

Circumpolar Arctic Vegetation

Circumpolar Arctic Vegetation Map (CAVM) Raster Version

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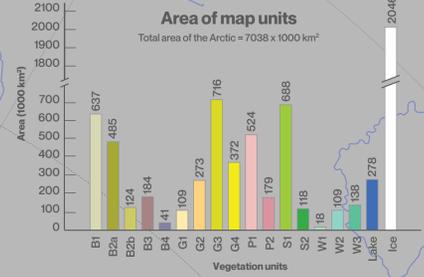
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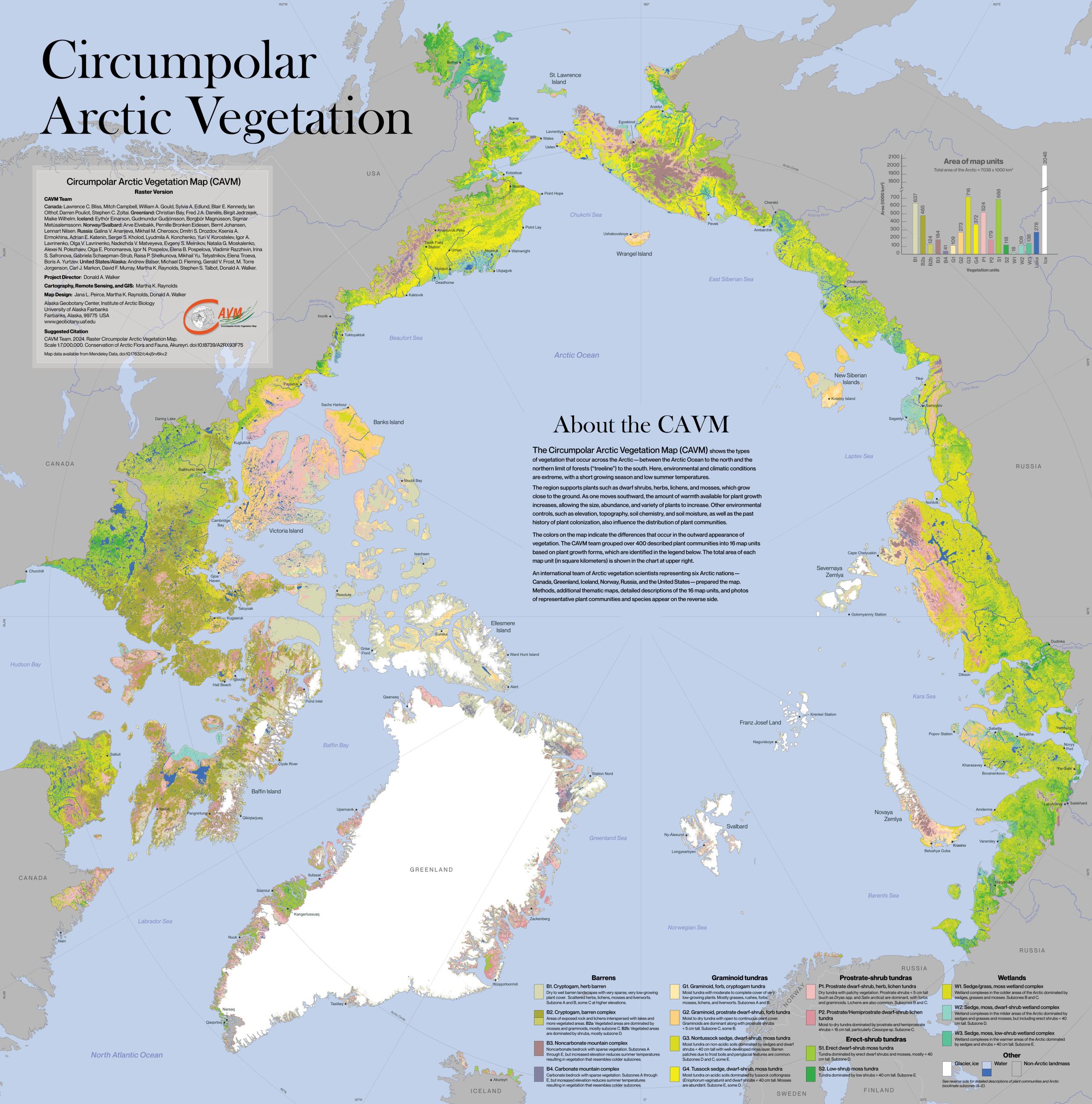
About the CAVM

The Circumpolar Arctic Vegetation Map (CAVM) shows the types of vegetation that occur across the Arctic—between the Arctic Ocean to the north and the northern limit of forests (“treeline”) to the south. Here, environmental and climatic conditions are extreme, with a short growing season and low summer temperatures.

