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## Intergovernmental relations for public health adaptation to climate change in the federalist states of Canada and Germany



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## ABSTRACT

Climate change is a significant threat to public health, and governments at all scales will need to adapt to protect the health of their populations. The impacts of climate change are highly localized and thus federal systems theoretically have the inherent advantage of allowing for regional diversity and policy experimentation in adaptation. However, there are also higher levels of conflict and stalemates in federal systems than in unitary systems, complicating intergovernmental relations and coordination necessary for public health adaptation. We examine how intergovernmental dynamics are patterned across national, regional and local levels of government for public health adaptation to climate change, drawing upon semi-structured interviews (n=28) in comparative embedded case studies of Canada and Germany. We find that coordination between levels of government specifically for climate change and health is rare, but climate change issues are occasionally discussed through working groups or through existing methods of public health coordination. These findings have implications for national and regional governments in federal systems seeking to enable sub-national public health adaptation to climate change and create synergies between levels of government.

## 1. Introduction

The current and projected health impacts of climate change are well established in the scientific literature: morbidity and mortality related to extreme weather events (e.g., heat waves, floods, storms), infectious diseases associated with food and water contamination and changing vector biology and range, respiratory and cardiovascular illness related to declining air quality, and allergic symptoms associated with increased allergen production (Smith et al., 2014). Nonetheless, public health and health services are often overlooked in climate change adaptation research and planning (McMichael et al., 2009; Hess et al., 2012; Lesnikowski et al., 2011). Adapting to the health impacts of climate change is a challenge for public health officials, decision makers

and practitioners (Costello et al., 2009); public health institutions at all levels of government (e.g., national, regional², local) will need to adjust their practices to prepare for climate change (Hess et al., 2012; Austin et al., 2016; Watts et al., 2015) and coordinate between levels for effective public health adaptation (Bowen et al., 2013). Isolated approaches are insufficient to address complex environmental and social determinants of health where multiple levels of government are responsible for different aspects of public health issues (Fierlbeck, 2010) and need to cooperate across these levels (Egeberg and Trondal, 2016). Without coordination, adaptation risks redundancy, fragmentation, or being maladaptive (Magnan et al., 2016).

Adaptation studies typically examine one level of government, without considering interactions (i.e., intergovernmental relations) or

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<sup>1</sup> www.trac3.ca.

<sup>&</sup>lt;sup>2</sup> In this paper we follow Marks et al.'s (2008) – definition of regional government: "a coherent territorial entity situated between local and national levels with a capacity for authoritative decision making" (p. 113) (i.e., Canadian provinces and territories, German *Länder*)

coordination between levels (Koch et al., 2007; Henstra, 2017). In the past decade, studies have begun to examine the multi-level dimension of adaptation and interactions between governments (e.g., Bauer and Steurer (2014), Keskitalo (2010a), Urwin and Jordan (2008)). For example, Fidelman et al.'s (2013) study of multiple governmental levels of adaptation in the Great Barrier Reef region of Australia finds that the federal government provides funding to some local governments for assessing risks and developing action plans, and that the state government assists the local level by providing guidance and downscaled climate change projections.

Despite the regional level's pivotal role in adaptation (Farber, 2011; Bierbaum et al., 2013) and increasing policy authority over time (Hooghe et al., 2016), it has received little attention in adaptation studies relative to national and local governments (Dannevig and Aall, 2015; Aylett, 2015), with notable exceptions (e.g., Hanssen et al. (2013), Bauer and Steurer (2014)). This gap is most obvious in federal systems which have some constitutionally defined level of dispersion of authority from centralized to regional governments. In federal systems, regional governments have the jurisdictional mandate to hold a substantial role in adaptation planning and policy, unlike unitary countries where such responsibilities are often the role of national governments (Keskitalo et al., 2012). This is particularly true for policy issues such as health care and public health that are typically the responsibility of regional governments in federal systems (Blank and Burau, 2014). Federalism has the advantage of allowing for regional diversity and experimentation in adaptation responses, and having regional governments with the authority to facilitate adaptation at the local-level (Clar and Steurer, 2014). Intergovernmental relations and coordination for public health adaptation, however, are theoretically more challenging in federal than in unitary systems, considering both a regional level with significant or primary policy authority in health (Blank and Burau, 2014) and that adaptation to unprecedented levels of climate change is a new and complex policy issue. Several studies have examined the differences between unitary and federal systems for adaptation planning (Austin et al., 2016; Glicksman, 2010; Bauer et al., 2012), although it is unclear from the literature what implications different types of federal systems will have for adaptation.

