

CASE STUDY | Transforming the coasts of New Brunswick through community engagement

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IMPACT SUMMARY

40+ Participating residents

1000 Square metres of habitat restored

OUTCOMES

New Brunswick's GDDPC achieved its goals of biodiversity protection and helped foster a deeper connection between the community and their natural surroundings.

The Tamarack Institute extend our gratitude to Serge LaRoche from the [Pays de Cocagne Sustainable Development Group](#) for sharing their insights that informed the development of this case study.

Restoring the coasts of New-Brunswick

After a series of natural disasters shook the province, residents of the Cocagne Bay and River Watershed, in South-East New Brunswick, drafted a plan of action to adapt to climate change, mitigate its effects on their environment, and increase the resilience of their neighbourhoods and the province at large.

Inspired by work done around nature-based healing in the US by organizations like [Helping Nature Heal](#) the Pays de Cocagne Sustainable Development Group (GDDPC) sought to use renaturalization and nature-based techniques to restore and reinforce their coasts, in an effort to create long-lasting impacts that can be just as effective as sustainable.



THE POWER OF NATURE
WAS USED IN SOUTH-
EAST NEW BRUNSWICK
TO TURN DISASTER INTO
HEALING AND ACTION.

Over the course of three years, the communities of Grande-Digue, Cocagne, Notre-Dame, Irishtown and Grand Saint-Antoine – made up of 3,000 primary residences and many summer residences – worked diligently with residents, local and international partners to implement these solutions and witness their positive impacts on the coasts and the surrounding ecosystem.

“Living Coasts” (Cotes Vivantes) workshops led by Helping Nature Heal were held at Cocagne Community Park in August 2021, August 2022, and September 2023 demonstrate the application of nature-based methods to control coastal erosion. More than **40** people contributed a total of **250** hours to get more than **600** plants representing over **30** different varieties of trees, shrubs and perennials into the ground, restoring around **1,000m²** of habitat.



About the organizations

- [The Pays de Cocagne Sustainable Development Group \(GDDPC\)](#)

The GDDPC is a non-profit organization, established in 2000, which works in the Cocagne Bay and River Watershed, in South-East New Brunswick. Grande-Digue, Cocagne, Notre-Dame, Irishtown and Grand Saint-Antoine are part of the territory.

The GDDPC aims for a holistic sustainable development of the territory and offers opportunities for citizens to manage their environment. The GDDPC acts as a catalyst for the sustainable development of the community. It develops programs to improve the environment and the quality of life of the residents of the Cocagne River Watershed.

- [Helping Nature Heal](#)

Helping Nature Heal is Nova Scotia's leading-edge ecological landscaper. The community-minded business is led by a team of expert landscape designers and crew who craft ecological outdoor spaces that foster a deep connection between people and the surrounding environment. Their

approach combines various disciplines such as ecosystem science, landscape design, ecological restoration, biodynamics, permaculture, eco-forestry, and horticulture therapy. This integration allows them to create tailor-made, sustainable landscapes that meet the specific desires of their clients while respecting the needs of the ecosystems.

Success factors that drove the project's engagement

The success of the project and the remarkable community engagement can be attributed to the strong foundation that the GDDPC had established through their track record of public engagement. This long-standing commitment to involving the community in decision-making processes fostered an environment of trust and collaboration. People felt comfortable working together, sharing ideas, and collectively finding solutions. Participants were driven not only by the desire to protect themselves but also by the shared goal of protecting the neighbourhood and the entire province.

A crucial factor in rallying the community was the strategic approach taken. The GDDPC organized training workshops, equipping participants with the necessary knowledge and skills. The workshops served as an educational platform, allowing individuals to gain a deeper understanding of nature-based solutions and their potential benefits. Armed with this knowledge, the community members were empowered to actively contribute to the project.

However, the engagement did not stop at workshops and training sessions. Participants put their newfound knowledge into action by engaging in hands-on work in nature. This active involvement created a sense of ownership and pride among the community members. It was an opportunity to directly apply what they had learned, witnessing the tangible results of their efforts. The combination of education and practical application was instrumental in fostering a strong sense of commitment and motivation.

The project's objectives encompassed both adaptation measures to address climate change impacts and the protection of biodiversity. This comprehensive approach ensured that the project not only enhanced the resilience of the community and its coasts but also contributed to the conservation of precious ecosystems. By integrating nature-based solutions, the project aimed to strike a balance between human needs and the well-being of the environment.

A significant aspect of the project was the emphasis on education and awareness. The GDDPC recognized the importance of sensitizing the community to the issues at hand and potential solutions. [Rosmarie Lohnes](#) and her team from Helping Nature Heal were consulted to guide restoration work and run practical workshops for target populations.

These experts in the [living shoreline approach](#), along side the GDDPC, assessed the environment and gathered input on the issues residents were facing. Through a series of community meetings and consultations, the team was able to identify the key concerns and priorities of residents. They found that there was a strong desire to protect the coastline and enhance biodiversity, while also supporting the local economy and maintaining the Cocagne region's unique identity.

Using this feedback, they took proactive measures to inform and educate participants about the benefits of nature-based techniques. This approach not only ensured a shared understanding of the project's objectives but also empowered the community to become advocates for nature-based solutions beyond the scope of the project itself.

To ensure the long-term success of the project, the team also worked with the town's council to develop a comprehensive monitoring and maintenance plan. This plan would involve ongoing monitoring of the shoreline and wetlands, as well as regular maintenance activities such as planting and weeding.

ABOUT THE LIVING SHORELINE APPROACH

Living Shorelines are a soft engineering approach for helping to stabilize shorelines and slow down the effects of erosion on waterfront properties and create resilient shorelines that can better withstand waves and storms without endangering the coastal ecosystem.

