EDMONTON METROPOLITAN REGION CLIMATE RESILIENCE COLLABORATIVE:

A framework for ongoing regional collaboration

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All One Sky

FOUNDATION

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Table of contents

1 Introduction

Climatic conditions in the Edmonton Metropolitan Region (EMR) have been changing over the last century (see Box 1). The mean annual temperature in the EMR has increased at a rate of 0.17°C per decade since 1917—over twice the observed rate of warming globally. The rate of warming in winter months in the EMR has been more pronounced than during the summer. Mean annual and seasonal precipitation patterns have also changed over the last 100 years. In addition, the region has experienced an increasing trend in extreme weather, with more heat extremes, intense rainfall events, freezing rain and drought. Municipalities across the EMR are grappling with the human, economic and environmental impacts of these changes and are recognizing the need to build resilience and prepare for the consequences of future climate change.[1]

Municipalities are not only on the front lines of managing the impacts of climate change, they are also critical to efforts to build climate resilience—having the powers, among others, to plan and regulate land use, invest in infrastructure, manage services and provide essential information. But urban leaders face a myriad of challenges to manage climate change impacts at a local level. Common hurdles include funding limits, staffing constraints, a lack of technical capacity and balancing competing priorities. These challenges are particularly pertinent for smaller municipalities. Challenges also arise because the physical impacts and consequences of climate change and extreme events do not stop and start at human-defined municipal boundaries. Relatedly, adaptation actions—like land use and infrastructure decisions—taken by one municipality can affect adjoining municipalities, both positively and negatively. As a result, piecemeal adaptation approaches that vary from one municipality to the next can be inefficient and even counterproductive.

Municipal decision-makers are starting to recognize the challenges of adapting to climate change in isolation and see that well-coordinated strategies with neighboring jurisdictions can more efficiently enhance climate resilience on a larger regional scale, as well as within their individual communities. For a start, coordinated approaches allow municipalities to leverage scarce financial and staff resources, and to share research and information. As a result, some municipalities have started working with neighbouring local governments (and other organizations) through “regional climate collaboratives”. The Climate Resilience Exchange project field tested regional collaboration to strengthen climate

[1] The EMR can expect to see the following changes in climate in the coming decades: Warmer temperatures - mean temperatures are projected to increase in all seasons, with the largest temperature increase projected for the winter months. Increased precipitation - mean precipitation is projected to increase significantly in the spring season, and modestly in the winter and fall seasons; projected changes in summer precipitation are insignificant. Hotter, drier summers - substantial increases in temperature, coupled with essentially no change in summer precipitation, and significant evapotranspiration, will result in hotter, drier summers. Warmer, wetter winters - both mean winter temperature and mean winter precipitation are projected to increase significantly, leading to warmer, wetter winters. More extreme precipitation - warming temperatures increase the water holding capacity of the atmosphere, which supply storms, resulting in more intense rainfall events and ultimately to flooding. More extreme weather events - increasing frequency, and in some cases severity, of extreme weather events such as windstorms, lightning, freezing rain and heavy snow.

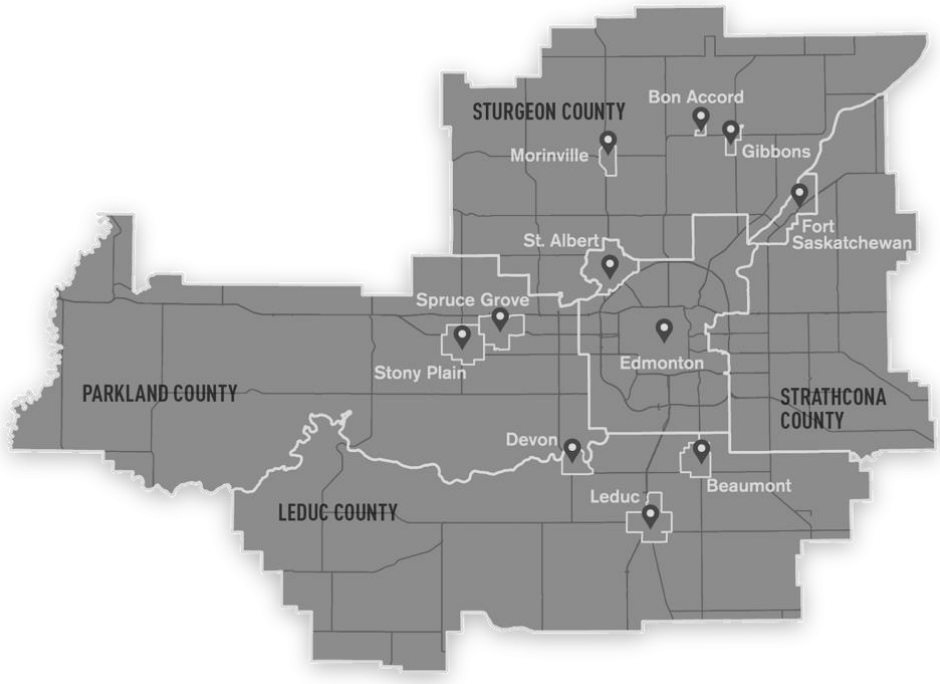
resilience in the EMR[2]. As such, it lays the foundations for establishing a more formal collaborative for ongoing, long-term coordination of adaptation efforts at a regional level.

