## GOVERNING THE UNCERTAIN: ADAPTATION AND CLIMATE IN RUSSIA AND FINLAND. Monica Tennberg (editor). 2012. Dordrecht: Springer.

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Climate change has been identified as one of the major challenges facing the Arctic as a region. Mitigation of climate change has been at the top of the agenda in climate governance for over two decades, but it is only in recent years that interest has emerged in adaptation as a tool for governance. *Governing the uncertain*, as the title suggests, approaches this issue-area as one characterised by uncertainty. The work illuminates this point with insights from political science and anthropology, gained from reflections on the literature as well as case studies from the Finnish and Russian Arctic.

The work is a product of a collaborative research project titled 'CAVIAR' (Community Adaptation and Vulnerability in Arctic Regions). It comprises seven chapters, organised logically by thematic focus in four parts. Part one consists of the general introduction to the book as well as a chapter on adaptation as a governance practice. Parts two and three present case studies exemplifying adaptation governance in Russia and in Finland respectively. Concluding the work and bringing together its findings, part four illustrates the process of responsibilisation for adaptation. The contributors to the volume are mainly scholars in the disciplines of political science and anthropology who clearly are well versed in the overarching issue of adaptation governance.

The introductory chapter addresses three important aspects of the topic. Firstly, it describes the general nature of adaptation governance. The author illustrates how adaptation is perceived as a problem or an issue and highlights why it requires governance. Secondly, the chapter shows the governance practices available at the national, regional and local levels. Lastly, it identifies the opportunities for agency that enable or constrain governance practices. The chapter highlights the importance not only of adaptation, but also of state intervention in promoting adaptation governance. The author suggests that responsibility is the core consideration in this issue-area. The chapter goes on to present two cases - one from the Russian, the other from the Finnish Arctic - which require different political, economic and administrative arrangements for adaptation governance. Whereas the state bears overall responsibility for, and has many roles to play in adaptation governance, the process is a multilevel one. Accordingly, the author argues that governance requires actions on many levels from actors on each level; one crucial consideration is identifying the relevant actors and the responsibility each should assume in adaptation governance.

Chapter two, Adaptation as a governance practice, addresses adaptation as it applies to human-induced climate change, a context in which the term 'adaptation' has been used in connection with similar concepts, such as 'resilience'. In this vein, adaptation governance is examined as the reflection of both the governmental process and political practices involving the role of the citizens as political actors. The author discusses two theoretical approaches illustrating the governance options available for climate change adaptation. The first, deliberative adaptation governance is based on what may be considered the classical liberal political tradition. It draws on the work of

American philosopher and educator John Dewey, who emphasised individual growth, education and community deliberation. The second, inspired by French philosopher and social historian Michel Foucault, is critical of the classical tradition, viewing adaptation as a question of power tactics and struggles between the state and other actors. The approaches serve to frame the problem of adaptation and to identify relevant governance practices and agencies.

Chapter three, Adaptation in Russian climate governance, discusses Russian practices of adaptation governance, focusing on the complexity of political and economic questions in Russia while addressing the problem of climate change and its impacts. According to the author, Russian documents suggest that climate change adaptation requires policies from national to local level. Interestingly, however, Russian politics seem to portray climate change as an opportunity rather than a threat. While this may be true to some extent - climate change can stimulate the economy at the local level and thus bring wellbeing to the people - climate change unquestionably also has environmental consequences. It is certainly the case, as the author argues, that one of the challenges for regional adaptation policy is the lack of reflective information on climate change at the local level. Research on this issue in the Russian context has been insufficient. Regions and local communities have not yet emerged as sites of adaptation governance. The chapter provides an able treatment of the importance of the political and economic complexities in adaptation governance in Russia. It would have been more insightful, however, if the author had also considered the reasons for the complexity identified and means for reducing it.

