

Natural Infrastructure for Water Solutions: Scaling NI for water needs in Canada

Dimple Roy
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Natural Infrastructure
for Water Solutions



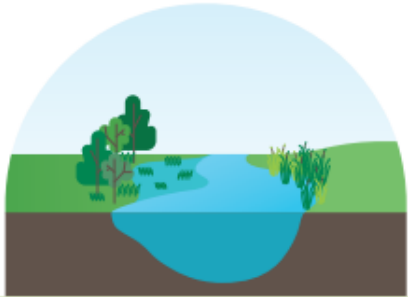
Natural Infrastructure for Water Solutions

Natural Infrastructure for Water Solutions (NIWS) is a five-year initiative (2022 to 2026) led by IISD to scale up NI across the Canadian prairies (Manitoba, Saskatchewan, and Alberta). The NIWS initiative aims for NI to be **well-understood, adopted, financed, and enabled by policy**.

While science and policy are the foundation for this work, IISD is also taking a systems view—looking for opportunities and creative approaches to achieve real impact across the region, working with a network of champions, partners, and decision-makers.

“Taking natural infrastructure from novel to normal.”

What is Natural Infrastructure?



Conserved Ecosystems

Conserving existing natural ecosystems to prevent their loss and/or optimizing their function to enhance infrastructure outcomes

Examples

Wetland, grassland, floodplain, and forest conservation, riparian buffers, and urban tree canopy



Restored Ecosystems

Restoring or enhancing degraded ecosystems to deliver infrastructure outcomes

Examples

Wetland, grassland, floodplain, and forest restoration, riparian buffers, and urban tree canopy

