

## 북극 반건조 툰드라와 습한 툰드라에서의 토양 이산화탄소 플럭스

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## Soil CO<sub>2</sub> Efflux of Semi-arid Tundra and Moist Tundra in the Arctic

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Response of the Arctic to global warming is seen as a high-sensitivity indicator of climate change. Considering that 25% of Earth's terrestrial surface is underlain by permafrost, warming permafrost may play important roles in carbon cycle of the Arctic. The soil CO<sub>2</sub> efflux from representative tundra ecosystems in the Arctic should be monitored in order to evaluate the potential future sensitivity of the carbon cycle to climate change. We measured soil CO<sub>2</sub> efflux of two different tundra ecosystems which are a semi-arid tundra in high-arctic and moist tundra near treeline in subarctic. The study sites were Ny-Ålesund (78° 55' 24" N, 11° 55' 15" E), Svalbard archipelago, Norway and Council, Alaska (64° 50.63' N, 163° 42.64' W) on the Seward Peninsula. We examined relationship between soil CO<sub>2</sub> efflux and various controlling factors and contribution of vegetation. Response of soil CO<sub>2</sub> efflux to environmental factors was compared in two type tundra ecosystem.

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