This research focuses on the role of federalism and intergovernmental relations across levels of government in public health adaptation to climate change and asks: How are top-down and bottom-up intergovernmental dynamics patterned in different types of federal systems to enable public health adaptation at sub-national levels? We focus our analysis on formal and informal interactions driven from both the top-down by national and regional actors and from the bottom-up by local actors, along with formalized mechanisms for coordination (e.g., committees, working groups). This research draws upon a comparative embedded case study of the Canadian province of Quebec and German *Land* Baden-Württemberg. Canada and Germany are both high-income countries but have different types of federalism.

# ${\bf 2.} \ \ {\bf Background\ information:\ Canadian\ and\ German\ public\ health} \\ {\bf systems}$

Health policy in Canada is decentralized to the provinces and territories (Banting and Corbett, 2002), with Section 92(13) of the Constitution Act and subsequent legal interpretations recognizing public health as a primarily provincial jurisdiction (Wilson, 2004). There is a general recognition at all levels of government that coordination is needed for public health, but coordination is more difficult to achieve in Canada than in other federal states because constitutional law protects provincial jurisdictional autonomy from federal encroachment (Bakvis and Brown, 2010; Wilson, 2004). At the federal level, Health Canada and the Public Health Agency of Canada (PHAC) share health responsibilities. In Quebec, the Ministère de Santé et Services Sociaux (MSSS) [Ministry for Health and Social Services] is responsible for health issues. Its scientific arm, the Institut national de santé publique du Québec

(INSPQ) [Quebec National Institute for Public Health], supports the MSSS and Public Health Directorates by conducting public health research and disseminating knowledge (Bernier, 2006). Quebec is known for its progressive social and public health policies (Bernier, 2006) and was an early adopter of climate change adaptation measures in the health sector (Austin et al., 2015; Gosselin et al., 2011).

Unlike other aspects of health policy in Germany, such as health financing, the Länder have primary policymaking authority in public health (Mätzke, 2013; Banting and Corbett, 2002). At the federal level the Bundesministerium für Gesundheit's (BMG) [Ministry of Health] has primary health responsibilities (Mätzke, 2013). The Robert Koch Institute (an organization of the BMG), supports the BMG's public health activities with disease identification, research, surveillance and prevention. The Umweltbundesamt (UBA) [German Environment Agency] also works on environmental health issues such as climate change and health, and is an agency of the Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB) [Ministry for the Environment, Nature Conservation, Building and Nuclear Safety]. In Baden-Württemberg the Landegesundheitsamt [State Public Health Office] is responsible for advising Local Public Health Offices on public health issues, and is an agency of the Ministerium für Soziales und Integration [Ministry of Social Affairs and Integration].

#### 3. Conceptual framework

## 3.1. Federalism

Federalism is intended to ensure power sharing and safeguard liberal democracies, while protecting sovereignty and regional diversity, and allowing for variations in local policy design and implementation (Fenna, 2012; Elazar, 1987). As such, federalism provides an opportunity structure for climate change adaptation policy experimentation<sup>3</sup> and learning, where regional climate change vulnerabilities are addressed at the sub-national scale and policy innovation is stimulated between and within regions. Federalism involves some combination of self-rule and shared rule (Elazar, 1987). Self-rule refers to independence of the regional government from the national government's authority and the scope of the regional government's decision-making authority, while shared rule refers to the regional government's influence on national decision-making (Hooghe et al., 2016). By this very definition of self-rule and shared rule, "federalism allows flexible solutions to complex situations of overlapping jurisdiction and contested sovereignty" (Hueglin and Fenna, 2015).

The interdependent and over-lapping jurisdictions associated with complex intergovernmental relations in federations contributes to disproportionate bureaucratic and executive control, and limits government accountability to the public (Simeon and Swinton, 1995). In addition, others argue federalism inherently means weak government because power is split between federal and regional governments and no one government is capable of taking strong action (Burgess, 2006; Dicey, 1893). In the context of adaptation to climate change, sub-national governments' progress on adaptation in federal systems tends to be more unequal, with some sub-national jurisdictions pushing ahead while others lag behind (Keskitalo, 2010b; Austin et al., 2015).

Federal systems can be classified by their type of federalism, federation structure and intergovernmental relations (Table 1). Federal systems can be legislative or administrative, or in other words, they can legislate to divide either policy areas (i.e., legislative federalism) or roles within policy areas (i.e., administrative federalism) (or some combination of both). The structure of federations can alternatively be categorized as divided or integrated systems (Hueglin and Fenna, 2015). This type of classification can be idealized as dividing

<sup>&</sup>lt;sup>3</sup> Policy experimentation refers to the testing of innovative policies or programs, which may then be replicable in other jurisdictions.

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