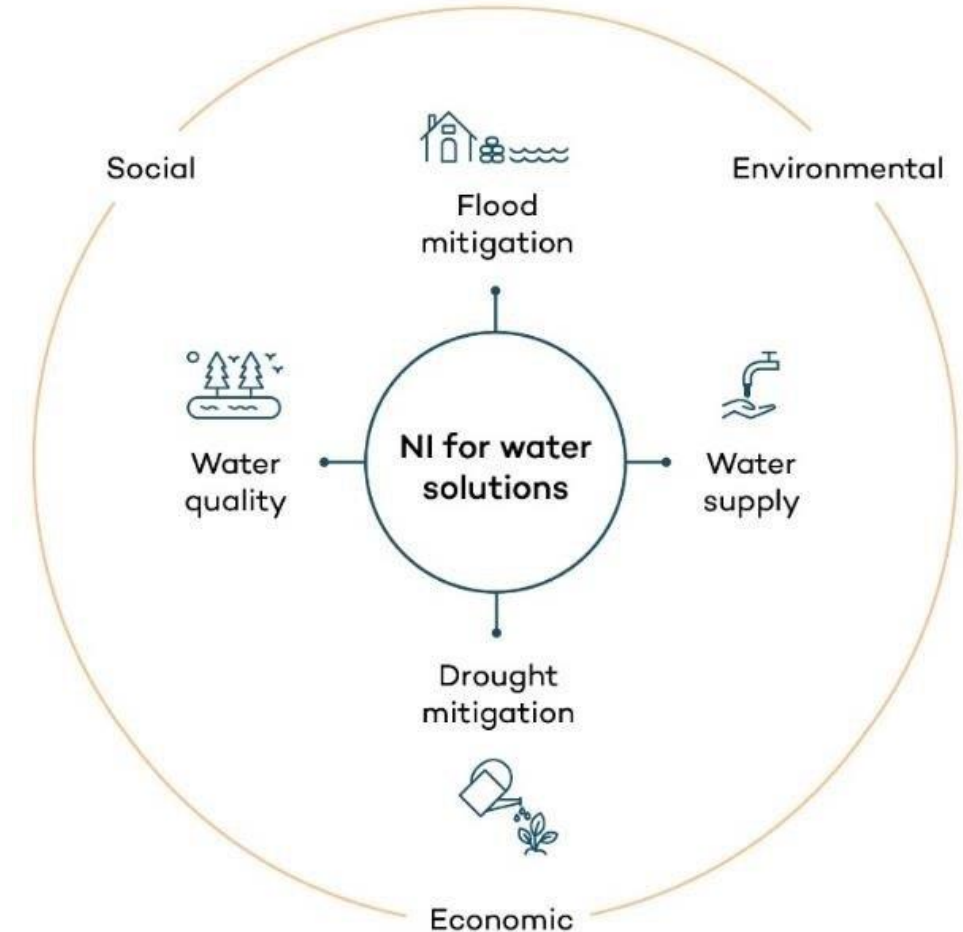


Engineered Ecosystems

Engineering and constructing new ecosystems that incorporate ecosystem features to deliver infrastructure outcomes

Examples

Constructed wetlands, water retention sites, floating treatment wetlands, soil cells, green roofs, and bioswales



