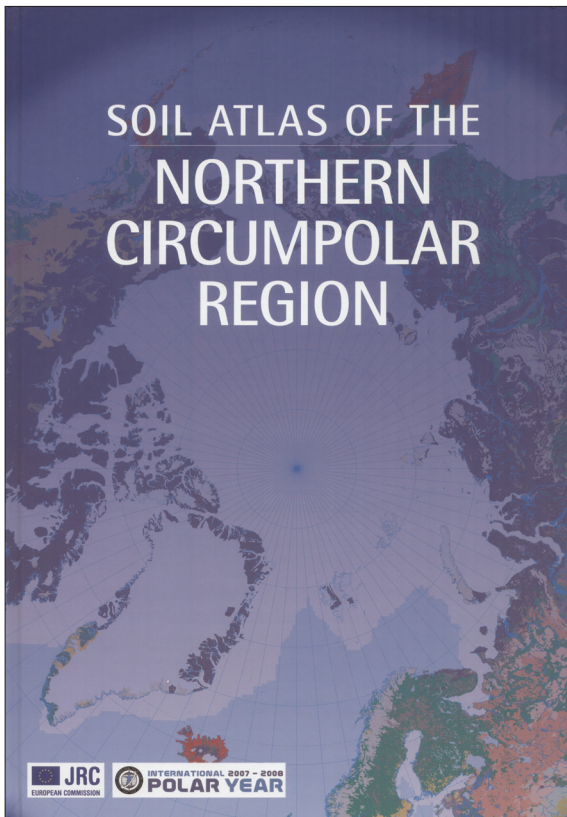


Jones, A. *et al.* (eds): **An introduction to the „Soil Atlas of the Northern Circumpolar Region“**. European Commission, Publication Office of the European Union, Luxemburg. 2010.

The Joint Research Center of the European Commission has recently published a new atlas summarizing the soil resources of the Northern Circumpolar region. This atlas is the second in the Soil Atlas series, which was launched three years ago with the Soil Atlas of Europe and will continue soon with the Atlas on Soil biodiversity, and the Soil Atlas of Africa. Both of them are in the final stage of editing and will be published very soon. The work is ongoing, the organization of the scientific and editorial team for the Soil Atlas of Southern America has just recently started.

The initiative of publishing this Atlas series has been started with the compilation of the 1:1 million scale harmonized European Soil database, which was the first harmonized thematic database for the EU member states. The Atlas on the European soils is one of the presentation forms of this database with two major aims behind it. The first one is to provide a comprehensive view on the soil resources of Europe for teaching and educational purposes, while the second one is to raise awareness of soil protection over Europe.

The topic of the most recent Atlas on the soils of the Northern Circumpolar region was decided in 2007, as an EU contribution to the international polar year 2007–2008. Soil



plays a critical role in the global carbon cycle processes thus being one of the most important factors in global warming. The thawing of soils in the arctic regions will result in the thawing of the currently frozen organic matter of the peat and meadow soils formed in this temporarily wet environment.

The reactivation of the surface and the soil forming processes can impact the global carbon cycle in two opposite ways. The warming and drying scenario may increase the decomposition rate of the soil organic matter and thus produce significant amount of extra carbon load to the atmosphere.

On the other hand, the warming and wetting scenario is bound to increase the hydromorphic impact and to decrease the decomposition rate of the fresh biomass and therefore to increase the carbon sequestration ratio in the soil. It is very likely, that both scenarios will happen in the same

time depending on the environmental conditions. The important thing in forecasting the impact of the soil systems on global warming is to know the spatial extent of the two processes. Any modeling effort requires hard and harmonized data on soil for the potentially affected regions, which did not exist till recently. This gap was filled by this atlas.

More than 20 soil specialists of the arctic regions were involved into the project from each of the corresponding countries of Europe, Asia and North America, which ensured the high scientific quality of the work. Besides being a traditional atlas with 28 A/2 sized soil map plates classified in accordance with the World Reference Base 2006, the book is an attempt to describe the physical endowments and human environment of the Arctic and their impact on soil formation and the soil types. It summarizes the major soil types and soil properties of the regions and their role in the global processes, like the carbon cycle and global warming/climate change issues, and the local perspectives/uses of the soils in the contributing areas and countries.

The book is rich in illustrating photos, figures and maps, and provides a unique opportunity to obtain an insight into the Arctic environment. It is very useful for teaching or self educating purposes and provides a pleasant reading for the interested audience.

Endre DOBOS