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Exploring the role of bureaucracy in the production of coastal risks, City of Cape Town, South Africa

Darryl Colenbrander ^{a, b, *}, Maarten Bavinck ^b

^a Environmental Resource Management Department, City of Cape Town, PO Box 16548, 8018, Vlaeberg, South Africa

^b Department of Geography, Planning, and International Development, Programme Group Governance and Inclusive Development, University of Amsterdam, PO Box 15629, 1001 NC, Amsterdam, The Netherlands

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ABSTRACT

Cape Town is currently experiencing a range of coastal pressures consistent with a warming climate. Notably this includes evidence of a receding coastline in certain areas and shifting wind regimes. Coupled with an increasing demand for coastal development, the City of Cape Town as the administrative authority is presented with an unfolding scenario of uncharted waters. From a coastal management perspective this requires a reappraisal of its governance strategies. However, this paper demonstrates that various governance structures within the City, whilst designed to address these challenges, are instead competing with, and undermining each other. In the context of a coastal city these dissonant governance structures translate into conventional (Weberian) forms of bureaucracy that counter efforts at promoting Integrated Coastal Management, the key tenets being institutional learning, collaboration, deliberation, flexibility and adaptive management. The disjuncture between governance structures in turn is restricting the City's ability in achieving its own coastal adaption strategies, particularly the restoration and maintenance of dune systems as effective 'buffers' against climate change induced pressures such as sea-level rise and storm surges. The procedural rigidity delivered by the bureaucracy is instead leading to a 'pathology': risks are being created and their production perpetuated by the bureaucracy charged with mitigating these risks. We suggest that the role of informal networks are explored as a means to circumvent the 'necessary evil' of bureaucracy, towards enabling stronger degrees of Integrated Coastal Management and ultimately successful climate change adaptation responses.

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1. Introduction

Climate change is posing important new challenges for the governance of coastal cities (Francesch-Huidobro et al., 2016; Brescia and Marshall, 2016). These challenges primarily relate to coping with, and building resilience to new extremes in climate shocks, such as drought, flooding, heat waves and storm surges (Glavovic, 2013; Hughes and Brundrit, 1992). The changing climate and associated impacts however requires that cities, to better respond to these pressures, reappraise their governance arrangements (Goedecke and Welsch, 2016; Bulkeley and Betsill, 2005). The cross sectoral and multi-dimensional impacts associated with climate change induced pressures (National Department of

Environmental Affairs, 2016; Holman et al., 2005), necessitates that governance responses are not only coordinated across vertical and horizontal plains within and between various departments and agencies, but that governance actors in themselves become more responsive, and adaptive, to a changing world (Carter et al., 2015; O'Brien and Selboe, 2015).

There are however barriers that may impede required institutional shifts to new and innovative governance paradigms necessary to respond to contemporary challenges such as a changing climate. Whilst innumerable in list, they range in scale and complexity, from financial constraints and regulatory barriers, (Pasquini et al., 2015), divergent cultural world views (often shaped by historical contexts) and discordant beliefs surrounding climate change and subsequent conflicting policy stances (Akerlof et al., 2016; Leck et al., 2011), political emphasis on short term developmental goals over environmental protection (Brosius, 1999), and institutes, in particular those in government, that tend to remain static and unresponsive to external changes (Fleischman, 2008;

* Corresponding author. Environmental Resource Management Department, City of Cape Town, PO Box 16548, 8018, Vlaeberg, South Africa.

E-mail address: Darryl.Colenbrander@capetown.gov.za (D. Colenbrander).

Myers and Kent, 2008; Stankey et al., 2003; Gunderson et al., 1995).

It is the causality of the static or 'non-responsive' institute that forms the basis of this research. In the context of a coastal city and associated pressures driven by a warming climate such as sea-level rise, the lead question of this paper is whether bureaucratic forms of organization, as commonly found in cities, are capable of realizing the necessary level of integration and flexibility for responding to the challenges posed by a changing climate. Our enquiry is embedded in an understanding of risk society. Within a risk society Beck (1992) theorizes that risks may be created within social systems, for example by organizations and institutions, where such organizations and institutions are in themselves responsible for managing risk, or activities that may lead to risk. In such instances the adherence to bureaucratic rules may take precedence over the underlying organizational goals, resulting in the organization becoming dysfunctional or unproductive, finally leading to a 'bureaupathology' (Giddens, 2001). In this sense the link between bureaucratic forms of organization and risk is not a trivial one. For a deeper analysis of this see Section 2.4 "Bureaupathology and the production of risk".

We focus on the City of Cape Town (CCT) Local Government Municipality, South Africa, which is expected to undergo serious impacts from climate change in the coming century (Climate Systems Analysis Group, 2016; Taylor, 2016; Cartwright et al., 2012; Brundrit, 2009). While the CCT is aware of these risks, and is implementing an integrated management approach that combines protection with inclusive development, the effectiveness of its adaptation responses and sustainability in reality remains a challenge (Davison et al., 2015; Sowman, 2002) and instead may be leading to mal-adaptive impacts. This article aims to understand whether these impediments can be overcome through regular mechanisms of governance, or whether they are in fact – at least in part – a result of such mechanisms.

