

Book Reviews

Scoones, Ian. 2015. *Sustainable rural livelihoods and rural development*. UK: Practical Action Publishing and Winnipeg, CA: Fernwood Publishing. 137pp. ISBN: 9781853398759; £10.40, CA\$18.95, ebook £7.00.

Reviewed by Simon Batterbury [simonpbj "at" unimelb.edu.au](mailto:simonpbj@unimelb.edu.au)

The concept of 'sustainable livelihoods' (SL) is an analytical framework that emerged from existing studies of rural livelihoods systems, agrarian change, and community development going back to the work of William Cobbett, Karl Marx, Karl Polanyi, Amartya Sen and several influential household and micro-economists. Tony Bebbington, Henry Bernstein, Debbie Bryceson, Robert Chambers, Gordon Conway, Susanna Davies, Frank Ellis, and Norman Long worked on new livelihood definitions and approaches in the 1980s and 1990s. They argued, in different ways, that the sustainability of rural livelihoods should form the basis for improved rural development and poverty alleviation. Ian Scoones at the Institute for Development Studies (IDS) in the UK was also one of the key players. He wrote a short working paper that set out a succinct approach to understanding livelihoods, which he hoped would also be amenable to scrutiny by influential development economists, who believed poverty could best be tackled through utility maximization and modernization paths (Scoones 1998). It emphasized "...the economic attributes of livelihoods as mediated by social-institutional processes" (p8). He designed a well-known diagram showing how capital, assets and resources lead to certain types of livelihood strategies and outcomes, influenced by a set of contexts and institutional processes (Figure 1).

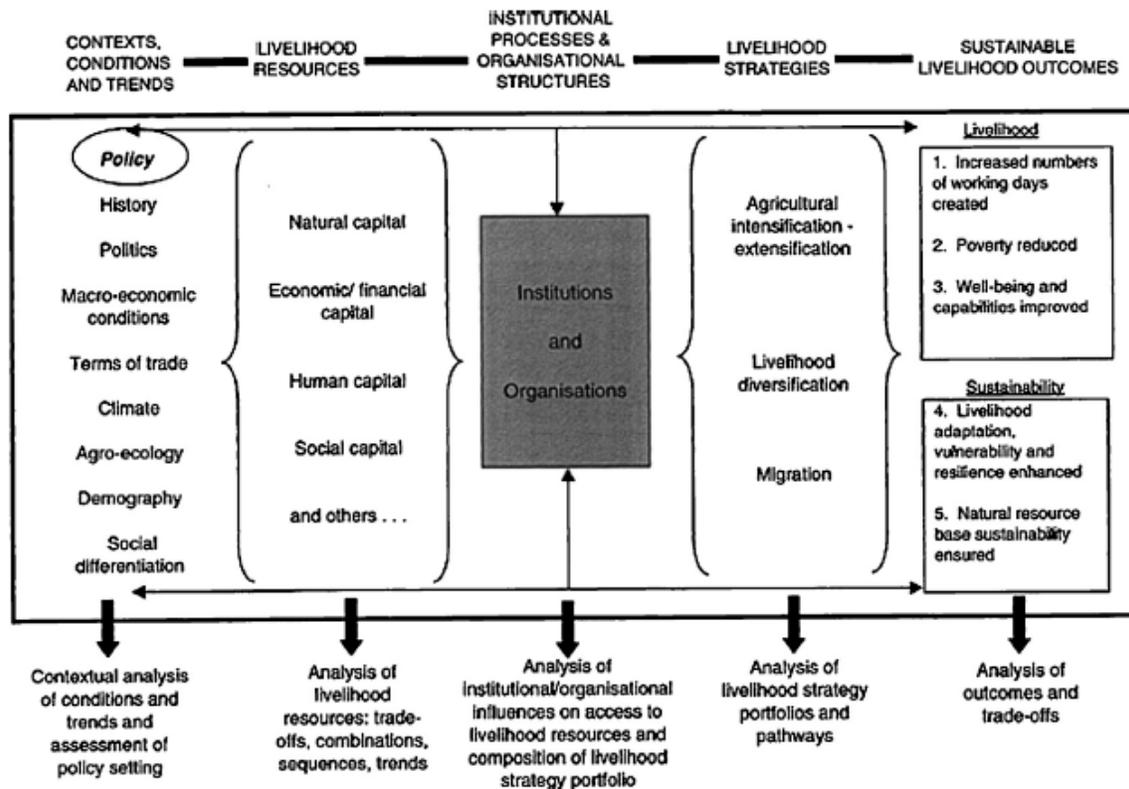


Figure 1: The Sustainable Livelihoods Framework (Scoones 1998; Scoones 2015, p36)

From modest beginnings, this work led to something many researchers aspire to – substantial 'policy uptake' and funding for empirical research and practical elaboration, particularly in the UK in the context of an enlarged and invigorated British government aid program. 'Sustainable livelihoods' drove the agenda of the newly-badged British aid agency (DfID) for about five years from 1997, and it was central to the revitalization of the UK's aid effort under the new Labour government of the day. About c£200m (US\$285m) was spent by the UK on support to sustainable livelihoods, largely in rural environments and through projects and inter-sectoral programs led by in-country 'rural livelihoods' teams, especially in Anglophone recipient countries in Africa and in South Asia (Batterbury 2008; Morse and McNamara 2013). DfID employed 'Livelihood Advisors', reworked the SL model as 'Sustainable Livelihoods Approaches' (SLAs), commissioned millions of pounds of research and publications, and funded and populated the now-defunct *livelihoods.org* website (and a successor, *livelihoodsrc.org*) (Carney 1998).

These efforts were short-lived. By 2002, after a rethink on aid policy and in line with the Millennium Development Goals, the entire focus of DfID's aid platform shifted to sectoral program-based aid, in-country capacity-building, and direct national budget support. Livelihoods work, with its local focus, diminished and since the late 2000s it has all but disappeared in the agency. The holistic dimension of understanding rural livelihoods through detailed fieldwork, and then making informed decisions about how to support livelihoods through projects and strategic interventions, was lost or certainly de-emphasised. British academics like me wondered if this was the revenge of those pedalling a 'markets and growth' development economics agenda, and certainly the debate in the UK shifted markedly, although it did still recognise important local issues like climate adaptation as part of development goals (Batterbury 2008).

