

# Census of Environment: Ocean and coastal ecosystems, 2020

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Two-thirds of the world's surface is covered by oceans, and many ocean ecosystems are still largely unknown—particularly those in the deep ocean.

Today is World Oceans Day, and to celebrate, Statistics Canada is releasing a new data table on ocean and coastal ecosystem areas, which support a diversity of marine life and play a key role in carbon storage. Over time, these data will help Canadians understand more about the state of our ecosystem assets and how they are changing.

Ocean and coastal areas over which Canada has jurisdiction—up to the boundary of its exclusive economic zone—cover 5.76 million square kilometres, of which 62% are located in the Arctic Ocean, 30% in the Atlantic Ocean and 8% in the Pacific Ocean.

## Coastal ecosystems vulnerable to human activity and climate change

Many important ecosystems, such as salt marshes, seagrass meadows and kelp forests are found in coastal areas with water depths of 50 m or less. For millennia, these areas provided many benefits, including carbon capture as well as fish habitat and nursery services. However, human activities, such as those related to development, agriculture and shipping have caused the loss of many of these ecosystems.

In 2020, salt marsh ecosystems were estimated to cover a minimum of 1,114 km<sup>2</sup> of the intertidal zone along Canada's coasts. Seagrass meadows were estimated to occupy 1,423 km<sup>2</sup> of seabed, while kelp forests occupied an estimated 597 km<sup>2</sup>. These ecosystems are biodiversity hot spots and important carbon sinks.

## Deep waters still unknown

The existence of cold water coral and sponges in Canadian waters has been known for some time. However, mapping these ecosystems based on species surveys and deep-water research is relatively new. This work commenced around the turn of the century.

In 2020, the known area of cold water coral and sponge ecosystems extended across 293,346 km<sup>2</sup> of the ocean floor off the coast of Canada, the majority of which were located in the Atlantic. However, in deeper waters, the ocean floor has not been fully mapped, and more research is required to further classify these ecosystems.

Coral areas are important ecosystems for biodiversity, but they are fragile and susceptible to damage from human activities, such as fishing and oil extraction, as well as climate change.



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### Note to readers

Measuring ocean and coastal ecosystem extent is a foundational component of Statistics Canada's ecosystem accounts, developed as part of the new [Census of Environment](#) program.

Ecosystem extent accounts organize data on the size and location of different types of ecosystems, and their change over time. Ocean and coastal areas are classified by ecosystem type, including seagrass meadows, kelp forests, coral and sponge ecosystems, and by substrate type and ocean water layer, for each marine bioregion of Canada.

An important aspect of the accounts is to identify where there are data gaps. Much of the ocean floor is difficult to map at the level of detail required to delineate different ecosystem types. As work progresses on the accounts, the area listed as unassigned will decrease.

Further work is ongoing to develop ecosystem extent estimates and assess change on a long-term basis. Quantitative measures of ecosystem condition and valuations will be developed to provide a more complete picture of the relationship between the economy, society and the environment. This will influence how well-being and social progress is measured.

Look for more of these types of data and engagement with key stakeholders and Canadians as the program develops over the course of the next several years.

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

**Available tables: table [38-10-0153-01](#).**

**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](mailto:infostats@statcan.gc.ca)) or Media Relations ([statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca](mailto:statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca)).