Building upon the experience of the Climate Resilience Exchange project and existing regional climate collaboratives, the aim of this report is to outline key elements of a framework for ongoing coordination of climate adaptation efforts in the EMR. The following key questions are addressed:

- What is a regional climate resilience collaborative?
- What are its main functions?
- What are the benefits and challenges of collaborating on climate resilience at a regional level?
- What are the options for structuring a collaborative?

Box 1: Edmonton Metropolitan Region

The Edmonton Metropolitan Region (EMR) is a conglomeration of 21 municipalities (5 cities, 10 towns, 2 villages and 4 counties) covering an area of 9,439 km^2 surrounding and including Alberta's provincial capital of Edmonton. It is home to nearly 1.3 million people (2016), employs 775,000 people and generates about $105 billion in Gross Domestic Product annually, making the region the 5th largest economy in Canada.



Sources: Edmonton Metropolitan Region Board [www.emrb.ca] and Edmonton Global [www.edmontonglobal.ca]

[2] For more information on the Climate Resilience Exchange project see: www.allonesky.ca/edmontonclimateexchange

2 What is a climate resilience collaborative

The concept of collaboration and the use of strategic networks at the regional level to advance local policy priorities is not new. Municipalities have worked across jurisdictions for decades on a variety of issues from transportation to economic development. In the EMR, for example, Edmonton Global was created to advance economic development collaboration with the region's 15 municipalities and a range of partner organizations, associations, institutions and businesses. Nonetheless, the idea of regional approaches to collectively address climate impacts is relatively new. As of mid-2019, there are about 20 regional climate collaboratives in North America; nearly all are in the U.S. Moreover, half of these collaboratives have formed over the last four years. Examples of regional climate collaboratives are shown in Box 2. Some of these collaboratives also address GHG emissions.

Based on how existing collaboratives describe their purpose, we can define a regional climate resilience collaborative as a network of diverse entities[3] representing a region and committed to working together to ensure the region is adapted and resilient to the impacts of climate change. Key defining characteristics include:

- Participating entities share adjacent or overlapping administrative boundaries within a defined region.
- Participating entities share the benefits of natural, social, economic and built systems, such as watersheds, transportation, energy and water infrastructure, and labour and commuter sheds. They are also responsible for many of these systems.
- Leadership emanates from local government and other locally-focused entities, rather than other levels of government.

These characteristics distinguish regional climate resilience collaboratives from other forms of sub-national local government networks.

3 Functions of regional collaboratives

There is no "one-size fits all" regional climate resilience collaborative. The circumstances of each collaborative are unique—e.g., the diversity of shared ecosystem services and infrastructure, the climate impacts faced by the region, the local culture, politics and economy, as well as the annual budget and maturity of the collaborative. While there is no single model for all regional collaboratives, the most effective ones enhance and supplement the capacity of member municipalities and locally-oriented

[3] Participants can include private sector, academic and voluntary-sector organizations, in addition to local government (this is discussed further below).

stakeholders. Not withstanding the uniqueness of each regional collaborative, there are a core set of activities common to all.

Box 2: Some examples of regional climate collaboratives

The **Los Angeles Regional Collaborative** (LARC) supports climate resilience actions across different sectors and actors in the Los Angeles County region of California and its 88 municipalities.

The **Southeast Florida Regional Climate Change Compact** (the "Compact") spans four counties in Southeast Florida (Broward, Miami-Dade, Monroe, and Palm Beach) and their 108 municipalities.

