温暖化予測に関わる北極域土壌圏の炭素収支の時空間変動

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Spatiotemporal variations of carbon budget in arctic pedoshpere concerned with the prediction of global warming

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We introduce our study plan and new results of spatiotemporal variations of carbon budget in arctic pedoshpere concerned with the prediction of global warming supported by Environment Research and Technology Development Fund of the Ministry of the Environment, Japan (2-1304). The study sites are boreal forests and tundra in Alaska, USA and Canada. We focus on remotely sensed classification of the ecosystems from the viewpoint of soil organic matter decomposition. Shrub increase in tundra, wildfires, and transition of tundra to boreal forests are considered in the ecosystem classification. By combining the profiles of soil organic matter contents and soil organic matter compositions in the classified ecosystems and a carbon circulation model of the ecosystems with the ecosystem classifications, we evaluate spatiotemporal variations of carbon budget in arctic pedoshpere concerned with the prediction of global warming in the scale of 1 km and 2500 years.