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# Multi-level governance of climate change adaptation: The role of regional partnerships in Canada and England

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## Abstract

Adaptation to climate change is widely recognized as a multi-level governance challenge because expected impacts and respective measures cut across governmental levels, sectors and societal domains. The present paper analyses the role of regional adaptation partnerships in Canada and England in the multi-level governance of climate change adaptation. We describe and compare three partnerships per country with regard to their evolution, membership and governing structures, coordination across levels and societal domains, and their adaptation activities and outputs. Although both partnership schemes represent new collaborative approaches, their genesis and governance differ. While the Canadian collaboratives are a government-centred approach that originated and partly operated top-down through a national programme for the period 2009-2012, the English partnerships follow a more pluralistic stakeholder-centred approach that evolved bottom-up already in the early 2000s. Both schemes have in common that they intermediate between governmental levels, foster networking between public and private actors, and eventually build adaptive capacities and inform adaptation policies. We conclude that regional adaptation partnerships represent a new governance approach that facilitates climate change adaptation, albeit with limits. Since state actors play(ed) key roles in both partnership schemes, they do not represent a new sphere of authority outside the state. Instead of blurring or destabilizing governmental levels they complement (and perhaps even stabilise) them with multi-level interactions.

## Keywords

climate change adaptation, regional partnerships, new governance, multi-level governance, Canada, England

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# 1 ADAPTATION TO CLIMATE CHANGE AS A MULTI-LEVEL CHALLENGE

After two decades of climate change mitigation policies that failed to curb global green-house gas emissions and frequent signs of already changed climate patterns in many regions of the world (IPCC, 2007), climate change adaptation gained increasing attention among both policy-makers and scholars (Adger et al., 2007; Biesbroek et al., 2010). Adaptation to climate change challenges policy-making at international, national, regional and local levels in distinct ways (Adger et al., 2005, 78). Although climate change impacts such as sea level rise or extreme weather events show similar patterns across continents and countries their manifestations vary considerably at regional and local levels. As a consequence, climate change adaptation is widely understood as a multi-level endeavour that requires the coordination of different levels of government. Often, the following 'political division of labour' is implicitly or explicitly evoked in both scholarly literature and practical guidance. On the one hand, national governments (and supranational entities such as the European Commission) are expected to raise awareness, provide general frameworks and guidance on how to adapt to climate change and co-fund adaptation projects. On the other hand, sub-national entities such as provinces and municipalities are identified as key actors when it comes to the detailed planning and implementation of adaptation policies (Corfee-Morlot et al., 2009; Galarraga et al., 2011; Keskitalo, 2010). Regions or provinces are expected to mediate between national and local actors because they are "strategic enough to establish links between all the different policy areas" (Galarraga et al., 2011, 168), and at the same time close enough to the local level for developing tailored solutions (Clar and Steurer, 2012; Corfee-Morlot et al., 2009, 31; Galarraga et al., 2011, 165). In addition, climate change adaptation concerns not only governmental authorities and public agencies but also civil society, businesses and individuals (Adger et al., 2005, 79). Governments are not only expected to facilitate adaptation among non-state actors, but they often also rely on the resources (including expertise) of the latter (Cimato and Mullan, 2010). Governance scholars consequently assume that effective adaptation to climate change requires new governance approaches that are able to bridge or even transcend governmental levels and societal domains (Adger et al., 2005; Bauer et al., 2012; Corfee-Morlot et al., 2009; Leck and Simon, 2013).

Partnerships denote such a new governance approach: they represent collaborative arrangements, usually between actors from two or more spheres of society (Glasbergen, 2007, 1f; Van Huijstee et al., 2007, 77). At the international level, partnerships exist mainly between developing and developed countries (for instance the Adaptation Partnership co-chaired by the United States, Spain and Costa Rica<sup>1</sup>). At national and subnational levels, most partnerships are public-private in character and have either a comparatively narrow (sectoral) focus (for instance between adaptation policy-makers and insurance companies in Germany and Norway) or a local scope (for instance in the Netherlands and in Australia). So far, comprehensive regional partnership schemes that encompass numerous regions in a country and address multiple sectors have emerged only in Canada and the UK (Bauer et al., 2012).

Based on an embedded case study design, the present paper analyses how three Regional Adaptation Collaboratives (RACs) in Canada and three Regional Climate Change Partnerships (RCCPs) in England facilitate climate change adaptation by coordinating activities across levels of government and societal domains. The selection of the partnerships was purposeful, i.e. we selected those that national policy-makers recommended as the most active ones. We accepted the loss of representativeness because the case selection helped us to unearth the potential of partnerships as new governance approaches. The case studies combine a document analysis (including reports, websites and material published by the partnerships) and a total of 19 semi-structured interviews with national policy-makers responsible for the

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<sup>1</sup> See <http://www.adaptationpartnership.org>

support of the partnerships (three interviews), their managers (six interviews) and key partners (ten interviews).<sup>2</sup> The interviews, conducted between April and July 2011, were transcribed fully and analysed qualitatively.

The paper proceeds as follows: Section 2 discusses the analytical underpinnings of partnerships as new governance approaches. Sections 3 and 4 introduce the three Canadian RACs and the three English RCCPs respectively in terms of their evolution, membership structure, governance and activities. Section 5 compares and discusses the two partnership schemes with regard to their genesis, governance, coordination patterns, modes of governing and their roles in shaping adaptation. Section 6 concludes with a reflection on partnerships as new problem-solving instruments, as pluralistic environmental governance innovations and as post-scalar phenomena.