Chapter four, *The big water of a small river: flood experiences and community agenda for change*, addresses the perception of extreme events in a Russian community. Located in the Tatta River valley, an area in the Sakha (Yakutia) Republic in northeastern Siberia, the community has had to deal with major floods that have posed risks in everyday life. In this context, the author endeavours to identify the factors mandating and shaping human responses to hazardous events in order to facilitate people's adaptive agency and the community's participation in adaptation governance.

Chapter five focuses on Adaptation in Finnish climate governance. To date, the process has for the most part kept to the logic of international climate governance, and the expectation is that it will become even more internationally oriented in the future as the country follows EU-level developments. Based on available research done on climate adaptation, the chapter examines people's concerns, and their eagerness to see strategies for adaptation. Research suggests that at present almost half of the Finnish population is covered by some kind of regional or local climate strategy that addresses adaptation to climate change. Additional strategies are being drawn up, with an adaptation scheme begun in recent years in Finnish Lapland, for example. The author suggests that in a Finnish perspective the major threats lie in the indirect impacts of climate change, such as global economic disturbances, conflicts and influxes of refugees, and that these issues perhaps merit more attention.

The chapter Adaptation of Sámi reindeer herding: EU regulation and climate change explores the debate on Sámi reindeer husbandry and its interactions with governance in light of EU politics. The author presents an anthropological case study focusing on the production and sale of reindeer meat in

the Inari region of northern Finnish Lapland. According to the author, the concepts of agency and governance in this setting are defined from the perspective of the reindeer herder, whose livelihood is linked to the traditional Sámi kinship system, or *siida*. The author argues that the most recent challenges facing herding stem from climate change as well as EU regulations on reindeer meat production and carnivore protection. The examples presented by the author show that, despite constraints imposed by new EU hygiene regulations and the concern occasioned by climate change and other factors, the reindeer herding community has nevertheless adapted well because of its capability to cope with change.

The final chapter - Responsibilisation for adaptation serves largely as a conclusion to the book. It formulates an understanding of responsibility in climate change adaptation based on practice theory. Drawing on a number of case studies done in this field, the authors argue that the rationality of climate change adaptation relies on multiple and scattered responsibilisations. As they note, 'climate change as a problem is a problem for everyone and thus for no one' (page 126). Although the challenges are the same, communities' responses may differ considerably owing to political traditions, cultures and practices. While the prospects for adaptation are closely and persistently related to political and economic governance structures, the authors submit that responsibilisation requires a particular technique of power whereby governance and responsibility are scattered based on socio-cultural and traditional practices.

In sum, the research in this book comprises a comprehensive study of the development of adaptation governance in Russia and in Finland with a focus on the northern regions of these two countries. It combines expertise in political science with anthropological insights drawn from case studies in both Finnish and Russian contexts. While political science illuminates structural conditions, anthropology highlights the everyday experiences of people and their communities. The combination of the two disciplines provides an important source for developing adapt-

ation studies beyond assessments of vulnerability and impact assessments. The research underscores the importance of the issue of accountability in adaptation governance. It reveals the differences between Russian and Finnish practices in tackling the problems of adaptation and producing agency for adaptation. The findings thus suggest that while there is complexity in the Russian system due to a number of challenging factors, ensuring responsibilisation and taking into consideration the socio-cultural and traditional practices prevailing at the local and regional level may promote better and more effective adaptation governance in both Russia and Finland.

The book is well written and its structure is quite clear. It is topical and timely, as it presents an important issue of regional concern – adaptation governance for climate change. It is a valuable contribution, particularly in light of the fact that research on adaptation lags behind climate impact assessment by almost a decade (Dessai and van der Sluijs 2007). However, the reader would have benefited from the inclusion of additional articles based on experiences from some other parts of the northern regions in the two focal countries. In addition, the work could have perhaps included a sharper focus on regional economic development and institution building, as lack of these incentives constrains adaptive capabilities (Watson and others 1997). (Shahnaj Begum, University of Lapland, Faculty of Education, P.O. Box 122, 96101 Rovaniemi, Finland (shahnaj.begum@ulapland.fi)).

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