



Universität für Bodenkultur Wien
Department für Wirtschafts- und
Sozialwissenschaften

Innovation in climate adaptation policy: are regional partnerships catalysts or talking shops?

Anja Bauer & Reinhard Steurer

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Bestelladresse / orders to:

Institut für Wald-, Umwelt- und Ressourcenpolitik
Universität für Bodenkultur Wien
Feistmantelstr. 4
A – 1180 Wien
Tel: + 43 – 1 – 47 654 – 4400
Fax: + 43 – 1 – 47 654 – 4417
e-mail: edith.hoermann@boku.ac.at

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Abstract

We analyze whether and how six regional partnerships catalyze innovations in climate adaptation policies in Canada and England. The relatively rare and underexplored adaptation partnerships are collaborative arrangements in which governmental, business, and civil society actors strive to facilitate adaptation to climate change. Representing new political spaces, partnerships are expected to produce more innovative policies than hierarchies do. We find that the partnerships catalyze policy innovations in three distinct ways: through collaboration among the partners, through scaling-up their activities beyond the partnerships, and by supporting national adaptation politics. However, the instrumental portfolio of the policy innovations is limited: It primarily comprises informational policies (e.g. guidelines), strategies, and plans (usually non-binding). Regarding innovation mechanisms, the analysis highlights the importance of collaboration and learning. Although there is a risk that partnerships will become talking shops, we conclude that, thus far, they support policymakers in tackling the challenges of an emerging policy field.

Keywords

climate change adaptation, regional partnerships, policy innovation, England, Canada

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1 Adaptation to climate change and the need for policy innovations

Over the past decade, adaptation to climate change has been added to the climate policy agenda around the world (Biesbroek et al. 2010, Rayner and Jordan 2010, Burton 2011, Ford and Berrang-Ford 2011). Adaptation to climate change is understood as ‘adjustment in natural or human systems in response to actual or expected climatic changes or their effects, which moderates harm or exploits beneficial opportunities’ (IPCC 2007). The unprecedented pace of the current changes in the world’s climate and the increasing complexity of societies suggest that autonomous, self-regulated societal adaptation alone is not sufficient and that governments have to play an active role in planned and anticipatory adaptation (Cimato and Mullan 2010). Public policies on climate change adaptation should be concerned with raising awareness for the present and future impacts and vulnerabilities, building adequate capacities (in society and government) to cope with the impacts, helping to put already existing adaptation capacities into action (Adger et al. 2005, Nelson et al. 2007), resolving conflicts of interest that have been reinforced by climate change, and reducing the external effects that are triggered or reinforced by climate change (Cimato and Mullan 2010). However, as with climate change mitigation, respective measures do not fit into a single policy domain. Climate change impacts concern various public and private actors, affect diverse sectors, and cut across different levels of government, from the international to the local level (Galarraga et al. 2011, Hallegatte et al. 2011, Bauer et al. 2012). Adaptation is further challenged by a high degree of uncertainty and a widespread lack of awareness (Hulme et al. 2007, Bauer et al. 2012, Clar et al. 2013).

In recent years, an increasing number of governments have started to mainstream adaptation into policies horizontally across sectors and vertically across levels of government (Biesbroek et al. 2010, Burton 2011, Ford and Berrang-Ford 2011, Bauer et al. 2012). They employ a range of governance approaches, including national adaptation strategies, coordination bodies, reporting schemes, and stakeholder consultation (Biesbroek et al. 2010, Burton 2011, Wolf 2011, Bauer et al. 2012). A comparatively rare and underexplored governance approach is adaptation partnerships – collaborative arrangements in which actors from government, business, and civil society strive for common goals in a particular issue area (Glasbergen 2007, pp. 1f, Van Huijstee et al. 2007, p. 77), such as adaptation to climate change. Adaptation partnerships have been established at international, national, and subnational levels. At the international level, partnerships primarily exist between developing and developed countries.¹ At national and subnational levels, most partnerships are public-private and have either a comparatively narrow thematic focus (for instance, on insurance issues in Germany and Norway) or limited spatial scope (for instance, the Rotterdam Climate Initiative in the Netherlands²). Comprehensive regional partnerships that address multiple sectors as well as domains and that have been established throughout the country have only emerged in Canada and England (Bauer and Steurer 2014).

We analyze and compare the Canadian and English partnership schemes. In the next section, we portray partnerships as collaborative governance approaches and introduce the dimensions and categories to analyze them, thereby combining the scholarly literature on partnerships and policy innovations, before explaining the case selection and introducing the methods and cases. Then, by presenting the main activities and outputs of partnerships, we explore three ways in which the partnerships act as catalysts for policy innovations, before reflecting the findings against the background of the partnership approach in general, the differences in the two partnership schemes, and the peculiarities of adaptation policymaking. We conclude with a brief discussion on how adaptation partnerships relate to traditional governmental

¹ For example the Adaptation Partnership co-chaired by the United States, Spain, and Costa Rica (see <http://www.adaptationpartnership.org/> [Accessed July 29, 2013]).

