



**Submission to Canada's National Adaptation Strategy
July 15, 2022**

Thank you for the opportunity to provide input into the National Adaptation Strategy.

The Ecology Action Centre is an environmental charity based in Nova Scotia. We take leadership on critical environmental issues from biodiversity protection to climate change to environmental justice. Grounded in over five decades of deep environmental change work and fuelled by love and grief, EAC takes a 50-year perspective on what is needed to build towards a time of thriving and flourishing. We want to build a world where ecosystems and communities are restored not just sustained.

It is with this perspective that we offer comments on the National Adaptation Strategy and urge the federal government to take a similar lens. Responding to the climate emergency requires transformative change to all aspects of our society; minor changes to the status quo will be insufficient.

The science of resilience and ecology show us that the healthiest ecosystems are those that are biodiverse and abundant, with redundancies at many levels. These ecosystems are better able to adapt and shift as conditions change. Like ecosystems, the strength of our economic system lies in diversity, interdependence, redundancy, and adaptability. We must ensure our use of resources is within natural limits, and dedicate ourselves to social and ecological regeneration.

While we agree that it is important for Canada to develop an effective climate adaptation strategy to adjust to changes that are now unavoidable, a focus on adaptation must not distract the federal government from the fundamental changes and dramatic emissions reductions that are still urgently required to avoid the worst impacts of climate change.

The National Adaptation Strategy should strive to generate the much-needed conviction across federal government departments to meet nature commitments with adaptation value that, in many cases, already exist. This would include, for example, Canada's commitment to work toward halting and reversing biodiversity loss by 2030 and achieving a full recovery by 2050. And the commitment to protecting 25% of its land and ocean area by 2025, working toward 30% by 2030.

Much of the conservation work that is required to restore, manage and protect natural infrastructure with adaptation value must occur at the local level. However, it can be very challenging for local-scale organizations to access the resources required to undertake effective conservation projects. As such, priority should be placed on finding efficient pathways to establish the flow of funding and other supports (e.g. logistical, expertise) to communities, particularly those that are at the most imminent risk of climate change impacts (e.g. low-lying coastal communities). Administrative and bureaucratic barriers to this flow must be removed to the greatest extent possible and the various levels of government must work effectively together.

We appreciate the language in the guiding principles outlined in the discussion paper, many of which are echoed in our comments above.

Below you will find specific comments pertaining to each of the five key systems identified in your discussion paper.

Thriving Natural Environment

- Nature based climate solutions

High importance must be placed on nature-based climate solutions, not just as a means of climate change mitigation, but also adaptation. Many natural ecosystems such as wetlands, forests and seagrass meadows generate ecosystem services (e.g., flood protection, water filtration, storm buffers) that will help Canada adapt to climate change, while also sequestering large amounts of carbon.

Nature-based climate solutions present an opportunity to adapt to and mitigate climate change cost-effectively, while also aiding in meeting Canada's protected areas commitments. As such, the national adaptation strategy should emphasize the critical importance of meeting Canada's existing commitment to protect 25% of its land and ocean area by 2025, and 30% by 2030. Canada must commit to changes on a systemic level and prioritize the protection of nature-based climate solutions; this includes putting an end to unnecessary economic and industrial development projects that cause harm to and degrade key natural areas.

Protection of coastal habitats that buffer coasts from storm surge and erosion, like salt marshes and eelgrass meadows, should be a particular priority. (These habitats also have high climate mitigation and biodiversity value.) Marine protected areas should meet the minimum protection standards announced by Fisheries and Oceans Canada in 2019 and should provide strong, effective and long-term protection of biodiversity in line with international guidance. Research in all protected areas should focus on understanding what drives ecosystem resilience to change and how the adaptation value of these ecosystems may shift as climate change progresses. Across all ecosystems, Indigenous-led protection and co-governance approaches should be prioritized and supported to the fullest extent possible.

Disaster Resilience and Security

- Managed retreat

As climate change continues to pose an increasing threat to communities, regulating the location of new development, while necessary, falls short as it offers no impact or protection for *existing* buildings. There must be a recognition at a national level that some areas should never have been approved for development, and some regions are becoming increasingly untenable for building. Permitting and funding the rebuilding of housing and infrastructure in areas regularly subjected to inundation by floodwaters, intensifying coastal erosion, and affected by landslides, is an inefficient use of funds, and short-sighted. In some cases, the best form of adaptation to a changing climate will be a well-regulated and funded plan for managed retreat.

- Emergency preparedness AND emission reductions

Like the rest of the country, Nova Scotia is predicted to face more frequent and severe weather events and more frequent power outages. The electricity sector is poised to double by 2030, and it is critical that the electrical grid in Nova Scotia is ready. However, the need for emergency preparedness in the electricity sector does not justify increasing natural gas capacity for electricity generation. As the federal government develops the Clean Electricity Standards, we must ensure that no new natural gas infrastructure is developed for emergency or other purposes, and that the use of natural gas declines nation-wide. We should invest in increasing our resilience through community-based renewable electricity projects, increased storage capacity, and increasing interties to share electricity between regions.

Health and Wellbeing

We were encouraged by the inclusion of mental health supports in the discussion paper. Climate anxiety is already impacting the communities we work with, and robust mental health supports will be imperative in the coming years. We also agree that attention to the social determinants of health is required.

- Sustainable transportation

Sustainable transportation options for all ages and abilities are integral to resilient community life. They represent an intersection of climate adaptation and mitigation.

By prioritizing sustainable methods of transporting people and goods, we can achieve a significant reduction in greenhouse gas emissions produced by the transportation. Investment in a complete neighborhood approach where communities have equitable access to essential services and social opportunities without relying on a private motor vehicle positively contributes to the health and wellbeing of all.

