



Critical reflection on knowledge and narratives of conservation agriculture



Stephen Whitfield^{a,*}, Andrew J. Dougill^a, Jen C. Dyer^a, Felix K. Kalaba^b, Julia Leventon^c, Lindsay C. Stringer^a

^a Sustainability Research Institute, University of Leeds, Leeds LS2 9JT, United Kingdom

^b Copperbelt University, Kitwe, Zambia

^c Leuphana University of Lüneburg, Lüneburg, Germany

ARTICLE INFO

Article history:

Received 14 November 2014

Received in revised form 28 January 2015

Keywords:

Climate-smart agriculture

Scaling up

Farming systems

Politics

Zambia

Sub-Saharan Africa

ABSTRACT

In the context of contemporary concerns about climate change and food security, Conservation Agriculture (CA) has emerged as a well-supported and central component of the agricultural sector development strategy across sub-Saharan Africa, including in Zambia, which is the focus of this paper. A variety of narratives about the benefits of CA over conventional agricultural systems underpin endeavours towards 'scaling up' CA and increasing rates of adoption amongst smallholder farmers nationwide. However, there is a knowledge politics underlying the translation of a weak evidence base around CA into persuasive narratives and financial and political support. In this paper, we trace the evolution of five narratives around CA in Zambia in relation to changing political agendas and the involvement of new public and private sector actors, and review the development of evidence bases and knowledge that support and challenge each of these narratives. We discuss the potential to open up space within this knowledge politics to alternative narratives and the contestation of the pervasive CA scaling up agenda. Critical reflection is essential to ensure that national and local evidence is more effectively used to guide national climate and agricultural policy developments and international donor initiatives.

© 2015 Elsevier Ltd. All rights reserved.

Introduction

Conservation Agriculture (CA) is both an agricultural technology and a set of land management principles, based on the practice of zero- or reduced-tillage, permanent organic soil cover, and crop rotations (FAO, 2008). It has long been heralded by the international agriculture and development community as a sustainable approach to farming (Myers, 1983; Unger, 1990) and has been adapted in southern Africa from the Zimbabwean commercial farming sector for application to smallholders (Hagglblade and Tembo, 2003). In the context of small-scale and subsistence agriculture in sub-Saharan Africa, CA is central to national agricultural policies and the activities of non-governmental organisations alike, justified on the basis of a variety of success claims about its ability to increase productivity (and therefore enhance national food security), its low input requirements, and its contribution to climate change mitigation and social empowerment.

These claims have shifted and accumulated over time. As new concerns and priorities – land degradation, gender, climate change

and others – have moved up and down the international agricultural development agenda, CA has been consistently promoted as an appropriate technological response. The amalgamation of these narratives underpins a contemporary push towards the setting of ambitious adoption targets and the 'scaling-up' of CA in Africa, as is evident in the declaration of the 2014 Africa Congress on Conservation Agriculture and the Food and Agriculture Organisation's (FAO) 2013 CA Scaling Up programme in Zambia.

A counterweight to these persuasive calls for increased investment in and efforts towards scaling up CA is emerging in the form of critical commentaries that question the strength of evidence underpinning success claims, particularly in the context of eastern and southern Africa (Giller et al., 2009; Andersson and Giller, 2012; Andersson and D'Souza, 2014). An obvious conclusion in response to these contested claims about CA (yet only implicitly acknowledged in the literature), is that they are inextricably political. A series of political framings of agro-ecologies, problems and research agendas; assumption-based interpretations of disparate bodies of evidence; and a variety of values and motivations, underpin the translation of evidence into success stories, the promotion of particular technologies and the closing down of alternatives (Sumberg and Thompson, 2012).

* Corresponding author.

E-mail address: s.whitfield@leeds.ac.uk (S. Whitfield).

Here we take the case of Zambia as one well-developed example of a country in which CA has received strong political support. We analyse the narratives through which CA has been promoted in the Zambian context and how these have evolved in response to changing political agendas; the involvement of new public and private sector actors in the CA community of practice; and the development of evidence bases and knowledge. We approach the analysis of CA in Zambia through a political ecology lens, which has been largely absent from current literature, yet is ideally suited to unpacking, engaging with, and challenging the assumptions and knowledge claims that underpin CA's promotion. By presenting a critical political ecology perspective, this paper aims to identify points of entry, and to open up space within the knowledge politics around agricultural development in Zambia, for the consideration of alternatives to the current agenda of scaling up CA.

The specific objectives are to:

1. Identify the narratives through which CA has been promoted.
2. Trace the evolution of these narratives in Zambia in relation to changing political agendas and the involvement of new public and private sector actors in the CA community of practice.
3. Review the development of evidence bases and knowledge that support and challenge each of these narratives.
4. Critically consider the appropriateness of the current scaling-up of CA agenda in relation to these findings and the political space for counter narratives.