Scoones does not elaborate much on the debate, but for certain DfID economists of the early 2000s, I am sure SL ideas were deemed expensive, and sometimes uncomfortable or unworkable (Batterbury 2008). In countries like Ghana, home to several livelihoods projects, Britain's substantial aid efforts have now re-focused on economic reforms, business support, gender equality and health; by 2014 support for key rural concerns like transport, agriculture, land and water management – the backbone of support to rural people in the 1990s- had ceased. The holistic and bottom-up assessment of aid priorities of the SL period has been reversed. But the SL framework was accepted by other agencies internationally, notably the large NGOs like CARE, Save the Children and Oxfam, UNDP, and some small in-county organisations that were happy to absorb and rework it to underpin their local projects. They continue to do so to this day. SL is therefore a development approach that got knocked sideways but has never really died (Morse and McNamara 2013). In academic circles, Scoones' working paper alone has been cited 2,900 times and new studies continue to be published (Bennett 2010; Lisocka-Jaegermann 2015; Morse and McNamara 2013).

The book is a look back at the 'livelihoods phase' in international development thinking, but it also offers a sanguine assessment of the strengths and weaknesses of SL. The audience for the book is primarily academics and students of development, but there are nuggets of wisdom that will appeal more broadly, and it is being translated for release in several different languages. It is short, cheap, and deserves wide dissemination. The book is particularly interesting given Scoones' central role in the ideas being discussed. It is striking to think that a 'framework' developed by applied academics really did become government 'policy' that unrolled rapidly and through the deployment of key staff in DfID (p.39).

For political ecologists, the book shows how SL challenged neoliberal economic development models, by focusing on the rural poor and their persistent vulnerability, often tracing this to the very markets, neoliberal politics and economic growth models that agencies and governments were actively supporting elsewhere in their programs. The book's most interesting aspects are the proposed extension of the SL approach today, to ask a new set of questions relevant to the altered world climate. These build on a political economy tradition in agrarian and development studies that influenced the SL approach to some extent, but it could not receive priority at the time of the SL explosion because governments and development agencies found it too challenging. Questions about persistent vulnerability, 'accumulation by dispossession', and social justice now have increased saliency given the mounting interest in anthropogenic environmental impacts and nefarious grabs for natural resources affecting the rural poor across the developing world. Nurturing sustainable livelihoods for the poor is not just about recognising their exceptional skill at making a living in-situ, which was the focus of many academics and development workers in the 1990s (including myself). It is

also about diversifying livelihoods, jumping scales, and nesting home 'places' within productive networks. It also involves overtly political projects - mitigating vulnerability to land grabs, droughts and floods, natural disasters, corporate greed and venal politics.

Scoones' extended livelihood framework tries to encompass the real political economy of livelihoods (p.82). In the closing sections he combines some ideas traced back to Henry Bernstein with his own, to come up with six key questions we should be asking. These are: *Who owns what* (or who has access to what)? *Who does what?* *Who gets what?* *What do they do with it?* *How do social classes and groups in society and within the state interact with each other?* *How do changes in politics get shaped by dynamic ecologies and vice versa?* We could add something on how people makes sense of their realities, but asking these questions, which are illustrated by short examples, is very useful for communities themselves, but also for researchers and development practitioners.

Scoones expresses some regret that due to an implicit localism and a failure to engage with politics and power in certain development agencies, these vital questions were not all considered sufficiently in the first round of livelihood research in the 1990s (although they were, I would argue, in subsequent work from the 2000s). The original SL concepts became too blocky in use, and they collapsed complex agrarian histories and context into 'categories', as part of an 'asset pentagon' and 'capitals' analysis that some readers will be familiar with. 'Political capital' was excluded from the pentagon. Scoones concludes that the actions and the politics of the individual (p112) still need to be combined with the "wider, structural and relational dynamics that shape localities and livelihoods" (p115). Some of these dynamics are ecological and a "...political ecology approach to livelihoods analysis has long been part of the broader intellectual canvas" (p114). This requires "moving across scales" (p115) and from the micro to the macro. Sustainable livelihoods thinking must broaden in scope, he argues, in practice and methodologically, and the "right to a sustainable livelihood" is "something that is worth fighting for" (p116). Political ecologists need to consider this, and they will benefit from reading the book's historical account of SL. The book also shows how to express complex agrarian issues in a comprehensible way and to a range of potential readerships. Sadly, political ecology has yet to achieve such a degree of 'uptake.'

References

- Batterbury, S.P.J. 2008. Sustainable livelihoods: still being sought, ten years on. Presented at *Sustainable Livelihoods Framework: ten years of researching the poor*. African Environments Programme workshop, Oxford University Centre for the Environment, 24th January 2008. 15pp.
- Bennett, N. 2010. [Sustainable livelihoods from theory to practice: an extended annotated bibliography for prospective application of livelihoods thinking in protected area community research](#). University of Victoria/Vancouver Island University, Canada: MPARG/PAPR.
- Carney, D. 1998. Sustainable rural livelihoods: What contribution can we make? London: Dept. for International Development.
- Lisocka-Jaegermann, B. 2015. [Sustainable rural development or \(sustainable\) rural livelihoods? Strategies for the 21st Century in peripheral regions](#). *Barometr Regionalny. Analizy i Prognozy* 13 (1):13-20.
- Morse, S. and McNamara, N. 2013. *Sustainable Livelihood Approach: a critique of theory and practice*. Dordrecht: Springer.
- Scoones, I. 1998. [Sustainable rural livelihoods: a framework for analysis](#). *IDS Working Paper 72*. Brighton: Institute for Development Studies.
- Scoones, I. 2015. *Sustainable rural livelihoods and rural development*. UK: Practical Action Publishing and Winnipeg, CA: Fernwood Publishing.