² See <http://www.rotterdamclimateinitiative.nl/en/english-2011-design> [Accessed January 16, 2014].

steering and questions for future research. Our analysis provides one of the first accounts of policy innovation in the emerging field of climate change adaptation. By highlighting the potentials and limitations of innovating adaptation policies via partnerships, we enrich the scholarly literature on partnerships as innovation-friendly governance, in particular, and on network-based political spaces, in general.

2 Partnerships and policy innovation

With the rise of network-like forms of governance in the last two decades, partnerships have become increasingly popular, in particular in complex and fragmented policy domains such as sustainable development (Glasbergen 2007, Van Huijstee et al. 2007, Pattberg et al. 2012, Steurer 2013) and climate change (Benson 2010, Forsyth 2010, Hoffmann 2011). Partnerships are collaborative arrangements in which partners from multiple levels and societal domains share re-sources and risks in non-hierarchical interactions to achieve mutual benefits and synergies (Glasbergen 2007, p. 16, Lascoumes and Le Gales 2007, p. 13, McQuaid 2010, p. 128). Beyond collaborative benefits for individual partners, partnerships can also serve public interests and 'de-liberate societal change' (Glasbergen 2011, pp. 4f). Partnerships are expected to be more efficient than traditional (usually hierarchical) governance approaches or policy instruments, improve the legitimacy and credibility of policies, policymakers, and/or the image of businesses (Sorensen and Torfing 2009, Bache 2010), and lead to more innovative solutions not only in governmental policies, but also in the societal and business domains (Sabel 1996, Huxham and Vangen 2005, Van Huijstee et al. 2007, Steijn et al. 2011).³

Based on the latter expectation, we ask whether and how partnerships serve as catalysts for adaptation policy innovations in the governmental domain. Following Glasbergen (2011) we assume that partnerships can contribute to policy innovations through internal and external inter-actions. First, partnerships are expected to provide collaborative advantages for their partners, i.e. 'something has to be achieved that could not have been achieved by any one of the partners acting alone, but is in their interest' (Glasbergen 2011, p. 5). Accordingly, we explore how partnership activities catalyze policy innovations among their partners. Second, we ask if and how partnerships contribute to policy innovations when interacting with their external environments. As Glasbergen (2007, pp. 11f) notes, many partnerships aim to enhance their impact by scaling-up the scope of their activities beyond core partners.

When working out the policy innovations catalyzed by the partnerships, we ask what types or products they represent, and what mechanisms and processes led to them. Policy innovations as a product are either a policy that is entirely new to the world (i.e. policy invention) or 'a program that is new to the government adopting it' (i.e. diffusion) (Walker 1969, p. 881, Berry and Berry 2007, p. 169, Jordan and Huitema 2014). Since the analyzed adaptation partnerships target local and regional authorities, and the basic ideas on how to tackle adaption usually already exist elsewhere, our analysis is primarily concerned with diffusion of policy innovations rather than their invention. Moreover, while we recognize that policy innovations can concern ideational aspects, such as policy goals or paradigms, and instrumental aspects, such as instrument choices, settings, or calibrations (Hall 1993, Howlett and Pung 2014, Jordan and Huitema 2014), we focus on the instrumental dimension. Instrumental innovations include new instruments that have not been applied before in a sector, region, or local authority and changes in existing instruments that take climate change adaptation into account. We further distinguish between comparatively soft policies, including informational instruments (such as guidelines, brochures, campaigns, studies), partnering instruments (such as voluntary or negotiated agreements), soft fiscal instruments (mainly subsidies), as well as non-binding strategies and plans, on the one hand, and hard instruments such as binding laws, regulations, and spatial plans, on the other hand (Steurer 2013).

³ For more critical assessments, see (Geddes 2006, Lascoumes and Le Gales 2007, Sorensen and Torfing 2009, Bache 2010, Börzel 2011, Glasbergen 2011).

Regarding the mechanisms and processes leading to policy innovations, the literature on partnerships emphasizes that private and public benefits (including innovative solutions in policy-making) emerge primarily because of increased collaboration that bases on non-hierarchical, voluntary interactions, joint resource commitments and shared responsibilities (Glasbergen 2007, Van Huijstee et al. 2007, McQuaid 2010, Pattberg et al. 2012). Sharing resources (including knowledge, experience, and skills) and (financial) risks among a broad variety of actors is expected to allow for creativity, experimentation, and learning (Huxham and Vangen 2005, Glasbergen 2007, Van Huijstee et al. 2007, McQuaid 2010). Potential risks are related to different philosophies and interests of partners, unequal power relations among them, and the blurring of (government) responsibilities (Van Huijstee et al. 2007, p. 83, McQuaid 2010, pp. 134ff). Regarding responsibilities, a crucial question is what role governments play in partnerships. While partnerships can represent 'governing without government' (Rhodes 1996), governments can also be key partners that initiate and finance partnerships, set the rules of collaboration, and cast a shadow of hierarchy (Glasbergen 2007, p. 16, Börzel 2011, p. 57).

