



# Adaptation to climate change? Why business-as-usual remains the logical choice in Swedish forestry

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## ABSTRACT

The two latest IPCC assessment reports have concluded that knowledge is not sufficient for inducing action on climate change. This study problematizes the issue of going beyond business-as-usual through a study of the forestry sector in Sweden, which is a large economic sector and could be expected to be an early adapter, given that newly planted forest may stand some 70–90 years into the future. Therefore resources, economic motivation in the longer term and environmental foundations for early adaptation action could be expected to exist. This study draws upon the Foucauldian conceptualization of governmentality to explain the particular institutional logics that nevertheless lead to business-as-usual arguments dominating discussion on adaptation in the case of Swedish forestry. The study emphasizes that adaptation must be seen as steered and limited by existing institutional, social system logics, rather than by externally defined “rational” motivations. Efforts on adaptation to climate change must thus be considered in relation to, and seek to change, existing institutionally based motivational and incentive structures, and must thus be conceived through social rather than environmental logics. In fact, social logics may even define the types of actions that may be regarded as adaptations.

## 1. Introduction

Although development of climate change policies and strategies is on the increase world-wide, their success and efficiency in resulting in actions on climate change has so far been relatively limited, in terms of both adaptation and mitigation. The latest reports from the Intergovernmental Panel on Climate Change (IPCC, 2014, 2007) note, among other shortcomings, that “knowledge is not enough” and that, although it is an important factor, “knowledge in itself is not sufficient to drive adaptive responses” (Klein et al., 2014: 911). Due to this, IPCC (2014) concluded that implementation so far has been relatively limited and faces a number of barriers and challenges. While this may be partly due to the complexity of adaptation practices and to the fact that effective adaptation has not been fully covered in the literature (Noble et al., 2014), one criticism is that there has been a major focus “on what should happen rather than how it might be achieved” (Mimura et al., 2014: 888; Meadowcroft, 2011). It has been noted that the framing of adaptation planning as a “problem-free” process and underestimation of its social nature has contributed to the creation of unrealistic expectations in societies on the capacity for planning and mainstreaming climate adaptation (Mimura et al., 2014: 874). This has resulted in limited implementation (Mimura et al., 2014: 888) and in the failure of

existing models and analyses to handle the concepts and variables of climate change policy in e.g. the forest sector (Wellstead et al., 2013). It is therefore crucial to identify the logics that affect policy processes and actually cause inaction (Noble et al., 2014: 2).

Forest can be studied as an important case in this regard, as it is almost the epitome of an industry where actions today determine development some 70–90 years ahead (a tree planted today in northern Europe may stand that long before final logging). Factoring in climate change should thus be a given, based on this time span and economic decisions. The well-developed forest sector in northern Europe, largely acting on an international market focused on wood production, is also accustomed to long-term planning for growth on long time scales. However, despite this, whilst adaptation policy development has often included forest, implementation of adaptation policies in forestry has so far been relatively limited (Stephan, 2013; Lovell, 2013). This is not a result of limited data on impacts. As plant species ranges are expected to shift upward in elevation and northward in latitude in the Northern Hemisphere under future climate change (Kirschbaum, 2000; Lindner et al., 2010), it has been established that this will lead to both new assemblages of species in space and time (Hebda, 1997; Kirschbaum, 2000; Hansen et al., 2001) and changing physical conditions (e.g. nutrient and soil permafrost) (Stewart et al., 1998; Spittlehouse and

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Stewart, 2004). In addition, it has been claimed that Northern Hemisphere forests require adaptive actions now (Stewart et al., 1998; Walther et al., 2002; Lindner et al., 2014; Kellomäki et al., 2008) and that many climate adaptation options are available within forest management, both to take advantage of beneficial changes such as the potential for increasing growth and to limit risks (Dale et al., 2001; Parker et al., 2000; Stewart et al., 1998; Spittlehouse and Stewart, 2004; Christopher et al., 2017; Garcia-Gonzalo et al., 2017).

This study problematised the problem of going beyond business-as-usual by analysing and defining the institutional logics and framing around inaction, drawing on interviews with all main forestry sector organisations (i.e. a total study) in Sweden, one of Europe's largest forestry countries in terms of forest land and the contribution of forestry to GDP and export value (SFIF, 2016). The analysis covered the specific sets of technologies and rationalities that can be seen as representing powerful and productive “regimes of practices” in structuring mentalities, identities and behaviours as appropriate, legitimate or effective, and that are in effect constructing e.g. forest naturalness or efficiency-orientated regimes, with very different adaptation results (Neumann and Sending, 2007). Situated in a specific context, these rationalities shape policy interventions, actions and implementations (Neumann and Sending, 2007; Hynek, 2008), but can also constitute barriers to effective climate change policy and adaptation (Oppermann, 2011; Methmann, 2010; Tennberg, 2009; Slocum, 2004; Brooks, 2003). The assumption in this study is that adaptation – and inaction on climate change – must be viewed with a focus on social logics, i.e. as the product of the governing rationalities and technologies (Okereke et al., 2009) and the prevailing social, political and economic systems in which they are produced (Smit and Wandel, 2006). These may differ between countries to such an extent that in effect very different actions are constructed as adaptations even in relatively similar environmental regimes. As a result, institutional rather than environmental knowledge or impact-focused research is crucial in understanding the limitations and possibilities of adaptation and mitigation.