Simon Batterbury is Associate Professor of Environmental Studies at the University of Melbourne, and co-editor of the *Journal of Political Ecology*.

DeShazo, Jessica L., Chandra Lal Pandey, and Zachary A. Smith. 2016. *Why REDD will fail*. New York: Routledge. ISBN: 9780415729260; c.\$50, Kindle \$16.64

Reviewed by Karen E. Allen [kallenp "at" uga.edu](mailto:kallenp@uga.edu)

Why REDD will fail begins with a bang. Through this evocative title, the book promises to be a detailed critique of one of the most recent developments in market-based conservation, an approach that has risen to dominance in global sustainable development policy over the last few decades. Reducing Emissions from Deforestation and Forest Degradation in developing countries, otherwise known as REDD, is a program spearheaded by the United Nations in an effort to fund forest conservation in the Global South, thereby achieving net global reductions in atmospheric carbon dioxide and mitigating climate change. At its core, as the authors effectively demonstrate, REDD "moves the carbon sequestration capacity of the forest into the market economy" (p.3), by promoting infrastructure and providing a vehicle through which "less developed countries" can receive payment for protected forests. The authors convincingly argue that this approach to climate change mitigation is fundamentally flawed, from the vague definition of "forest" and the lack of adequate governance within recipient countries, to the egregious refusal among "developed nations" to engage with greenhouse gas reduction.

The text clearly is directed toward scholars and policy makers less familiar with critical political ecology. Political ecologists will readily place the critiques of REDD emphasized in the book within the larger conversation about the pitfalls (and limited promises) of market-based conservation and sustainable development (e.g. Igoe *et al.* 2007; McAfee 1999). Readers of this *Journal* will find that though the book draws heavily on themes of "green developmentalism" and "neoliberal conservation", it does not clearly position itself within this literature, which would have helped to better orient the authors' critiques. REDD did not, for example, independently "[allow] for the commodification of forest resources", (3) but rather it represents the pinnacle of market-based conservation efforts that have gained unprecedented momentum within the concept of ecosystem services (see Gómez-Baggethun *et al.* 2010). Had the authors devoted a section of the book to tracing the evolution of REDD within the broader ideology of market-based conservation (and critiques therein), it would have eased some of their discussion and clarified what is otherwise a confusing timeline of REDD evolution. Instead, the text reproduces many arguments made by political ecologists, among others, and shows how they apply to REDD. For experts in the field, this will not come as much of a surprise, nor does it illuminate the particularities of REDD that distinguish it from other market-based conservation programs.

The book is strongest and most appealing as a primer on REDD and the general challenges of market-based conservation programs like REDD. It would be a useful text, for example, in survey courses on environmental policy, sustainable development, and ecological economics. The chapters have extensive repetition in the opening paragraphs, and they read well independently. The first two chapters define REDD and trace its evolution through the last 20 years of global climate change policy. They draw links between the Noordwijk Declaration on Climate Change, The Kyoto Protocol, The Noel Kempff Mercado Climate Action Project, and REDD (with a brief description linking RED to REDD, and now REDD+). Chapters 1 and 2 also outline the main actors in REDD policy successfully, covering the financial funding institutions and participating countries.

Chapter 3 defines what the authors perceive to be the key threats to REDD's potential success: leakage, additionality, and the problem of forest definition. The authors offer a convincing discussion of why monoculture plantations, such as oil palm, should not be defined as forests because of their threat to biodiversity and their inefficient role in carbon sequestration. In this sense, REDD offers perverse incentives to governments to invest in monoculture plantations that do not solve the problem of carbon mitigation and that create new environmental and social threats. The authors provide a thorough discussion on leakage – the idea that environmental damage is merely displaced to another location through programs like REDD, and additionality – the question of whether such programs provide additional environmental benefits or merely finance activities that would occur independent of economic incentives.

Chapter 3 seems to flow naturally with Chapter 5, which continues the discussion of the inability of increased market liberalization and green markets to solve the problems of environmental degradation. Chapter 4 is a brief interlude that provides an overview of the "drivers of deforestation" in different contexts, reinforcing the conclusion that "[the] drivers of deforestation are complex and vary within countries over time, from country to country, as well as from region to region" (p.56) and are often "powerfully connected to the capitalist market system" (p.58). Chapter 5 lifts the problems of REDD identified in Chapter 3 to a larger scale – the scale of capitalism itself. This chapter walks the reader through the ideology behind market-based conservation approaches, from market failure to free-trade agreements, in order to successfully pick apart the inadequacies of the underlying logic. In doing so, the authors invoke dependency theory to explain why REDD will fail in the stated objective of promoting sustainable development (Viotti and Kauppi 1999). Combined, chapters 3 and 5 provide a thorough analysis of the shortcomings of REDD.

Chapter 6 pulls together the themes of the book, and argues decisively that REDD will fail to help developing countries, as well as fail to mitigate climate change. The chapter addresses the problems of governance in REDD schemes, and asserts that the demand for forest products and the problem of forest definitions will ultimately be the undoing of REDD. The authors conclude that poor governance, unequal power relations, and high costs of operation will result in few economic benefits reaching the most impoverished sectors who are the purported benefactors. Further, they assert that the demand for forest products and the market-driven search for profit will result in negligible net benefits for climate change mitigation.

The conclusion may leave the reader perplexed. The authors frequently backpedal from their strong stance on *Why REDD will fail* to a watered-down *how REDD can be improved*. They suggest improving REDD with "forest certification" programs that would tag sustainable forest products on the global market. This is confusing, since they have convincingly argued that global capitalism is incapable of solving its own environmental ills. For example, the reader will find it difficult to reconcile statements like "We strongly feel that REDD can be improved and could be made to do what it was intended to do" (p.114), with "Any program like REDD will ultimately fail without fundamental changes in our market economy and dependence on fossil fuels" (p.115). The forest certification programs they speak of certainly function differently than REDD, but do little to establish the fundamental changes in the global market economy that the authors seem to advocate. The support thrown behind forest certification programs comes off as a bit of hand-waving and may be frustrating to the reader who, at that point in the book, is expecting a radical proposed solution.