Concerning whether and how partnerships lead to innovations beyond their immediate scope by scaling-up their activities, diffusion studies (see Berry and Berry 2007, Shipan and Volden 2008, Heinze 2011) suggest three mechanisms. First, public authorities can learn from or socialize each other; ideationally, they can adopt norms, preferences, or ideas from others (Graham et al. 2013), and instrumentally they can adopt policy instruments that are perceived to be successful elsewhere (Berry and Berry 2007, p. 171, Shipan and Volden 2008, pp. 841f). Second, many policy innovations are triggered by (economic) competition between public authorities, in particular when policy innovations in one authority have positive or negative spillover effects on others (Berry and Berry 2007, p. 171, Shipan and Volden 2008, p. 842). Third, one actor (usually national government) can impose or incentivize a policy innovation at other (usually sub-national) levels of government, e.g. through grants or subsidies (Shipan and Volden 2008, p. 843, Graham et al. 2013). Since communication and exchange between various actors are important in all three diffusion mechanisms (Heinze 2011, Graham et al. 2013), we explore to what extent partnerships serve as intermediaries.

3 Methods and cases

To study the role of partnerships in adaptation policy innovation, we employ an embedded case study design. We examine the regional adaptation collaboratives in Canada and the regional climate change partnerships in England because they are the only comprehensive partnering approaches that address adaptation issues for several sectors in regions across whole countries. The Canadian scheme consists of six and the English scheme of nine partnerships. In order to allow for in-depth qualitative analysis, we selected three partnerships per country (see Tables 1 and 2). They represent critical cases for the respective partnership scheme in the sense that they are comparatively old and active. The activity level of the English partnerships was assessed based on their online-documentation of projects, publications, and events. Since the Canadian partnership scheme was launched only in 2009, we selected those partnerships that started first and had implemented the most projects at the time of our investigation. In both countries, our selection was confirmed by national/federal representatives involved in the partnership scheme. Since the selected partnerships represent critical cases that permit 'logical deductions of the type' (Flyvbjerg 2006, p. 230), we assume that if policy innovations cannot be found here it is unlikely that they could be found in other, less active partnerships.

We collected the data by means of desk research and 20 semi-structured interviews (ten by telephone for Canada and ten face-to-face for England). The interviews were conducted between May and July 2011 with national/federal policymakers from the Department for Environment, Food and Rural Affairs (Defra) in England and Natural Resources Canada (NRCan), the managers of the partnerships and key partners. Since we guaranteed the interviewees anonymity to allow for (self-)critical responses, they are referred to

by consecutive, but randomly assigned, numbers (i.e., I-1 to I-20). The interviews were recorded, fully transcribed, and analyzed qualitatively along the aspects described in the previous section.

The Canadian and English partnership schemes are similar in their regional approach but differ with respect to their history and governance. Whereas the Canadian RACs were introduced top-down by Natural Resources Canada (NRCan), were government-led, and had a limited lifespan of three years (2009-2012), the English partnerships evolved bottom-up, are stakeholder-led, and do not have an expiration date.

3.1 The Canadian collaboratives

In 2009, Natural Resources Canada created the Regional Adaptation Collaboratives Program (RAC Program) that established six Regional Adaptation Collaboratives (RACs) across Canada for the period 2009-2012. The program was financed with C\$ 30 million by the Clean Air Agenda. The overall aim of the program was to 'catalyze coordinated and sustained adaptation planning, decision-making and action, across Canada's diverse regions' (Natural Resources Canada 2011). Since the RAC Program represents an innovative cornerstone of Canadian adaptation policymaking, the following characterization of the Canadian RACs can also be read as the story of a federal adaptation policy innovation per se.

When NRCan launched the program, it informed policymakers and stakeholders in the designated six regions about the opportunities and requirements. Leading policymakers in the regions identified and contacted further partners and sketched out priorities, themes, and projects based on the requirements defined in the RAC program. Starting with the RAC British Columbia in September 2009, the six collaboratives were set up as partnerships between the federal government, provinces, territories, communities, businesses, academia, and civil society organizations. The regional partners added 50%-match-funding (either as monetary or in-kind contributions) to the federal subsidies by the RAC program. Although non-state stakeholders played a role, the RACs were predominantly steered and coordinated by regional administrations in collaboration with NRCan. Public decision-makers in local and regional authorities were also the main target groups.

We analyzed the RAC British Columbia, RAC Prairies, and RAC Atlantic (see Table 1). They differed in their regional scope, number and types of partners involved, and themes and scopes of activities. While the boundaries of RAC British Columbia were identical with those of the province, RAC Prairies and RAC Atlantic encompassed three and four provinces, respectively. While RAC Prairie involved 14 partners (mainly provincial representatives), RAC British Columbia included 18 and RAC Atlantic 66 partners (mainly municipal and provincial representatives). Regarding themes and activities, RAC Prairie primarily focused on provincial water management while the other collaboratives primarily addressed municipal activities. The RACs organized their activities in predefined projects that revolved around informing decision-makers on how to address adaptation to climate change.