The **San Diego Regional Climate Collaborative** (SDRCC) helps coordinate climate actions across San Diego County, focusing on local capacity building for the County and its 18 municipalities.

The **Capital Region Climate Readiness Collaborative** (CRC) includes the six-county region surrounding Sacramento, California, including El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties.

The **Western Adaptation Alliance** (WAA) is a network of 14 local government agencies located in the desert and intermountain regions of Nevada, Utah, Colorado, New Mexico, Arizona and Texas.

The **Windsor Essex Climate Change Collaborative** (WEC3) is a partnership between Essex Region Conservation Authority, municipalities, the County of Essex, the Windsor-Essex Health Unit, the University of Windsor, and others, to address regional climate change vulnerabilities and risks.

The **Sierra Nevada Climate Adaptation and Mitigation Partnership** (Sierra CAMP) is a rural-focused collaborative, spanning the 22-county Sierra Nevada-Southern Cascade region in California.

The **King County Cities Climate Collaboration** (K4C) is a collaborative between King County, Washington State and 14 local governments within the County.

The **Puget Sound Climate Preparedness Collaborative** is a network of local and tribal governments, regional agencies, and organizations in the Puget Sound region focused on peer learning and information exchange for climate preparedness.

3.1 Core activities

Key roles played by collaboratives include:

- **Climate research and analysis**. Collaboratives can conceptualize, commission, manage and produce, translate and disseminate climate-related research and analysis needed to support adaptation planning in the region. They can also serve as a link between the academic and consultancy community and participating municipalities, communicating joint research needs and gaps. In the Climate Resilience Exchange project, for example, three research projects were undertaken to address knowledge gaps identified as priorities by participating municipalities: 1) Guide to Tree Planting and Management in a Changing Climate – Trees and Forest Vulnerability Study; 2) Invasive Species and Pests Vulnerability Study – Edmonton Metropolitan Region; and 3) The Impact of Climate Change on Water Security in the Edmonton Metropolitan Region – A Meta-analysis of Existing Knowledge and Information.[4]
- **Tools and training**. Building capacity among partner municipalities and stakeholders is another key activity of regional collaboratives, typically through the provision of training, data sharing and the development of tools and guides. As part of the Climate Resilience Exchange project several capacity building resources were developed for practitioners in the region. Building from the vulnerability studies, guides were developed for managing invasive species and pests and for urban forest management in a changing climate. Best practice guidance for mainstreaming climate change into water management was also prepared.[5] In addition, an interactive online tool and guidance document was developed to showcase design features of a "climate resilient" home.[6]
- **External funding**. Municipalities typically have limited budgets to address climate change risks. To redress funding challenges, collaboratives provide a means for members to pool and leverage (financial and staff) resources. They also serve as a vehicle for securing external funding.
- **Convening and engaging stakeholders**. Collaboratives provide a platform for convening key decision-makers (at all levels of government) and other stakeholders in a region. They provide a forum for members to share lessons and best practices with peers, to discuss challenges to progress climate adaptation and strategies for overcoming them, and to bring in external expertise. Engagement activities typically include membership meetings, workshop series and—occasionally—high profile special events.
- **Climate policy and planning**. Collaboratives can develop regional policies and plans for coordinated local implementation—e.g., the adoption of common design standards or revisions

[4] All research studies are available at www.allonesky.ca/edmontonclimateexchange.

[5] The best practices guide is available at www.allonesky.ca/edmontonclimateexchange.

[6] The interactive climate resilient home is found at www.climateresilienthome.ca.

to land development regulations to discourage development in vulnerable areas. As discussed below, it is important that the work of collaboratives respect local government autonomy. Hence, collaboratives tend to make recommendations in the form of guidance documents or the provision of technical assistance, with implementation voluntary at the discretion of individual members.

- **Advocacy**. Collaboratives can get involved in advocacy with provincial and federal government, providing members with a stronger, unified regional voice for desired changes. This can involve generating and submitting joint comments and recommendations on regulatory proposals.
- **Public communication**. Finally, collaboratives can communicate with the general public in their region, providing information—via their own websites, social media, or through other means—on projected climate change, associated impacts and actions to manage risks.