Overall, the book provides a solid critique of REDD while illuminating the history and some particularities of the program. Given that the authors are experts in environmental policy, it is a timely book, and likely a hard pill to swallow in that field. This book serves to educate current and future policy makers about the pitfalls of market-based conservation policy, and expose them to the wealth of literature that expounds upon the arguments stipulated in the book.

References

- Gómez-Baggethun, E., R. De Groot, P.L. Lomas and C. Montes. 2010. The history of ecosystem services in economic theory and practice: From early notions to markets and payment schemes. *Ecological Economics* 69 (6):1209-1218.
- Igoe, J. and D. Brockington. 2007. [Neoliberal conservation: a brief introduction](#). *Conservation and Society* 5: 432-449.
- McAfee, K. 1999. [Selling nature to save it? Biodiversity and green developmentalism](#). *Environment and Planning D: Society and Space* 17: 133-154.
- Viotti, P.R. and M.V. Kauppi. 1999. *International relations theory: realism, pluralism, and beyond* (3rd. ed.). Boston: Pearson.

Dr. Karen E. Allen is Visiting Assistant Professor of Sustainability Science at Furman University, USA.

Kerr, Thor. 2015. *To the beach: community conservation and its role in sustainable development*. Crawley, WA: University of Western Australia Publishing. 196pp. ISBN: 9781742586649; US\$40.00.

Reviewed by Kira Smith [kbs2 "at" pdx.edu](mailto:kbs2@pdx.edu)

In his book *To the beach: community conservation and its role in sustainable development*, Thor Kerr offers a descriptive case study of a large coastal development project in the city of Fremantle, a part of the Perth metropolitan area in Western Australia, using data collected from local government meetings, advertisements, newspapers, websites, and other media sources. The framing of this coastal project was illustrative of production operating under the ideology of ecological modernization, which is based on the assumption that science and technology can provide the solutions to ecological crisis with the help of economic agents including innovators, entrepreneurs and technologists (Mol 1997). In Kerr's study of project failure, we can see how ecological modernization materialized in the context of a proposed large residential and commercial development, and the challenges of framing this particular type of production as 'green.' Kerr argues that the promotion of the [North Port Quay](#) (NPQ) development project as carbon-neutral, and therefore beneficial for an ambiguous global public, opened the doors for local opposition predicated on residents' different conceptions of a local working-class utopia.

The structure of this book is conducive to easy reading. The first few chapters introduce the major themes and subsequent chapters build on these themes by developing relationships among them and analyzing the dominant and subordinate discourses surrounding NPQ. The primary narratives of NPQ introduced by Kerr are: local and regional elections, the framings of development and elections used by media sources; the context of Australia's colonial history; and larger discourses of green development and ecological modernization.

This book begins by introducing the geography of Fremantle and the goals of developers in Perth, who envisioned North Port Quay (NPQ) as a community of 20,000 people living on islands on a reclaimed seabed, powered by renewable energy, and insulated against rising sea levels by a 3.5 meter wall. While the project had the support of renowned sustainability scholar [Peter Newman](#), the development consortium responsible for this venture misjudged the reception their proposed project would receive from nearby residents.

In the second chapter, Kerr discusses the colonial history of Australia. According to the text, British colonization used discourses framed with maps, surveys, and language to displace and erase the presence of Aboriginal peoples (p. 18). Resistance to the appropriation of land by the Nyoogah Indigenous peoples living in the region around Fremantle was met with violence by the British Crown. As Kerr discusses later in the text, the remnants of this colonial relationship and its corresponding violence are embodied in historical relics and are maintained as cultural resources by the Fremantle Historical Society. Beaches also hold cultural and symbolic importance and are considered by many Australians to be the border of their homeland, and have military significance for Euro-Australian people. Kerr compares the methods used by the NPQ consortium in proposing and advertising their development project to those used by European colonists against the Nyoogah. The developers of NPQ also failed to recognize and address the fact that their proposed project over-wrote pre-existing spaces to which community members felt an intimate connection.

Kerr argues that attachment to place in the case of Fremantle was rooted in the sensory experience of local people for whom the beach represented fond memories, rather than an environmental object that spurred traditional environmental movements. Dissent against the large development project was focused on preservation of the town, which often resulted in an essentialized and idealized Fremantle. Kerr summarizes this mechanism by stating that the semiotic distinction between defending natural environments and defending urban environments clouded as Fremantle was talked about as something 'natural' to be saved from the threat of an alien city [Perth] (p. 32).

In Chapter 8, Imagining Fremantle, Kerr draws on work by Benedict Anderson to construct Fremantle as an imagined community. Kerr also notes that much of Fremantle's shared identity is founded

on its history as a port city with dock workers unions. This working class identity persists despite the middle class demographic of Freemantle today.

Kerr writes that local oppositions to development targeted the nature of the project as overly lavish, unnecessary, and contrary to Freemantle's working class identity. The role of media in framing NPQ may also have had a substantial effect on public perception. For regional political candidates and developers, claiming the authority of public opinion was important for establishing the legitimacy of their positions. Many local and regional newspapers were sites of aggressive advertizing campaigns run by developers, and by politicians who either vocalized support or opposition to the development project.

In Chapter six, Kerr unpacks the meaning of green building infrastructure labelling, and the challenges in framing such construction as environmentally friendly. Green certifications allow developers to claim a moral imperative for their projects; however, unlike industrial manufacturing, developers cannot hide the visible destruction of local environments occurring at construction sites. According to Kerr, one way that the green building industry addresses such challenges is by appealing to the public sense of global environmental crisis. Tied to this crisis is a purported need for "radical departures" from normal planning procedures, such as the incorporation of expert panels. In these models, select community members are invited to give comment on proposals, rather than planning decisions reached through municipal institutions beholden to the public. Developer's unsuccessful calls for a change to the independent planning board format for evaluating the merits of NPQ is not unusual in Australia, but was met with harsh criticism from politicians whose campaigns used development as a platform.