## 2. Theoretical framework

Implementing adaptation to climate change, i.e. actions taken to deal with the consequences of climate change, is crucial, given that even the present level of emissions – if emissions were to cease today, which is highly unlikely – is resulting in environmental change (IPCC, 2013). However, the adaptation actions that can be undertaken are largely conditioned by broader decision-making systems. Multi-level governance is increasingly conceived as the dominant model for decision-making, highlighting the way in which not only government, but also other actors such as the private sector and NGOs, impact upon and undertake decision making at several levels (Green, 2008; Pattberg and Stripple, 2008; Biermann and Pattberg, 2008). Decision making is increasingly being delegated to supranational level, such as the EU, and to subnational level, with local governments gaining increasingly large decision-making powers (Eberlein and Newman, 2008; Hooghe and Marks, 2001; Keskitalo and Pettersson, 2016). In order to understand the way in which decision making amongst different actors is structured, understanding their established assumptions and practices is key. Michel Foucault developed the concept of governmentality to describe the “conduct of conduct”, or governing mentalities, i.e. the way in which certain assumptions or rationalities “shape, guide, or affect the conduct of some person or persons” by making them seem logical (Gordon, 1991: 2). In other words, governmentality concerns “a multiplicity of rationalities, authorities and agencies that seek to shape the conduct of human behaviour” (Bäckstrand and Lövbrand, 2006: 54). The concept of governmentality is an extension of Foucault's more general work on discourses as systems of thought and practice that structure behaviour. Utilising the concept of governmentality highlights in particular the explicit governing or steering measures of different actors (Foucault, 1991). This concept also structures what is seen as

knowledge: “[e]ach society has its regime of truth, its ‘general politics’ of truth: that is, the type of discourse which it accepts and makes function as true” (Foucault, 1991: 131, quoted in Winkel 2012: 82). For the case of forest management, certain tenets may thus exist as truths, e.g. that forest management should focus on planted monocultures, not on mixed forest (e.g. Scott, 1998).

In Foucauldian literature, it is argued that the rationalities that form a system of governmentality can be identified through the different “technologies of government”: the “strategies, techniques and procedures” by which different actors undertake programmes or initiatives in their areas (Rose, 1996: 43). These technologies constitute the pathway through which “rationalities and the programmes [...] that articulate them become capable of deployment” (Rose and Miller, 1992: 184). Assessment of such technologies and rationalities has most often been undertaken at the national level, with the focus on governmental rationalities and technologies of government, in the sense of national government. However, as Foucault strongly emphasises, power and government in a more general sense, concerning decision making and not only the state body, is related to actions by multiple actors but steered by such organisational logics, an approach that has been fruitfully applied to other actors (e.g. Senellart, 2007). For instance, the state-focused governmentality literature tends to argue that the state is impacted upon by a market logic originating in areas outside the state itself (e.g. Edwards et al., 1999), which indicates the role of logics applied in the market sector. Here, “governmentality approaches [...] direct a call for research to address the complexities of social interaction with cultures of nature; problematising institutions, and the complexities of placing communities in governance” (Stanley et al., 2005: 679). In the present case of Swedish forestry, governmentality could thus be defined through e.g. the forest management measures that are undertaken, whether they are intensive, active or passive, what species they target, how they are implemented, and what system of forest management is assumed. In relation to adaptation to climate change, such approaches to governmentality would determine the adaptation actions that are possible and also the role allocated to adaptation in comparison with other factors (such as economic profitability) (Keskitalo, 2011; see also e.g. Lindner et al., 2010).

In forestry, the technologies of agency may, for instance, come into play when certain individuals, groups and communities, such as forest owners, are confronted with various forms of risk and rendered a target population for these. The object of technologies of agency is often to transform people's status in order to make them active citizens capable of managing their own risk (Rose, 1999; Dean, 2010). In forestry, this is being practised through processes of subjection and empowerment of forest owners (e.g. through education, forest fairs and media) and in the relationship between forest owners and forest professionals (e.g. consultations, marketing and personalised IT systems such as “My pages”). However, the target population subject to these technologies of agency is not limited to forestry, but also includes parts of the general population that consume forest products and services, by emphasising their responsibilities as consumers, for instance through various types of certification (Holmgren et al., 2010; Johansson, 2013; Johansson and Lidestav, 2011). The technologies of performance are designed to penetrate dominant social enclosures of expertise (e.g. potential geographical variations in practice) and to subsume the substantive domains of expertise to specific forms of calculative regimes (Rose and Miller, 1992) or regimes of standards (Hudgson, 2001). Audits (Power, 1999), budgets, performance indicators, expertise and service provision and the corporatisation and privatisation of public, or formally public, services are all more or less technical means for locking in the moral and political mentalities for shaping and optimising conduct in specific ways (Larner, 2000; Rose and Miller, 1992; Teghtsoonian, 2004; Dean, 2010). These technologies of government can therefore be described as an indirect means of regulating agencies, transforming individuals and groups into subjects of particular “calculative regimes” (Miller, 1992) of Swedish forestry discourse. This distinction between technologies of

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