## 2 PARTNERSHIPS AS NEW GOVERNANCE APPROACHES

The rise of 'new governance' or 'network governance' in recent decades stands for significant changes in how political decisions are taken and implemented. Although governments still have the prime responsibility for steering societies, they are increasingly dependent on the cooperation and joint resource mobilization of non-state actors (Börzel, 2011; Kooiman, 2003; Pierre, 2000; Pierre and Peters, 2000). Consequently, new governance arrangements (such as partnerships) often embody network-like relations between state, business and civil society (Bulkeley, 2005, 881; Glasbergen, 2007, 4; Steurer, 2013). In addition, many of them also operate at and across multiple levels or scales of government (Bulkeley, 2005, 881)<sup>3</sup>.

New governance approaches, most prominently networks and partnerships, are heavily promoted as vehicles for societal change in complex policy fields such as sustainable development (Forsyth, 2005; Glasbergen, 2007; Pattberg et al., 2012; Steurer, 2013; Van Huijstee et al., 2007) and climate change (Benson, 2010; Bulkeley, 2005; Bulkeley and Betsill, 2013; Dow et al., 2013; Hoffmann, 2011). Partnerships are defined as self-organizing, non-hierarchical alliances in which actors from one or multiple levels of government, the business domain and/or civil society pursue common goals by sharing resources, skills and risks (Glasbergen, 2007, 1f; Greve and Hodge, 2010, 9; Leach et al., 2002, 646; McQuaid, 2010, 128; Van Huijstee et al., 2007, 77).<sup>4</sup> Apart from these common characteristics, actual partnerships differ widely with regard to the themes addressed, their purpose, actor constellations and relations, spatial and temporal scope, funding, activities, outputs and their modes of governing (Glasbergen, 2007, 5; McQuaid, 2010, 127f; Van Huijstee et al., 2007, 77). When analysing the roles of partnerships in facilitating societal change, scholars usually focus on the "interactive structures and processes in which partnerships operate and the impacts of partnership activities on sustainability issues therein" (Glasbergen, 2011, 3). Our analysis of the adaptation partnerships in Canada and England is organized around the following five dimensions. First, partnerships are generally associated with a shift of responsibilities and authority

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<sup>2</sup> Managers were asked about the origins, governance structure and activities of the partnerships. Key partners provided insights about how they became a partner, what their activities were within the partnership and how they benefitted from their involvement. National representatives were asked about their role and support in the partnerships and how they used the partnerships for their adaptation policies. All interviews addressed the relations between different actors, partnering benefits, and assessments of the strength, challenges and future of the partnerships.

<sup>3</sup> While the political science literature usually speaks of multi-level arrangements when referring to spatially bounded political units and the relations between them (see for instance Bache and Flinders, 2005; Hooghe and Marks, 2003; Keskitalo, 2010), the political geography literature uses the term multi-scalar (see for instance Benson, 2010; Bulkeley, 2005; Bulkeley and Betsill, 2013; Leck and Simon, 2013). We prefer the term 'multi-level' because we draw mainly on the concept of multi-level governance. The term 'scale' will be used synonymously when we refer to the political geography literature.

<sup>4</sup> While partnerships are generally characterised as formalized collaborations, networks are conceptualized in diverse ways. In some cases networks are understood as partnership-like governance arrangements, in other cases networks denotes a particular mode of governance that complements hierarchies and markets (see below).

between public and private actors and hence the role of various actor groups in the initiation of the partnerships is of particular interest. Partnerships may be set up top-down by (national) governments, or they may emerge bottom-up from the activities of businesses or societal actors.

Second, partnerships can include any number and combination of government, business and/or civil society actors both in their governance and in their activities. Accordingly, Glasbergen (2007, 5) distinguishes government-led partnerships from partnerships dominated by private parties, and 'private partnerships' between businesses and civil society organizations without government involvement (see also Steurer, 2013, who distinguishes public-private, private-private and tripartite partnerships, the latter involving all three societal domains).

A third analytical dimension concerns the coordination patterns of partnerships. Drawing on the multi-level governance literature, we distinguish between vertical and horizontal dimensions of coordination (Hooghe and Marks, 2003; Rosenau, 2005, 31). Vertical coordination is concerned with relations between two or more levels of government (local, regional, national), be they formal or informal, institutional, financial or informational (Hooghe and Marks, 2003; Pahl-Wostl, 2009, 358). Vertical coordination can occur in three ways: bottom-up when local initiatives influence national action, top-down when national frameworks influence local actors (Corfee-Morlot et al., 2009, 3), or reciprocal. Horizontal interactions can bridge the divides between different policy areas or sectors (Corfee-Morlot et al., 2009), between state and non-state actors (Glasbergen, 2011; Hooghe and Marks, 2003), or between regions or local authorities (Betsill and Bulkeley, 2006). Political geography scholars often contest the static conception of governmental levels as discrete units as well as the vertical hierarchy between them. Instead, they guide the analysis towards the processes and outcomes of how political scales are produced, reproduced and contested (Bulkeley, 2005, 897). They further highlight the "networked nature of social relations" (Bulkeley, 2005, 888) and the emergence of new political spaces as post-scalar or post-territorial phenomena (Benson, 2010; Bulkeley and Betsill, 2013).

Closely related to the emphasis of networks is our fourth analytical dimension - the modes of coordination. Depending on the locus of authority and forms of interaction between actors, hierarchical, market and network modes of governance are commonly distinguished (Thompson et al., 1991). In hierarchies, one or a few actors have the possibility to reach collectively binding decisions and to coordinate social actions by command and control without the consent of others (Börzel, 2011, 52; Treib et al., 2007, 9). Markets, in contrast, build on "the self-coordination of autonomous actors" (Börzel, 2011, 52) and networks rely on coordination through which resources are exchanged in non-hierarchical actor constellations (Börzel, 2011, 52; Treib et al., 2007, 9). Although partnerships are strongly associated with the network mode of governance, a more profound analysis might reveal elements of hierarchical steering or steering through competition. In this sense we also explore to what extent "different forms of hierarchical and network governance interact and intersect" (Bulkeley, 2005, 881) in partnerships.

