Climate Risk Management xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

Climate Risk Management

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

Co-exploratory climate risk workshops: Experiences from urban Africa

A. Steynor [a,*], J. Padgham [b], C. Jack [c], B. Hewitson [c], C. Lennard [c]

[a] Climate System Analysis Group (CSAG), University of Cape Town, Private Bag X3, Rondebosch 7701, South Africa
[b] System for Analysis, Research and Training (START), 2000 Florida Avenue, N.W., Suite 200, Washington, DC 20009, USA
[c] Climate System Analysis Group (CSAG), University of Cape Town, South Africa

ARTICLE INFO

Article history:
Received 4 May 2015
Revised 3 March 2016
Accepted 24 March 2016
Available online xxxx

Keywords:
Stakeholder engagement
Decision-making
Climate information
Africa
Collaborative

ABSTRACT

Co-production is increasingly recognized as integral to appropriate use and uptake of climate information into decision-making. However, the success of co-production is contingent on an innate understanding of the context in which it is being implemented. Climate knowledge co-production in Africa is unique and requires a nuanced approach because of the immediacy of a myriad of decision challenges on the continent, thereby making it more challenging to engage decision-makers in co-production processes around climate. Given these challenges, the process described here, referred to as "co-exploration", was designed to complement the multi-stressor decision-making context of various African cities. Users and producers of science work together in an equitable framework to co-explore the urban decision-making space. While the dialogue has potential to inform the development of the science, it is not an explicit expectation of the process.

The paper describes the context for a place-based co-exploratory analysis of climate risks, the elements and steps incorporated in the approach, reflections on the effectiveness of this approach in addressing multi-stressor, place-based decision-making and the challenges that still remain in further refining the approach. The co-exploration approach is complementary to the objectives of the Global Framework for Climate Services and provides lessons for uptake of climate information into urban adaptation planning in Africa.
© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Introduction

Developing country governments are being increasingly encouraged by the donor community to expand the uptake of climate information in adaptation planning and related decision-making. Many decision-makers operate in a highly complex decision space where decisions are seldom made in isolation. They usually have to consider multiple sectors, disciplines, or locations that are interlinked and interdependent. Climate is just one of these considerations.

Climate data is being provided into this decision space largely through a science-driven process, as evidenced by the recent proliferation of climate data portals and tools that purport to provide climate information in the form of a single method or single model. Often though, this climate information is devoid of vital guidance information about how the data were generated or whether or not any evaluation process was undertaken to test the validity and robustness of the climate data product, and users are frequently ill equipped to determine this for themselves. Thus, they are unable to evaluate whether or not the climate data can be appropriately applied to their decision-making context (Barsugli et al., 2013). This

* Corresponding author.
E-mail address: asteynor@csag.uct.ac.za (A. Steynor).

http://dx.doi.org/10.1016/j.crm.2016.03.001
2212-0963/© 2016 The Authors. Published by Elsevier B.V.
This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

creates the potential for maladaptation and actions that impede efforts to respond effectively to impacts from climate change (Dilling and Lemos, 2011).

The emerging climate services agenda (WMO, 2012; Hewitt et al., 2012) provides a means to address important inadequacies in the predominant approach through promoting integrative decision-making that involves both users and producers of information in developing relevant climate information and guidance for application (Dutton, 2002; Vaughan, 2014; Vaughan and Dessai, 2014; WMO, 2012; Miles et al., 2006; Weeks et al., 2011). This shift away from supply-driven climate information acknowledges that simple delivery of data very seldom meets user needs (Dilling and Lemos, 2011; Srinivasan et al., 2011; O'Brien et al., 2000; McNie, 2007).

Overcoming the disconnect between climate data supply and application requires a fundamentally different kind of engagement between the science (producer) community and the broad array of potential end users of climate information (Weiler et al., 2012; Srinivasan et al., 2011; Girvetz et al., 2014). To date, a common response to the conundrum of supply-driven climate data has been to advocate for the generation of demand-driven climate data (McKenzie-Hedger et al., 2006; Gawith et al., 2009). While this approach has merit, it is self-evident that many of the issues implicit in informing climate data development are aspects requiring discipline-specific knowledge. Hence a demand-led approach is necessarily constrained by a user's capacity to recognize and express realistic and achievable needs.