The State of Play Report for Natural Infrastructure on the Canadian Prairies

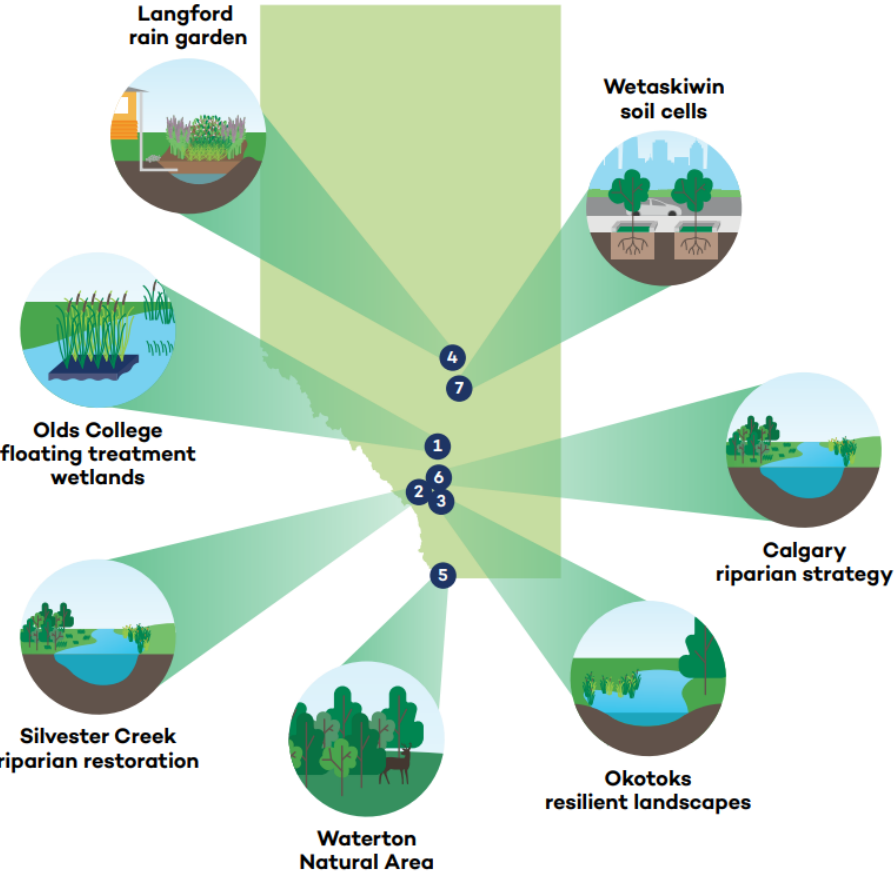


Natural Infrastructure across the Prairies

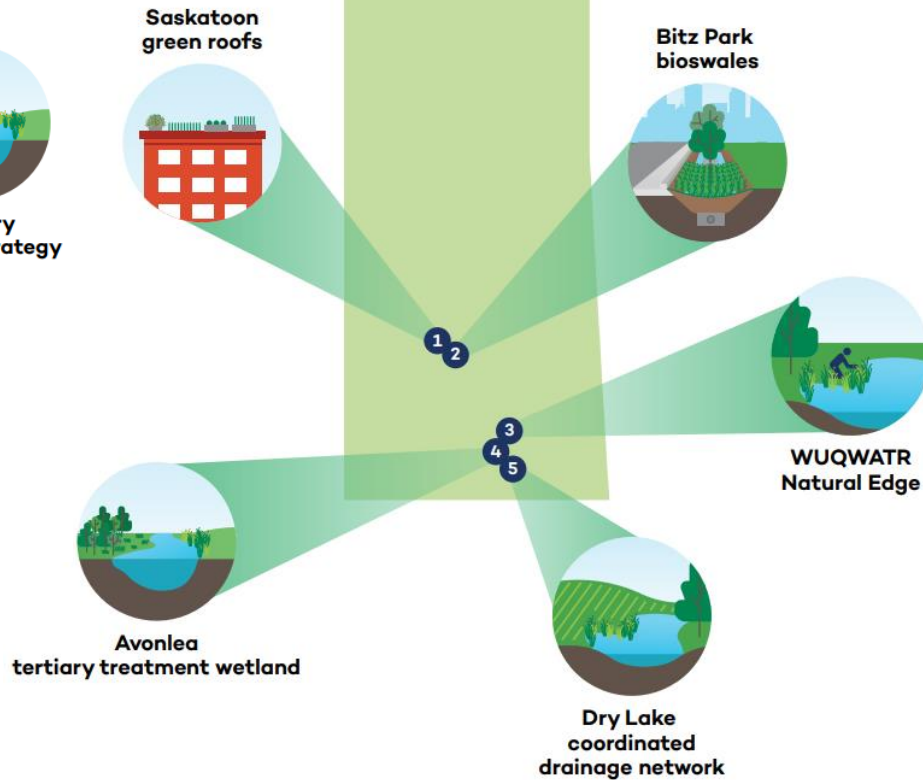
- Nascent, but has growing momentum
- Natural infrastructure forms a patchwork of site-specific projects
- Ongoing loss of critical natural assets
- Local capacity drives natural infrastructure implementation

Credit @ City of Calgary

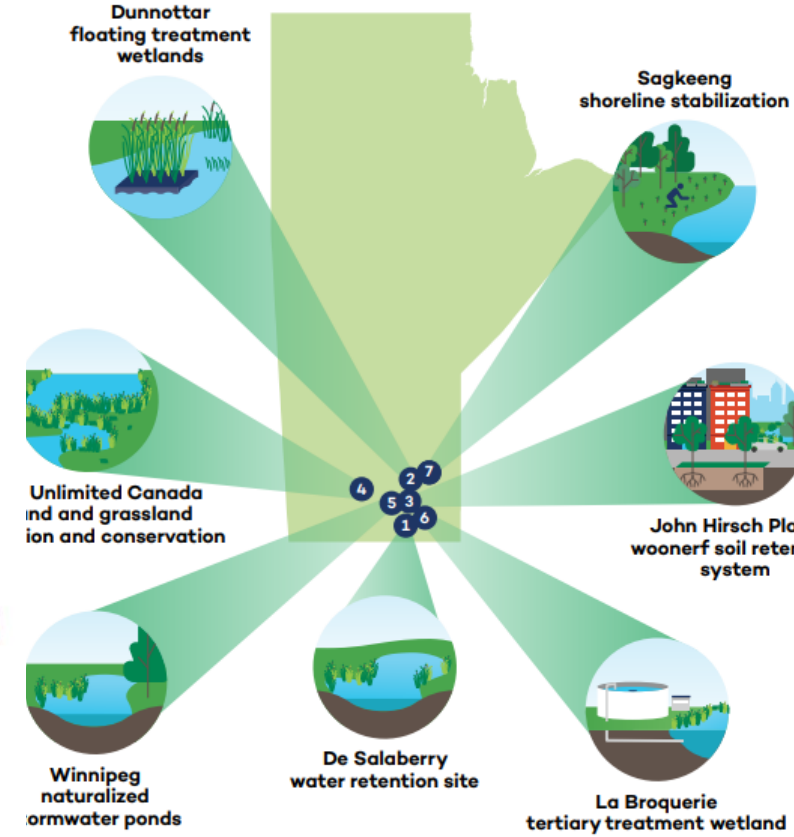
Alberta



Saskatchewan



Manitoba



Floating Treatment Wetlands in the RMs of Springfield & East St. Paul



A resilient infrastructure mix



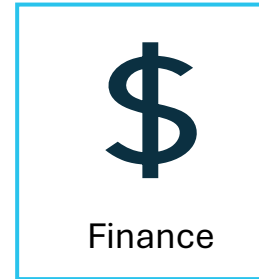
Barriers to Scaling NI Across the Prairies

