 2014. Nexus Nirvana or Nexus Nullity? A Dynamic Approach to Security and Sustainability in the Water-Energy-Food Nexus. STEPS Working Paper 63, STEPS Centre, Brighton, UK.
- Arakelyan, Irina, Dominic Moran, and Anita Wreford. 2017. Climate Smart Agriculture: A Critical Review. In Making Climate Compatible Development Happen, edited by Fiona Nunan, 66-87. London: Routledge.

- Barnett, Michael, and Raymond Duvall, eds. 2005. *Power in Global Governance*. Cambridge: Cambridge University Press.
- Biermann, Frank, Kanie, Norichika & Kim, Rak. 2017. Global governance by goalsetting: the novel approach of the UN Sustainable Development Goals - Open issue, part II. Current Opinion in Environmental Sustainability 26–27 (Supplement C): 26–31.
- Braimoh, Ademola. 2013. Global Agriculture Needs Smart Science and Policies. Agriculture and Food Security 2 (1): 1.
- Cairns, Rose, and Anna Krzywoszynska. 2016. Anatomy of a Buzzword: The Emergence of "the Water-Energy-Food Nexus" in UK Natural Resource Debates. *Environmental Science and Policy* 64: 164–170.
- Climate Change, Agriculture, and Food Security. 2016. CCAFS Phase II Proposal 2017–2022 Summary. Available online at: https://cgspace.cgiar.org/rest/bitstreams/80655/retrieve, last accessed July 19, 2017.
- Chandra, Alvin, Karen McNamara, and Paul Dargusch. 2017. Climate-Smart Agriculture: Perspectives and Framings. Climate Policy. https://doi.org/10.1080/14693062.2017.1316968.
- Clapp, Jennifer, and Doris Fuchs, eds. 2009. Agro-Food Corporations, Global Governance, and Sustainability. Cambridge, MA: MIT Press.
- Clapp, Jennifer, Peter Newell, and Zoe Brent. 2018. The global political economy of climate change, agriculture and food systems. *Journal of Peasant Studies* 45 (1–2): 80–89.
- Cole, D. H. 2015. Advantages of a Polycentric Approach to Climate Change Policy. *Nature Climate Change* 5 (2): 114–118.
- Collins, Andrea. 2018. Saying All the Right Things? Gendered Discourse in Climate Smart Agriculture. *Journal of Peasant Studies* 451 (1–2): 175–192.
- Community Alliance for Global Justice. 2014. Statement of the African and US Food Sovereignty Summit Seattle, Washington, October 13, 2014. Available online at: https://tinyurl.com/yaxdbv2k, last accessed October 23, 2017.
- CTA. 2016. COP 22 Action for Agriculture Press Communique. Available online at: https://tinyurl.com/yatoczqw, last accessed July 19, 2017.
- Food and Agriculture Organization. 2013a. *Climate-Smart Agriculture: Sourcebook*. Rome: FAO.
- Food and Agriculture Organization. 2013b. Statistical Yearbook 2013: World Food and Agriculture. Rome: FAO.
- Friedmann, Harriet. 2016. Commentary: Food Regime Analysis and Agrarian Questions—Widening the Conversation. *Journal of Peasant Studies* 43 (3): 671–692.
- Gallagher, Kevin, ed. 2005. Putting Development First: The Importance of Policy Space in the WTO and International Financial Institutions. London: Zed Books.
- Government of Kenya (GoK). 2017. Kenya Climate Smart Agriculture Strategy. Available online at: https://tinyurl.com/yadyhzp3, last accessed 19th July 2017.
- GRAIN. 2015. *The Exxons of Agriculture*. Barcelona: GRAIN. Available online at: https://tinyurl.com/o2tm5ov, last accessed October 8, 2017.
- Hajer, Maarten. 1997. The Politics of Environmental Discourse: Ecological Modernization and the Policy Process. Oxford: Oxford University Press.
- International Fund for Agriculture and Development. 2010. Rural Poverty Report 2011. Rome: IFAD.
- Keohane, Robert, and David Victor. 2011. The Regime Complex for Climate Change. *Perspectives on Politics* 9 (1): 7–23.