Chapter seven addresses the contradictions inherent within the green building discourse, and often noted by critics of ecological modernization. The development of NPQ is framed as a solution to climate change; however, without the development of the project, there would be no carbon emissions, and therefore no need to mitigate emissions. Kerr writes that this high-tech solution was particularly problematic in Freemantle, where sustainability was often associated with grassroots efforts to recycle or use bicycles, which are more consistent with the communities' working class identity.

In the final chapters Kerr contextualizes the events in Freemantle by relating them more broadly to issues of hegemonic discourse and in relation to the larger global movement towards neo-liberal policies. The growth of independent planning boards has been prominent since the NPQ was [rejected](#) by the Freemantle city council in September 2009. However, Kerr warns that a lack of viable political alternatives for local people to express their opposition to development project may result in the use of violent coercion by the state. The state also loses access to claims of legitimacy from the democratic process, and therefore has an incentive to reassert its authority through other means. In this case, the rejection of NPQ was a result of the conservative desire for local residents to protect their way of life, as well as the need of the Australian government to maintain legitimacy through local democratic institutions.

While Kerr's text has many merits, it may have benefited from additional attention to theoretical linkages between case study material and scholarship on ecological modernization theory, sense of place, and community activism. Over-all, this book was thorough, accessible, and well organized. I would recommend it for scholars at any level who are interested in exploring how communities respond to large development projects predicated on ecological modernization.

References

Mol, A. 1997. Ecological modernization: industrial transformations and environmental reform. In Redclift, M.R. and G. Woodgate (eds.) *The International Handbook of Environmental Sociology*. Northampton: Edward Elgar. Pp. 845-871.

Kira Smith is a graduate student in the Department of Geography at Portland State University, USA.

Moseley, William G., Matthew A. Schnurr and Rachel Bezner Kerr (Eds). 2016. *Africa's Green Revolution: critical perspectives on new agricultural technologies and systems*. New York: Routledge. 136 pp. ISBN 978-1-138-18595-1; £90/c.US \$140 (hbk, lower through resellers).

Reviewed by Banu Koçer Reisman [banu.kocer "at" yeditepe.edu.tr](mailto:banu.kocer@yeditepe.edu.tr)

In a recent call for a new Green Revolution in the US, Sharp and Leshner (2016) claimed that "[n]ow, more than ever, we need to embrace 21st-century science, fund it and turn it loose so we can develop better methods of putting food on the table." Berry, Jackson, and Berry (2016) responded by fervently criticizing Sharp and Leshner for their ignorance of the serious negative ecological and social consequences of the Green Revolution, calling attention to their remarkable omission of farmland or farmers in their article about agriculture, and concluding that "...even eminent scientists, who propose to improve agriculture exclusively by scientific research and technological innovation with no regard for land and people, know little about agriculture." For them, the solutions to agricultural problems lay in the traditional methods of farmers that are both more ecologically sound and socially just than Green Revolution technologies.

This recent debate epitomizes a long-fought and ongoing battle between the proponents and opponents of the Green Revolution approach to agricultural development. Proponents are on the technical and scientific side, focusing on Green Revolution technologies and their positive effects on crop yields, whereas opponents take the critical, livelihood stance with an emphasis on the negative ecological, social and economic effects of the technocratic, productionist and seemingly apolitical agenda of the Green Revolution. *Africa's Green Revolution: critical perspectives on new agricultural technologies and systems* locates itself on the critical side of this battle. Based on a special issue of the *African Geographical Review*, this edited volume brings together contributions that problematize the New Green Revolution for Africa by examining its effectiveness as a strategy for increasing crop yields and alleviating poverty on the continent.

The opening chapter serves as its introduction, providing a brief overview of the Green Revolution for Africa, covering its political-historical background, its actors, rationale, overall approach and characteristic elements, and setting a skeptical tone for the remaining chapters with respect to the potential of this philanthrocapitalist-neoliberal approach to improve household food security for African farmers.

Employing fieldwork methodologies and drawing on locality-based case studies in several Sub-Saharan countries, the contributing authors of four chapters (Ch. 2, 3, 4 and 8) focus on various agricultural technologies and market strategies within the framework of the Green Revolution for Africa and analyze their socio-economic impacts on smallholder farmers and lower-income urban dwellers. In this context, Bornstein evaluates the seed-saving and seed-selling practices of high-yielding rice growers in The Gambia (Ch.2), Nyantakyi-Frimpong and Bezner Kerr examine the effectiveness of input-intensive agricultural technologies within the agro-ecological context of Northern Ghana (Ch.3), Peyton, Moseley and Battersby explore the effect of the formal Western supermarket strategy on food security/insecurity in the hybridized (formal and informal) economies of lower income neighborhoods in Cape Town, South Africa (Ch.4), and Ruby and Bellwood-Howard study the effect of soil fertility management and access to credit markets on farmers' livelihoods and sustainable agro-ecological practices in Northern Ghana (Ch.8).

With the exception of Bornstein (Ch.2), the authors reach similar conclusions. They emphasize that it is necessary to rethink the African Green Revolution due to its exclusive focus on productivity, its reliance on technological fixes and high-input agriculture, its insensitivity to social differentiation and farmers' agency (Ch.3), its overall commercial thrust and market-oriented strategy for food security (Ch.4 and Ch.8) and its implications for the long-term sustainability of farming in sub-Saharan Africa (Ch.3 and Ch.8).

