



# Futures, ethics and the politics of expectation in biodiversity conservation: A case study of South African sustainable wildflower harvesting



Cheryl McEwan<sup>a,\*</sup>, Alex Hughes<sup>b</sup>, David Bek<sup>a</sup>

<sup>a</sup> Department of Geography, Durham University, Science Site, South Road, Durham DH1 3LE, United Kingdom

<sup>b</sup> School of Geography, Politics and Sociology, Newcastle University, 5th Floor Claremont Tower, Newcastle upon Tyne NE1 7RU, United Kingdom

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## ABSTRACT

Corporate efforts to demonstrate 'sustainability' within production networks are driving a continued demand for new metrics. This raises questions concerning which experts will be enlisted in their creation, what data and calculative methods they will draw on, and how and whether different publics will be convinced of the rigour of these metrics and their ethical purpose. Debates about futures and expectations tend to be western-centric; in response, this paper highlights the sophisticated environmental science and knowledges in a global South context where politics and uncertainty are of utmost importance. It draws on research into sustainable wild flower harvesting in the Cape Floral Kingdom (CFK), in the Western Cape province of South Africa, to explore the politics of expectation and future-making driving debates about biodiversity conservation and socio-economic empowerment within rural communities. It focuses specifically on how expectations of technologies, databases, knowledge and the environment play out in this particular site of production, influencing debates about sustainability, but also perspectives on what is ethical. The case study demonstrates that expectations are neither uniform nor uncontested, but bound up with inequities of power and authority in defining futures. The paper draws on postcolonial approaches to conclude that a radical opening of databases and knowledge production might challenge these asymmetries, but that constraints exist because of external pressures and expectations that arise from the political economy of biodiversity conservation.

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## 1. Introduction

Within global production networks, corporate efforts to demonstrate 'sustainability' are driving a continued demand for new metrics. This raises questions concerning which experts will be enlisted in their creation, what technologies, data and calculative methods they will draw on, and how and whether different publics will be convinced of the rigour of these metrics and their ethical purpose (Freidberg, 2010). This paper is concerned with how the shift towards metrics and governance through technology plays out in sites of production. Specifically, we are interested in the politics of expectation that surround the use of technology, how the shift towards technology influences debates about sustainability in specific places, and how this shapes perspectives on what is ethical in such places. We explore these issues through a case study of sustainable wildflower harvesting and biodiversity conservation in the *fynbos* ecosystem of South Africa's Western Cape.

\* Corresponding author.

E-mail addresses: [cheryl.mcewan@durham.ac.uk](mailto:cheryl.mcewan@durham.ac.uk) (C. McEwan), [alex.hughes@ncl.ac.uk](mailto:alex.hughes@ncl.ac.uk) (A. Hughes), [david.bek@durham.ac.uk](mailto:david.bek@durham.ac.uk) (D. Bek).

Studies of the politics of expectation have argued that promises and expectations are crucial to provide dynamism and momentum in new ventures in science and technology, while failure can bring reputational, professional and commercial damage (Brown and Michael, 2003). In the case of biodiversity conservation, failure can also lead to irreversible ecological damage. Thus the way in which the future is presented is political. As Wilkie and Michael (2009: 504) argue, how the future is discursively constructed is a "means of enacting a future that (hopefully) makes a present that (hopefully) shapes the future". They do not assume a linear model of time where expectations are "simply prospective pointers to a future generated in a present that draw upon a past set of presuppositions". Rather, future scenarios fold implications and consequences back onto present activities; innovations in the present open up "future potentialities, which in turn serve in the potential making of the present with a view to affecting the future" (Wilkie and Michael, 2009: 505). The future is thus always a site of contestation, and who and what constructs futures will exclude some versions of the future to the advantage of others.

As a consequence of its positioning within a specific political-economic nexus, expectations within environmental conservation are shifting towards a more active sense of constructing the future

in the present. Conservation constructs expectations by not only *looking into* the future, but *looking at* the future, mobilising the future “in real time to marshal resources, coordinate activities and manage uncertainty” (Brown and Michael, 2003: 4; see also Borup et al., 2006). Conservation is thus a form of pre-emption or anticipatory action that has political and ethical consequences (Anderson, 2010: 778). Technology and scientific knowledge are central and both are interwoven with political economy in mutually defining ways:

as we create worlds of . . . information which reflect our political economy in all its contradictions, it should be no surprise if the politics that get read out of these worlds should help us shape the world in the image of that political economy – again in all its contradictions. (Bowker, 2000: 660)

This paper explores the politics that underpin these processes, the ways in which political economies are reflected in scientific knowledge and *vice versa*, the ways in which competing ethics are articulated in the mobilising of futures in the present, and the different actors involved in biodiversity conservation networks. We use a case study approach to suggest that who constructs expectations and futures – scientists, conservationists, retailers – is as significant as how they are constructed. We focus specifically on the problem of the relationship between databases created by conservationists and the biome they seek to catalogue. We examine the intricate challenges in bringing the complexity of the biome and its sustainable harvesting into the databases, and explore the potential of the databases to play a key role in the sustainability of both the resource and its commodity chain. We are interested in how multiple and competing expectations are or might be articulated by diverse actors, and to what effect. This includes expectations emerging through the paradoxical ‘commercialisation of nature’ (Castree, 2003; Johnson, 2010; Prudham, 2009) in the interests of conservation, and the ways in which expectations of future natures inhabit contemporary environmental management in diverse and contested ways.

