



Municipal Natural Assets Initiative (MNAI):

Managing Natural Assets to Increase Coastal Resilience Pilot Project

Call for Expressions of Interest

Date issued: October 8, 2019

Expression of Interest period will close as soon as suitable candidates found

1. Purpose

This document is to solicit expressions of interest from local governments¹ to host a Municipal Natural Assets Initiative (MNAI) pilot project located in a coastal area in Canada.

2. Context

The MNAI program, and municipal natural asset management in general, helps local governments understand, measure, protect and manage assets such that they deliver cost-effective and reliable core services to communities. This approach offers tremendous advantages to local municipalities in reducing infrastructure costs and vulnerabilities and protecting and improving natural systems.

Within this context, coastal ecosystems provide numerous services to communities, including wave and wind attenuation, soil stabilization and sediment capture, and water flow and flood regulation. For example, a team from the engineering, insurance and conservation sectors found that coastal wetlands in the northeastern USA prevented more than US \$625 million in direct property damages during Hurricane Sandy – this amounts to a 22% reduction in damages in over 50% of affected areas.²

As more research is directed towards the concept of natural infrastructure, it is becoming clear that coastal ecosystems often provide more durable protection than traditional engineered infrastructure approaches. As coastal ecosystems become damaged or destroyed, the protection they provide for coastal communities disappears and the risks associated with coastal flooding increase. In order to fully understand the implications of natural resource management decisions, it is necessary to understand how changes in ecosystem structure and function can translate into changes in ecosystem service delivery.

¹ E.g. villages, towns, municipalities, regional districts.

² Narayan et al. (2017). The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA. *Scientific Reports* 7(1): DOI:10.1038/s41598-017-09269-z

3. Project objective and components

The objective of the MNAI Managing Natural Assets to Coastal Resilience Pilot Project (“the Project”) is to help participating local governments identify, prioritise, value and manage key coastal natural assets as part of core local government asset management systems. This will result in the natural assets providing core services such as flood protection, storm surge and coastal erosion management in a cost-effective and reliable manner for the long-term. This, in turn, can:

- save money relative to engineered alternatives
- reduce risk and potential liability
- result in sustainable service delivery to the community

To achieve this, participating local governments will, together with MNAI:

- Identify: (a) natural assets of interest (e.g. salt marsh, estuaries, rocky shorelines); (b) the ecosystem functions of the identified asset(s) (e.g. a salt marsh may mitigate storm surge) and (c) the municipal services derived from the ecosystem function (e.g. a salt marsh’s wave attenuation function may reduce coastal flooding, or have potential to do so).
- Determine different scenarios to model – for example, finding out what will happen to natural asset in climate change scenarios, with land use intensification, or development.
- Assess condition and risk.
- Determine beneficiaries of the services provided by the natural asset.
- Determine the economic value of the municipal functions provided by the natural asset.
- Identify planning, land-use and other decision-making options to ensure cost-effective service delivery from well-managed coastal natural assets.
- Develop costed operations and maintenance plan and other standard asset management measures to manage the identified natural asset effectively.

The project expands on numerous MNAI projects that focused on stormwater management, surface water quality, and related natural assets.

4. Mutual contributions

4a. What does MNAI provide to participating local governments?

MNAI will support local government participants by providing:

- a) Project scoping support to ensure a common understanding amongst the local governments of the initiative and its objectives.
- b) “Help desk” technical support to participating municipalities over 10 months at approximately 35 hours per month across the participating municipalities. This typically involves: support for scoping data needs; support in finding data sources to enable modelling; trouble-shooting; training on modelling; support for developing an Operations and Maintenance plan (or equivalent where private land is involved).
- c) Support to identify the natural assets of highest priority and identify the planning and decision-making processes that modelling will inform.

- d) Economic analysis to determine the value of the natural assets' services in a single watershed.
- e) Modelling for prioritised natural assets in the coastal zone.
- f) Project evaluation at the end of the pilot (monitoring will be conducted throughout).
- g) A final 15-20-page public report that summarizes the project and its findings.

4b. What do the participating local governments provide as part of the project?