Table 1: Key characteristics of the three Canadian RACs

| | Preparing for Climate Change: Securing British Columbia's Water Future (RAC British Columbia) | Prairie Regional Adaptation Collaborative (RAC Prairie) | Atlantic Climate Adaptation Solutions Project (RAC Atlantic) |
|-----------------------|---|---|---|
| Period | 2009 –2012 ⁴ | 2010 -2012 | 2009-2012 |
| Funding | NRCan, Match funding by partners \$6.6M - \$8.2M | | |
| Managing organization | 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) |
| Provinces | British Columbia | Alberta, Manitoba, Saskatchewan | New Brunswick, Prince Edward Island, Newfoundland and Labrador, and Nova Scotia |
| Partners | 18 partners: provincial departments & agencies, municipalities, aboriginal organizations, industry, academia, NGOs, NRCan | 14 partners: provincial departments, agencies, associations, NGOs, NRCan | 66 partners: provincial departments, agencies/associations, municipalities, aboriginal organizations, businesses, academics, NGOs, NRCan, other federal departments |
| Working areas | Water allocation and use Forest and fisheries management Flood protection Community adaptation | Water supply and demand Drought and flood planning Forest and Grasslands Ecosystems | Community planning for flood and coastal areas Groundwater protection Enhancing capacity of practitioners |
| Website | http://www.fraserbasin.bc.ca/programs/bcrac.html | http://www.parc.ca/rac/ | http://atlanticadaptation.ca/ |

Replicated from Bauer and Steurer (2014)

3.2 The English regional climate change partnerships

In England, nine regional adaptation partnerships emerged in a decentralized way in the early 2000s. They were triggered by the United Kingdom Climate Change Impact Programme's (UKCIP) initiative to conduct regional scoping studies on the climate change impacts across the UK in 1999. Following the scoping studies, regional actors (usually the former regional authorities and mayors of large cities) institutionalized their cooperation in formal partnerships with the aims to further investigate regional and local impacts of climate change and to advise on how to address them (UKCIP 2011, p. 62). From 2008 onwards, Defra supported the partnerships through its Adapting to Climate Change Programme (ACC), a commitment that was renewed in 2011 and 2012 but with decreasing budgets (UKCIP 2011, p.62).⁵

⁴ The RAC British Columbia was renewed for a second phase from 2012-2015.

⁵ Since 2012, financial support is administered through the Environment Agency.

Between 1999 and 2010, the regional representatives were the main partners alongside local authorities, public service providers and agencies, research organizations, civil society organizations and businesses. Due to the omission of the regional administrative level and other austerity measures by the British government since 2010, several partners either disappeared or had to cut back their activities. Today, key partners are local authorities, public agencies, research organizations, public service providers, non-governmental organizations and businesses (Boyd et al. 2011). Overall, non-state actors play significant roles as core partners (i.e. with governing roles) and as important target groups. The regional partnerships exchange information and cooperate with each other in Climate UK (previously called UK Interregional Climate Change Group).

Table 2: Key characteristics of the three English partnerships

| | Climate SouthWest | Climate South East | London Climate Change Partnership |
|-----------------------|--|---|---|
| Period | Since 2001 | Since 2000 | Since 2001 |
| Funding | Regional partners Defra (since 2008) Other sources (e.g. EU funding) | | |
| Managing organization | Environment Agency (SW) | Community of interest company | Greater London Authority |
| Core partners | UKCIP, Environment Agency, businesses (public service providers), Defra, academics, Natural England | Local authorities, UKCIP, businesses, Environment Agency, academics | Greater London Authority, local authorities, Defra, UKCIP, businesses, associations, Environment Agency |
| Working areas | Agriculture and Forestry Biodiversity Business and utilities Housing and construction Local government Tourism Transport | Communications Planning Business & economy Communities Emission Monitoring Biodiversity Tourism | Health and social care Weather stations Urban greening Retrofitting Flooding Heat Monitoring Local Expertise |
| Website | http://climatesouthwest.org/ | http://www.climatesoutheast.org.uk/ | http://climatelondon.org.uk/ |

Replicated from Bauer and Steurer (2014)

The three English partnerships presented here are Climate South East, Climate SouthWest and the London Climate Change Partnership (LCCP) (see Table 2). The partnerships are operated by host organizations with different legal statuses and have diverse membership structures. The English partnerships organize their activities in working groups concerned with a variety of themes encompassing issues such as water management, tourism, the built environment, businesses, and planning. In addition to conducting specific projects, the working groups primarily operate as networking and information sharing platforms.

4 The catalyzing roles of partnerships

Interviewees in both countries recognized the partnerships as important governance approaches to advance climate change adaptation and expected them to induce and influence adaptation decisions of private and public actors. As a representative from NRCan put it,

‘we needed to have a program that actually started to incite adaption decision-making. [...] Just before that program was designed we were audited by our Auditor General of Canada, and one of the comments was: [...] “you’ve done a lot of work building knowledge and building awareness but you haven’t really kind of shown that you’ve made any difference in terms of actual adaptation decisions.” [...] So what we needed was a program that really went beyond just talking about it, a program that would actually get to the point where decisions were proposed’ (I-1).

Likewise, the English partnerships (here exemplarily Climate SouthWest) aim

‘to raise awareness of the impacts of climate change, inform and advise on the challenges and opportunities of climate change in SW England, and develop practical adaptation responses [...] across a number of priority sectors. We influence the strategies and plans of key partners and work with stakeholders to enhance the region’s resilience to the impacts of climate change’.⁶

How far do the six partnerships live up to these aspirations and catalyze policy innovations for climate change adaptation? Drawing on the distinction between internal and external interactions, we identify three ways in which partnerships catalyze policy innovations: first, internally through collaboration in projects and working groups; second, through diffusing knowledge and policy innovations externally to decision-makers beyond the partnerships; and third, also externally, through consultation of national adaptation policy formulation.

