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Diversity to decline-livelihood adaptations of the Namaqua Khoikhoi (1800–1900)

Clare Kelso[a,*], Coleen Vogel[b]

[a] Department of Geography, Environmental Management and Energy Studies, University of Johannesburg, Kingsway Campus, P.O. Box 524, Auckland Park, 2006 Johannesburg, South Africa
[b] Global Change and Sustainability Research Group (GCSRI) and School of Animal and Plant Sciences (APES), University of the Witwatersrand, P. Bag 3, 2050 Johannesburg, South Africa

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ABSTRACT

An environmental history of the Leliefontein community of Namaqualand, Northern Cape provides a detailed case of the nexus between social and ecological stresses shaping livelihood change. By combining an historical proxy precipitation data set with a livelihood change study the value of historical research in integrated studies of past human-environment systems is illustrated. The identification of effective livelihood adaptation to extreme climatic conditions is examined, illustrating the tradeoffs made between adaptation and 'coping' strategies which were unsuccessful over the long term. During the course of the 19th century the Namaqua Khoikhoi population changed from a sustainable nomadic pastoral community to a poverty stricken rural community with a diversity of livelihood strategies. For the Namaqua increased livelihood diversity – usually an effective adaptation in times of stress – instead of promoting resilience, contributed to their material decline. Widespread transhumance between different climatic regions is shown to have been a successful adaptation to climatic extremes, but external economic exposure and restricted access to land become drivers of decline. The 'double exposure' framework used in contemporary studies, proved useful in accounting for this decline as it can accommodate both environmental and economic stressors.

1. Introduction

Much contemporary research focuses on vulnerability to global environmental change and responses by individuals, communities, institutions, national governments or the international community. Determining the ways in which climate variability, or change, will impact different communities is a challenge for global change research. It is difficult to identify, for example, how climate change will impact natural resource use, or when it will exacerbate movements of people, or what role it might play, if any, in possible conflict. While much current scholarship is focussed on evidence for climate change and on making the case for 'future' dimensions of such change it is suggested here that a detailed examination of how 'past' climate stresses co-interacted with other pressures in a particular context; in this case Namaqualand, South Africa; may provide some clues for future adaptation measures.

Historical environmental research, when paired with socio-cultural history provides some useful insights into human responses to changing environments. Historical studies however, are often on the margins of global environmental change research and paleo-researchers usually do not make use of the theoretical lens provided by the growing adaptation and vulnerability literature. Yet it could be argued that an historical, long-term perspective allows a more accurate analysis of effective adaptation, as the outcomes of particular responses to change only become evident over a longer period of time.

In an attempt to test the value of a detailed examination of historical change, this particular paper carefully tracks the causes of the decline of the Namaqua Khoikhoi people based around the Leliefontein mission station, in northwest South Africa, for the period spanning 1800–1900 (Fig. 1). The initial research involved an extensive two-part study. Firstly, a proxy precipitation data set, which identified drought and wet periods, was compiled using documentary resources such as travel writings, missionary journals, diaries; government reports and letters (Kelso and Vogel, 2007). Secondly, these sources were used to identify livelihood activities and changes for the Namaqua peoples during this period. This historical perspective lends itself to long-term vulnerability analysis allowing for identification of successful adaptations to various drivers of environmental and social change.

* Corresponding author. Fax: +27 11 559 2430.
E-mail addresses: ckelso@uj.ac.za (C. Kelso), coleen.vogel@wits.ac.za (C. Vogel).