This pilot is the first test of the coastal framework and model with Canadian communities. As such, participants should be aware of the innovative nature of this work and be willing to contribute to the MNAI technical teams' understanding of local needs, obstacles and opportunities for replication elsewhere. Participating communities will be an essential partner in refining the approach for broader application and are expected to:

- a) Demonstrate explicit written support (letter or resolution) from participating Council and/or the Chief Administrative Officer (CAO) for the project, including for allocating additional staff capacity.
- b) Demonstrate clear commitment to a structured asset management approach across the organization.
- c) Commit to supporting the identification of data sources, providing data, and working individually and to do the work required to fill in the templates.
- d) Commit to exploring changes to decision-making as a result of the project, including, for example, costed Operations and Maintenance Plans.
- e) Commit the engagement of a multi-disciplinary staff team representing relevant departments such as Finance, Public Works, Planning, Engineering, and Parks. If the community already has an asset management committee then the involvement of someone from this group is needed.
- f) Commit staff time and input in the development of a municipal natural asset management guidance package for coastal natural assets, which draws on material from the Federation of Canadian Municipalities, the Canadian Network of Asset Managers Asset Management BC and others.
- g) Designate a project lead that will also be the primary focal point for MNAI.
- h) Commit a total of \$10,000 as a contribution to total project costs.
- i) Participate in project evaluation interviews at the close of the project.
- j) Commit to follow-up exercises at 1, 2, and 3 years after the close of the project so MNAI can assess and communicate long-term impacts.
- k) Provide a suitable room(s) for each launch workshop. Suitable workshop locations will be determined with participants.
- l) Share publicly their experiences with MNAI. Communication regarding project activities will be undertaken according to a communications protocol developed by MNAI.

5. Additional considerations for applicants

- Local governments may wish to partner with local post-secondary institutions and environmental non-governmental organisations (ENGOS) for some aspects of their proposal.

- MNAI projects require incremental staff resources and this needs to be built into work planning.
- MNAI initiatives are most successful when they link to core municipal priorities such as climate adaptation planning.
- Participating local governments contribute a fraction of overall project costs. MNAI also receives funding for MNAI Natural Assets for Coastal Resiliency Project from Natural Resources Canada, the Sitka Foundation, and the Bullitt Foundation. This means that local government contributions are highly leveraged.
- The primary natural asset services considered in this project relate to coastal management.
- Participating local governments will interact primarily with the Executive Director of MNAI, the Technical Director, and Technical Team. The technical team comprises a hydrologic modeler, an ecological advisor, a coastal management specialist, a coastal engineer, and an environmental economist.

6. Applying

Who can apply?

- Local government(s) that may be a single town, village or municipality.
- Up to four (4) local governments within a regional district (or ecologically similar region) that agrees to work collaboratively together within the framework of a single project.

What should go in my expression of interest?

Applicants should develop a single letter, signed by the Chief Administrative Officer (CAO) or equivalent (or each CAO if there are several applicants to a collective project), that outlines:

- The rationale for hosting a project.
- The coastal region, specific natural assets, services and scenarios that are of greatest interest.
- The ability to contribute sufficient capacity to the project as outlined in Section 7.
- The willingness and ability to contribute \$10,000 towards project costs.

How are applications evaluated?

Applications will be evaluated on:

- A commitment to asset management.
- A clear initial understanding of priority natural assets and project objective.
- Capacity commitment sufficient to successfully manage the project.
- A commitment to implementing / acting on the results of the project.

What happens after we apply?

- MNAI will contact local government applicants for an interview and as soon as decisions are made. Successful applicants and MNAI will sign a memorandum of understanding

and then the project will begin as soon as practically possible. A community workshop and site visit will occur in January 2020. The project will run until October 2020.

Where do we submit our applications?

- Please submit expressions of interest to: info.mnai@gmail.com.

Where can I get additional information?

- To read more about why municipal natural asset management is so important, how it started, current projects and much more, please visit MNAI.ca.

About MNAI:

Municipal Natural Assets Initiative teams up with municipalities to develop resilient, long-term infrastructure alternatives at substantial savings. MNAI employs practical strategies to support and guide local governments in identifying, valuing and accounting for natural assets in their financial planning and asset management programs, and developing leading-edge, sustainable and climate-resilient infrastructure.

To-date, MNAI has embarked on 11 community-level natural asset management projects, as well as Canada's first watershed project-level natural asset management project to help communities continue accessing clean and safe drinking water, and is also poised to launch a second watershed initiative in Ontario's Greenbelt.

With the help of nature, local governments *can* continue providing critical core services while maintaining and even improving the liveability of its communities for generations to come.

MNAI...making nature count.