4.1 Catalyzing innovations through collaboration

The primary way partnerships catalyze policy innovations is through internal collaboration in projects and working groups. The two main types of policy innovations resulting from collaboration are informational policies enacted by the partnerships and (multi-)sectoral strategies and plans to be adopted and implemented in partnering authorities (see Table 3).

Partnerships in both countries are among the first and main venues where a broad variety of informational, educational and outreach policies are developed at regional and local levels (Table 3, lines 1-3). These policies are designed to build a knowledge base, raise awareness for and provide guidance about climate change, its regional, local and sectoral impacts, and respective adaptation options. Despite the ambition of the RAC program to advance adaptation ‘from knowledge to action’, the collaboratives (at least in their beginnings) were mostly occupied with risk and vulnerability assessments, modeling and scenario development because local and regional decision-makers felt a need for targeted, downscaled information about regional and local vulnerabilities. Likewise, the English partnerships engage in local assessments (e.g. on health impacts) and broader regional impact studies, for instance in the context of the ‘First UK Climate Change Risk Assessment’ (Defra 2012). In addition, they publish case studies on adaptation activities already taking place in various sectors. Assessments, case studies and scenarios frequently serve the development and testing of decision-support and policy guidance tools such as risk assessment tools, checklists for planners and new or revised guidelines. Partnerships in both countries further engage in various outreach and educational activities such as conferences, workshops, and (online-) trainings.

⁶ See <http://climatesouthwest.org/about> [Accessed November 12, 2013].

Table 3: Examples of policy innovations emanating from partnerships

| | | Canadian RACs | English RCCPs |
|---|---|--|--|
| Information, education, and outreach | Information | <ul style="list-style-type: none"> • Report on ‘Anomalous coastal changes identified in rate of change analysis in Prince Edward Island’ (RAC Atlantic) • Floodplain mapping study (RAC BC) • Assessment of the vulnerability of Prairie grasslands to climate change (RAC Prairie) | <ul style="list-style-type: none"> • South East climate threats and opportunities research study (Climate South East) • Adapting to climate change: local authority case studies (Climate SouthWest) • Wild weather warning: a London climate impacts profile (LCCP) |
| | Decision-support and guidance | <ul style="list-style-type: none"> • Community vulnerability assessment tool tailored to small, rural communities (RAC Atlantic) • Climate change adaptation guidelines for sea dikes and coastal flood hazard land use (RAC BC) • Climate change adaptation framework manual (RAC Prairie) | <ul style="list-style-type: none"> • Climate change and tourism in the south of England: Adaptation guide (Climate South East) • Adapting to climate change: a checklist for development (all) • Adapting to climate change impacts: a good practice guide for sustainable communities (LCCP, Climate South East) |
| | Outreach | <ul style="list-style-type: none"> • Conference ‘Advancing decision-making in climate adaptation’ (RAC Atlantic) • Webinar for local governments (RAC BC) • Adaptation and Resilience Forums (RAC Prairie) | <ul style="list-style-type: none"> • Trainings on UKCIP scenarios (all) • Participation in climate change week (Climate SouthWest, LCCP) |
| Regional and local strategies and plans | Adaptation focused strategies and plans | <ul style="list-style-type: none"> • Municipal climate change action plans (RAC Atlantic) • Climate change adaptation plan in the District of Saanich (RAC BC) • Provincial drought strategy (RAC Prairie) | <ul style="list-style-type: none"> • Chichester interim statement on planning and climate change (Climate South East) • Managing risks and increasing resilience. The Mayor’s climate change adaptation strategy (LCCP) |
| | Mainstreaming adaptation | <ul style="list-style-type: none"> • Municipal land use planning and infrastructure design (RAC Atlantic) • Management plan for the San Jose watershed (RAC BC) | <ul style="list-style-type: none"> • South East Plan (Climate South East) • Retrofitting program (LCCP) |

Apart from informational policies, partnerships contribute to the formulation of sub-national strategies and plans among their partners. In contrast to many informational policies enacted by the partnerships themselves, these policies are adopted and implemented in the respective partnering authorities. They encompass either new policies such as first-generation regional or municipal adaptation strategies, or aim to mainstream adaptation in existing regional and municipal planning documents and public investment decisions (Table 3, lines 4-5). In Canada, many RAC projects revolved around specific planning processes in communities or provinces, such as community, infrastructure, and flood protection planning and climate change action plans in RACs Atlantic and British Columbia, or provincial water conservation strategies in RAC Prairie. Similarly, the English partnerships try to ‘be involved as much as [they] can in local planning’ (I-12), for instance in building programs or community flood plans. Before the regional administrative level was abolished in 2010, the partnerships played an important role in the adaptation mainstreaming of regional strategies. The LCCP still serves as the primary consultation and refining mechanism for the London climate change adaptation strategy.

