



Top 10 Municipal Actions to advance nature-based climate solutions

Cities and towns across Canada are moving forward on nature-based climate solutions (NBCS) to mitigate climate change, protect biodiversity and improve equity. Here are some examples of what they're doing and what you could consider bringing to your own community! These examples will differ depending on the size of the municipality.

1. Include nature-based climate solutions in all municipal planning processes

Including NBCS in municipal action plans will help implement solutions that prevent biodiversity loss and reduce future municipal expenses responding to climate emergencies. Policymakers often work towards single goals, however [taking a holistic approach to the planning process can be a cost-effective method that increases the likelihood of success](#)¹. NBCS are inherently multi-faceted, and they provide a host of societal benefits. That's why these solutions should be part of municipal plans, especially the municipality's Official Plan, which often gives direction to other plans.

Kawartha Lakes, for example, incorporates NBCS and climate actions into many of their planning documents, which gives direction to, which has benefits throughout the region. The municipality created a comprehensive community-wide action plan with goals to help the city adapt and plan for the unexpected effects of climate change. The plan provides a rather detailed list of NBCS actions for agriculture designed to help increase sequestration. It also supplies actions for forestry intended to increase the city's canopy cover while ensuring that green spaces are equitably accessible for all residents. Appendix A of their [Healthy Environment Climate Action Plan](#)² (pg. 98) shows how all of their municipal plans are integrated.

2. Cross-collaboration between municipal staff teams

To effectively implement NBCS, many different municipal departments will need to be involved. City documents should outline the collaborative mindset required during planning. For example, a common NBCS implemented during street reconstruction is to increase tree canopy cover to manage stormwater, carbon sequestration, and cooling atmospheric temperatures. In this case, the NBCS would be outlined in the municipality's Transportation Master Plan, and also referenced in the Climate Action Plan.

¹ <https://institute.smartprosperity.ca/sites/default/files/nbsreport.pdf>

² <https://www.kawarthalakes.ca/en/resourcesGeneral/Documents/Healthy-Environment-Plan-Long.pdf>



Ideal policy outcomes will arise from collaboration between municipal staff during the creation of the transportation and Climate Action Plan, such as increased canopy cover and the planting of native species. Implementing these climate solutions requires abandoning a siloed approach and encourages a collaborative planning process that involves various municipal departments.

3. Create specific goals for growing your municipal tree canopy cover

Dense tree canopy cover purifies the air in Canadian municipalities and provides untold economic, environmental, mental, spiritual, and cultural benefits. Setting a municipal tree canopy cover goal can keep expanding the tree canopy a priority.

The City of Calgary's goal to increase tree canopy from 8% cover to 16% by 2060 requires planting 4,000 trees annually, in addition to maintaining existing canopy cover. Tree planting initiatives should have equitable distribution, as research shows there is decreased tree canopy surrounding BIPOC communities in Toronto, [Montreal](#)³, and Vancouver. Inequitable access to nature is a form of environmental racism and socio-economic discrimination. The City of Vancouver's [Urban Forest Strategy](#)⁴ intends to double urban tree canopy, and has identified equity as a key principle in the Urban Forest Management Plan, guiding the selection of priority neighbourhoods for tree planting initiatives.

4. Equitably expand municipal greenspace

Greenspaces provide a resting stop for migratory birds and other species traveling along natural corridors and allow species to move within urban areas. Expanding greenspace helps mitigate climate change and benefits nature. Some benefits of municipal greenspaces include increasing rainwater catchment, reducing heat island effect and creating more natural areas for carbon sequestration.

There is also a human element that should be considered in creating greenspaces. Historically, the creation of parks and the availability of greenspace has disproportionately prioritized wealthier neighbourhoods or suburbs where space is more abundant. We now know that the access to greenspace improves mental, physical and overall well-being of residents. People who

³https://www.academia.edu/29786836/Spatial_distribution_of_vegetation_in_Montreal_An_uneven_distribution_or_environmental_inequity

⁴ <https://vancouver.ca/files/cov/urban-forest-strategy.pdf>



live in neighbourhoods where greenspace is less accessible have reduced access to these benefits. Vancouver has created a [framework and a plan](#)⁵ for increasing access to greenspace and making this access more equitable.

5. Create a municipal natural asset inventory

Natural assets, such as wetlands, grasslands, peatlands, forested areas and parks provide many services to a community, but their value is often not accurately recorded or considered during municipal decision making. Municipalities may not include natural asset management strategies or consider them as powerful tools in helping to mitigate climate change risks. Properly valuing and managing natural assets can save on capital and operating costs, as well as provide numerous benefits for climate change mitigation.