A recent survey of U.S. based regional collaboratives conducted by the Institute of Sustainable Communities[7] found the focus of existing regional climate collaboratives to date has been to procure and produce joint research and analysis; develop tools, share data and provide training; convene and engage stakeholders; and raise external resources. Indeed, the primary driver behind the initial creation of many regional collaboratives was to establish an entity to leverage and raise external funding. In terms of self-evaluation, collaboratives claim to be most efficacious at conducting research and analysis, developing tools and sharing data, and providing training and capacity building. These activities were the focus of the Climate Resilience Exchange and, consistent with the experience of other collaboratives, effectively delivered. Existing collaboratives spend the least amount of time on advocacy and, surprisingly, public communications.

3.2 Forms of collaboration

Regional climate collaboratives are essentially networks—connecting municipal staff and local practitioners across a region. When it comes to performing activities and producing outcomes, networks can operate at various points along a spectrum differentiated by levels of collaboration.[8] At one end of the spectrum are “connectivity networks”, where members of a regional collaborative plan and undertake activities independently but share outcomes with each other. At the other end of the spectrum are “joint production networks”, where members collectively develop plans and priorities and the collaborative undertakes activities to produce shared outcomes. Somewhere in the middle of the spectrum are “aligned networks”, where members align priorities and develop shared plans but undertake activities to produce results independently. In moving along the spectrum, the level of joint production increases, and so does the resource intensity of the effort required by members of the collaborative. Furthermore, mature collaboratives are typically characterized by “joint production”, though they may simultaneously employ all three forms of collaboration depending on the issue at

[7] ISC, 2019: Regional Collaboratives for Climate Change – A State of the Art. Institute of Sustainable Communities (www.us.sustain.org).

[8] See Plastrik, P. and Taylor, M., 2006: Net Gains: A Handbook for Network Builders Seeking Social Change.

hand. Table 1 illustrates what each of the above activities would look like depending on the type of network adopted (i.e., level of collaboration).

Table 1: Core activities of regional climate collaboratives and forms of collaboration[9]

Activity	Connectivity network	Aligned network	Joint production network
Research and analysis	Members independently scope, procure and produce research and analysis to meet local needs, and share outputs with other members	Members define shared research and analysis priorities, but independently procure and produce results	The collaborative collectively defines shared research and analysis priorities, and jointly procures and produces results
Tools and training	Members independently scope and produce training or tools to meet local needs, and share products with other members	Members define shared priorities for training and tools, but independently procure and deliver them	The collaborative collectively defines, procures, produces and delivers shared regional training and tools
Raise external funding	Members independently seek and raise external funding, and share best practices with other members	Members identify shared local funding priorities and sources of funding, but seek to secure the funding independently	The collaborative defines shared regional funding priorities, identifies sources of funding, and collectively secures the funding
Engage stakeholders	Members independently convene and engage stakeholders, and share learnings and insights with other members	Members define shared local engagement needs, but convene and engage stakeholders independently	The collaborative defines regional engagement needs and collectively convenes and engages stakeholders
Policy and planning	Members independently craft their own climate adaptation action plans and policies, and share learnings and best practices with other members	Members develop shared local climate adaptation goals, but create action and implementation plans independently	The collaborative develops shared regional adaptation goals and collectively creates recommendations for action and implementation
Advocacy	Members independently create advocacy priorities and agendas and share them with other members	Members develop shared local advocacy priorities and agendas, but advocate independently	The collaborative develops regional advocacy priorities and agendas, and members advocate as a group
Public communication	Members independently communicate with their constituencies and share insights and best practices with other members	Members develop shared local communication and messaging priorities, but independently communicate with their constituencies	The collaborative develops a regional communication strategy and converses with the region as a whole
	Level of effort and cost →		
	Maturity of collaborative →		

[9] Based on Appendix B in ISC, 2019.

Among existing U.S. based regional climate collaboratives, research and analysis and training and tool development are primarily undertaken as "joint production" activities.[10] Indeed, the outputs of the Climate Resilience Exchange project (i.e., the research studies, guides and climate resilient home) were jointly produced. That is, participating municipalities collectively defined shared research priorities and tool needs, and subsequently found and contracted consultants and managed them in producing the required outputs.

The most common "aligned" activities undertaken by existing collaboratives are public communication and climate policy and planning. Stakeholder engagement and raising external resources are typically treated as "connected" activities.

It is worth noting that existing regional collaboratives will concurrently employ all three forms of cooperation to suit their project specific needs. However, as noted above, collaboratives claim to be more effective at conducting research and analysis, developing tools and sharing data, and providing training / capacity building. This suggests that outcomes of collaboration are best achieved via joint production.

