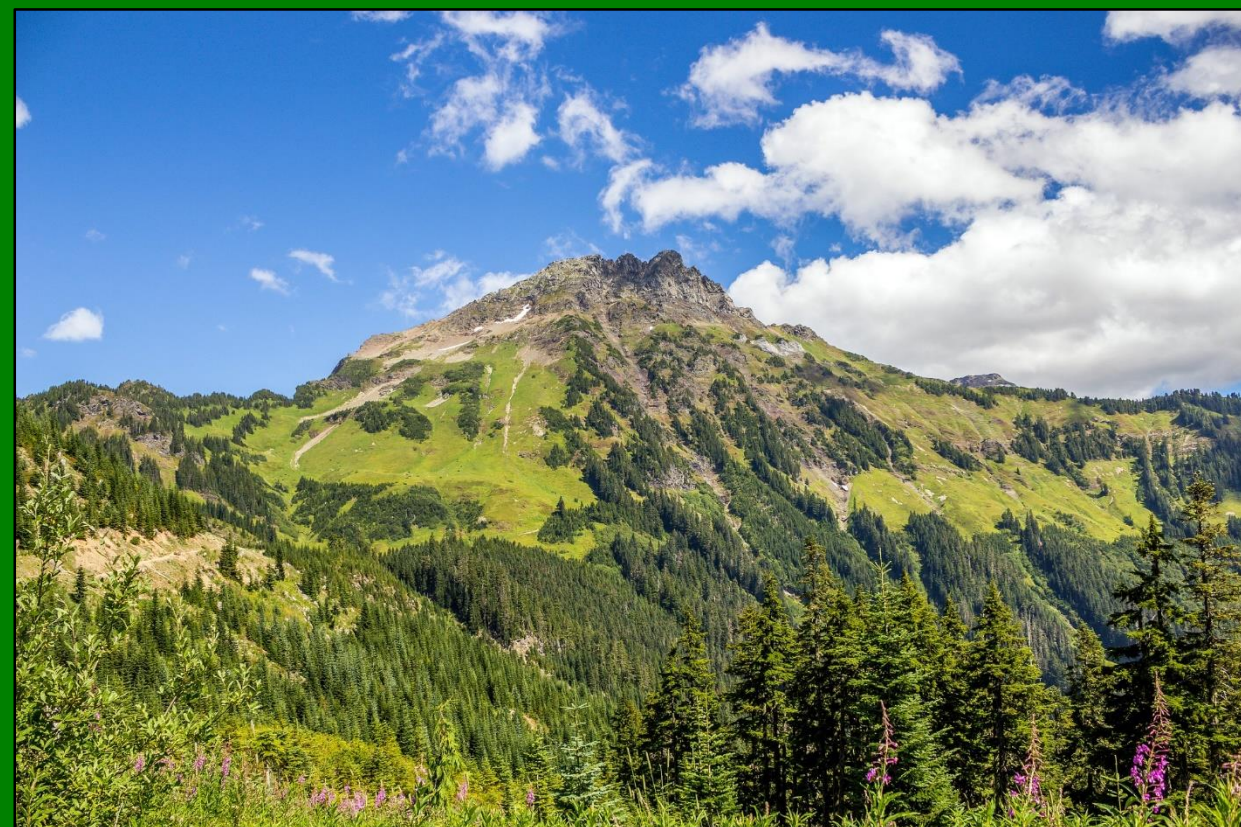


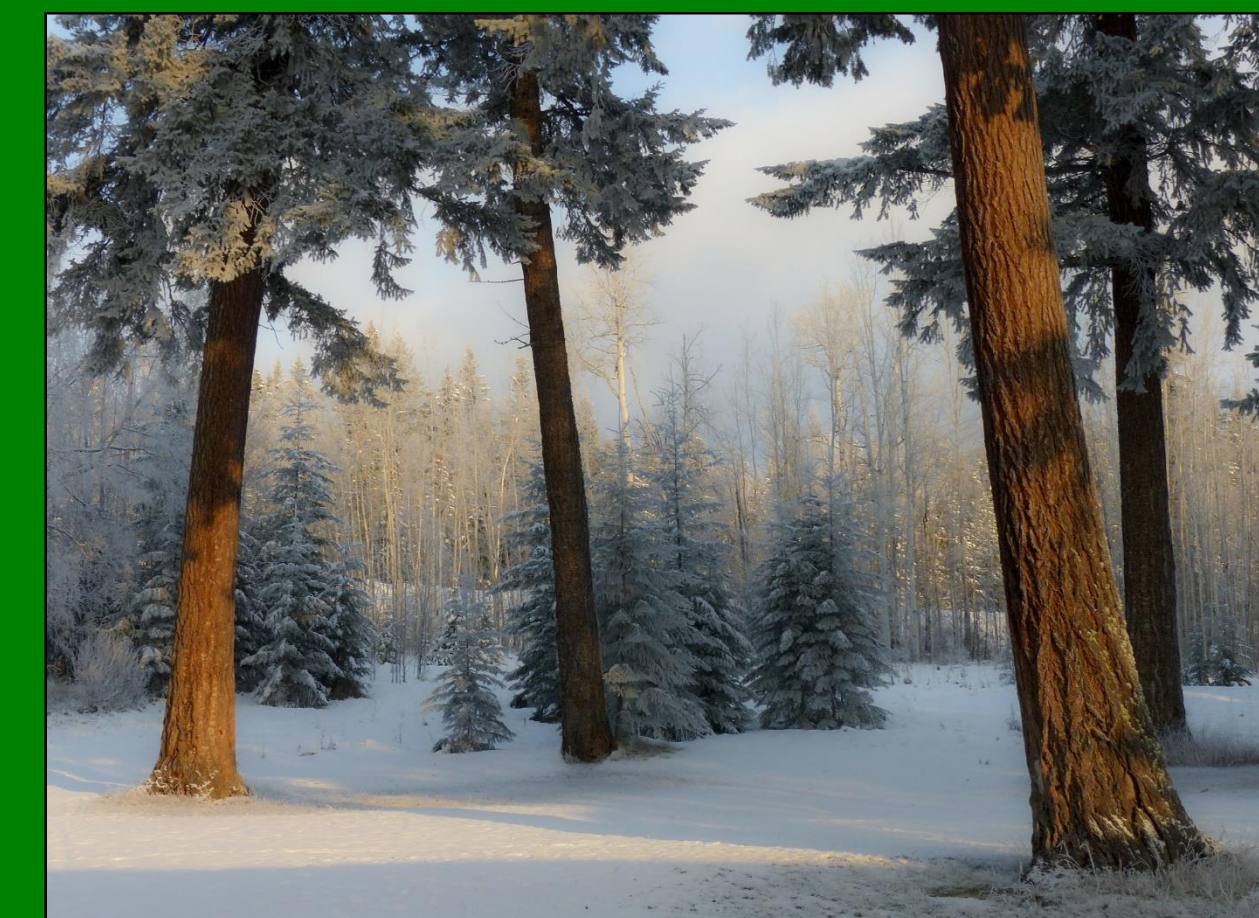
# Why Cities May Be the Most Appropriate Level of Government at Which to Pursue Climate Science–Policy Partnerships

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## Abstract

The urgency of climate change demands that we think strategically about the uptake of scientific knowledge by policy makers and, more broadly, the very relationship between science and public policy. Literature from the fields of political science and STS (science, technology, and society) tells us scientific knowledge is unlikely to influence policy decisions, at least not in any direct or immediate way, unless policy makers are involved in producing or requesting that knowledge. Consequently, science–policy partnerships (SPPs), which bring together researchers and policy makers (usually civil servants rather than politicians) for direct and regular co-productive exchanges, are a possible way forward, potentially improving mechanisms of uptake for evidence-informed policy. My research uses a social scientific and qualitative lens to examine existing cases of climate SPPs in Canada (with a particular focus on the province of British Columbia), including research organizations such as the Pacific Climate Impacts Consortium (PCIC) and the Pacific Institute for Climate Solutions (PICS) as participants. Findings demonstrate the possible benefits of SPPs for both science and policy, the factors that must be considered and understood in order to establish new SPPs, and the institutional design principles that may improve the effectiveness of SPPs. Most importantly, my research suggests that SPPs may be easiest to establish and most productive at the municipal or local level of government (i.e. rather than the regional or national level), which implicates cities as a crucial site for co-productive action on climate change.