Much of the current debate about futures, technologies and expectations tends to be western-centric and based around assumptions that sophisticated science resides only in advanced economies. In contrast, we focus on the science and knowledges that are evolving in a global South context, where politics and uncertainty are of utmost importance and where debates about futures are highly significant. It draws on research (conducted between January 2010 and March 2012) on biodiversity conservation in the Agulhas Plain in the Western Cape of South Africa and, specifically, a sustainable harvesting pilot project at Flower Valley Farm. 61 interviews were conducted with stakeholders in wildflower harvesting and conservation, including trustees at the Flower Valley Conservation Trust (FVCT), various environmental NGOs, farmers and landowners, pickers, pack-shed workers, academics, botanists and other members of the scientific community. In what follows, we first outline the key issues for biodiversity conservation in the Agulhas Plain and chart the emergence of the sustainable harvesting project. This is contextualised both in terms of the unique *fynbos* ecosystem, and the national and international market-led approach to biodiversity conservation driving recent initiatives. Secondly, we explore how futurity and expectations are managed within the sustainable harvesting project through the use of technology and scientific knowledge. The case for sustainable harvesting of wildflowers is shaped by the veracity of scientific knowledge – specifically ecological knowledge produced by botanists and conservationists – and the databases in which this is stored. We examine the nature of knowledge being produced and expectations of using the databases to scale up the Flower Valley pilot. Finally, we examine

the competing expectations and ethics at work in wildflower harvesting. In particular, we suggest that commercial expectations do not always map neatly onto sustainable harvesting and explore the paradoxes inherent in commodifying *fynbos* wildflowers in order to conserve them.

## 2. Biodiversity conservation in South Africa’s Cape Floral Region

Since the ending of apartheid in 1994, environmental issues in South Africa have been shaped increasingly by socio-economic imperatives and political expectations. Conservation cannot be divorced from socio-economic issues because of South Africa’s past and the problematic positioning of conservation within both imperialism and apartheid. Recent years have witnessed a policy shift away from ‘fortress conservation’ (Brockington, 2002) – dominated by the vested interests of white land-owners – towards community-based conservation (Adams and Hulme, 2001). A National Biodiversity Conservation and Action Plan is now in place, which works towards conservation and sustainable utilisation of biodiversity. As a consequence of profound structural social and economic inequality, “conserving biodiversity and progressively realising rights of all citizens are now expected to be mutually reinforcing” (Crane et al., 2009: 145). The question is whether these expectations are realisable in a context in which conservation interests remain hegemonic because of inequities of power and entitlements to land and natural resources, in which the government is wedded to market-led realisation of environmental visions, and in which international retailers exercise enormous influence.

South Africa is, of course, not unique in terms of its market-led approach to sustainable development; biodiversity conservation here is also shaped by the broader international context. The Convention on Biological Diversity at the 1992 Rio Earth Summit first put biodiversity conservation on a neoliberal footing at a global scale (Ten Kate and Laird, 2000). In 2004, the United Nations formalised the Millennium Ecosystem Assessment, popularising the idea of ecosystem services and ascribing economic value to nature. In addition, the Organisation for Economic Co-operation and Development’s (OECD) International Futures Programme (2005) produced a bio-economy policy agenda for governments. OECD is promoting a neoliberal approach to the utilisation of biological materials and information (Parry, 2007), which is also concerned with the public acceptance of the bio-economy agenda through intellectual property rights legislation and biodiversity conservation (TEEB, 2011). As Bek et al. (2010) argue, “the primacy of the neoliberal paradigm within national policy has placed economic rationalism at the heart of many areas of policy. Thus, if an economic case can be made for conservation, then there is a greater likelihood of attaining policy backing.” This is certainly the case in South Africa.

The focus of this paper is on a biodiversity conservation pilot project centred on the 580 ha Flower Valley Farm, located within the Cape Floristic Region (CFR) [see Map 1]. The CFR is the smallest and richest of the world’s six floral kingdoms (Ashwell et al., 2006), a UNESCO World Heritage Site, and listed by Conservation International as one of the world’s ‘biodiversity hotspots’: ‘the richest and most threatened reservoirs of plant and animal life on earth’. It is extremely floristically diverse, home to an estimated 9600 plant species<sup>1</sup> of which 70% are endemic. The main vegetation type is known locally as *fynbos* – translated from Afrikaans as ‘fine-leaved bush’ and commonly used to refer to the distinctive vegetation of the CFR (Manning, 2008). *Fynbos* consists of four plant families;

<sup>1</sup> As discussed subsequently, this figure is contested but is widely accepted within the international conservation movement.

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