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Rivershed
Society of BC



Adapting for Ecological Resilience Network Nature-Based Solutions Working Group

Workshop #1 Summary

January 27, 2022 | Microsoft Teams | 1:00 - 3:00pm PST

Workshop Introduction

Justine Nelson, the Executive Director of the Rivershed Society of BC, welcomed participants and introduced this workshop as the first in a series of three nature-based solutions (NbS) workshops. The second workshop will focus on Indigenous-led NbS and the third on the implementation of NbS.

NbS and Climate Change

Kacia Tolsma, from Simon Fraser University's (SFU) Action on Climate Team (ACT), provided a scholarly definition of NbS and explained how the term gained momentum:

- *Scholarly definition of NbS.* Broadly speaking, NbS are those actions or strategies taken to protect, sustainably manage and/or restore natural or modified ecosystems, working lands and aquatic systems, or create novel ecosystems (IUCN, n.d.) (Seddon, et al., 2021). NbS can help address societal challenges (e.g., climate change, food and water insecurity, natural disasters) effectively and adaptively while simultaneously providing human well-being and biodiversity benefits (Cohen et al., 2016).
- From a settler/colonial perspective, *the conceptualization of NbS* emerged from a paradigm shift as people changed from being passive beneficiaries of nature to independent actors. However, Indigenous traditional ecological knowledge has long recognized the importance of nature and its ability to provide benefits.

Kacia then explained that NbS acts as an umbrella term, which covers natural assets (e.g., wetlands, forests, grasslands) and blue-green infrastructure (e.g., bioswales and rain gardens). NbS have the ability to enhance community resilience by reducing risks and emissions, as well as provide ecosystem goods and services at a fraction of the cost of engineered assets.

[A reflection exercise on the definition of NbS, using Miro](#), was then introduced and participants were given the opportunity to share their thoughts on the working definition.

Low Carbon Resilience (LCR)

Kacia then introduced LCR as a step change in climate action that coordinates and mainstreams, adaptation, mitigation, and co-benefits in decision-making processes. Applying an LCR lens can help to reduce projected impacts of climate change, as well as build community resilience and sustainability over time, as it requires users to consider climate risk, emissions, and co-benefits¹. Additionally, the LCR approach reduces the potential for contradictory decision-making and ushers in the opportunity to expand the benefits received. NbS emerge as a critical LCR entry point because of their ability to reduce climate risk and emissions and provide co-benefits.

¹ Co-benefits are the positive social, cultural, economic, and environmental benefits of a policy or action that aims to reduce climate change risks and greenhouse gas emissions.



Climate Change in Metro Vancouver

Kacia shared a list of climate change hazards and their potential impacts in the Lower Fraser region, as well as impacts on salmon populations specifically, such as fish disease and changes in rates of fish growth. Several examples of NbS within the Lower Fraser were then highlighted, such as the Semiahmoo Public Library green wall and stream daylighting of Still Creek.

Three pillars to planning for NbS were presented:

- Collaborating with and following the leadership of Indigenous Nations
- Acknowledging how climate change is altering ecosystem functions
- Considering how we are building corridors (e.g., at a regional or landscape scale)

Monitoring NbS was also discussed, as it can provide evidence that actions are helping to meet targets, as well as aid in adapting and iterating management approaches. As indicators provide quantifiable and objective information, data from monitoring can also be a useful communications tool to bridge the gap between science and policy and share findings with a wider audience.

Breakout Rooms

Breakout rooms were then opened and each group completed four different exercises on co-benefits, challenges, opportunities, and monitoring. For more detail on the discussions, [please refer to the Miro boards](#). The key takeaways from each group were presented in the main room:

- *Co-benefits.* Many co-benefits were identified (e.g., NbS have the ability to advance community wellness and needs while also preserving the natural environment) and individuals were seeing them frequently in their work.
- *Challenges.* Ethical considerations around NbS; policies acting as a hindrance; pushback from Engineering departments; traditional funding does not include NbS; communities are in need of funds; valuing nature in the traditional economy versus environment dichotomy that many environmental decisions get made in; aligning and unifying NbS projects and efforts; the complexity of working within a larger ecosystem; sharing costs in the protection of natural and agricultural land.
- *Opportunities.* Creating a space for ethical consideration; developing a brief for how we are defining NbS and using it; creating a space for coordination and collaboration where a facilitator can put people in touch with each other; involving multiple champions from multiple fronts; optimizing ecosystem function beyond jurisdictions; engaging youth by passing on our knowledge; generating innovative ways of capturing ecosystem services to inform the regulatory environment; a prioritization framework to help advance and scale up NbS projects and planning
- *Monitoring.* It is difficult to identify all factors because there is a never-ending amount of data on co-benefits that could be used to reflect various values. However, two points that arose were the lack of baseline data for restored areas and that land cost in the Lower Fraser is not economically feasible for the preservation of land.

Conclusion and Ideas for Workshop #2

The workshop concluded with Kacia providing closing remarks and thanking the participants for attending the workshop. Participants were then prompted to share ideas and thoughts about who they would like to see present and what topics they would like to be covered in the next workshop: Indigenous-led NbS.