## What Is a Science–Policy Partnership?

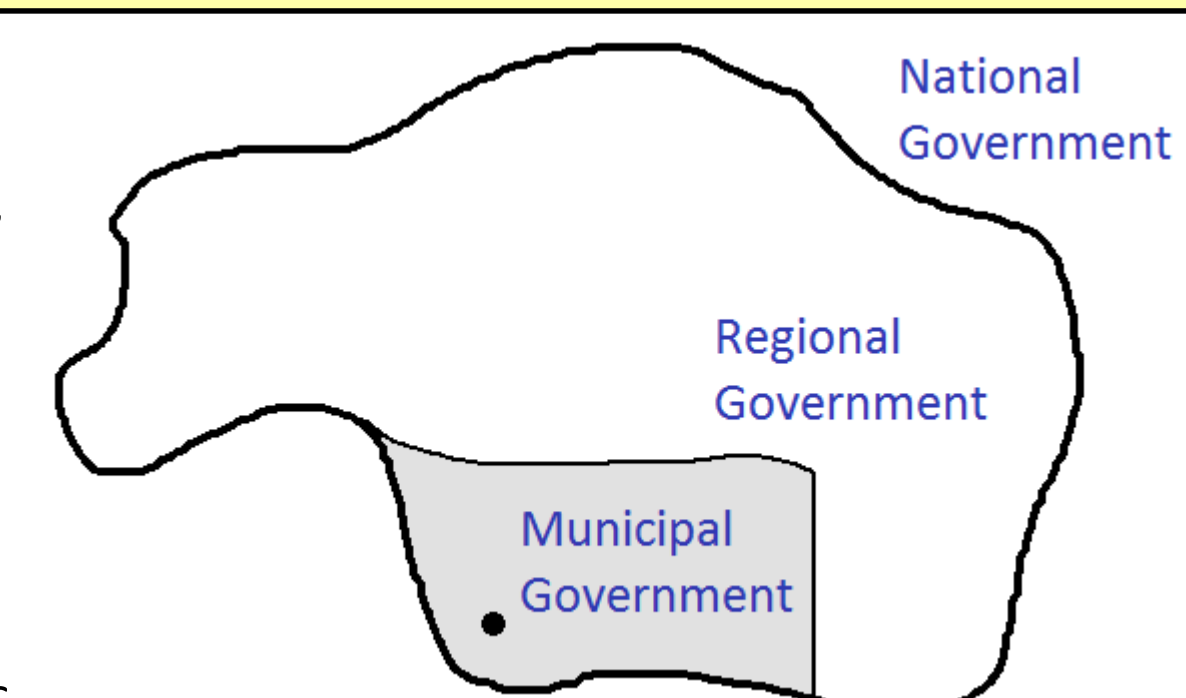
“A science–policy partnership (SPP) is any lasting, regular, collegial interaction between a specific ministry, branch, or agency within government and a specific department, research group, or institute within academia. They can be as simple as **informal monthly meetings** to exchange information about current policy priorities and contemporary research in a given field. For the sake of simplicity and focus, this definition sees university-based groups as the likely research partner, but similar arrangements may be possible with research organizations outside of academia (although think tanks and private research groups may bring their own complications).” (Richards 2017, p. 167)



SPPs are particularly important because they challenge how we think about the policy process. Academics tend to assume (even if just on an intuitive level) that policymakers will respond to their findings and recommendations. While policymakers do tend to agree that academic research is important, it very rarely has a direct and noticeable influence on policy decisions (Weiss 1977). An effective SPP accepts the reality that scientists and policymakers have **different priorities**. Instead, it focuses on cultivating the science–policy relationship itself, with an emphasis on learning, feedback, joint projects, and sharing resources (Richards 2017).