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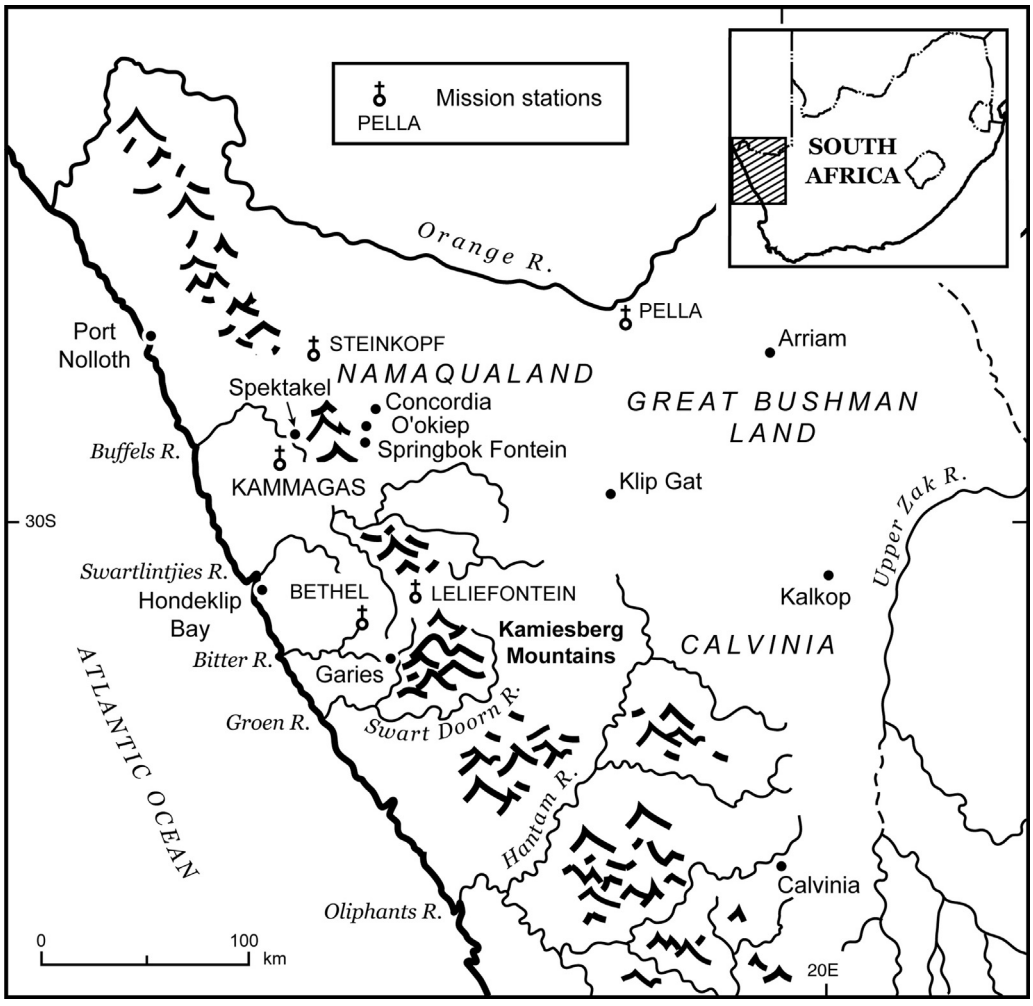

Fig. 1. Namaqualand—19th century.

2. Vulnerability: a lens to understand change

Studies on livelihoods, vulnerability and adaptation are mostly located within the temporal framework of the present or the short-term past (selected examples include Devereux, 1993; Ziervogel and Calder, 2002; Eriksen et al., 2005; Eriksen and Kelly, 2007; Cameron, 2012; Goldman and Roismena, 2013; Waha et al., 2013). Historical studies using such framings to understand change have been few, despite the fact that they have good potential to provide useful insights into effective adaptation strategies particularly to climate stresses (e.g. O'Conner and Kiker, 2004; Endfield and Fernández Tejedo, 2006; Fraser, 2007; Endfield, 2007; Butzer, 2012; Ekblom, 2012; Adamson, 2014; Hannaford et al., 2014; Ribot, 2014). Pfister, recently argued that "historical climatologists should put a new focus on societal aspects of past climate variations" (Pfister, 2010, 26). This paper attempts to do exactly that. The theoretical lens of vulnerability and adaptation is applied to the historical context and provides insights relating to adaptation.

Historical vulnerability is an emerging field of global change research that overlaps into the fields of environmental history and historical climatology. Vulnerability theory has its roots in hazard research but now is more widely used in the context of climate change (Brooks et al., 2005; Adger, 2006; Janssen et al., 2006; Hahn et al., 2009; Füssel, 2007; Turner, 2010; IPCC, 2014). Resilience theory, is a separate, if overlapping, theoretical framework which focusses on the causes of system collapse and non-sustainability over a long period (Holling, 2001; Holling and Gunderson, 2001; Berkes et al., 2003; Folke, 2006; Nelson et al., 2007). Adaptation research often transcends both perspectives (Gallopín, 2006; Smit and Wandel, 2006; Nelson et al., 2007; Engle, 2011). These conceptual frameworks are mostly used to explore contemporary systems or the recent past.

Environmental historians have become more active in the field of historical climate vulnerability (Brázdil et al., 2005; Pfister, 2010; Nash and Adamson, 2014). Initially the focus was largely on reconstructing climates of the past and in some cases, exploring the impacts of these (e.g. Nicholson, 1979, 2001; Vogel, 1987, 1989; Nash and Endfield 2002a,b, 2008; Pfister et al., 2002, 2009; Nash and Grab, 2009; Grab and Nash, 2010; Neukom and Gergis, 2012; Nicholson et al., 2012a,b; Adamson and Nash, 2013; Berland et al., 2013; Nash et al., 2014). More recently this has expanded into what would be classified as historical vulnerability research. Here the focus is on past climate and societal response particularly on how people coped with environmental shocks, identifying successful adaptation or the causes of human-environment system collapse (eg. O'Conner and Kiker, 2004; Orlove, 2005; Fraser, 2007; Endfield, 2007; Endfield, and Fernández Tejedo, 2006; Butzer, 2012; Ekblom, 2012, Adamson, 2014; Hannaford et al., 2014).

Vulnerability analysis is the most relevant analytical framework for this research because it integrates both physical and human systems, their weaknesses and thresholds (Adger, 2006; Leichenko and O'Brien, 2008). It allows for an incorporation of response and adaptation, giving more analytical weight than purely descriptive history. In addition, it creates a framework to analyse the past using