Bornstein, on the other hand, takes issue with the critics of African Green Revolution for their conception of smallholder farmers as passive victims of external agents who control the production process under this agricultural system. He asserts that the seed-saving and selling practices of the Gambian farmers growing NERICA (New Rice for Africa) – a high-yielding rice variety introduced within the framework of the Green Revolution for Africa – "...do not correspond with narratives portraying NERICA as a pernicious threat to smallholder autonomy" (p.9). Contrary to experts' recommendations that they plant new seed every three years, the Gambian NERICA growers maintained existing agronomic practices, continuously re-

planting their seeds and selling them to farmers from other villages, thereby minimizing farmers' dependence on off-farm input dealers (pp.9-10). That NERICA farmers thus retained control over their production process and defied the inevitability of capitalist penetration into agriculture led Bornstein to conclude that "...to conflate agricultural technology transfer with an inexorable commodification of the seed is to overlook the farmer's agency in constructing the social reality of any agricultural system" (p.11).

As thought-provoking as Bornstein's claim is, his conclusion is not supported by the case he presents. The Gambian NERICA farmers' seed saving and selling practices, says Bornstein, are "...a manifestation of exactly the kind of local autonomy that food sovereignty's proponents have been advocating for" (p.9). He then states that these practices "*if allowed to continue* [emphasis added], can act as a guard against capital's takeover of the seed sector" (p.11). The crucial question of "allowed by whom?" is left unaddressed by Bornstein. Neither does he problematize the severe limitation of an autonomy that requires the approval of some unidentified source of authority for its continuation. Granted, Bornstein hints at the limited nature of this autonomy by supporting his claim of farmers' autonomy with cautious caveats, as when he says "farmers retain *some degree of sovereignty*", "*to some extent at least* – farmer autonomy ... can indeed co-exist with technological change in rice agriculture" and "the farmer-led NERICA system has, *under certain conditions*, the potential to entrench vibrant peasant agriculture" [emphases added] (p.11). However, these limitations remain in the background of his main argument - implied, rather than acknowledged as significant. This, in turn, contributes to the failure to recognize that farmers' autonomy in the case of Gambian NERICA seems to be achieved, not as much due to the *success of farmers* to assert agency as it was due to the *failure of the NERICA program* to be put into full practice there. By disproportionately focusing on farmers' agency at the expense of structural factors (such as political will, economic incentives, administrative and legislative measures) in evaluating the outcome of Green Revolution technologies Bornstein runs the risk of reaching the misleading conclusion that in cases where farmers depend on external actors in their production processes - like those Nyantakyi-Frimpong and Bezner Kerr (Ch.3), and Ruby and Bellwood-Howard (Ch.8) observed in Northern Ghana - their lack of autonomy is because they failed to assert agency.

Although Bornstein's conception of the impact of Green Revolution technologies on farmers differs from that of others in the volume, he and other contributors share an *emphasis on context-specificity* as a common thread. The significance attributed to context, and the concomitant call to consider the various geographical, agro-ecological, political, economic, and social contexts in designing, implementing, and evaluating any agricultural and food policy, stands out as an overarching theme encompassing all the chapters. To that effect, Nyantakyi-Frimpong and Bezner Kerr (Ch.3) criticize the generic agricultural development policies relying on uniform technological fixes, and conclude that "...agrarian intensification should involve not only a simple transfer of technology, but should be sensitive to the local context and social relations of production" (p.30). Peyton, Moseley and Battersby (Ch.4) call attention to the context-specific implication of the geography of formal food retail for the food security of poor households. Acknowledging the need for contextualized development policies, Jones, Schnurr, Carr and Moseley (Ch.5) suggest long term work in the field as a means of supporting such policies. Along similar lines, Ruby and Bellwood-Howard (Ch.8) stress the importance of context-specific solutions. One of the main points of their criticism of the African Green Revolution (AGR) is that it fails to live up to its claim to recognize the importance of context specificity. Taking issue with its current implementation "...as a package in a hegemonic fashion" (p.121), Ruby and Bellwood-Howard argue that AGR's rhetoric of choice and site-specificity "...is not always borne out in practice. The approach, when implemented as a package, is not, therefore, able to facilitate the livelihood choices that would benefit all farmers" (p.110).

In addition to the scholars of political ecology of agricultural development, the current volume will also benefit agricultural policy makers and NGOs working in the Sub-Saharan African context. The emphasis of the authors on the context-specificity of agricultural development programs promises to provide a corrective to policies implemented as a one-size-fits-all package deal, and the case studies presented provide a better understanding of context-specific implications of agricultural technologies within the framework of Green Revolution for Africa.

References

Berry, W., W. Jackson and M. Berry. 2016. Response to the recent New York Times op-ed on the Green Revolution. Retrieved May 5, 2016 (<http://berrycenter.org/protecting-farmers-in-the-marketplace-berry-center-update/response-to-the-recent-new-york-times-op-ed-on-the-green-revolution/>)

Sharp, P.A. and A. Leshner. 2016. We need a Green Revolution. *The New York Times*, January 4. Retrieved May 5, 2016 (<http://www.nytimes.com/2016/01/04/opinion/we-need-a-new-green-revolution.html>).

Banu Koçer Reisman is Assistant Professor in the Department of Sociology at Yeditepe University in Istanbul, Turkey.

Adkin, Laurie E. (ed). 2016. *First world petro-politics: the political ecology and governance of Alberta*. Toronto, Buffalo, and London: University of Toronto Press. 696pp. ISBN 9781442612587; US\$37.46, lower through resellers.

Reviewed by James B. Johnson [jbjohnson "at" umail.ucsb.edu](mailto:jbjohnson@umail.ucsb.edu)

For those readers interested in the Albertan petro-plays, Adkin's *First world petro-politics* is a must-read. For those uninterested or more likely unaware of Alberta's place in the global hydrocarbon industry, this volume serves notice: pay attention. Right off the bat, Adkin highlights the prominence of Alberta in the dizzyingly complex interconnectedness of global petroleum markets. This interconnectivity, which signals the introduction of the overarching theoretical perspective of political ecology, emphasizes not only the iterative relationship between natural and social worlds but also considers the political, economic, and environmental aspects across historical and scalar webs in which actors find themselves operating. Methodologically, the volume takes a discursive or constructivist tack, in which the voices of these diverse actors are either amplified or repressed vis-à-vis their relationship to the Albertan petro-state. In Adkin's words,