The following section (Section 2) presents a theoretical perspective on governability and the role of bureaucracy in contemporary risk society. Within this section integrated coastal management (ICM) as an increasingly valued management paradigm for enabling climate change adaptation responses (Celliers et al., 2013; Tobey et al., 2010; Falaleeva, O'Mahony, Gray, Desmond, Gault, Cummins, 2011; Chemane et al., 1997) and some common difficulties in implementing ICM in bureaucratic environments is also discussed. Section 3 presents the methodology, Section 4 provides the background, context and case study and Section 5 outlines the results regarding the CCT and its efforts at promoting more adaptive forms of governance through the ICM paradigm. We illustrate this by reference to the practice of rehabilitating and maintaining coastal dunes as one of the CCT's key coastal adaptation strategies (Cartwright et al., 2008). Section 6 discusses these findings in the context of wider literature.

2. Bureaucracy and the challenges of coastal governance

2.1. Governability and the coastal space

Within the interactive governance framework, governance is described as comprising three components, namely the governing system, a system to be governed, and a system of governing interactions which mediate between the two (Kooiman and Bavinck, 2013; Kooiman and Jentoft, 2009; Chuenpagdee et al., 2008). The governing system may be conceptualized into three orders, namely first and second order governance as well as meta-governance (Chuenpagdee et al., 2008; Bavinck, 2005; Kooiman, 2003). First order governance activities consist of daily operational procedures coordinated and implemented by organizations towards solving societal problems and creating opportunities. Second order

governance comprises institutional structures, which in turn guide and enable first-order governance activities (Jentoft, 2007). These institutional structures take the form of agreements, rules, rights, laws, norms, roles and procedures (Kooiman and Bavinck, 2013; Chuenpagdee et al., 2008). Such structures are born out of normative governance principles where these principles collectively form the third level of governance, that of meta-governance (Peters, 2010; Kooiman and Jentoft, 2009; Kooiman, 2003).

Interactive governance advocates that the relationship between these orders of governance play a central role in determining the governability of a system. Governability is considered as the overall capacity of a governing system to effectively respond to, and deliver on the challenges that systems-to-be-governed present (Chuenpagdee et al., 2008; Jentoft, 2007). It is not unusual for the system-to-be-governed to exceed, in a manner of diversity, complexity and dynamics, the capabilities of a governing system (Kooiman and Bavinck, 2013). In such cases governing systems become limited in their effectiveness (Jentoft, 2007). Unpacking this, Kooiman and Bavinck (2013) suggest that the governability of a system is dependent on the compatibility between the governing system and the system to be governed. The terms 'match' and 'mismatch' are used to describe this compatibility and primarily relate to scale: spatial, temporal and organizational. For a governing system to handle a diverse, complex and dynamic system-to-be-governed, so too should the governing system reflect reciprocal characteristics (Kooiman and Bavinck, 2013). For example, and in relation to spatial compatibility, where mobile natural boundaries define the spatial limits of a natural resource, administrative boundaries of the governing system should only be set at the extremes of the natural variation of that resource (Bennett et al., 2010). From an organizational and temporal perspective, Jentoft (2007: 361–366) argues that the governing system and the system to be governed should bear similar structural traits i.e. they should be 'isomorphic' and 'mutually responsive' in that diverse, complex and dynamic systems-to-be-governed require the governing system to be sensitive, inclusive, flexible and of equal longevity.

Societal realms differ in their governance requirements: the governability of a public health system (Mayntz, 2003) is, for example, dissimilar from a capture fishery (Kooiman and Bavinck, 2013). This is a result of differing goals, with fisheries being interested in resource extraction and public health in the maintenance of human wellbeing. It also follows from different combinations of governing actors, as well as major variations in their systems-to-be-governed. A coastal zone with multifarious human activities that is faced by coastal squeeze is quite different again (Chuenpagdee et al., 2008). The latter, as a system-to-be-governed, is argued to show a low level of governability due to its inherent complexity and dynamism (Kremer and Pinckney, 2012; Chuenpagdee et al., 2008; Glavovic, 2006; Cicin-Sain et al., 1998). The following description presents a snapshot of this complexity, particularly as it relates to the multi-scalar dimension and connectivity of coastal systems:

"The human activity sphere of the oceans obviously includes sectors such as fisheries, biodiversity, pollution, technology, climate and energy. Less obviously, though inevitably insofar as the oceans extend to coastal zones, the sphere includes human settlements (four people out of 10 live within 100 km of coast-lines), plus agriculture and industry, all being major sources of pollution. The sector can even include forestry insofar as deforestation of inland watersheds leads to siltation of port facilities. Deforestation also leads to a smothering impact from soil, silt and other debris washed off watersheds onto in-shore fisheries." (Myers and Kent, 2008:37).

The range of influences on coastal systems over varying

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