Fifth, neither the partnerships nor their coordination functions are ends in themselves, but they are expected to fulfil important roles in solving societal problems, inter alia by producing and/or disseminating knowledge, building capacities, setting norms, lobbying, or by making public management more participatory (Pattberg et al., 2012, 9). With respect to policy making, they are expected to help defining problems, develop, implement and assess policies. It is often assumed that collaborative arrangements such as partnerships are more adequate to produce flexible, responsive, creative and innovative solutions than hierarchical governance (for instance McQuaid, 2010; Van Huijstee et al., 2007).

Based on a description of the two partnership schemes in the following two sections we will then analyse them by using the five analytical dimensions outlined above.

### 3 REGIONAL ADAPTATION COLLABORATIVES IN CANADA

According to Dickinson and Burton (2011, 103) adaptation policy in Canada is a multi-level mosaic, constituted by a range of adaptation activities at federal, territorial, provincial and municipal levels that lack a coherent framework. At the federal level, four departments (Health Canada, Natural Resources Canada/NRCan, Environment Canada and Indian and Northern Affairs) hold responsibilities on adaptation without central direction or formalized coordination (Office of the Auditor General of Canada, 2010). With its Clean Air Agenda, the Canadian Government provided the four departments with CAD 85.9 million for adaptation. With this support, Natural Resources Canada created the Regional Adaptation Collaboratives Program (RAC Program) in 2009. Equipped with CAD 30 million, the RAC Program established six Regional Adaptation Collaboratives across Canada for the period 2009-2012. The RAC Program defined the six regional collaboratives based on the regions determined in its assessment "From Impacts to Adaptation: Canada in a Changing Climate" (2007). These regions covered by the RACs built on the administrative provinces and territories but in some cases encompassed several provinces: the analysed RAC's (see Table 1) covered one (RAC British Columbia), three (RAC Prairies) and four provinces (RAC Atlantic). Once the programme was launched, NRCan informed policy-makers in the designated regions about the new funding opportunity. Based on the requirements defined by NRCan, these policy-makers contacted potential partners and sketched out priorities, themes and projects. Overall, the regional collaboratives had some freedom in setting their agenda but NRCan strongly promoted the impacts and issue areas identified in its 2007 assessment. Since 2013, NRCan's successor programme 'Enhancing Competitiveness in a Changing Climate' provides possibilities for the RACs to continue their work, although not necessarily in a partnership setting. So far, two of the six collaboratives (i.e. RAC British Columbia and RAC Ontario) entered in a second phase.

**Table 1: Key characteristics of the analysed Canadian RACs**

	Preparing for Climate Change: Securing British Columbia's Water Future	Prairie Regional Adaptation Collaborative	Atlantic Climate Adaptation Solutions Project
<b>Period</b>	2009-2012 2 <sup>nd</sup> phase: 2012-2015	2010-2012	2009-2012
<b>Provinces</b>	British Columbia	Alberta, Manitoba, Saskatchewan	New Brunswick, Prince Edward Island, Newfoundland and Labrador, and Nova Scotia
<b>Partners</b>	18 partners: provincial departments & agencies, municipalities, aboriginal organisations, industry, academia, NGOs, NRCan	14 partners: provincial actors, NGOs, NRCan	66 partners: provincial actors, municipalities, aboriginal organisations, businesses, academics, NGOs, NRCan, other federal departments
<b>Funding</b>	50:50 co-funding by NRCan and provincial partners: CAD 6.6 M – CAD 8.2 M in total per RAC		
<b>Managing organisation</b>	Fraser Basin Council and the BC Ministry of Environment	Prairie Adaptation Research Collaborative at the University of Regina	The Atlantic Climate Adaptation Solutions Association (ACASA)
<b>Structure</b>	<ul style="list-style-type: none"> <li>- FBC Manager</li> <li>- Management Committee</li> <li>- Coordination Committee</li> <li>- RAC community of practice</li> <li>- RAC advisor</li> </ul>	<ul style="list-style-type: none"> <li>- Manager</li> <li>- Management committee</li> </ul>	<ul style="list-style-type: none"> <li>- Secretary</li> <li>- Provincial project managers</li> <li>- Executive director (similar to management committee)</li> <li>- Steering committee</li> <li>- ACASA advisory panel</li> </ul>
<b>Working areas</b>	<ul style="list-style-type: none"> <li>- Water allocation and use</li> <li>- Forest and fisheries management</li> <li>- Flood protection</li> <li>- Community adaptation</li> </ul>	<ul style="list-style-type: none"> <li>- Water supply and demand</li> <li>- Drought and flood planning</li> <li>- Forest and Grasslands Ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>- Community planning for flood and coastal areas</li> <li>- Groundwater protection</li> <li>- Enhancing capacity of practitioners</li> </ul>
<b>Website</b>	<a href="http://www.fraserbasin.bc.ca/programs/bcrac.html">http://www.fraserbasin.bc.ca/programs/bcrac.html</a>	<a href="http://www.parc.ca/rac/">http://www.parc.ca/rac/</a>	<a href="http://atlanticadaptation.ca/">http://atlanticadaptation.ca/</a>



The collaboratives were partnerships between the federal government, provinces, territories, municipalities, businesses, academia and civil society organizations. They were co-funded 50:50 by NRCan and the regional partners. The membership structures of single collaboratives varied considerably: The RAC Prairie included 14 partners (mainly provincial authorities), the RAC British Columbia 18 (from provincial departments and agencies, municipalities and non-governmental organizations) and the RAC Atlantic 66 (mostly municipal and provincial representatives). The governance structure of all collaboratives foresaw an executive director responsible for the daily management. The two RACs that involved several provinces also appointed provincial coordinators and the RACs British Columbia as well as Atlantic have set up advisory and steering bodies that provide strategic guidance. The executive directors collaborated closely with the key provincial partners and a representative of NRCan in a management committee. The provincial Environment Departments were usually those who had general oversight over the RACs. The leaders of all six RACs and related experts met several times a year in the National Coordination Committee chaired by NRCan. The committee aimed to guide the RAC activities and facilitate national coordination and communication.