4 Benefits and challenges of regional collaboratives

There are multiple benefits to adopting a regional approach to building climate resilience—most notably, ensuring scarce resources are used efficiently. Yet, regional collaboration on climate action presents some unique challenges.

4.1 Key benefits

Key benefits of regional collaboration identified by the Climate Resilience Exchange project and through the experience of existing climate resilience collaboratives include:

- **Leveraging scarce resources**. Municipalities typically have limited budgets available to address issues such as climate change. Collaboration with adjacent jurisdictions allows resources to be pooled, enabling investments in climate actions with regional benefits that would otherwise be beyond the reach of individual municipalities. The research projects funded as part of the Climate Resilience Exchange are prime examples of this. In addition, grant applications submitted by a collaborative are more likely to be competitive than applications from individual municipalities, since they offer benefits over a wider regional scale.
- **Realize economies of scale**. Collaboratives offer a cost advantage over individual municipalities when taking climate action because of economies of scale. The cost advantage primarily arises

[10] ISC, 2019.

from being able to spread the fixed costs of adaptation efforts, for example project management and administrative costs, over more municipalities, as well as from being able to spread project risks and to buy in bulk from suppliers of inputs to adaptation actions. Economies of scale can also be external to the collaborative if its collective membership induces preferential treatment from higher levels of government (see "provide unified regional voice" below).

- **Sharing capacity**. The resources, knowledge and expertise of larger, often better funded local governments can be shared with smaller, less well funded members of a collaborative with much smaller tax bases. In the Climate Resilience Exchange project, for example, climate projections prepared by the City of Edmonton for its Adaptation Strategy and Action Plan were made available to all project partners via the State of Knowledge Report, which was developed at the outset of the project to define needs and gaps in existing knowledge and resources.
- **Build relationships among neighbouring jurisdictions**. Sharing capacity has the added benefit of strengthening connections between neighbouring jurisdictions and fostering more effective peer learning. Collaboratives, in general, provide an effective means to build trust and strong relationships between staff and elected officials from different municipalities. Trusted relationships are crucial when it comes to leveraging resources, pursuing external funding opportunities, and acting together on joint programs and projects.
- **Provide unified regional voice**. Collaboratives allow municipalities to present stronger, unified regional positions, that are more likely to result in successful outcomes. Equally, collaboratives provide provincial and federal government and their agencies with a more efficient means of working with municipalities by providing a single gateway.
- **Avoid maladaptation**. Many climate change impacts transcend political boundaries (e.g., the migration of invasive species and pests). Similarly, many ecosystem services span entire regions and are shared by different municipalities (e.g., the water provisioning services of the North Saskatchewan River are shared across the EMR). In these cases, analysis of vulnerabilities to climate change and adaptation actions can only be undertaken effectively at a regional scale. Collaboratives provide municipalities and local stakeholders with a platform to develop a coordinated adaptation strategy and thereby avoid actions that may benefit one municipality but increase risks for their neighbour(s).
- **Maintain continuity despite administrative changes**. Collaboratives can help moderate the impact of changing government administrations on the continuity of climate initiatives, even if the new administration has a different agenda. Municipal staff involved with regional collaboratives will be able to explain to new administrations the benefits of coordinated adaptation efforts and the relationships formed with their peers in neighbouring jurisdictions and thereby make the case for continuing support.

A survey of city-to-city networks (not necessarily regional networks) found the most cited reasons for joining collaboratives were to share capacity and exchange knowledge and to provide a stronger, unified

voice on climate issues when engaging other levels of government and stakeholders.[11] In addition to sharing capacity and peer learning, participants in the Climate Resilience Exchange project identified pooling / leveraging resources, avoiding maladaptation, and achieving economies of scale as key benefits of collaboration.

