

Available online at www.sciencedirect.com

SciVerse ScienceDirect

journal homepage: www.elsevier.com/locate/envsci

The politics of numbers in forest and climate change policies in Australia and the UK

Marleen Buizer^{a,*}, Anna Lawrence^b

^a Murdoch University, Australia

^b Forest Research, UK

ARTICLE INFO

Article history:

Received 3 May 2012

Received in revised form

4 December 2012

Accepted 6 December 2012

Available online 21 June 2013

Keywords:

Adaptation

Adaptive Forest Management

Australia

Indicators

Mitigation

Quantification

UK

ABSTRACT

Forestry worldwide has a history of relying upon quantification, drawing on science and economics to compute core concepts such as the relationship between tree-based stand descriptors and marketable timber volumes. This number-oriented approach is grounded in rationalisation and sustained yield objectives that emerged in the eighteenth century and persisted throughout most of the twentieth century. With the rise of Sustainable Forest Management (SFM) as a governing idea in the 1990s, forest policy and management broadened its orientation to encompass different values, including biodiversity and cultural values. Adaptive Forest Management (AFM) has emerged as a more recent paradigm, responding to the complexity of forest ecosystems by building on systematic learning from operational practice, making space for more qualitative approaches. With the development of climate change policy and carbon accounting, the balance changes once again towards the role of numbers in forestry management. In both Australia and the UK, international politics, policy and national debate linking climate change to forests prioritise one public good – carbon sequestration – over others. The quantifiability of carbon makes mitigation more easily communicated and translated into other sectors and across levels of government, so when policy actors attempt to promote the role of forestry in climate change, its contribution to mitigation is receiving more recognition than adaptation. At the sub-national level, there is a growing awareness of the urgency of adaptation, but advocates struggle with the challenges of making adaptation legible in the absence of widely recognised forms in which to express results. Our analysis suggests that ways need to be found to combine the historically strong language of number with other, more qualitative languages, to realise the full potential of forestry in climate change policy.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

A common thread to professional cultures of forestry is their hierarchical, rational planning systems and quantitative tables to guide the timing and spacing of planting, thinning and felling under any given silvicultural regime (Lawrence and Gillett, 2011). Forestry has been a highly rationalised endeavour to achieve predictive accuracy and control, for

efficiency and maximisation of timber production yields, and deliver sustained yield. Scott in his seminal book *Seeing like a State* uses forestry as a prime example of the practice of states making situations 'legible' by homogenising them according to rational and scientific standards, so that "an overall, aggregate, synoptic view of a selective reality is achieved, making possible a high degree of schematic knowledge, control, and manipulation" (Scott, 1998: 11). Legibility required that forests were viewed narrowly and from a

* Corresponding author at: 90 South Street, Murdoch, Western Australia 6150, Australia. Tel.: +61 0893 606391/0415 898087.

E-mail address: m.buizer@murdoch.edu.au (M. Buizer).

1462-9011/\$ – see front matter © 2013 Elsevier Ltd. All rights reserved.

<http://dx.doi.org/10.1016/j.envsci.2012.12.003>

strictly utilitarian perspective. It meant that in the process, new meanings were inscribed onto the forests and local meaning and diversity was lost. Various authors in political ecology have looked at how the scientific and quantitative approaches that went along with this drive towards legibility were not neutral but were rather political acts of knowledge production (Nadasdy, 2011; Peluso and Vandergeest, 2001). Attaching numbers to forests served useful purposes such as moving them into the domains of government, and making them measurable, manageable and comparable. But these selective representations may come to be imagined as the forest itself that remove from view types of knowledge that are not included in the specific numerical representation. Indeed, knowledge represented by numbers did not simply reflect forests but ‘made forests’ (Agrawal, 2005; Forsyth, 2003).