The overall aim of the RAC Program was to “catalyze coordinated and sustained adaptation planning, decision-making and action, across Canada’s diverse regions” (Natural Resources Canada, 2011). The collaboratives have defined thematic working areas that revolved around water, community adaptation, coastal, ecosystem and land-use management. Within these working areas, the RAC partners have defined projects mainly concerned with provincial or municipal adaptation challenges. These include the development of municipal infrastructure, flood protection or climate change action plans in the RACs Atlantic and British Columbia, and provincial water conservation strategies in the RAC Prairie. Although the RAC Program emphasized the aim to advance adaptation ‘from knowledge to action’, most of the projects had a strong emphasis on knowledge and capacity building. Thus, conducting assessments, modelling and scenario analyses that concerned local and regional impacts of climate change in various issue areas (such as flooding, salt-water intrusion or coastal erosion) were common activities. The studies served both the formulation of concrete plans, policies or strategies and the development and testing of decision-support tools such as guidelines, online-toolkits and checklists for planners which targeted, in particular, communities. In addition, the collaboratives provided input to the (re)formulation of plans, strategies and programmes. While the RACs British Columbia and Atlantic targeted mainly municipalities, the RAC Prairie focused its activities on identifying and prioritizing policy options for provincial and inter-provincial water policies (Rescan, 2012, 4-2). A typical project of the RAC Atlantic started with assessments or studies that recommend modifications of specific municipal policies such as coastal management plans, flood plan regulations, or emergency management plans. Municipal authorities were usually involved so that they were able to (re)formulate their policies in the context of partnership projects in cooperation with other partners. Vulnerability and risk assessments in some cases led to newly adopted or reformulated municipal plans and strategies (for instance adaptation-focused municipal climate change action plans in the RAC Atlantic) but experiences from the RAC Prairie also show that limited time and resources sometimes hindered the implementation of the results (J. H. Archibald Consulting, 2011, 18). Through the National Coordination Committee and the recently established Adaptation Platform, the RACs also provided input to adaptation policy-makers at the federal level. Finally, the RACs also aimed at networking and awareness raising beyond their partners. Outreach activities included the organization of conferences, workshops, trainings, webinars and the circulation of newsletters with the aim to inform provincial decision-makers and non-state actors about key issues of climate change adaptation.

## **4 REGIONAL CLIMATE CHANGE ADAPTATION PARTNERSHIPS IN ENGLAND**

The beginnings of the English partnerships date back to the regional scoping studies conducted by the United Kingdom Climate Change Impact Programme (UKCIP) across the UK in 1999. The scoping studies

aimed to assess climate change impacts in consultation with regional stakeholders. Thus, UKCIP collaborated with regional actors (i.e. the former regional authorities, mayors of large cities or the regional branches of the Environment Agency) in organizing workshops and compiling the reports. Once the scoping studies were completed, regional actors in all nine English regions institutionalized their cooperation with stakeholders in climate change partnerships.

For almost 10 years, the partnerships depended strongly on regional government bodies with respect to management, coordination and funding issues. When the UK government abolished the English regions as administrative units in 2010 alongside several other austerity measures, the organization and membership structure of the partnerships changed profoundly. They increasingly approached businesses and civil society organizations and they addressed additional sectors (for instance health). Today, key partners are local authorities (mainly county and borough councils), public agencies (like the Environment Agency or Natural England), research organizations (most notably UKCIP and the Met Office), public service providers, non-governmental organizations and businesses. Due to its special status as a region and a capital city, London is the only English partnership in which the regional authority, i.e. the Greater London Authority, was not abolished in 2010. The funding of the partnerships changed with their membership structure. While regional government bodies were the main funders of the partnerships as long as they existed, their support was replaced by funds from other core partners and additional sources such as EU funding. Since 2008, the Department for Environment, Food and Agriculture (Defra) provides £ 20-80k annually per partnership through its Adapting to Climate Change Programme (ACC) with a decreasing tendency (UKCIP, 2011, 62, bidding agreements).<sup>5</sup> The partnerships are managed by a variety of organisations and have distinct governance structures (see Table 2).