The City of Saskatoon's [Natural Capital Asset Valuation Pilot Project](#)⁶, for example, created an inventory of local natural assets and the specific ecosystem functions and services they provide, and assigned an economic value to them. Then, natural assets could be accounted for in a way comparable to traditional engineered assets. This will aid decision makers during future budgeting and development decisions. The total annual value for natural assets in the city's inventory was estimated at roughly \$48.2 million per year! The project also helped to raise awareness about the importance of ecosystem services that are provided by natural assets. [Municipal Natural Assets Initiative](#)⁷ is the leading organization working on this in Canada and could assist you in creating your own municipal natural asset inventory.

6. Consider biodiversity in decision-making (e.g. land use planning)

Promoting biodiversity in urban nature by creating protected areas, renaturalizing landscapes, and planting native species can make local ecosystems more resilient to climate shocks. Municipalities can incorporate NBCS by considering the impact of developments on biodiversity and how land-use planning can encourage dense development and prevent sprawl. This would protect existing natural areas and preserve ecosystems' functions.

⁵ <https://vancouver.ca/parks-recreation-culture/vanplay-parks-and-recreation-strategy.aspx>

⁶ <https://www.saskatoon.ca/sites/default/files/documents/ncav-report-final-2.pdf>

⁷ <https://mnai.ca/>



The Municipality of Austin in Quebec won the [2016 FCM Sustainable Communities Award](#)⁸ with its Sustainability Action Plan. Before working on their action plan, Austin determined where commercial and residential developments could occur without negatively impacting existing land and water ecosystems. The plan took into account the municipality's forest, lakes, and wetlands. After vigorous stakeholder collaboration, the project succeeded in providing a comprehensive management strategy for future planning to help protect and preserve the rich biodiversity and ecosystem services.

7. Expand green infrastructure (e.g. green roofs and permeable pavement)

[Green infrastructure](#)⁹ uses natural vegetative systems and green technologies to mimic the functions of a natural landscape. They provide a multitude of economic, environmental, health, and social benefits. Municipalities own and operate many buildings, which should be seen as an opportunity to incorporate green infrastructure within the community. These solutions can help to address access to greenspace, improve stormwater management, and help mitigate and adapt to climate change.

8. Incentivize sustainability financially and fund nature-based climate solutions (e.g. property levies, green bonds, development fees, parking levies, stormwater charge)

Municipalities have access to a wide range of creative funding mechanisms to support NBCS projects which provide economic, environmental and social benefits. An inspiring example is the [Columbia Valley Local Conservation Fund](#)¹⁰, the first of its kind in Canada. Through a small charge based on the value of a property owner's land instituted in 2013, the Regional District of East Kootenay has generated millions of dollars supporting protection, restoration and agricultural stewardship projects in recent years. Several other [BC municipalities](#)¹¹ have since set up their own funds for conservation and park expansion.

⁸<https://fcm.ca/en/resources/gmf/case-study-2016-fcm-sustainable-communities-awards-neighbourhood-development-plan>

⁹ <https://greeninfrastructureontario.org/>

¹⁰ <https://kootenayconservation.ca/columbia-valley-local-conservation-fund/>

¹¹<https://soconservationfund.ca/wp-content/uploads/2017/12/Conservation-Fund-Guide-2nd-Edition-2017.pdf>



9. Use certifications and declarations to leverage action (e.g. become a Bird Friendly City)

There are many programs that provide guidelines to improve climate resiliency and protect natural spaces within a municipality. Canadian municipalities can help fight the climate crisis by taking advantage of programs that often offer support, a clear action plan and sometimes funding.

Nature Canada's [Bird Friendly City Certification Program](#)¹² helps Canadian cities become safe havens for birds through threat reduction strategies, community outreach and climate resilience. Working towards certifying your city as Bird Friendly is a badge of honour and a great way to raise awareness about urban nature and the birds who depend on it for habitat or migration.

10. Support local community action (e.g. creation of pollinator gardens, wetland restoration)

In any given municipality, there are many local organizations who are doing good work to fight climate change and protect nature. Municipal funding for these projects would increase an organization's ability to do this important work. Through partnering with local organizations, these projects can be created on municipally-owned land. Municipalities who don't have in-house expertise addressing climate change and nature loss could also look to their local organizations for support. These relationships can be mutually beneficial!

¹² <https://naturecanada.ca/defend-nature/how-you-help-us-take-action/bfc/>