The region supports plants such as dwarf shrubs, herbs, lichens, and mosses, which grow close to the ground. As one moves southward, the amount of warmth available for plant growth increases, allowing the size, abundance, and variety of plants to increase. Other environmental controls, such as elevation, topography, soil chemistry, and soil moisture, as well as the past history of plant colonization, also influence the distribution of plant communities.

The colors on the map indicate the differences that occur in the outward appearance of vegetation. The CAVM team grouped over 400 described plant communities into 16 map units based on plant growth forms, which are identified in the legend below. The total area of each map unit (in square kilometers) is shown in the chart at upper right.

An international team of Arctic vegetation scientists representing six Arctic nations—Canada, Greenland, Iceland, Norway, Russia, and the United States—prepared the map. Methods, additional thematic maps, detailed descriptions of the 16 map units, and photos of representative plant communities and species appear on the reverse side.



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| <p>Barrens</p> <ul style="list-style-type: none"> B1. Cryptogam, herb barren
Dry to wet barren landscapes with very sparse, very low-growing plant cover. Scattered herbs, lichens, mosses and liverworts. Subzone A and B, some C at higher elevations. B2. Cryptogam, barren complex
Areas of exposed rock and lichens interspersed with lakes and more vegetated areas. B2a: Vegetated areas are dominated by mosses and graminoids, mostly subzone C. B2b: Vegetated areas are dominated by shrubs, mostly subzone D. B3. Noncarbonate mountain complex
Noncarbonate bedrock with sparse vegetation. Subzones A through E, but increased elevation reduces summer temperatures resulting in vegetation that resembles colder subzones. B4. Carbonate mountain complex
Carbonate bedrock with sparse vegetation. Subzones A through E, but increased elevation reduces summer temperatures resulting in vegetation that resembles colder subzones. | <p>Graminoid tundras</p> <ul style="list-style-type: none"> G1. Graminoid, forb, cryptogam tundra
Moist tundra with moderate to complete cover of very low-growing plants. Mostly grasses, rushes, forbs, mosses, lichens, and liverworts. Subzones A and B. G2. Graminoid, prostrate dwarf-shrub, forb tundra
Moist to dry tundra with open to continuous plant cover. Graminoids are dominant along with prostrate shrubs < 5 cm tall. Subzone C, some B. G3. Nontussock sedge, dwarf-shrub, moss tundra
Moist tundra on non-acidic soils dominated by sedges and dwarf shrubs < 40 cm tall with well-developed moss layer. Barren patches due to frost boils and periglacial features are common. Subzones D and C, some E. G4. Tussock sedge, dwarf-shrub, moss tundra
Moist tundra on acidic soils dominated by tussock cottongrass (<i>Eriophorum vaginatum</i>) and dwarf shrubs < 40 cm tall. Mosses are abundant. Subzone E, some D. | <p>Prostrate-shrub tundras</p> <ul style="list-style-type: none"> P1. Prostrate dwarf-shrub, herb, lichen tundra
Dry tundra with patchy vegetation. Prostrate shrubs < 5 cm tall (such as <i>Dryas</i> spp. and <i>Salix arctica</i>) are dominant, with forbs and graminoids. Lichens are also common. Subzones B and C. P2. Prostrate/Hemiprostrate dwarf-shrub lichen tundra
Moist to dry tundra dominated by prostrate and hemiprostrate shrubs < 15 cm tall, particularly <i>Cassiope</i> sp. Subzone C. <p>Erect-shrub tundras</p> <ul style="list-style-type: none"> S1. Erect dwarf-shrub moss tundra
Tundra dominated by erect dwarf shrubs and mosses, mostly < 40 cm tall. Subzone D. S2. Low-shrub moss tundra
Tundra dominated by low shrubs > 40 cm tall. Subzone E. | <p>Wetlands</p> <ul style="list-style-type: none"> W1. Sedge/grass, moss wetland complex
Wetland complexes in the colder areas of the Arctic dominated by sedges, grasses and mosses. Subzones B and C. W2. Sedge, moss, dwarf-shrub wetland complex
Wetland complexes in the milder areas of the Arctic dominated by sedges and grasses and mosses, but including erect shrubs < 40 cm tall. Subzone D. W3. Sedge, moss, low-shrub wetland complex
Wetland complexes in the warmer areas of the Arctic dominated by sedges and shrubs > 40 cm tall. Subzone E. <p>Other</p> <ul style="list-style-type: none"> Glacier, ice Water Non-Arctic landmass <p>See reverse side for detailed descriptions of plant communities and Arctic bioclimate subzones (A–E).</p> |
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