**Table 2: Key characteristics of the analysed English adaptation partnerships**

	Climate SouthWest	Climate South East	London Climate Change Partnership
<b>Period</b>	Since 2001	Since 2000	Since 2001
<b>Core partners</b>	UKCIP, Environment Agency, businesses (public service providers), Defra, academics, Natural England; NGOs	Local authorities, UKCIP, businesses, Environment Agency, academics [around 50 organisations]	Greater London Authority, councils, Defra, UKCIP, business, associations, Environment Agency, other agencies
<b>Funding</b>	Core partners Defra (adaptation to climate change program) since 2008 Other sources (e.g. EU funding)		
<b>Managing organisation</b>	Environment Agency (SW)	Climate South East- community of interest company	Greater London Authority
<b>Structure</b>	<ul style="list-style-type: none"> <li>- Executive group (core funders)</li> <li>- Sector groups</li> <li>- Forum (advisory group)</li> <li>- Network</li> <li>- Project team: manager &amp; project officer</li> </ul>	<ul style="list-style-type: none"> <li>- President and patron</li> <li>- Annual general meeting</li> <li>- Directors /executive group</li> <li>- Working groups</li> <li>- Staff: Manager and support</li> </ul>	<ul style="list-style-type: none"> <li>- Chair</li> <li>- Steering group (key partners)</li> <li>- Manager</li> </ul>
<b>Working areas</b>	<ul style="list-style-type: none"> <li>- Agriculture and Forestry</li> <li>- Biodiversity</li> <li>- Business and utilities</li> <li>- Built environment</li> <li>- Communities</li> <li>- Tourism</li> <li>- Transport</li> <li>- Health</li> </ul>	<ul style="list-style-type: none"> <li>- Communications</li> <li>- Planning</li> <li>- Business &amp; economy</li> <li>- Communities</li> <li>- Emission Monitoring</li> <li>- Biodiversity</li> <li>- Tourism</li> </ul>	<ul style="list-style-type: none"> <li>- Health and social care</li> <li>- Weather stations</li> <li>- Urban greening</li> <li>- Retrofitting</li> <li>- Flooding</li> <li>- Heat</li> <li>- Monitoring</li> <li>- Local Expertise</li> </ul>
<b>Website</b>	<a href="http://climatesouthwest.org/">http://climatesouthwest.org/</a>	<a href="http://www.climatesoutheast.org.uk/">http://www.climatesoutheast.org.uk/</a>	<a href="http://climatelondon.org.uk/">http://climatelondon.org.uk/</a>

<sup>5</sup> Since 2012, financial support is administered through the Environment Agency.

Executive or steering groups comprising the funding partners provide overall guidance, take strategic decisions and maintain close relations with the management. In addition, Climate SouthWest has an advisory group (the forum) that supports the management, and Climate South East and the London Climate Change Partnership are represented by a high-profile president or chair. All English partnerships collaborate within ClimateUK, a 'community of interest company' (i.e. a company that uses its profits and assets for the public good) that evolved from an informal coordination platform (the UK Interregional Climate Change Group) in 2011. Within the frame of ClimateUK, the partnerships meet several times a year, share experience and knowledge and strive to develop joint activities.

The partnerships aim to investigate the regional and local impacts of climate change, build the knowledge base as well as the capacities required for effective adaptation and advise public and private decision-makers. By doing so they cover a variety of issues such as water management, tourism, the built environment, businesses and land use planning. The activities of the partnerships are mainly organised in thematic or sectoral working groups in which partners with similar adaptation needs work on joint projects. So far, most of their activities have been concerned with building the knowledge base for regional and local climate change adaptation. Thus, partnerships frequently initiate or participate in assessments and studies on regional climate change impacts, vulnerabilities and adaptation options, they assess and monitor the preparedness of regions or sectors to cope with the expected impacts of climate change, and they publish case studies on actual adaptation activities. Recently, the partnerships contributed to the First UK Climate Change Risk Assessment (Defra, 2012) by organising workshops on climate change risks with local actors and by feeding the results into regional reports. Further key activities include the development and testing of decision-support tools (including risk assessment tools or checklists for planners) and the hosting of respective trainings (for instance on how to use the UKCIP scenarios). In the past, the partnerships also provided guidance and conducted trainings for the implementation of the performance indicator NI188.<sup>6</sup> In addition, partnerships aim to raise awareness for adaptation among a broader audience, for instance by hosting workshops or discussion forums and by maintaining websites and circulating newsletters. Regarding policy advice, partnerships inform and facilitate adaptation plans, programmes and policies at the local, regional and national levels. According to an interviewee, the London Climate Change Partnership, for instance, tries to "be involved as much as we can in local planning" by working with communities and the boroughs in London. Before the regional administrative level was abolished, the partnerships were major consultants for regional strategies and plans such as the South East plan (a regional planning framework). The London climate change partnership still fulfils this function, for instance by providing input to the London climate change adaptation strategy and the plan to manage and reduce surface water flooding. To facilitate input to national adaptation policies (for instance on the National Indicator NI188 between 2008 and 2011, or the National Adaptation Programme more recently), representatives from the partnerships and Defra communicate regularly and meet three to four times a year. In addition, the partnership platform ClimateUK plays an important role in the Local Adaptation Advisory Panel (LAAP) that facilitates exchange between Defra and municipalities. As a Defra representative emphasised, this kind of policy advice is important to national policy-makers:

*"You [civil servant at Defra] can sit in a room here and make something out that is not going to work in the real world or we [Defra] really upset people. They [the partnerships] know how it works at the local level and obviously had a lot of insight they can give us to what would help or what would hinder them in adapting".*

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<sup>6</sup> In the UK, the National Indicator 188 measured the "progress on assessing and managing climate risks and opportunities, and incorporating appropriate action into local authority and partners' strategic planning" between 2008 and 2011 (Local and Regional Partnership Board, 2010). Afterwards, Defra used the indicator to support local authorities on a voluntary basis.

# 5 COMPARISON OF THE PARTNERSHIPS

The interviewees from Canada and England recognized regional partnerships in their country as important governance approaches. In general terms, all six partnerships involve and coordinate a variety of public and private actors and aim to advance adaptive capacities and actions at regional and local levels. However, beneath this surface of similarities, significant differences emerge. The comparison summarises the main similarities and differences of the two partnership schemes with regard to their genesis, their own governance, the governance of horizontal and vertical coordination, the underlying modes of governance and the roles of the partnerships in adaptation to climate change. Although the partnerships within the two schemes are far from being identical, they appear as relatively consistent when compared across countries (see Table 3).