Another approach is that of co-production, which is built on user-producer facilitated science within a sustained community of practice (Lemos and Morehouse, 2005) The literature describes this as an approach of negotiated understanding or a pull–push process between suppliers and users of climate data and information (Lemos et al., 2012; Dilling and Lemos, 2011; Gawith et al., 2009; Mastrandrea et al., 2010; Lemos and Rood, 2010).

Co-production takes many forms, however, most forms of co-production are time-intensive and do not occur as a matter of course (Hegger and Dieperink, 2014). Important forms of co-production include joint fact finding, where a shared view of uncertain and contended facts is sought (Schenk et al., 2016), consultative processes, where users input is sought on particular points of interest and joint knowledge production, where producers and users of climate information co-operate directly and deliberately (Hegger and Dieperink, 2014). Co-production can take place through boundary agents or via direct interaction between the producers of information and the resultant users. It can also take place at different points in a production process. For instance, some co-production processes are implemented fairly late in the development process (Steynor et al., 2012) and exist in order to nuance already existing information. However, arguably, the more successful co-production processes engage all interested parties from the outset (Steynor et al., 2012). Thus, there is no one-size-fits-all approach to co-production. Rather, the success of co-production is contingent on an innate understanding of the context in which it is being implemented.

Climate knowledge co-production in Africa is a case in point. It requires a nuanced approach because of the immediacy of a myriad of decision challenges in Africa. These assume priority over long-term climate change challenges, which hold a lesser weight in decision-making processes (Jones et al., 2015), thus making it more difficult to engage decision-makers in co-production processes around climate.

Additionally, at present, there is a short supply of boundary organisations that have the skills and technical capacity to mediate interactions between climate science and its application to decision making in Africa (Jones et al., 2015). While this is a shortcoming that should be addressed, for now, co-production approaches need to allow for direct interaction between producers and users of information rather than relying on intermediaries.

Building on the co-production challenges described above, this paper presents a process jointly developed by the Climate Systems Analysis Group (CSAG) at the University of Cape Town and the System for Analysis, Research and Training (START) to advance an emerging variation on co-production specific to collaborative decision-making in the context of varying African cities.

This process, referred to here as "co-exploration", is a nuanced form of co-production. It shares features of co-production in that the process is consultative and there is an explicit objective of joint fact finding. However, in contrast to many forms of co-production, the interaction does not have the explicit intention of informing the development of the science or joint knowledge production (although the potential is there), but is rather a dialogue of equals between climate data producers and the array of potential users in order to co-explore decision-making approaches and advance transdisciplinary understanding.

Fundamental to the co-exploration approach is that the process builds its foundation on place-based multi-sector development challenges. Climate information is introduced relatively late in the process with the objective of nuancing the outcome rather than driving the decisions. While several studies have been undertaken on a place-based rather than sectoral-based framing (Corburn, 2009; USAID, 2014; McCubbin et al., 2015; Webler et al., 2014) and the notion of vulnerability-led climate decision-making is an embedded concept (UKCIP, 2010; USAID, 2007), use of these collaborative co-learning techniques to engage climate data producers and users in Africa lags that of other regions.

Climate data co-exploration—a vulnerability-matrix approach in Africa

The CSAG/START co-exploration approach was initially formulated through a series of workshops aimed at integrating climate information into municipal adaptation plans in the Western Cape of South Africa (Berg Rivier Municipality Integrated Development Plan, 2013). Through this workshop series, the place-based vulnerability-driven framing emerged as an important theme worthy of further articulation. With that grounding, a methodology for facilitating co-exploration

Please cite this article in press as: Steynor, A., et al.. Climate Risk Management (2016), http://dx.doi.org/10.1016/j.crm.2016.03.001

Download English Version:

https://daneshyari.com/en/article/5115307

Download Persian Version:

https://daneshyari.com/article/5115307

Daneshyari.com