Political discourses jostle to establish hegemonic interpretations of such concepts as 'sustainable development,' 'human nature,' or 'democracy.' Seeking justification of their interpretations, actors appeal to different types of evidence or reasoning, which may be experiential, religious, cultural, or scientific. (p.9)

But these discourses did not just appear from nowhere. The Albertan petro-state is unique and this case study offers new insights of interest to petro-state literature in general, via political ecology. Big issues such as global or fossil capitalism, democracy, ecological sustainability, and neoliberalism are interrogated in all their contradictory complexity in a format that is organized and accessible across audiences. Adkin begins the work of injecting political ecology's strengths in her introduction by providing a brief history of Alberta's culture and class system, approximately from the early twentieth century to present. From a region dominated by small commodity producers characterized as liberal-individualistic and populist-liberal-evangelical to a fully industrialized, petroleum-dominated economy fraught with wage gaps between male and female workers and active dispossession of aboriginal lands, what is important for Adkin is that these things matter.

While the task Adkin sets out for her contributors may seem mammoth, "what holds it all together?" is the commitment shared by her contributors to political ecology's normative orientation and optimism about the possibility of both social justice and ecological sustainability (p.11). Thus, questions of political governance and democratic theory must be brought to the forefront to answer not only "how Alberta's reliance upon oil and gas revenue... has driven bureaucratic restructuring, government investment priorities, public policy political rights and representation, and citizenship", but also how it may be done better in a post-carbon and a socially just world (p.13). Thus, it seems Adkin sets up two goals for her contributors. First, Alberta, as a first world petro-state, warrants not just exploration along political, economic or social axes, but also requires more attention to its history and multi-scalar place in the world. Second, there is a critical and normative pledge that in doing so, we may be left with a breath of hopefulness for ecological sustainability and social justice. Do the substantive chapters live up to the billing? In short, absolutely.

Theoretically, petro-state issues are the least represented throughout the volume with two important exceptions. Carter and Zalik's contribution applies rentier state theory to the Albertan case to argue that this theory would be usefully updated by considering the history of, and transnational influence on, the Albertan petro-state. One of the more interesting points here is the assertion that across geopolitical scales the resulting actions can be "sometimes erratic" (p.52). While somewhat glossed over, this point brings a sense of complexity and even uncertainty that may warrant further discussion elsewhere. Likewise, in Chapter 17, Adkin interrogates and problematizes the 'First Law of Petro-politics' – that the price of oil and democracy are inversely related – on the grounds that it does not consider the political and economic milieu in which various petro-states emerged. Furthermore, she questions the assertion of some petro-state theorists who characterize Canada as democratic and diversified, and therefore an exception to the First Law. The volume offers 16 convincing chapters to back up this challenge. However, the case of Alberta offers a unique

opportunity to engage the rentier state literature theoretically through an exploration of seemingly democratic "techniques of governance" that actually only serve the interests of a few. Democracy, then, "is both a condition and an outcome of a societal transition to a low-carbon model of development" (p.591).

On the question of governance, the volume offers three especially telling chapters on how the Albertan state has failed on issues of environmental regulation. In Chapter 3, Adkin discusses the 'Alberta Advantage', the official stump for neoliberal governance. She finds, perhaps predictably, that the Albertan Ministry of Environment with its rather amorphous structural setup has not been up to standard in meeting its obligations to Albertans and in delivering environmental protection. This has led to a paradoxical situation – and Adkin's exasperation is palpable – in which, the government has created a quasi-independent body that must be protected from meddling by the Ministry of the Environment. Similarly in Chapter 5, Carter outlines the environmental costs of tar sands development and reviews trends in environmental regulation, which again are dismal given the political lobbying of the oil and gas industry. While Carter ends with very specific policy recommendations, perhaps a more thought-provoking point is the proposition that better hydrocarbon policy may require a "re-articulating and re-engaging with Alberta's diverse political history and culture" (p.176). In Chapter 11, Zalik explains how the state has shirked its responsibilities – namely the responsibility to consult with stakeholders – and passed them on to corporations. Using a comparative approach, she finds that the "merging of public and private interests" (p.375) results in the corporation being understood as part of a greater social good while those opposed are somehow impeding 'sustainable' development. In response, she suggests, "stringent, legally enforceable state monitoring policy... [and] the criminalization of corporate malfeasance, in lieu of the criminalization of protest actions against extractive capital" (pgs.356-357).

Four chapters in the middle of the volume are particularly strong on what might be called a methodological front that examines issues of discourse and representation. In Chapter 6, Adkin and Stares examine hegemonic politics, particularly the discursive response of the Albertan petro-state to increased criticism of its extractive economy. The provincial government has not only seen an institutional reorganization around the needs of the petroleum industry but since about 2008, it has also engaged in political marketing or rebranding of its fossil products as clean and environmentally responsible. This discourse of 'sustainable development' has revolved around posing technology as a solution, the rhetorical minimization of impacts, and the projection of confidence in the state to manage any negative consequences from extraction. However, most interestingly Adkin and Stares identify a hegemonic discourse of "nativist neoliberalism" at work in which the Albertan, settler, and peripheral population are pitted against the machinations of the central Canadian state (p.219). In Chapter 9, Garvin highlights the ways in which the right kind of participants are constructed, and are therefore included or excluded from political participation. Locals increasingly feel that they are being asked to assume higher environmental and health risks associated with sour gas extraction. Meanwhile the benefits accrue at a provincial, national or multinational level. So there is a need - or perhaps a demand - for greater public participation. On the one hand, Garvin argues that the regulatory apparatus, in framing policies of public participation, constructs the right kind of participants allowed into the discussion: as passive receivers of information, as consultants whose concerns need to be heard, and finally as collaborators whose concerns need to be addressed. This is a tentatively hopeful construction. On the other hand, she finds that community members closest to sour gas development express a lack of trust in the government, particularly the urban and national governments, and they agree that greater access to information would be helpful. Yet, they are reticent to criticize, or at least stalwartly resist, the idea of sour gas extraction.