**Table 3: Comparison of Canadian and English regional adaptation partnerships**

	Canadian RACs	English RCCPs
Genesis	Top-down through funding by NRCan	Bottom-up: regional authorities, supported by UKCIP
Partnership governance	Government-led: provinces, NRCan	Stakeholder-led: local authorities, public agencies, interest groups, businesses
Vertical coordination	Predominantly uni-directional top-down	Two-way interactions
Horizontal coordination across sectors	Focused on water and ecosystem management, community planning	Variety of sectors addressed: tourism, businesses, water, planning, building, etc.
	Mainstreaming of adaptation in sectors, only limited coordination between sectors	
Horizontal coordination across domains	Focus on public sector Consultative role of private actors	Equal involvement of public and private actors
Modes of governance	Network mode	
	Partly hierarchical steering	
Functions	Capacity building and informing adaptation policies	

## Genesis: top-down versus bottom-up

The partnerships in Canada and England have emerged in opposite ways. The regional adaptation collaboratives in Canada were introduced top-down through a federal programme by NRCan in 2008. The RAC Program was a logical step in the evolution of “adaptation programming” in Canada, as an NRCan representative reports. After ten years of developing the knowledge base through nation-wide research projects, networking and assessments, NRCan’s Climate Change Impacts & Adaptation Division wanted to put knowledge into action and hoped to initiate actual adaptation decision-making through partnerships. NRCan predefined the collaboratives regarding their geographical scope, thematic priorities and the type of adaptation actions pursued. Although the actual establishment of the collaboratives was in the responsibility of the provinces and territories, NRCan strongly steered the process:

*“We told them about this programme and we told them about our requirements for partnership and we talked about the national assessment. [...] So we described exactly what we expected and then they worked amongst themselves to identify what partnerships would make sense, and what priorities that they wanted to focus on, themselves.”*

The interviewed RAC representatives sometimes perceived this top-down steering as controlling and limiting: *“[NRCAN] came with an agenda, certain in their ways of how they want things to be done, and we sometimes felt that they were controlling the whole process”.*

In contrast, the English partnerships “had all originated as self-created, ‘bottom-up’ organizations” (UKCIP, 2011, 62) at the regional level. Though their emergence was triggered by a scoping study that was initiated by the national programme, UKCIP, interviewees recount the beginnings of the partnerships generally with reference to regional impulses. The London Climate Change partnership, for instance, “was established in

2001 and it was established by the mayor at the time who basically perceived the need to start taking action on climate change adaptation because things were starting to happen with the carbon”, as the manager tells. After several years, adaptation policy-makers at Defra recognized the partnerships as increasingly important governance mechanisms also for national adaptation policies and started supporting them in 2008. Although the financial support provided by Defra is based on some agreed objectives and criteria, the partnerships in England are overall relatively independent from the national level. However, the financial support for the RCCPs is considerably lower than the federal funding that was given to the Canadian RACs until 2012. As the following sub-sections show, the different origins of the two partnership schemes have influenced their governance.

**Partnership governance: government-led versus stakeholder-led**

The Canadian collaboratives and the English partnerships both involve state actors from various governmental levels and non-state actors such as businesses, research organizations and civil society organizations (see Table 4). However, a closer look reveals that the partners from different levels of government and from different societal domains are involved to different degrees and in distinct capacities. When distinguishing between key partners that are involved in the steering and management of the partnerships and other partners that are involved in its activities (for instance in projects or events) without governing responsibilities, the Canadian collaboratives were clearly government-led, with provincial and national level actors both playing key roles.

**Table 4: Involvement of governmental levels and societal domains in the partnerships**

	National authorities	Regional/provincial authorities	Local authorities	Public agencies	NGOs/Interest groups	Research	Business
RAC BC	✓✓	✓✓	✓ >	✓	✓	✓	✓
Prairies RAC	✓✓	✓✓ >	✓	✓	✓	✓	✓
RAC Atlantic	✓✓	✓✓	✓ >	✓	✓	✓	✓
Climate South East		(✓✓) (>)	✓✓ >	✓✓	✓	✓✓	✓✓ >
Climate SouthWest		(✓✓) (>)	✓ >	✓✓	✓✓	✓✓	✓✓ >
London CCP	✓✓	✓✓ >	✓✓ >	✓✓	✓✓	✓✓	✓✓ >

- ✓✓ Key partner involved in the governing of the partnership
- ✓ Partner taking part in the activities of the partnership
- > Main target group of the activities and products of the partnerships
- () Before the omission of the English regions; since then not applicable

In contrast, the English partnerships have always engaged local authorities, interest groups, businesses, research organizations and public agencies not only as partners in their activities but also as core partners in their own governance, even more so since the regional administrative level was abolished in 2010. Businesses with high stakes with regard to climate change (such as water or insurance companies) play a particularly prominent role. Although Defra has supported the partnerships since 2008, national actors are hardly involved in the steering of the partnerships.

In both countries, partners mostly consist of those organizations that are already aware of and willing to engage in adaptation to climate change. The outreach to important other actors who are unfamiliar with climate change adaptation proved to be an increasingly important challenge. The English partnerships in particular struggled repeatedly with involving new partners and keeping them engaged over the long-term.

Overall, the government-led governance of the Canadian RACs and the stakeholder-led governance of the English partnerships are inseparable from their top-down versus bottom-up genesis. While the Canadian collaboratives were primarily designed and understood as a tool of government policy, the English

partnerships are more balanced between the public and private and recently even shift responsibilities further to the private sector.