Conceptual framework and methods

To analyse changing and contemporary endeavours to promote CA in Zambia from a political ecology perspective is to begin from the assumption that they are bound up with political agendas that are themselves inherently ecological; 'forms of access and control over resources... [with] implications for environmental health and sustainable livelihoods' (Watts, 2000: 257). Political ecology studies have previously demonstrated the way that colonial legacies of conservation and control act to mutually reinforce enduring narratives of degradation (Cline-Cole et al., 1990; Neumann, 2005; Adams and Hutton, 2007). Similarly, political ecologists have recognised that narratives of vulnerability become self-fulfilling within political framings, and associated management, of natural resource and climate change (Adger et al., 2001; Bulkeley, 2001; O'Brien et al., 2007). Several of the key narratives of change and adaptation associated with both the promotion and critique of CA – particularly in relation to land degradation, climate vulnerability, and biodiversity conservation – have also been the subject of political ecology analyses (Blaikie and Brookfield, 1987; Neumann, 2005).

In this paper, a narrative is understood as a storyline about the future based on assumptions about the trajectories of one or more context components (e.g. the economy, politics, the environment, livelihoods, etc.) in relation to coupled problems and responses (Leach et al., 2010). Narratives are typically articulated within the campaigns and communications of groups or evidenced in language of project reports and outputs, as well as in the language of everyday interactions (Wodak, 1989; Hajer et al., 1993; Fairclough, 2009). A narrative may be realised not simply because of the correctness of its assumptions, but the power of those communicating it to influence decision making and close down alternatives.

Hajer (1995) and Sabatier (1988) differently describe the relationship between actors, policy influence, and narratives. Within Hajer's discourse coalition concept, campaign groups form around persuasive arguments such that they become politically dominant. He recognises that the discourses that hold groups together are amenable to change through policy processes, debate and learning. In Sabatier's theory, powerful policy coalitions are formed by actors who, despite holding diverse core, fundamental beliefs,

come together around shared beliefs on how to address a policy problem. Often, this results in the formation of a meta-narrative with powerful support that serves to reinforce the narrative through research activities and campaigning. Both theories are considered here in analysing the politics of agricultural agenda-setting. We do not examine processes of coalition formation, but rather focus on the expression of such coalitions by examining how narratives are evolving and being reflected by actors and their projects over time.

We trace the changing community and narratives around CA in Zambia through the outputs of major CA projects. Key informant interviews helped to identify the CA projects and policies in Zambia (including public and private initiatives), which formed the basis of our analysis. A discourse analysis of project reports ($n = 31$), policy documents ($n = 7$), press releases ($n = 4$), CA review papers ($n = 2$) and interviews with policy makers and project representatives ($n = 8$), was conducted. These took place around the 1st Africa Congress on Conservation Agriculture, held in Lusaka in March 2014. Participation in the conference and discussions around it informed the identification of key historical moments and information sources. Multiple sources were used to verify and triangulate information.

Documents and transcripts were marked with codes that correspond with three central components of the contemporary 'climate smart agriculture' (CSA) narrative – adaptation, mitigation, and food security (Lipper et al., 2014). Starting with these aspects allowed the historical pathway of the most recent narrative to be traced. However, it emerged that these codes did not adequately reflect the diversity of messages associated with CA in Zambia, which has a longer history than CSA. In order to accommodate these, a revised coding strategy was developed based on five key narratives, which are described in more detail in this paper. This coding strategy was used to attribute narratives to different projects, policies and actors which were organised chronologically to develop a picture of trends over time.

A systematic review of peer-reviewed and grey literature was used to identify evidence bases and knowledge gaps in relation to each narrative. Key words from each narrative description were combined with a generic search term ("conservation agriculture*" AND Africa*) in two academic search engines (Web of Science and Google Scholar) and abstracts were screened for relevance to the eastern and southern African context. These were also ordered chronologically and cross-referenced with the review of narratives to identify the coincidence of new knowledge and narratives.

Tracing the development of 5 narratives of CA in Zambia

Five key narratives in the promotion of CA in Zambia are outlined in Table 1. In each case, a framing of a problematic *status quo* (associated with conventional cropping systems) contrasts with a set of solutions offered by CA. The five narratives are not mutually exclusive and rather than dominant narratives being usurped or replaced over the history of CA promotion in Zambia, it is more accurate to think of them as overlapping and accumulating. The narratives are closely interlinked, and in many cases, the validity of one depends on the assumptions of another. The chronological description of changing institutions, policies, and CA projects, positions these narratives in relation to the contexts in which they have emerged and accumulated.

1980s: International concerns for degradation and conservation

The international sustainable development agenda that rose to popularity in the 1980s and the associated interest in dryland degradation, underpinned research and development efforts that focused on improving soil health in southern Africa. In 1985, the

Download English Version:

<https://daneshyari.com/en/article/5073728>

Download Persian Version:

<https://daneshyari.com/article/5073728>

[Daneshyari.com](https://daneshyari.com)