- Lilliston, Ben. 2015. The Clever Ambiguity of Climate Smart Agriculture. Institute for Agriculture and Trade Policy. December 4. Available online at: https://tinyurl.com/ yb7crtgh, last accessed July 19, 2017.
- Maina, Immaculate, Andrew Newsham, and Michael Okoti. 2013. Agriculture and Climate Change in Kenya: Climate Chaos, Policy Dilemmas. Future Agricultures Working paper No.70. Brighton: Future Agricultures Consortium.
- Mann, Wendy, Leslie Lipper, Timm Tennigkeit, Nancy McCarthy, and Giacomo Branca. 2009. Food Security and Agricultural Mitigation in Developing Countries: Options for Capturing Synergies. Rome: FAO.
- Margulis, Matias. 2013. The Regime Complex for Food Security: Implications for the Global Hunger Challenge. Global Governance: A Review of Multilateralism and International Organizations 19 (1): 53-67.
- McMichael, Philip. 2009. A Food Regime Genealogy. Journal of Peasant Studies 36 (1): 139-169.
- McMichael, Philip. 2016. Commentary: Food Regime for Thought. Journal of Peasant Studies 43 (3): 648-670.
- Morton, John. 2017. Climate Change and African Agriculture: Unlocking the Potential of Research and Advisory Services. In Making Climate Compatible Development Happen, edited by Fiona Nunan, 87-114. London: Routledge.
- Muok, Bernard, Andrew Adwera Ochieng, Joan Kungu Kariuki, Charles Tonui. 2012. Case Study on Climate Compatible Development (CCD) in Agriculture for Food Security in Kenya. Nairobi: African Centre for Technology Studies.
- Newell, Peter. 2008. Lost in Translation? Domesticating Global Policy on GMOs: Comparing India and China. Global Society 22 (1): 117-138.
- Newell, Peter, and Adam Bumpus. 2012. The Global Political Ecology of the CDM. Global Environmental Politics 12 (4): 49-68.
- Newell, Peter, and Olivia Taylor. 2018. Contested Landscapes: The Global Political Economy of Climate Smart Agriculture. Journal of Peasant Studies 45 (1-2): 108-130.
- Nunan, Fiona, ed. 2017. Making Climate Compatible Development Happen. London: Routledge.
- Rai, Neha, and Susannah Fisher. 2016. Understanding the politics of low carbon development in the least developed countries. In The Political Economy of Low Carbon Resilient Development: Planning and Implementation, edited by Neha Rai and Susannah Fisher, 1-22. New York: Taylor and Francis.
- Raustiala, Kal, and David Victor. 2004. The Regime Complex for Plant Genetic Resources. International Organization 58 (2): 277-309.
- Schreurs, Miranda, and Elizabeth Economy, eds. 1997. The Internationalisation of Environmental Protection. Cambridge: Cambridge University Press.
- Scott, Andrew. 2017. Making Governance Work for Water-Energy-Food Nexus Approaches. Working Paper, CDKN, London.
- Sexsmith, Kathleen, and Philip McMichael. 2015. Formulating the SDGs: Reproducing or Reimagining State-Centered Development? Globalizations 12 (4): 581-596.
- Sovacool, Benjamin, and Björn-Ola Linnér. 2016. The Political Economy of Climate Change Adaptation. Basingstoke, UK: Palgrave Macmillan.
- Sovacool, Benjamin, May Tan-Mullins, David Ockwell, and Peter Newell. 2017. Political Economy, Poverty, and Polycentrism in the Global Environment Facility's Least Developed Countries Fund (LDCF) for Climate Change Adaptation. Third World Quarterly 38 (6): 1249-1271.

- Strange, Susan. 1983. Cave! Hic Dragones: A Critique of Regime Analysis. *International Organization* 36 (2): 479–496.
- Taylor, Marcus. 2015. The Political Ecology of Climate Change Adaptation. London: Earthscan.
- Taylor, Marcus. 2018. Climate-Smart Agriculture: What Is It Good For? *Journal of Peasant Studies* 45 (1–2): 89–108.
- Thornton, Philip, Pramod K. Aggarwal, and David Parsons. 2017. Editorial: Prioritising Climate-Smart Agricultural Interventions at Different Scales. *Agricultural Systems* 151: 149–152.
- United Nations Environment Programme. 2007. Global Environmental Outlook 4. Environment for Development. Nairobi: UNEP.
- United Nations. 2015. Transforming Our World: The 2030 Agenda for Sustainable Development. Available online at: https://tinyurl.com/q9k2rk9, last accessed February 22, 2018.
- Vermeulen, Sonja J., Bruce M. Campbell, and John Ingram. 2012. Climate Change and Food Systems. *Annual Review of Environment and Resources* 37 (1): 195–222.
- Weitz, Nina, Claudia Strambo, Eric Kemp-Benedict, and Måns Nilsson. 2017. Closing the Governance Gaps in the Water–Energy–Food Nexus: Insights from Integrative Governance. *Global Environmental Change* 45: 165–173.
- World Bank. 2007. WDR 2008: Agriculture for Development. Oxford: Oxford University Press.
- World Bank. 2009. WDR 2009: Development and Climate Change. Washington, DC: World Bank
- World Bank. 2017. Kenya Climate Smart Agriculture Project. Available online at: http://projects.worldbank.org/P154784?lang=en, last accessed July 19, 2017.
- World Bank and CIAT (International Centre for Tropical Agriculture). 2015. *Climate-Smart Agriculture in Kenya*. CSA Country Profiles for Africa, Asia, and Latin America and the Caribbean. Washington, DC: World Bank Group.