### **Governance as coordination: vertical and horizontal patterns**

The governance of the partnerships themselves is related to their primary target groups and the coordination of adaptation activities between them. While the Canadian collaboratives tailored their activities mainly towards local or provincial public authorities, the activities of the English partnerships address private stakeholders (in particular businesses) and public authorities equally (see Table 4). Consequently, the Canadian RACs used to put stronger emphasis on the vertical coordination of adaptation policies between federal, provincial/territorial and municipal levels while the English partnerships aim to facilitate both vertical coordination across levels and horizontal coordination across societal domains. The interactions between the regional partnerships and national policy-makers are limited in both countries, yet again in distinct ways. In Canada, NRCan was the main and often only regular contact at the national level and coordination followed largely a top-down pattern (i.e. the RACs were used to implement the national adaptation policy agenda at regional and local levels). However, there have also been attempts of NRCan to learn from the experiences of the partnerships within the National Coordination Committee and the Adaptation Platform. In England, regular two-way interaction takes place between the partnerships and Defra and its delivering organizations UKCIP and the Environment Agency. As a partnership manager emphasized, the partnerships

*"[...] go out to local authorities, gather some of their views and feed those back up to the national level, [...] And that has been quite useful to the local authorities because they feel they can directly sort of [...] inform or influence national decisions [...]. And likewise we can kind of get the stream of information back from government directly to the local authorities".*

The intermediary role of the English regional partnerships became especially obvious after the regional administrative level was abolished in 2010. Instead of terminating its support because regions lost their political status, Defra renewed the funding agreement with the partnerships.

With respect to the horizontal coordination across sectors, the Canadian RACs had a narrower thematic focus than the English partnerships. However, this does not imply that the latter put more emphasis on coordinating adaptation horizontally across sectors. They simply address more adaptation themes, usually in separate thematic or sectoral working groups with only loose coordination. The fact that the main national counterparts of the regional partnerships in both countries are concerned with natural resources (NRCan in Canada) or environmental protection (Defra in England) emphasises that adaptation to climate change is still framed as an environmental, not as a genuinely cross-sectoral challenge.

With regard to horizontal coordination of adaptation between societal domains, the Canadian RACs involved research, business and NGO partners mainly as consultants that provide expertise on assessments, decision-making tools and adaptation policies that are ultimately relevant for regional and local governmental core partners. In contrast, the English partnerships strive for initiating and coordinating adaptation activities in the public as well as in the private domain. In this context partnerships often face difficulties when organizing the exchange between diverse partners from different domains (such as researchers, municipal decision-makers and businesses) because of their different backgrounds, rationales and languages.

Horizontal coordination between the partnerships with the aim to exchange experiences and knowledge across regions takes place in both countries on a regular basis, although in distinct ways. While the Canadian RACs were joined in the National Coordination Committee by NRCan, the partnerships in England collaborate in an umbrella group (Climate UK) that is supported by but independent from Defra. As a result, the English partnerships have a stronger identity as a group and act more as a coherent block vis-à-vis national policy-makers.

## Modes of governance: networks and a bit of hierarchy

Since partnerships are one of the paragons of network governance (see section 2), it is not surprising that the network mode dominates both the governance of the partnerships per se and their coordination efforts. The interviewees in both countries emphasize trust, collaborative personal relations, regular communication and little competition between the main partners as important. However, as the top-down genesis of the Canadian RACs shows, network governance can be established by a hierarchical funding scheme through which NRCan pre-defined the geographic as well as the thematic scopes of the RACs and their activities. Although provincial actors generally valued the support of the national level, they sometimes perceived the relation with NRCan as uni-directional, hierarchical and paternalistic:

*"It is a top down view of the world and it's interesting that again if you look at the programme criteria it's not in the cards that this work would influence federal decision-makers. It's all to do with influencing provincial or municipal or private stakeholders. [...] [it] appears that the federal people don't need help, or know what they are doing [...] but it's just the provincial and municipal people further down the government chain that need help. So if you are one of those provincial people or one of those municipal people you might find that paternalistic."*

In contrast, the English partnerships regard the independence from and the mutual relations with the national level as a key asset that enhances the partnerships' credibility with local actors. Given that Canada is a federal and the UK a semi-unitary state, it is surprising that the Canadian collaboratives were subject to stronger hierarchical steering than the regional partnerships in England. This shows that the governance characteristics of partnerships can have state-centred, hierarchical connotations that are shaped rather by their genesis and their role in the overall governance of a policy field than by the political system of a country.

## Roles in shaping adaptation

The coordination efforts of the partnerships are not ends in themselves but they ought to contribute to actual adaptation activities. Partnerships in both countries facilitate adaptation actions indirectly by building adaptive capacities among decision-makers in the public and private domain, and directly by supporting the (re)formulation of policies and plans. Apart from building adaptive capacities through the networking and coordination efforts described above, the partnerships pursue this task also by enhancing the knowledge base for adaptation through assessments, scenarios or case studies, and by providing decision-support and policy guidance tools such as handbooks, assessment instruments or trainings. The unique 'selling point' of all partnerships is that they address regional, local and sectoral knowledge gaps with regard to climate change impacts and adaptation options.

While core partners and members of the partnerships are their key target groups, several of their other activities (in particular conferences, stakeholder fora and workshops) facilitate networking and awareness-raising also among a wider public and private sector audience. As one interviewee reported, a workshop hosted by the partnership helped a wider circle of regional policy-makers in *"coming to terms with the fact that climate change impacts are real and that we need to make adaptation decisions"*. In a similar vein, almost all interviewees stated that they have learned from others by exchanging information, experiences and ideas within, between and beyond the partnerships (for instance with national policy-makers in England).