The different forest management approaches of the late twentieth century have gradually become broader in their orientation than sustained timber yield. ‘Sustainable Forest Management’ (SFM) emerged from the United Nations Conference on Environment and Development in 1992 and the ecosystem approach which underpins the Convention on Biological Diversity; it pursues the integration of a broad set of values, such as biological diversity, ecosystem health and cultural and spiritual values (Wang, 2004). Adaptive Forest Management (AFM) approaches provide ways to work towards these values by building on systematic monitoring and learning from operational practice. AFM is now a mainstream paradigm in North America and Australia (Allan and Stankey, 2009; Williams et al., 2009). However, many feel that the implementation of SFM is still driven largely by technical standards with social-cultural elements receiving less attention. AFM too has struggled to meet expectations; reviews of experience find that it is better known in theory than in practice, under-resourced, insufficiently participatory and undervalues (in some cases) or overvalues (in others) qualitative approaches (Allan et al., 2008; Gregory et al., 2006; Jacobson et al., 2009; Lawrence and Gillett, 2011). While forest yields are amenable to quantification, context-specific values, especially non-market values, are more elusive. Some argue that the criteria and indicators that have been developed in spite of these difficulties, have not been very effective in measuring sustainability, but have at least provided a structure for measurements and reporting, and have been useful for symbolic and conceptual reasons (Grainger, 2012). Advocates of a need to communicate achievements across levels of government and between multiple organisations by means of a commonly accepted, easily portable language have gained new currency under the banner of ecosystem services. The need for universal languages may sound obvious in a globalising world that is increasingly data-dependent. However these processes are not neutral and some things might be more readily articulated through them than others. In this paper we examine the need to keep in sight practices and experiences that may not be so easily translatable into numbers.

Climate change brings a new demand for quantification in the field of forestry. In particular the role of forests as both carbon sinks and sources has led to a whole new industry of carbon measurements (Lövrbrand and Stripple, 2006). But

forestry is linked especially to two approaches to climate change: mitigation and adaptation. These two approaches are often treated as if they are clearly distinguishable. However, they are intricately related, each involving multiple values (Klein et al., 2005). Yet the measurement of mitigation has come to focus on carbon which is only one public good that forests represent, while the measurement of adaptation, it is argued, is unsuitable for such selectivity, and does not easily translate into quantitative data (Grainger, 2012; Maciver and Wheaton, 2005; Millar et al., 2007). The two have been portrayed as sometimes pulling in opposite directions. Action for adaptation is usually considered at the local scale, because that is where the benefits are felt, whereas local action for mitigation provides global benefits (Seppälä et al., 2009) or benefits for other sectors. Some mitigation policies may even undermine lower level adaptive capacity (Urwin and Jordan, 2008), for example when higher stocking levels for carbon may limit lower level adaptive capacity by decreasing the structural and compositional complexity of forest ecosystems (D’Amato et al., 2011).

International and national carbon-focused policies, combined with sub-national and local interests in adaptation, heighten the need for portable, communicable measures, and for accommodation of behaviours that are not easily quantified. Rather than focus on the politics of scale of cost and benefit, our aim in this paper is to question the role of numbers, legibility and translatability across policy sectors. Through a combination of document analysis and interviews with forest managers and policy advisors, we explore the cases of the UK and Australia, where forestry is based on similar traditions. In both countries climate change is a high profile policy issue, but there are significant differences in terms of the intensities of ecological pressures, reliance on greenhouse gas producing industries, histories of conflict and population pressures. By looking at these two contrasting developed countries, we aim to enhance our understanding of the commonalities emerging in the life of numbers in forests and climate change.

2. Australian forest/climate politics of numbers

2.1. The forest resource – counting carbon for mitigation

The political nature of Australia’s efforts to quantify its forest resource in the context of climate change became strongly apparent in 1997. In that year, a decade before the Labor government ratified the Kyoto Protocol, the Liberal government negotiated the “Australia-clause” (article 3.7) into the protocol. This allowed Annex I countries to include GHG-emissions from land use change and forestry (LULUCF) in the 1990-base year calculations. It was known in 1997 that clearing would diminish after 1990, when the sum of forestry and land clearing activities still represented net sources of emissions (Christoff, 2010; Macintosh, 2012a,b). Because Australia also negotiated an increase of 108% of emissions in the first Kyoto commitment period, the polluting industries could leave their direct emissions largely as they were (Crowley, 2007; Howarth and Foxall, 2010). Ironically, through this result Australia’s

Download English Version:

<https://daneshyari.com/en/article/1053561>

Download Persian Version:

<https://daneshyari.com/article/1053561>

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