

## Study: Arctic soil carbon underestimated

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University of Washington researchers say scientists studying climate warming might be underestimating the amount of soil carbon in the high Arctic.

A three-year study of northwest Greenland soils found a key previous study greatly underestimated the organic carbon stored in the soil. That's because the earlier work generally looked only at the top 10 inches of soil, said Jennifer Horwath, a UW doctoral student in Earth and space sciences.

The 1992 study estimated 1 billion metric tons of organic carbon was contained in the soil of the polar semidesert, a 623,000-square-mile Arctic region. That research also estimated about 17 million metric tons of carbon was sequestered in the soil of the adjacent polar desert.

But Horwath dug substantially deeper and found significantly more carbon. She concluded the polar semidesert contains more than 8.7 billion metric tons of carbon, and the polar desert more than 2.1 billion metric tons.

"In the polar semidesert, I found nearly nine times more carbon than was previously reported," she said. "In the polar desert, I'm finding 125 times more carbon."

Horwath presents her findings Tuesday during the American Geophysical Union's fall meeting in San Francisco.

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