The approaches are diverse, but they all seek to mimic natural processes which help a coastline reach a more stable state.

(HelpingNatureHeal.com)

A case for nature-based climate action

There are numerous advantages of using nature-based techniques for coastal *renaturalization*:

- It is **cost-effective**. Unlike traditional, engineered solutions, natural techniques require minimal maintenance and can often be self-sustaining. This makes them an affordable and accessible option for coastal communities. Additionally, by attracting tourists, supporting recreational activities, and improving coastal aesthetics, these projects can stimulate local economies and create employment opportunities. Natural techniques often require less maintenance and operational costs compared to traditional, engineered solutions. For instance, maintaining and restoring natural habitats can be more cost-effective than constructing and maintaining hard infrastructure like seawalls or breakwaters.
- It is **sustainable**. By working with nature, we can create long-term solutions that are resilient to the impacts of climate change. This can include creating habitats for wildlife, improving air and water quality, and protecting against coastal erosion and flooding.
- It can help to address the loss of **biodiversity**. Coastal habitats are home to a diverse array of plants and animals, and protecting these habitats can help to maintain biodiversity. This is critical for the health of our planet and the many benefits that we derive from it. By restoring native vegetation, we create



WHAT ARE THE BENEFITS
OF NATURE-BASED
TECHNIQUES IN CLIMATE
ACTION?

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habitats for a wide range of plant and animal species, fostering ecological balance and resilience.

- It increases **carbon sequestration**. Coastal and marine ecosystems sequester and store more carbon per unit area than terrestrial forests and are now being recognized for their role in mitigating climate change. Restored coastal habitats, including mangroves, seagrass beds, and salt marshes trap and store carbon dioxide, helping to mitigate climate change by reducing greenhouse gas emissions.

Natural techniques such as wetlands and vegetated buffers can **improve water quality**, by acting as natural filters and removing pollutants from stormwater overflow. This enhances the health of aquatic ecosystems and benefits both wildlife and human populations. It is one of the main goals of [a massive restoration project in the Everglades](#), for example, where in addition to restoring the environment, the project works to foster compatibility of the built and natural systems.

Renaturalization projects provide opportunities for **community engagement and education**. The Côtes Vivantes project was an excellent illustration of how involving local residents in the planning and implementation process helps foster a sense of ownership and pride in their coastal environments. It also raises awareness of the importance of protecting and preserving natural habitats.

These techniques allow for the preservation of **cultural heritage** and traditional practices. By integrating Indigenous knowledge and engaging local communities, we can ensure that coastal renaturalization projects respect and reflect cultural values and traditions.

Community-led climate action for the win

Community-led collaboration is also a critical component of successful climate transitions. When communities work together to develop solutions, they can create more effective, sustainable, and equitable outcomes. This can include involving local stakeholders in decision-making processes, engaging with community members to identify challenges and opportunities, and building partnerships with other organizations and groups.

In addition to the Côtes Vivantes project, two other examples of community-led collaboration towards nature-based solutions in the Atlantic region include:

- [Halifax Green Network Plan](#) outlines a vision for a connected and protected network of green spaces throughout the city, including parks, trails, and natural areas. By working together, the community was able to create a plan that reflects the needs and priorities of all members, while also protecting the environment and promoting sustainability.
- [TransCoastal Adaptations](#) team at Saint Mary's University, which is made up of academics and industry experts who are working together to develop nature-based solutions for coastal adaptation. Their work is informed by community needs and priorities, and they are committed

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It's really great that they've done the work themselves they are becoming better stewards of their own land.

-Rosmarie Lohnes, Helping Nature Heal

to engaging with stakeholders and community members to ensure that their solutions are effective, equitable, and sustainable.

Visible impacts



Before



After

Key takeaways

- Community engagement and trust-building are crucial for successful nature-based projects.
- Combining educational workshops with hands-on work in nature encourages active participation and a sense of ownership.
- Nature-based solutions can address both climate change adaptation and biodiversity protection.
- Education and awareness play a vital role in empowering communities to become advocates for nature-based techniques.
- Striking a balance between human needs and environmental stewardship is essential for long-term sustainability.

Comments from residents

Rosmarie Lohnes from Helping Nature Heal says about the project, *“it’s really exciting to see folks take this work on by themselves and toil and understand the labour that’s involved in doing a vegetated rock wall system. It’s really great that they’ve done the work themselves they are becoming better stewards of their own land. They’re seeing way more creatures than they ever have*

here so it's wonderful to see the transition from a fully mowed lawn crumbling rock wall to something that's much more sustainable, vibrant, and abundant.”

Conclusion

Using natural techniques to protect Canadian coasts from climate change and loss of biodiversity is a critical component of a sustainable future. These techniques are cost-effective, sustainable, and can help to address the loss of biodiversity. Community-led collaboration is also important, as it can create more effective, sustainable, and equitable outcomes. By bringing people together, providing them with the necessary skills, and instilling a sense of ownership, the project not only achieved its objectives of adaptation and biodiversity protection but also fostered a deeper connection between the community and their natural surroundings.

The journey towards a more sustainable and resilient future starts with communities like these, united in their determination to protect their environment and ensure a better tomorrow.

By working with nature rather than against it, we can create sustainable, long-term solutions that protect our homes, livelihoods, and economy.



TAKE YOUR LEARNING FURTHER

[Restoration and management of coastal wetlands](#) by ClimateAdapt

[Coastal restoration projects and examples](#) from Coastal Restoration Toolkit

[Coastal ‘Blue Carbon’: An Important Tool for Combating Climate Change](#) from Pew Research Institute

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