4.2 Key challenges

Key challenges and capacity gaps identified by the Climate Resilience Exchange and through the experience of existing climate resilience collaboratives include:

- **Lack of funding and resources**. The principle challenge faced by collaboratives is a lack of resources to fund operations and service delivery. This is particularly pertinent given that the more resource-intensive "joint production networks" have shown to be the most efficacious (see Section 3.2 above). Most existing climate resilience collaboratives have annual operating budgets of less than $130,000 and employ one or fewer full-time staff.[12] Raising external resources is thus a priority, as is effectively leveraging the in-kind time and funding of members.
- **Establishing shared goals**. Regional collaboration only works in pursuit of common objectives. This requires defining shared value propositions and goals across participating municipalities and regional stakeholders. Aligning values, missions and politics across such a diverse group can prove challenging, as networks become more formal. For the Climate Resilience Exchange, which set up an informal network between participating municipalities, a one-day workshop was used to define a shared vision of the most significant regional climate risks to be addressed and to determine priority adaptation actions for immediate implementation.
- **Respecting local autonomy**. The most effective regional climate collaboratives preserve local authority and autonomy in decision-making. Regional approaches should not displace adaptation efforts by participating members; instead, they should strive to enhance the capacity of municipalities to develop and implement regional strategies locally, to complement their own local adaptation actions. Getting the balance right can be challenging.
- **Investing in long-term adaptation actions**. Adapting to climate change will almost certainly require investment in long-term strategies that extend over multiple election cycles. Getting the necessary buy-in to make such investments at a regional scale can be problematic. To build up the necessary trust to overcome this hurdle it is important for the collaborative to generate and communicate some short-term successes—early wins—that can demonstrate value to the public.

[11] Lusk, D. and Funkel, N., 2018: Cities Joining Ranks: Policy Networks on the Rise. Boston University Initiative on Cities.

[12] ISC, 2019.

5 Structuring a regional climate collaborative

In addition to deciding what activities to focus on, as well as the level of cooperation when performing chosen activities, regional climate collaboratives must also make decisions on how to structure the collaborative. Key choices relate to membership of the collaborative; administration, decision-making and governance; and funding. Each is considered in turn below.[13]

5.1 Membership

Membership of existing regional climate collaboratives take a variety of forms. Some collaboratives are comprised solely of representatives of municipal governments (typically staff from environmental or sustainability departments). Other collaboratives also include representatives from one or more of the following entities: other public agencies, regional authorities, planning bodies, utilities, universities, non-profit organizations, philanthropic organizations, and businesses. The collaborative formed for the Climate Resilience Exchange comprised mainly local government staff, though it was hosted by a non-profit organization (see below); private sector consultants and an academic institution were engaged to deliver specific projects.

In general, the goals (and planned activities) of collaboratives will drive decisions on membership. Collaboratives focused exclusively on climate resilience planning and policy tend to limit membership to representatives of local government. When formulating coordinated plans and policies, aligning the multiple views of a wider network can prove problematic. Collaboratives working on economic resilience to climate change have included representatives from businesses in the region. Other collaboratives that concentrate on convening activities, comprise a much broader range of stakeholders active in the region, while those with a research and analysis focus, include universities who can perform the work and sometimes have access to co-funding. More open collaboratives have the advantage that they offer more diverse sources of funding and expertise. Indeed, some collaboratives have strategically selected members who have extensive networks of their own, allowing the collaborative to indirectly reach a wider network of expertise and knowledge.

5.2 Administration and decision-making

Several administrative models are employed by existing regional climate collaboratives. Over three-quarters of collaboratives use an administrative "host" to support day-to-day operations.[14] Administrative hosts in practice include non-profit organizations, universities or research institutions, and municipalities themselves. In some cases, collaboratives will have dedicated employees (e.g., a

[13] This section draws heavily upon Bennett, A. and Grannis, J., 2017: Lessons on Regional Resilience: Case Studies on Regional Climate Collaboratives. Georgetown Climate Center, Washington, DC.

[14] ISC, 2019.

program manager); in other cases, they are dependent on in-kind staff time provided by individual members. As noted above, most collaboratives have annual operating budgets of less than $130,000 and employ one or fewer full-time staff.[15] A few collaboratives have annual budgets in excess of half a million dollars; however, some of these collaboratives are very large (with memberships of 80-100 plus municipalities, see Box 2) relative to others.

There are advantages to using a non-profit organization or university as the administrative host. Chiefly, management of the collaborative is viewed as more independent than it otherwise would be if it were hosted by a local government member. Both non-profit organizations and universities are viewed as neutral facilitators, which is beneficial if one of the collaboratives main activities is convening and engagement. Furthermore, using a third-party host allows collaboratives to select an organization with specific expertise or experience on an issue(s) of interest to the region. One concern raised about having an administrative host—at least in the case of U.S. based collaboratives—is the high overhead costs associated with administering grants. As was the case with the Climate Resilience Exchange, most existing regional climate collaboratives that use an administrative host, engage a non-profit organization.[16]

Importantly, those collaboratives where the administrative host is a member municipality, do not have dedicated staff; they rely on staff time donated in-kind by individual members.

