

Census of Environment: Condition and ecosystem services of Canadian salt marshes, 2016 and 2021

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Salt marshes are coastal wetlands that are an important link between land and marine environments. Healthy salt marshes provide benefits such as climate regulation, coastal protection against storms and flooding and a habitat for many species of plants and animals. New ecosystem accounts have been developed for salt marshes as part of Statistics Canada's new Census of Environment program.

Salt marsh condition better in less populated areas

Salt marshes in ecoregions around Hudson Bay and along the coasts of northern Quebec, northern Vancouver Island, northern British Columbia and the outer Gulf of St. Lawrence tended to be in the best condition. Marshes in these regions had a low share of non-natural land use in surrounding areas (less than 0.6% in 2016 and 2021) including a low density of roads in the surrounding land (less than 0.2 km/km² for both years). These marshes are less impacted by pollution and human activity associated with roads and other land uses, such as urban areas or cropland.

Salt marshes in more densely populated areas of Canada tended to be in poorer condition, particularly in ecoregions around the Lower Mainland of British Columbia, southern Vancouver Island, the Maritime provinces and along the estuary and Gulf of St. Lawrence. In these regions, land uses ranged from 3.5% to 30.3% in the area surrounding salt marshes, and road density ranged from 0.7 km/km² to 3.2 km/km². Salt marshes neighbouring roads and populated areas are more likely to be modified by humans and to have higher levels of pollution. Human infrastructure can also lower salt marshes' ability to adapt to changing conditions by creating barriers to natural tidal flow as well as limiting natural expansion of the marsh.

All Canadians benefit from salt marsh services

The natural services that salt marshes provide to Canadians can be nationally significant or may be enjoyed more locally. All Canadians benefit from the climate regulation services provided by salt marshes. The degree to which salt marshes provide climate regulation services depends on their condition and level of conservation and protection. Salt marshes in Canada may sequester as much as 785 kilotonnes of carbon per year. However, if disturbed, salt marshes can release carbon back into the environment. Currently, more than one-third of mapped salt marsh in Canada is conserved or protected. The Hudson Plains ecozone contains the largest area of mapped salt marsh, of which 45% is conserved or protected.

Coastal recreation and protection services are beneficial to local populations. Salt marshes provide opportunities for recreation through activities such as bird watching, fishing and walking. In 2021, about 640,000 Canadians lived within one kilometre of a salt marsh. Moreover, around 113,000 dwellings located directly behind a salt marsh benefitted from coastal flood and erosion protection services, accounting for 41% of the population living within the one-kilometre boundary.



Note to readers

Statistics Canada's new [Census of Environment program](#) reports on ecosystems in Canada, providing information to help Canadians make evidence-based decisions to protect, rehabilitate, enhance and sustain our environment. It follows the internationally accepted environmental-economic standard for producing information on ecosystems' extent, their condition and the services they provide.

Two new tables track salt marsh condition (38-10-0162-01) and ecosystem services (38-10-0161-01) for ecozones, ecoprovinces and ecoregions in Canada, following the framework described in "[Valuing the Salt Marsh Ecosystem: Developing Ecosystem Accounts](#)."

The variables in the condition and services tables were initially chosen because of data availability and ease of analysis. The data presented in these tables may be revised over time. As more data become available and methods are developed, additional variables will be added to the tables.

The [Ecological Land Classification 2017](#) provides standard names and codes for Canada's ecological areas including ecozones and ecoregions.

For more information on salt marshes, see "[Salt Marshes in Canada](#)" in the series Statistics Canada – Infographics (11-627-M).

For more information, see [Canadian System of Environmental-Economic Accounting – Ecosystem Accounts \(5331\)](#).

Available tables: [38-10-0161-01](#) and [38-10-0162-01](#).

Definitions, data sources and methods: survey number [5331](#).

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; infostats@statcan.gc.ca) or Media Relations (statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca).