

SEAGRASS

Seagrasses are underwater flowering plants found in shallow coastal ecosystems. They can form densely vegetated areas called seagrass meadows. Our understanding of the impact of seagrasses on complex, global carbon cycles is evolving, but they have been referred to as a “secret weapon” for mitigating climate change in coastal zones because of their ability to sequester carbon through photosynthesis and storage in marine sediments.

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Implementing natural climate solutions (NCS) can help to prevent further degradation and support the potential recovery of seagrasses, safeguarding the ecosystem services they provide.

KNOWLEDGE GAPS

Canada lacks standardized, long-term monitoring data for seagrasses, and so there is uncertainty on the status and trends of seagrass ecosystems. Existing data suggest considerable variability from coast to coast to coast. We still do not know enough about how location and time of year affect how much carbon they can sequester.

THREATS AND MANAGEMENT


An estimated three per cent of seagrass meadows in Canadian waters are in decline. Factors contributing to ecosystem destruction include coastal development, agriculture, commercial fishing and climate change. A key challenge for seagrass meadow management is the potential for feedback loops, where the loss of seagrass releases sediments that were previously stabilized by the roots. Resuspended sediments lead to a decrease in water quality and negatively influence growing conditions for new or remaining seagrasses. Implementing natural climate solutions (NCS) can help to prevent further degradation and support the potential recovery of seagrasses, safeguarding the ecosystem services they provide.

SEAGRASS AND NATURAL CLIMATE SOLUTIONS

In places where seagrass meadows have already been lost, restoration can increase the speed of recovery relative to natural processes, but for restoration to be successful, the cause of habitat loss must be addressed. In addition to contributing to the fight against climate change, seagrasses provide additional ecological services and functions, such as spawning habitat for Pacific herring — a cultural keystone species that is critically important to Indigenous Peoples on the northwest coast of North America. As such, restoration, monitoring and management considerations for seagrass may carry additional importance for coastal Indigenous Peoples who hold local ecological knowledge about these interrelated species. Opportunities to work with coastal Indigenous communities on NCS related to seagrass should be sought, including supporting Indigenous efforts to protect and restore coastal ecosystems.

RECOMMENDATIONS

- ✓ Connect seagrass mapping efforts, adopt standardized protocols and find ways to integrate new technology to improve understanding of seagrass distribution. Such efforts will support a more accurate evaluation of region-specific carbon dynamics to further the protection and management of these important habitats.
- ✓ Address barriers to implementation and monitoring of NCS in seagrass habitats.
- ✓ Support and build partnerships with Indigenous and local communities in ways that advance their priorities and initiatives, including restoration and conservation projects.
- ✓ Respectfully seek out Indigenous knowledge, perspectives and consent when developing NCS or conducting research on seagrass.



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