Outside, but not unrelated to state constructions, Davidsen makes the point that environmental problems are "selective observations out of a vast and complex array of multidimensional connections overlaps and dynamic changes" (p.243). This is very true in the mass media age, as media coverage is made as short, simple, polarized, digestible, and spectacular as possible. Furthermore, the ways that environment problems might possibly be confronted are severely limited by the neoliberal capitalist societies in which they are found. Thus, there is need for more mainstream media transparency, critical reflection on the problems faced, and most importantly public, structural literacy. In Chapter 8, using a feminist political ecology lens, O'Shaughnessy and Doğu offer an account of the gendered and racialized subjects involved in a mining boomtown. They outline the hegemonic, frontier masculinity and traditional family values discourse.

Particularly insightful is how they delve into the complex, intersectional, and even contradictory ways that gender and race operate across different scales to produce subjectivities. O'Shaughnessy and Doğu's work reminds us that from "royalty rates to worker shortages and statistics on emissions, barrels produced per day and required pipeline capacity, that it is easy to miss the fact that at the heart of it all are people whose lives are being fundamentally altered as result of oil sands development" (p.263).

Alas, all hope is not lost, and the volume offers substantive accounts of resistance strategies that have proven moderately effective. In Chapter 10, Parlee identifies five strategies for indigenous environmental governance in response to increasingly grave consequences of oil sands development. From the fiduciary commitments of the state to consult with first nations to bilateral and multi-stakeholder agreements, Parlee provides a balanced sketch of inclusion strategies but ultimately finds that Indigenous populations can boast only negligible influence over the development of their traditional lands. However, Parlee is also cautiously optimistic about the prospects of community-based monitoring of the oil-sands and public outreach and advocacy especially internationally. In Chapter 12, Adkin and Courteau examine the controversy surrounding Imperial Oil's attempt to ship Korean mining equipment– the Kearn Module Transportation Project– through Idaho and Montana. They find that Montana's unique resource-based economy, environmental protection in her state constitution, and the intellectualism provided by the University of Montana have all contributed to a healthy and inclusive environmental movement. In Chapter 13, Stendie and Adkin ask

how the decision-making process [related to Enbridge's Northern Gateway Pipeline] implemented by the federal government tells us about the nature of environmental citizenship in Canada today, and how this model of citizenship accommodates, excludes, or otherwise relates to the sovereignty claims of Aboriginal peoples. (p.418)

They find that in this case the duty to consult with Aboriginal peoples was not met (duties are ambiguous under Canadian law, and consultation duties were delegated to Enbridge) and the scope of discussion was narrowed to exclude larger socio-environmental concerns such as climate change and greenhouse gas emissions. They argue that, procedurally, public consultation processes should be capable of incorporating different interests and values. Moreover, insisting on science-based environmental citizenship, while sounding nice, may occlude different risk valuations, and promote faith in technology yet to be invented, or questionable 'scientific' evidence. Here, Stendie and Adkin think philosophically and ask us to consider what may "constitute a good life" (p.444). The authors offer a number of suggestions for moving towards a better deliberative democracy: impartiality procedurally and politically, inclusiveness in participation and scope, free prior informed consultation and consent for Indigenous people, and imagining Alberta without extractive capital.

Finally, we are left with some hope moving forward. In Chapter 4, Quinn *et al.* offer a spatial landscape change simulation model that allows us to actually "'imagine' or 'see' the long-term consequences of current growth patterns" (p. 115). The black and white visualizations (one wishes they had opted for color) are quite damning especially when combined with their discussion of the energy sector's impact on health, lifestyles, and other extractive sectors like forestry. This mapping approach aims to correct some of the political and institutional failings by suggesting increased attention to the cumulative effects of energy - a balance between government mandates for growth with environmental destruction, and better integration of citizen concerns in its decision-making apparatus. In Chapter 14, Haluza-Delay and Carter examine social movements against Alberta's petro-hegemony and argue that "effectively countering Alberta's petro-capitalism will require rethinking the material processes of production and social reproduction *as well as* reimagining the cultural foundations and collective identities of Albertans beyond being producers of energy" (p.457). They outline a variety of resistance strategies across scales and interests, and they distil and evaluate some of the major strategic trends, including: looking for external sites of resistance, delegitimizing the hegemony of the oil industry, and uneasiness with regard to the environmental justice framework. Ultimately, they argue that much of the work to be done in terms of resistance to petroleum development is in the cultural realm as much as the material. In Chapter 15, Weis *et al.* provide a unique contribution to the volume where they examine the current, largely coal-powered electricity system in Alberta and offer an economic projection of energy sources to best meet future energy needs. They forecast an increase in capital and fuel

costs for coal-fired electricity, cheaper infrastructure for renewables, increased liability concerns for larger power plants, and increasing competitiveness of renewable technology, especially if the costs of coal-powered production were to be internalized. As to what determines energy generation, on the one hand the authors note that the deregulated energy market in Albert has opened a space for renewable energy development. On the other, they find there are barriers to this approach as the electricity transmission systems in place are built for large, centralized power plants and favoring coal.

There is hope, however, as the provincial government has taken steps to reduce GHG emissions, the federal government has banned new conventional coal plants without CCS technology, Albertan's concern over energy security is on the rise, and large oil companies recognize an improvement in their reputations with investment in clean energy. Overall, they argue that a transition to more renewable energy sources for electricity generation is possible, even necessary, but will require careful study and planning. In Chapter 16, Adkin and Miller discuss Albertans' growing dissatisfaction with the petro-state governance model and outline some potential inroads to renewable transitions. Drawing largely on public polling data, they note that Albertans are willing to pay more for energy but also unhappy with how resource rents are being spent, they want to increase corporate taxes, they want a higher share of oil rents, and they also want to save and invest rents better. While it will be difficult to battle the behemoth that is the oil and gas industry, the authors posit that "cracks in the foundation of the petro-state model have indeed widened" (p.528).

James B. Johnson is a graduate student in the Department of Anthropology at the University of California-Santa Barbara, USA.