## What Is Multi-Level Governance?

A country's constitution often specifies which policy sectors fall under the jurisdiction of which level of government (e.g. Canada's federal government has law-making authority for foreign affairs and commerce, while provincial governments are responsible for natural resources and municipalities). However, the environment is still a relatively new sector, and it is not always clear which section should have authority, not to mention that climate change itself cuts across many sectors. In such situations, we must turn to multi-level governance (MLG). This can mean specifying new, distinct responsibilities for each jurisdiction to avoid overlap, or it can mean accepting complexity and having the levels deliberately work together to address an inter-jurisdictional issue (Hooghe & Marks 2003). Obviously, climate change action can take place at any level of government. Still, even under a collaborative governance model, we must ask how the ease and effectiveness of climate actions vary across the different levels. What role should municipalities play?



## Are Cities the Most Important Sites for Climate SPPs?

Maybe! The interview data from my research suggests the following possibilities:

- Cities tend to have jurisdiction over **adaptation** measures (e.g. civil infrastructure) for many of the most immediate and on-the-ground impacts of climate change (e.g. flooding), so they may be particularly interested in climate science.
- Because there are a large number of municipal governments in any given region, and a lot of variability among them, chances are good that a few will be interested in climate SPPs (perhaps leading to further connections with others).
- Institutions for municipal governance are “smaller” and less formalized than those for regional or national governance, and their more permeable boundaries make it easier for science organizations to interact with them.
- Cities usually have less capacity to employ their own government scientists, which means they may have more to gain and learn from partnering with academic scientists.
- Lower levels of government are not as likely to have any authority (perceived or actual) over science organizations with whom they might partner, avoiding a complicating **power dynamic**.
- Cities are usually under less public scrutiny than higher levels of government, which means they are freer to pursue policy initiatives supported by **evidence** from scientists without being constrained by public opinion.

## My Research: Climate SPP Case Studies in British Columbia

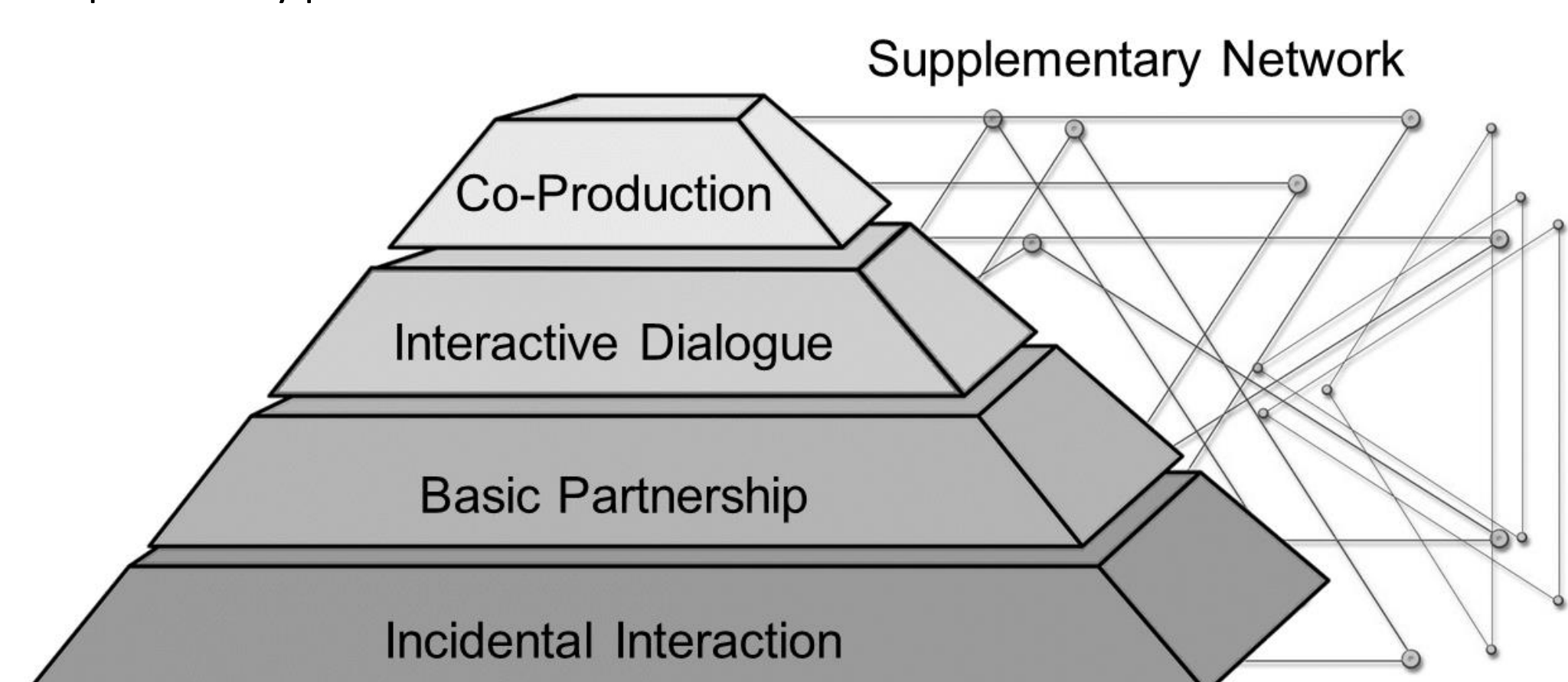
**Question** - What explains the success or failure of a climate SPP?

