

## Arctic soils

The Soil Functions team organises an annual expedition to South Greenland.



South Greenland is the only actual farming area in Greenland. Agricultural activities range from sheep farming, cattle farming and cultivation of winter forage crops, potatoes and other types of vegetable production to reindeer breeding. Muskox is another grazing species.

An application has been submitted to UNESCO for the South Greenland cultural landscape – Kujataa – to be designated a World Heritage Site.

New agricultural opportunities are emerging in South Greenland along with the gradual climate changes that are taking place. The extent of available land resources and agricultural production is currently relatively limited (an area of roughly 1,000 ha is available for crops compared with 250,000 ha for grazing). Sustainable management in harmony with nature and the environment will require a careful mapping of the soil, plant communities and their robustness in terms of protecting the soil and the vegetation as resources for the people of Greenland.



A sustainable agricultural production of quality food is an obvious alternative to, for example, mining when the objective is the protection of the environment and nature, including flora and fauna

biodiversity. Agricultural production supports the Greenlandic heritage, settlements and employment in the settlements and contributes to the self-sufficiency of Greenlandic quality foods.

Farming must be carried out with care and be based on scientific surveys to ensure that the soil is not depleted and biodiversity not compromised, which would otherwise leave the soil infertile for future generations. This requires a thorough understanding of the vulnerability of the land in terms of soil depth, organic matter content, water and vegetation in order to optimize its sustainable use.

The extensive and varied use of the landscape of South Greenland calls for a mapping tool that can ensure the most appropriate use of the South Greenland area for the farming of sheep and reindeer, growing of potatoes and winter forage, etc., while respecting nature and biodiversity.

### **Platform for mapping of resources in South Greenland**

The Soil Functions team is creating a platform for the scientific mapping of natural, terrestrial resources in South Greenland by means of soil sampling and characterization of soil functions. The aim is to manage the natural areas in a sustainable manner with respect to cultural heritage, agriculture and the environment – not only now but also in a future, warmer climate.

Every year the team invites 3-4 students to join the expedition. Interested students (MSc or PhD) can contact Professor [Lis Wollesen de Jonge](#) for information and application guidelines for participating in the 2017 expedition.