Despite some progress scaling up NI in recent years, there are several barriers to implementation:



Uncertainty around measuring performance and valuation

Accounting for societal benefits on private land



Funding requirements (“shovel ready”)

Developing project pipeline



Grey infrastructure remains the go-to

Stretched capacity and limited expertise

Current procurement strategies



Awareness and demand

Election cycles and administrative turnover

Limited watershed-scale coordination



Business case



Municipalities



Finance



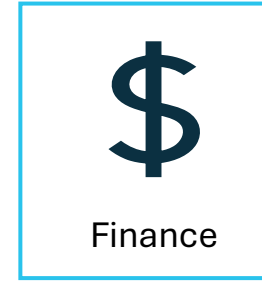
Policy

Opportunities to Scaling NI Across the Prairies

Key opportunities to scale NI on the Canadian Prairies:



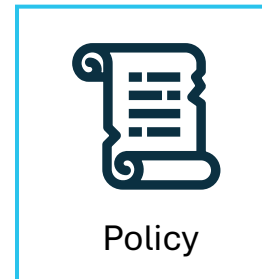
Primary benefits, co-benefits, and multi-solving
Public and political buy-in



Endowment funds
Lifecycle support for projects

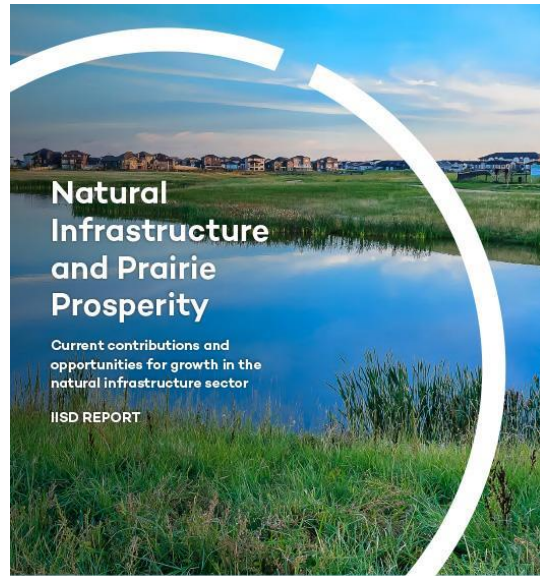


Increasing resilience and risk reduction
Regional collaboration
Easy to implement standards
More tools to support implementation



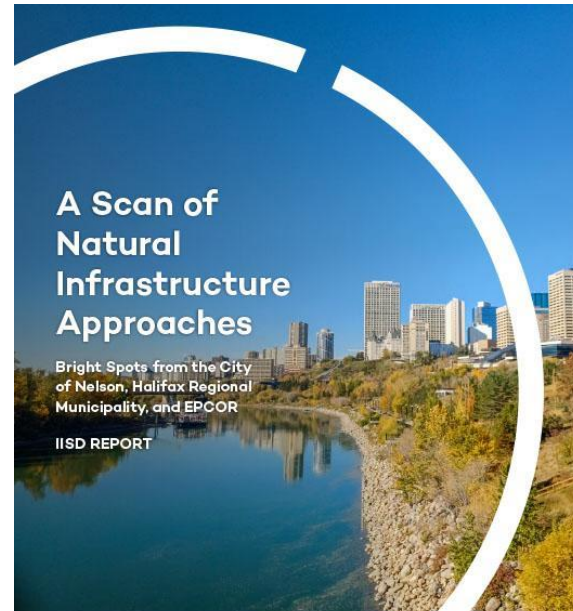
Planning instead of reacting
Redesign approval processes
Updated or new policies

Our work addressing some barriers



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Thank You!

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