

Natural Infrastructure for Planners
Workshop Report:

Atlantic Planners Institute Conference 2022



Municipal Natural Assets Initiative (MNAI)

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This workshop was designed, facilitated and data analysed by **Dr Liese Coulter** (MNAI, RRU). The workshop aimed to exchange knowledge by sharing experiences and opinions on the planning and implementation of natural infrastructure (NI) and natural asset management (NAM). Participants were attending the Atlantic Planners Institute Conference, Charlottetown, PEI. We are grateful for the workshop presentations prepared and delivered by **Adam Cheeseman** (Nature NB), **Adrian Prado** (CSRNO) and **Matt Delorme** (AIM Network) and their contributions to the workshop planning.



Invest in Nature

The Municipal Natural Assets Initiative (MNAI) is a Canadian not-for-profit that is changing the way municipalities deliver everyday services – increasing the quality and resilience of infrastructure at lower costs and reduced risk. The MNAI team provides scientific, economic and municipal expertise to support and guide local governments and watershed agencies 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.

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Building capacity to plan for natural infrastructure (NI)

Workshop participants at the 2022 Atlantic Planners Conference in Charlottetown were enthusiastic about the possibilities inherent in NI and natural asset management (NAM) (Drescher et al., 2018; MNAI, 2019). They focused on starting points for immediate action, leverage points to change professional norms, and partnership opportunities that build collaboration.

Clear and directive communication within the profession was the first step most planners mentioned to highlight NAM options for the planning processes. Considering ecosystem services as a municipal asset signals a fundamental shift in planning that goes much further than supporting sustainable development. To be confident that they are developing the best practices available, planners need practice notes and guidance documents that lead the shift in professional norms, while adhering to approved standards. As leaders in planning become champions for NI, their insights and experience can help planning to align cost-effective options with environmental considerations and use NI to reduce overall costs of municipal service delivery.

Leveraging collaboration opportunities within municipalities can improve planning for infrastructure and better integrate multiple needs within the planning process. As climate change concerns have started to shift professional practice, severe weather events such as post-tropical storm Fiona demonstrate the need to work with the power of nature when addressing ageing infrastructure. In addition, policy windows such as Truth and Reconciliation programs can be leveraged to bridge indigenous and scientific knowledge and better reflect natural systems in municipal planning.

Collaboration is key to the planning profession and partnership opportunities are essential for NI, which relies on multiple skills sets to design, implement and manage. Planning partnerships can be strengthened by communicating positive examples, such as case studies and best practice success stories. Professional associations were desirable partners channeling funding and expertise, with member directories of the Atlantic Planners Institute (API) and Canadian Institute of Planners (CIP) cited as sources for partnerships.



Presentations and Participants

Context: Less than a month before the workshop, post-tropical storm Fiona impacted the Atlantic provinces, causing the first evacuations in the history of Charlottetown where some homes were still without power. Across the Maritimes, shorelines were eroded in communities that faced violent winds exceeding 100 kilometres per hour, torrential rainfall, unprecedented flooding and downed trees.

Overarching Responses and Insights

Throughout the discussions, some responses arose frequently across all topics of starting points, leverage points, partnerships and opportunities. In all discussions, communication was seen as essential and fundamental to advancing NI in the Planning profession, with aims to change assumptions and norms. Identified starting points included “Gain buy-in and collaborate with multiple groups” and “Highlight NAM options for the planning processes.”

Champions were identified as needing and giving support for both funding and to better engage with colleagues and communities. Suggested leverage points included to “Support internal champions in favourable councils” and “Develop public and private collaboration opportunities for NI and asset management.”

Municipalities, professional associations and the private sector were identified as important actors in all phases of NI. Contextualising costs was identified as important in changing norms and assumptions, and to better align long-term thinking with multiple groups. It was suggested to “Leverage private interests to protect homes, investments, etc.” and “Require municipal plan reviews to consider zoning and require natural infrastructure.”

In addition to the suggestion to “Develop knowledge partnerships at universities and colleges”, both research and regulation were seen as important to support building capacity in NI and NAM, to “Identify opportunities in ageing infrastructure” and “build up and understand the standards.”

Focus by the visible evidence of hurricane Fiona impacts in Charlottetown, climate resilience was seen as an important starting point to “Exploit policy window opportunities aligned with natural disasters”. There were also calls to “Improve public health by reducing environmental risks and health hazards” and “Develop long term infrastructure in the face of climate change.” The insurance sector was identified as an important partner in building climate resilience through NI.

Municipal collaboration, inter-departmental cooperation and working with multiple groups were common themes. Opportunities were identified to “Work with municipal team and scientists to locate and plan for local geography” and to “Leverage multiple sources of funding.” It was also noted that collaboration offers both opportunity and increased complexity; “Variety of groups offer varieties of expertise although can lead to more complex administration.” Comments specifically addressing municipal collaboration called to “Find ways to show and build trust across all government levels”. Methods included to “Encourage aligned councils to be champions” and to “leverage non-profit initiatives with buy-in from council and staff.”