**Hypothesis** - Institutional design characteristics are an important factor.

**Methods** - Elite interviews with science and policy partners from cases of climate SPPs at each level of government.

Key findings include...

- While institutional design characteristics (e.g. informality, feedback, facilitation) can contribute to the success of a SPP to some degree, they are not nearly as important as **external factors like political will**.
- Climate SPPs can be classified into a framework that I call the Science–Policy Relationship Hierarchy (SPRH) model. The science and policy partners must first form a basic partnership based on trust and credibility before they can engage in a more interactive dialogue. From there, moving to the ideal of true **co-production** (i.e. mutual influence) without violating the initial foundation of trust requires particularly high political interest in climate change or the involvement of particularly proficient individuals.



- The only case to come close to the co-productive ideal was the municipal-level case between the Pacific Climate Impacts Consortium (PCIC) and various cities in BC.
- In this case, the science partner was extremely open to **feedback** from users, which continually improved the quality of information and tools provided to partner cities.
  - One **success story** involved the municipality of Castlegar. Based on information from PCIC, they were able to identify flooding as a vulnerability and inexpensively increased their frequency of culvert maintenance (as well as requiring new neighbourhoods to have larger culverts). Within a year, a major precipitation event did occur, and the low-cost solution paid off immensely.
- While there are many factors in this case that help to explain its success, the fact that it manifested at a low level of government (i.e. the municipal level) may have been important. Indeed, some interviewees suggested that science–policy connections are easier to establish and maintain at the municipal level.

An important theme for this research was to identify causes that can be manipulated. Scientists cannot easily change the amount of political interest in climate change, but they **can** choose which governments to engage with.



## Conclusion: Research Gaps to Consider

- How do the ease and effectiveness of climate science–policy partnerships vary across different levels of government (e.g. municipal, regional, national)?

Possible answer: For the reasons above, cities may be the most appropriate site (although the potential impact of SPPs will be less than at higher government levels)

- What principles for effective climate science–policy partnerships can we learn from successful municipal-level cases?

Possible answer: The policymakers I interviewed reported credibility, informality, and a focus on users as key ingredients in a successful municipal-level SPP

- Information on science–policy–practice linkages should draw on the expertise and experience of actual policymakers and practitioners, not just academics.

Possible answer: We cannot yet know what answers this consideration might bring, but it is critical not to be over-reliant on existing academic procedures and research

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