Regarding policy innovation as a process, we confirm the expectation that partnerships rely on three related mechanisms: collaboration, learning, and experimentation; actors with similar adaptation needs and interests but also with complementary know-how and resources work jointly in organizational bodies, working groups and projects. The partners represent a range of diverse organizations from different societal domains and levels of government, in particular local and regional authorities. In some partnerships the latter are even core partners with governing roles. When political authorities are core partners, many partnership activities are closely intertwined with formulating policies in partnering authorities. Interviewees highlight trust and good personal relations to be crucial assets for collaboration in partnerships. Many interviewees stated that they have learned from others by exchanging information, experiences and ideas. Learning is usually perceived as a process through which not only existing ideas are exchanged but also new ideas are generated. Partnerships further facilitate experimentation because their projects provide a protected environment that helps the partners to explore what works, how and why. Within the English partnerships, for example, UKCIP has experimented with a range of assessment and guidance tools in collaboration with local authorities and other organizations (for instance, on the Local Climate Impact Profile LCLIP).

On the other side, partnerships are also confronted with a range of challenges. First, some partners are well aware of the risks of climate change and have already undertaken actions independently. This raises the question to what extent the adaptation policies facilitated by partner-ship activities would have happened anyway. Second, especially some English partners were not primarily interested in learning from others but rather in disseminating their experiences (I-15). Third, some interviewees indicated that it is often difficult to engage those decision-makers who are not yet familiar with climate change adaptation. Finally, the interests and resources of partners change with external circumstances over time. In Canada, several policy innovations were intended but not realized during the 3-year program period, and their implementation remains uncertain. In RAC Prairie, for example, 'significant portions of the Water Management Plan [of Alberta] were not undertaken' due to lack of financial and human resources (J. H. Archibald Consulting 2011, p.18). With the exception of the London area, the English partnerships had to cope with the abolition of one of their core partners and potential policy innovators: the regional authorities. Other public authorities in England have experienced extensive cutbacks in finances and staff and had to reduce their partnering activities. Consequently, the English partnerships have shifted their focus toward the private sector and, with some exceptions, are confined to informational policies.

4.2 Catalyzing policy innovations through scaling-up

Besides policy innovations as collaborative benefits, partnerships expect that their activities unfold knock-on effects far beyond their immediate scope: 'these types of tools or learnings that we produce may be of use to people all over the world' (I-2). Consequently, partnerships aim to 'scale-up' their activities by diffusing their innovations to non-partners. By doing so, they hope to raise awareness for climate change adaptation as a new policy challenge and objective. More specifically, guidance and assessment tools are expected to travel to a variety of local and regional authorities to be replicated in their specific contexts. Similarly, the strategies and plans (re)formulated within the partnerships are understood as blueprints for other political authorities to adopt similar policies.

When diffusing their activities, the partnerships strongly rely on learning. On the one hand, partnerships expect that other authorities learn by observing successful policies implemented by partners: 'Some other local governments that weren't part of the RAC are also being influenced just because they are talking to their neighbors [...], but that's anecdotal, it's not being documented' (I-8). On the other hand, partnerships actively foster learning. When one or more of their partners succeed in mainstreaming adaptation into sectoral policies, they often aim to diffuse this success to other decision-makers with the help of their own informational policies. The English case studies on selected sectoral adaptation activities are a prime example, and so are the numerous awareness raising and outreach activities (such as workshops, forums, trainings, or newsletters) that target a variety of local and regional decision-makers. A Canadian

interviewee highlighted that the first event of a stakeholder exchange forum 'was very successful; we got some of them [public and private decision-makers] coming to terms with the fact that climate change impacts are real and that we need to make adaptation decisions' (I-6). Since climate change adaptation is a new policy issue, scaling-up activities are obviously at first concerned with pushing adaptation policies onto the agendas of a broad variety of public authorities.

As the interviewee noted, insights on successful diffusion exist only anecdotally. While scaling-up effects are difficult to pinpoint, some challenges partnerships face become apparent. First, the 3-year life of the Canadian RACs raises doubts about their ability to diffuse good practices. Since the collaboratives sometimes struggled to finalize their projects, it is unlikely that they had the time or resources necessary to widely disseminate their outputs. Second, diffusion efforts are hampered by a general lack of awareness for and sometimes even strong skepticism toward climate change among target groups in both countries. Whether partnerships succeed in shaping problem perceptions and policy goals among unaware and skeptical policymakers puzzles partnership managers. While they are under pressure to provide evidence about the effectiveness of the partnerships in influencing a broad variety of decision-makers (not only core partners), they struggle with the fact that this kind of influence is difficult to trace. One interviewee (I-17) raised the concern that the partnerships in England are at risk of turning into 'pure talking shops'.

4.3 Catalyzing innovations through consultation

In addition to diffusion of policy innovations to a wider group of sub-national decision-makers, partnerships can also play a role in formulating national policies. In particular, the English partnerships have provided inputs to the formulation of the National Adaptation Programme, and supported the implementation of performance indicator NI188.⁷ Since these policies are not formulated within the partnerships, their roles differ from those described above: instead of innovating policies through collaboration, the partnerships (aim to) contribute to national adaptation policies by providing insights on regional and local needs as well as experiences. For this purpose, representatives of the partnerships and federal/national ministry representatives (NRCan and Defra) in both countries meet several times a year and maintain frequent contact in between. During the period of the RAC program, NRCan organized joint meetings with the collaboratives three to four times a year.⁸ More recently, NRCan has institutionalized regional and local advice based on the work of RACs in an adaptation platform. In England, Defra joins the regular meetings of the partnership umbrella group Climate UK. The consultative role of the partnerships is further institutionalized in the Local Adaptation Advisory Panel (LAAP), a coordination body in which the partnerships represent the perspectives of their local authorities vis-à-vis Defra.

