

## Soil Governance

Winfried E.H. Blum  
Secretary General of ISSS/IUSS 1990-2002  
Professor em. at the University of Natural Resources  
and Life Sciences (BOKU)  
Vienna/Austria



International Union of Soil Sciences

Soil is a finite resource. Only 12% of the global soil and land resources can produce food and fibre, 24% sustain grasslands, 31% forests, and 33% are unfit for any kind of ecological use, because they are too cold, too dry, or without soils at all.

Soils are owned by individuals or groups of individuals, including states. As stakeholders, decision makers or politicians, they have the mandate and are responsible for soil governance. Science can only develop scenarios or concepts, based on acquired scientific knowledge and experience in the protection and the sustainable use of soil and land resources, which have to be focused on the locally prevailing conditions, in view of the extreme diversity of soil and site conditions at the global scale.

In this context, important competition exists between ecological and non-ecological uses of land and soils, for example between the protection and the use of natural, agricultural and forest ecosystems on the one hand, and the development of technical infrastructure for daily life, industrial production, transport or for other purposes on the other hand.

Through sealing and the excavation of soil material we lose, globally estimated, up to 400 km<sup>2</sup> of fertile land per day, which means that every second we lose large surfaces for food and fibre production, which can only be compensated by intensification of the production on the remaining surfaces without considering impacts on the renovation of groundwater resources or the maintenance of biodiversity.

Additionally, within the ecological soil uses there is a competition between intensive agriculture and the quantity and quality of groundwater resources or between intensive agriculture and soil biodiversity. To explain these and further complex problems in an understandable way to stakeholders, politicians and decision makers is a further important task of soil sciences besides their role in developing concepts and practices for the protection and the sustainable use of thousands of different soils and sites at a global scale.

For example, looking at the politically defined 17 Sustainable Development Goals (SDG's), the role of soil science is to develop concepts for a sustainable realisation of these goals, which can only be achieved on the local level, given the most diverse physio-geographical conditions world wide for food and fibre production, protection of human health, or the provision of clean water resources.

In this context, the protection of soils and the development of concepts for the harmonisation of land take for infrastructure development on the one hand and the sustainable production of food and fibre for an increasing world population on the other, is of paramount importance and will be decisive in the near to medium future.