When partnerships play a direct role in the agenda setting and formulation of national, regional or local policies, they do this either within their own projects, or by providing tailored input and feedback in institutionalized or informal settings. The policies they are mainly concerned with are non-binding strategies (for instance on regional development or water management) and guiding standards (for instance concerning sea dykes in the RACs Atlantic and British Columbia). Less frequently, they are concerned with binding planning instruments such as land use plans, water allocation policies (for instance in Saskatchewan) and public infrastructure projects. In a few instances, English partnerships also played a role in the implementation of national adaptation policies (especially the adaptation indicator NI188).

## 6 CONCLUSIONS

The regional partnerships in Canada and England are a new governance approach that aims to facilitate climate change adaptation across sectors, governmental levels and societal domains. However, as our comparison has shown, they do so in different ways. The Canadian collaboratives originated (and partly also operated) top-down, were government-dominated and rather closed in terms of membership, short-term oriented and project-focused. The English partnerships, in contrast, originated bottom-up, are stakeholder-led and rather open in terms of membership, long-term oriented and network- rather than project-focused. Owing to these differences our analysis provides insights to the debates revolving around partnerships (i) as innovation-friendly problem-solving instruments (McQuaid, 2010; Pattberg et al., 2012; Van Huijstee et al., 2007), (ii) as (environmental) governance innovations that favour more pluralistic bottom-up governance over hierarchical top-down government (Bulkeley, 2005; Bulkeley and Betsill, 2013; Glasbergen, 2007; Hoffmann, 2011), and (iii), as “post-scalar” or “post-territorial” phenomena (Benson, 2010; Bulkeley, 2005, 895; Bulkeley and Betsill, 2013, 145).

Do our cases live up to the widely held assumption that partnerships are innovative problem-solving instruments, in particular in the context of complex environmental problems (McQuaid, 2010; Pattberg et al., 2012; Van Huijstee et al., 2007)? The question of partnership impacts is generally difficult to answer (Van Huijstee et al., 2007), and our case study design allows only for anecdotal insights. As shown above, the partnerships in both countries facilitate adaptation actions by building adaptive capacities among decision-makers in the public and private domain, and by informing policy (re)formulation. These activities represent or establish important prerequisites for mainstreaming climate change adaptation across levels of government, sectors and societal domains. Yet, all adaptation partnerships face the limitation that they have no formal norm-setting and rule-making authority and are based on voluntary collaboration. This relatively weak political status and the notorious lack of financial as well as human resources within the partnerships and among their partners and target groups challenge their effectiveness. Thus, the adaptation partnerships we analysed play important facilitating roles but they also face internal and external limits in delivering innovative adaptation solutions.

To what extent do the adaptation partnerships represent governance innovations that favour more pluralistic bottom-up governance over top-down government? Here, the two partnership schemes diverge right from their beginnings. All partnerships denote network governance or “post-sovereign” approaches (Bulkeley, 2005; Bulkeley and Betsill, 2013) in the sense that they rely on collaboration and involve non-state actors. However, our analysis has also shown that the two partnership schemes provide ample variation with regard to both governance modes and the role of governments. Governing the Canadian RACs was always in the hands of the provincial authorities, with a considerable degree of top-down steering by the national funder. In addition, Canadian authorities have collaborated with non-state actors in the RACs but the former never shared their decision-making power with the latter. The RACs were therefore a sequel of public policy-making with other means in which hierarchy has cast a shadow onto networking activities. In contrast, the bottom-up genesis of the English partnerships implies a stronger emphasis of pluralistic governance in which non-state actors play more prominent roles, in particular in recent years. Nevertheless we should notice that also their beginnings were strongly driven by (regional) government authorities, and that the recent shift towards non-state actors was not driven by partnership ideals but by government policies (i.e. by the austerity measures of the British government that led to the abolition of the regional administrative level in England). Since the English partnerships have also played an increasingly important role in political discourses on ‘community engagement’ and ‘big society’, their role can also be seen critical. It seems that more pluralistic bottom-up governance is sometimes the other side of the coin that shows a neoliberal imprint. Respective shifts of responsibilities from state to non-state actors have often been criticised as ‘hollowing out the state’ and ‘eroding accountability’ (Bache, 2010; Cook, 2009; Forsyth, 2005; Geddes, 2006; Lascoumes and Le Gales, 2007).

Are our partnership cases examples for post-scalar or post-territorial approaches that challenge traditional conceptualizations of and relations between scales or levels of government? Contrasting for example the



observations of Benson (2010) with respect to climate change (mitigation) partnerships in the US and Canada, the analysed regional partnerships (even those in England that emerged bottom-up) are largely oriented at long-established (or in the case of England: recently abolished) territorial and administrative boundaries. This applies to their governance and to their main activities. Even though one of the purposes of both partnership schemes was to reach beyond these boundaries and inform or support policy making at other levels of government, we found no intention to blur respective boundaries. Therefore, and since politically defined regions, provinces or territories play defining roles in both partnership schemes, we would characterise them not as post-scalar but as inter-scalar, inter-level or, as expressed in the title of the paper, as multi-level arrangements that link a variety of actors between undisputed levels of government. Since the Canadian RACs were established mainly because national policy-makers perceived those at the provincial and local levels in need of adaptation capacities and actions, the collaboratives not only built on but even reinforced the idea of a 'political division of labour' between governmental levels as outlined in section 1. As noted above, some regional actors criticized this approach as paternalistic, and it may be one of the reasons why only one of the three analysed RACs continued their operations after 2012.

Overall, the regional adaptation partnerships analysed here represent an innovative governance approach that relies mainly on network governance between different societal spheres and levels of government, but they do not represent a new sphere of authority outside the state. Instead of blurring or destabilizing governmental levels they complement (and perhaps even stabilise) them with multi-level interactions.

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