Interactions between partnerships and national governments are characterized by consultation and learning. National policymakers in both countries highlight the importance of local and regional feedback. As one English interviewee put it,

'you can sit in a room here and make something out that is not going to work in the real world or we really upset people [...], they 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, so this group has a role in checking out policies and giving advice and giving feedback on how things are working' (I-11).

Representatives of the English partnerships uniformly agree that Defra takes their inputs seriously. In Canada, the relationship with NRCan was also predominantly described as good and helpful. However, the joint meetings rather served the assistance of and exchange between the collaboratives and some

⁷ National Indicator 188, measuring the progress of local authority in adaptation action, was part of the Local Government Performance Framework from 2008 to 2011. Thereafter, Defra used the indicator to support local authorities on a voluntary basis.

⁸ Although NRCan is an official partner in all the collaboratives, we conceptualize the interaction as external, because it does not take place in actual partnership work.

interviewees felt that federal representatives showed limited interest in incorporating their perspectives into national policymaking: 'it is a top down view of the world and it's interesting that again if you look at the program criteria it's not in the cards that this work would influence federal decision-makers' (I-7). While we found that the federal RAC program shaped the activities of the Canadian partnerships, we encountered no indications of influence of the latter on national adaptation policies. It seems that the dependence of RACs on federal funding limited their ability to position themselves as independent political actors toward the federal government.

5 Discussion and conclusions

In this concluding discussion we explore how the activities of the six regional adaptation partnerships in Canada and England have been shaped by the partnership approach in general, the different partnership schemes, and the peculiarities of the adaptation policy issue. By doing so, we contextualize both the governance of partnerships and the policy innovations that they entail. Finally, we explore the overarching question of how adaptation partnerships relate to state governance, and briefly discuss topics for future research.

5.1 How the partnership approach shaped policy innovation

Our findings demonstrate that the analyzed partnerships in Canada and England act as catalysts for policy innovations in three distinct ways. First, policy innovations emerge as collaborative advantages in the context of partnership projects or working groups, either as genuine 'products' of the partnerships or as benefits for single partners when they (re)formulate their policies. Second, in line with other studies (Glasbergen 2007, Van Huijstee et al. 2007) we found that partnerships strive beyond the collaborative advantages by scaling-up their activities through diffusion. Beyond these two well-documented roles of partnerships, we identified a third: partnerships can also provide targeted inputs to national politics and policy. They encounter national policymakers not as a gathering of diverse partners but as a homogeneous political actor (in particular in England). With regard to the types of policy innovations, we observed that partnerships catalyze in particular soft policy instruments, i.e. informational instruments and regional or local strategies and, in some cases, hard instruments such as land use plans; we did not find that partnerships innovate hard policy instruments such as regulations or taxes. These findings are consistent with other studies (Auld et al. 2011) noting that network-based governance arrangements (including partnerships) mostly engage in informational policies while regulatory and financial instruments remain the domain of traditional governmental actors.

Given the collaborative and non-hierarchical nature of partnerships, neither their central innovation and diffusion mechanisms (collaboration, experimentation and learning) nor their focus on soft policy instruments come as a surprise. However, the literature underexposes the challenges: the voluntary character of partnerships makes it difficult to address those who are not yet aware of climate change impacts, maintain engagement in the long-term, and secure and monitor actual policy change. Since the six adaptation partnerships run the risk of exchanging knowledge and experiences among those already familiar with adaptation, the line between catalyzing relevant policy innovations and becoming a talking shop is a thin one.

5.2 How different partnership schemes shaped policy innovations

The partnership schemes in England and Canada differ in various respects. The Canadian RACs originated (and partly operated) top-down, were government-initiated and dominated, closed in terms of membership, short-term (3 years) and project-focused. The English partnerships, in contrast, originated

bottom-up, are stakeholder-led with more diverse and open membership, are open-ended, long-term (more than 10 years) and network-focused. How did these differences influence the catalyzing roles of the partnerships?

First, because the Canadian RACs were co-funded by a federal program they had considerably more resources and implemented more projects in a shorter time than their English counterparts. Although the latter often struggled with a lack of resources, their bottom-up genesis helped them to secure longevity, and to scale-up their activities beyond their partners. In contrast, the long-term effects of the RACs and their projects remain questionable. Only one of the three analyzed collaboratives (RAC BC) continued after 2012, again under a federal funding regime. Second, the different roles national governments played in initiating and funding the partnerships also had effects on the substance of their activities. NRCan predefined the thematic and temporal scopes of the Canadian collaboratives. While NRCan viewed these specifications as a prerequisite for focused and coordinated action based on existing knowledge (I-1), some RAC representatives criticized that it limited their scope for adaptation policy innovations within their projects (I-6, I-7). Notably, NRCan did not foresee the importance of informational policies such as studies and assessments, at least not to the degree that they eventually dominated the activities of the collaboratives. In addition, the top-down approach limited the capacity of RACs to provide inputs to federal policymaking. In contrast, the English partnerships were independent from national policymakers for a long time, and receiving support from Defra since 2008 did not curtail their independence. This allowed them to strengthen their identity as autonomous actors vis-à-vis both national and local actors, enabling them to consult national adaptation policies more effectively than their Canadian counterparts.