In terms of governance, steering committees are frequently used to make decisions about the direction, activities, and funding of the collaborative. For the larger collaboratives, these committees typically comprise representatives from a subset of the overall membership. Steering committees, in practice, make decisions for the collaborative based on simply majority voting or by trying their best to reach consensus on issues. Some collaboratives allow the administrative host (if one) and other stakeholders to participate on steering committees, to broaden the diversity of input to decisions and to provide a neutral voice(s); though only municipal members have “voting rights”. This is similar to the model employed in the Climate Resilience Exchange, whereby only municipal partners had voting rights—in terms of choosing the research themes, projects and tools to be developed—but these decisions were informed by representatives from the non-profit administrative host, research institutions and private consultancies.

In addition to steering committees, existing regional collaboratives often use working groups to streamline decision-making at a more micro level—e.g., with respect to specific initiatives. The use of working groups also allows collaboratives to bring in external expertise, when needed. Topic-specific decisions made by individual working groups are periodically brought to the attention of the collaborative’s steering committee. This governance structure was used in the Climate Resilience Exchange. Working groups were established to oversee and make day-to-day decisions on the individual

[15] ISC, 2019.

[16] ISC, 2019.

projects chosen and defined collectively by all municipal partners (the de facto steering committee). Each working group had a representative from the administrative host.

5.3 Funding and support

Funding is one of the key challenges to maintaining an effective, sustainable regional climate collaborative. Nearly all existing collaboratives combine multiple sources of funding to support their work—specifically, member dues and cost-sharing, and philanthropic, provincial or federal grants. In general, membership dues are typically used to support ongoing administrative functions, whereas provincial and federal grants are mostly used to pay for individual projects or initiatives. Philanthropic grants have been used to fund both general overheads and staff costs as well as specific projects or initiatives. In some cases, philanthropic, provincial or federal grants have provided seed money to set up collaboratives and fund their first few years, and as membership grows, these collaboratives have introduced fees to fund ongoing operations.

A variety of fee structures are used by regional collaboratives, with annual fees dependent on the type of member (e.g., municipality, public agency, non-profit organization, research institution, etc.) and its relative size (e.g., a municipality's population). While annual fees provide a means to cover operational costs, it is important they do not discourage participation in the collaborative—especially for smaller jurisdictions and organizations with limited resources. For this reason, some collaboratives only require fees from steering committee members, or make paying annual fees voluntary. In addition, many collaboratives allow members to contribute in-kind services in lieu of, or in addition to, direct financial support. In-kind services can be used to support individual projects and not just ongoing administrative functions.

For the Climate Resilience Exchange project, a grant from the Government of Canada and the Federation of Canadian Municipalities funded the creation of the collaborative and covered general overheads and staff costs for the duration of the project. The grant also supported the procurement and production of the research studies and tools listed in Section 3.1, along with financial and in-kind contributions from partner municipalities.

Before concluding this section, it is worth noting that the organizational details outlined above can be laid out in official governance documents, like charters, membership agreements, or interlocal agreements.

6 Moving forward

The Climate Resilience Exchange project piloted a regional collaborative to strengthen climate resilience in the EMR. The success of the project demonstrates the important benefits from coordinating climate action at a regional scale. Regional collaboration allowed participating municipalities to pool scarce

financial resources and staff time to collectively assess and prioritize climate change risks and develop regional initiatives for responding to these risks, while still respecting the roles and decision-making authority of each individual municipality. In so doing, they could realize economies-of-scale, share capacity and build relationships among neighbouring municipalities and peers in other jurisdictions. The project laid the foundation for establishing a more sustainable collaborative for ongoing, long-term coordination of adaptation efforts at a regional level within the EMR.

The discussion above nonetheless underscores that there is no single, "one size fits all" model by which to grow and mature a regional climate resilience collaborative for the EMR. In moving forward, the collaborative will need to formalize decisions about its role, structure and governance—specifically:

- What are the collaborative's core activities?
- What level of cooperation should underpin pursuit of each activity?
- Who should be included in the collaborative?
- Whether to use an administrative host, and if so, what type of host?
- How to organize the collaborative and structure decision-making?
- How to sustainably fund the collaborative for the long-term?

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