In the absence of other viable transportation choices, most of Canada's communities are not accessible without a car. Car-dependent communities are not only inaccessible, but reduce opportunities for physical activity, resulting in negative health outcomes. Reducing car-dependence will require deeper integration of land use and transportation planning to create communities that enable active living by design. The federal Active Transportation Fund has enabled communities to fund planning and design work, but \$400 million over 5 years will not meet the funding demand for capital projects. We recommend developing a national inventory of active transportation capital projects to identify the required magnitude of investment.

- Community food security

Climate change will negatively impact the four pillars of food security (availability, access, utilization, and stability) across the entire range of food system activities. Climate change is, as such, an enormous threat to community food security and community health outcomes and must be addressed in the form of widespread adaptation measures.

Climate change threatens the health and stability of food systems. Temperature extremes and variability, changing precipitation patterns, and extreme weather events will impact production through crop damage and failure. In coastal regions, sea level rise may compromise the quality of irrigation water, damaging crops and reducing yields. Transportation and storage infrastructure are vulnerable to the increasing frequency of extreme weather events, impacting both processing

and distribution. Climate change is also likely to affect the transmission, survival, and growth of common foodborne pathogens.

Food insecurity takes a tremendous toll on people's health and the healthcare system. It is a serious public health problem impacting a wide range of health outcomes, including increased nutritional vulnerability, chronic conditions, and mental health. Ultimately, people facing food security are more likely to die prematurely.

Canadians needs federal support to build a localized and resilient food system in the face of supply chain disruptions, crop failures, and food loss brought on by climate change.

Resilient Natural and Built Infrastructure

- Energy efficient buildings

The increasing prevalence of intense weather events highlights the importance of resilient buildings. There is a pressing need for the federal government to prioritize and streamline deep energy retrofits for Canada's existing buildings and increase energy building code standards within each province to keep pace with climate targets.

Extreme heat caused by climate change will pose a threat to Canadians, and buildings play a critical role in avoiding negative impacts on human health. Energy efficiency measures ensure suitable air quality and effective cooling. Regulatory intervention on energy efficiency in new and existing buildings is critical for securing cost-effective, resilient housing for all Canadians. A focus on energy efficient solutions will spur an increase in demand for skilled trades and foster a high-performance economy.

- Support for municipalities

Infrastructure has been identified as Canada's top sector for potential action towards climate resilience, however, 62% of publicly-owned infrastructure is primarily owned by municipal governments. Municipal governments need to be given the financial resources and legal authority to enable policy change and program delivery to achieve these goals. Without explicit collaboration across all levels of government, the goals of the National Adaptation Strategy will not be realized.

Promoting more sustainable and resilient development patterns is as important as strengthening our infrastructure. Municipalities need to plan our communities, buildings, and infrastructure with nature and not around or over-top of it. Directing growth into urban centres, planning complete communities, and establishing greenbelts should be the priority. Increasing density and affordable living options in already-serviced areas makes use of existing infrastructure and benefits communities.

- Ecosystem protection

Natural and built infrastructure need to be considered together, as part of the same network of systems. An ecosystem approach needs to be taken to planning, building, and management of both our natural and built environments. Nature-based solutions for adaptation can help to improve the resilience of built environments and should be used as a first choice. Salt marshes, wetlands, riparian buffers, and maritime forests are listed as examples of natural infrastructure to be restored or enhanced. However, there is little to no legal framework to protect these important ecosystem features, let alone restore or enhance them. The federal government should support municipalities to work with the Municipal Natural Asset Initiative and provide funding for municipalities to create a natural asset inventory.

Strong Resilient Economy

A transformational shift requires us to reconsider our approach and remember economic systems serve society and social needs not the other way around. We have the capability to design economic strategies that support regenerative practices, enable prosperity, and allow adaptation to the changing climate. The linchpin to this transformational approach is recognition and respect for the simple fact that our economy is embedded in nature, and not an external force unto its own. Wellbeing must be prioritized over GDP and/or included in its calculation. Sustaining ecosystems that sustain us must be understood as a principle of economic growth.

- Enhance local food systems

Agri-food, fisheries, and aquaculture are pillars of the Canadian economy. However, climate change leaves farmers on both land and sea susceptible to new temperature and precipitation extremes, seasonal shifts, and increased environmental variability. Fisheries are already seeing warming ocean temperatures, species moving to new habitats, and more extreme weather that increases the dangers out on the water. Canadian producers and harvesters must be supported in adapting to a changing climate, especially as an over reliance on globalized supply networks increases the vulnerability of regional food systems, resulting in issues of product availability, affordability, distribution, and quality control.

Climate adaptation in agriculture will require new infrastructure and resources needed for training farmers. On the water, adaptive management approaches that take into account the rapidly changing ocean conditions and allow for flexibility and innovation by fishers are critical. The government must also invest in climate vulnerability assessments for all wild caught and farmed species with outcomes integrated in management planning and forecasting.

By supporting Canadian producers in adapting to climate change, regional governments can shorten and diversify supply chains. This will, in turn, support the development of circular economies and the resilience of local food systems in the face of ongoing climate threats. Localizing the food system will require huge investments in local food production, storage, processing, and distribution infrastructure. From processing facilities to cold storage, aggregation, and distribution, massive investment in local food infrastructure is needed to limit our reliance on precarious imports to feed ourselves.

In conclusion, we urge you to consider the concept of transformational thinking and how the above themes may support this approach. We can create new strategies, new legislation, and new programs, all of which are essential. However, if we do not transform our thinking and, by consequence, our actions, we cannot truly enable the changes required to secure a future worthy of the next generation and those thereafter.

Once again, we value this opportunity and look forward to future discussions involving the vital pursuit of sustainability.

Sincerely,



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