5.3 How the characteristics of the adaptation policy field shaped policy innovations

Climate change adaptation is a relatively novel issue that is characterized by needs to coordinate policies across sectors and levels (Bauer et al. 2012), a plethora of uncertainties, and a lack of awareness among decision-makers (Urwin and Jordan 2008, Hallegatte et al. 2011, Clar et al. 2013). While these characteristics open many opportunities for policy innovations, they also affect them accordingly. Partnering outputs are dominated by informational policies not only because they are within the scope of the collaborative governance approach but also because they represent adequate responses to the manifold awareness and knowledge needs surrounding climate change impacts. As Hallegatte et al. (2011, p. 12) point out, the 'major responsibility of public authorities concerns the production and dissemination of information about climate changes, their impacts and how to adapt to them'. Similarly, multi-sectoral adaptation strategies that aim to mainstream adaptation across sectors and levels of government are widely promoted as reasonable responses to the cross-cutting characteristics of adaptation policymaking (see, for ex-ample, European Commission 2013) (the fact that national adaptation strategies usually struggle in fulfilling their coordination purposes is another story, see Casado-Asensio and Steurer forthcoming). The cross-sectoral character also explains why adaptation policy innovations often consist of changes in existing policies or planning documents (such as municipal emergency or spatial development plans) rather than genuinely new instruments. Since adaptation to climate change has been a new concern for most regional and local authorities, instrumental innovations are usually accompanied by an ideational dimension in the sense that they introduce adaptation as an important cross-sectoral policy objective in partnering authorities and beyond for the first time (Howlett and Pung 2014).

The peculiarities of climate change adaptation not only affect the types of policy innovation but also the diffusion mechanisms behind them. Given the cross-sectoral and multi-level characteristics of adaptation, partnerships represent an alternative to often infeasible hierarchical coordination of adaptation policies. Partnerships are expected to serve as important intermediaries strategic enough for national and regional policymakers and pragmatic enough for local representatives. On the downside, the long-term character of adaptation and respective time-lags limit the possibilities of learning because cause-effect relations and successes are difficult or impossible to observe. As Jordan and Huitema (2014) stated (citing Busch and

Jørgens 2012), policies tackling visible problems appear to travel faster than those addressing less visible, or in the case of adaptation less attributable, issues.

5.4 How partnerships relate to traditional forms of government

Since partnerships are often promoted as a response to limited problem-solving capacities of governments (Glasbergen 2007), the question arises how they relate to more traditional institutions of government (such as ministries) and their regulatory activities: are they substitutes, complements, competitors, or do they merge over time (Eberlein and Kerwer 2004, Jordan et al. 2005, Van Huijstee et al. 2007, Jordan and Huiteima 2014)? The partnerships analyzed here represent forums that allow policymakers and non-state actors to collaborate in non-hierarchical settings. Since public authorities play key roles in initiating, funding and governing the partnerships in both countries (although to a larger extent in Canada), they do not represent 'governance without government' but rather governance of public and private actors employing non-hierarchical ways and means of steering. Consequently, the activities of the partnerships either represent public policies that have been developed in collaboration with non-state actors, or they aim to support public policies (mainly strategies and plans) to be implemented either by their partners or by other governmental authorities. Thus, the majority of partnership activities neither complement nor substitute public policies but are (or lead to) public policies that are shaped collaboratively. However, since we also witnessed the decline of public engagement in the English partnerships, they may also stand for a tendency to shift responsibilities from state to non-state actors. Since the English partnerships play an increasingly important role in political discourses on 'community engagement' and 'big society', their role can also be criticized as 'hollowing out the state' (Geddes 2006, Lascoumes and Le Gales 2007, Bache 2010, Bauer and Steurer 2014).

What questions do we see for future research? Although the two partnership schemes analyzed here are the only ones that tackle adaptation comprehensively in a variety of regions, similar collaborative approaches exist in other countries. Prominent examples are collaborative research programs with a regional focus in the Netherlands ('Knowledge for Climate') and Germany ('KlimZug'). Like the partnerships in Canada and England, they also aim to coordinate adaptation between different societal domains, sectors, and levels of government, but, in contrast to the partnerships analyzed here, they are predominantly research-led (Bauer et al. 2012). Future research could compare these different governance approaches and explore questions of transferability, in particular between countries with different political cultures. A second question concerns the evolution of policy innovations as the adaptation policy field matures. Although the relatively soft instruments catalyzed by regional adaptation partnerships have to be acknowledged as relevant innovations in an emerging policy field, they may not suffice in future. Since the observed policy innovations hinge not only on the governance approach but also on the characteristics of the policy field, a question for future research is, how do adaptation partnerships change in concurrence with adaptation agendas? Although partnerships resemble a new governance approach that refrains from hierarchical steering, they do not have to be restricted to soft policy innovations. If binding adaptation laws, standards and plans become more common, partnerships could play a role in catalyzing them through collaboration in partnership projects, by diffusing good practices, and by informing national politics.

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