Starting Points

Standards: Participants focused on current standards as starting points to better enable natural infrastructure and natural assets management. To increase NI options and make NAM practices more cost-effective, planners were asked both “Build up and understand the standards” and to “Communicate standards and roadblocks.” While engineering standards were nominated for revision, there was also a call to “Promote effective Engineering standards”.

Cost-Effective: The need to understand the costs of NI were reflected in calls “Calculate costs so finances and resources support the NI” with a caveat to “Conduct functional analysis according to value and importance.” Practical considerations included suggestions to “align the most cost-effective options with environmental considerations” and “Use NI to reduce overall costs of services across departments.”

NI Options: Suggestions included to “highlight NAM options for the planning processes” and “Develop documents and guide-books to help people get their start, get to the next level.” Differences in acceptance of the value of NI was seen in the call to “Change the burden of proof ...” to assume NI is valuable unless there is evidence to the contrary, compared to developing “Prove that doing it ‘naturalized is better’.



Leverage Points

Disruptions: Physical and environmental conditions were seen as potential opportunities to “Take advantage of disruption”, aligned with climate change and severe weather events and through “... aging infrastructure”. Social disruptions were seen as policy opportunities where programs might “Include NI as a government funding requirement.” The shift to better support indigenous communities was seen as a positive disruption to better “Align NI with Truth and Reconciliation” and “Incorporate NAM in Municipal, Federal and Provincial Reconciliation work.”

Opportunities: In addition to the opportunities associated with disruption, leverage points were seen to “Fund opportunities for already identified NI options” and in replacing existing service delivery methods with negative health implications such as to “Identify hazards in open sewerage lagoons.”

Success Stories: Important leverage points were identified in communication to “Celebrate and promote Municipal NAM victories”, “Communicate to increase public-buy-in” and “Find communication opportunities for connections.” There were also calls to “Support internal champions in favourable councils.”

Partnerships and Opportunities

Research: Many partnerships focused on developing evidence and sharing knowledge, partly to “Find ways to show and build trust across all government levels.” Formal research was suggested to “Develop knowledge partnerships at universities and colleges” and to “Support academic research and co-op students to keep costs down.” Citizen and community research could be conducted through environmental groups, where “Citizen science can benefit from community and grass-roots localized knowledge.” Partnerships would benefit if they “Communicate case studies and best practice success stories, positive examples.”

Collaboration: Working across groups was considered important to build “Multidisciplinary teams”. There were calls to both “Collaborate with other municipalities, provincial departments, federal departments” and to “Partner with developers working with nature, not against it.” Efforts to “Increase space and connections to meaningfully partner with First Nations” were suggested to enable greater collaboration. Looking to social as well as environmental benefits, collaboration with government could “Focus environmental protection related to people and development.”

NGOs: Partnering with NGOs was considered beneficial because they may “... access unique funding and programs” and “... avoid internal competition for resources.” Specific NGOs were mentioned such as FCM, Nature NB, Nature Conservancy and the Climate Institute, and it was suggested to “Develop a resource for aligned NGOs and Associations.”

Professional Practice: Member directories of the Atlantic Planners institute (API) and Canadian Institute of Planners (CIP) were cited as sources for partnerships. It was suggested to “Provide feedback to community planners to change norms” and to “Communicate case studies and best practice success stories, positive examples.” Partnership opportunities were seen with “Private sector through landscape and design professionals” , benefiting because “Professional associations can be partners with funding and expertise.” Diverse partnerships were mentioned with suggestions to “Connect with and through arts organizations” , include “Insurance companies and sector” and financial institutions which “... can highlight issues of immediate funding compared to more money later.”

Appendix

Participant Survey

- Participants came from Nova Scotia (13), PEI (6), NB (3), NL (2) and BC (1).
- Participants were affiliated with (14) municipalities, (7) universities - as students and educators, (4) consultancies and (4) provincial governments.

Q1: In my opinion, nature provides some direct benefits to communities. My top three picks are:

- (16) Increasing climate resilience
- (11) Stabilizing shorelines and slopes
- (10) Controlling floods
- (9) Offering aesthetic appeals and experiences
- (6) Providing an active transport corridor
- (4) Providing municipal services
- (4) Providing food
- (3) Storing carbon
- (1) Supporting tourism

Q2: Where would you look for tools and knowledge to plan a NI project?

- (10) Forester, Ecologist, Botanist, Biologist
- (9) Professional Association
- (9) University
- (6) Landscape Architect
- (6) Federation of Canadian Municipalities - FCM
- (4) Senior Colleague
- (3) Infrastructure Canada
- (2) Engineer

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