



IESP
International Expert Group on
Earth System Preservation

Declaration
on the
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Soil, like water and air, is essential for life on earth. Soils have multiple natural functions and provide important ecosystem services, but there may be diverging interests in their use as a non-renewable resource by humans (e.g., for food production versus for urban infrastructures). These types of trade-offs need to be evaluated, considered and balanced towards a sustainable soil and land management. Public awareness for the importance to wisely using soils is growing, especially in the International Year of Soils 2015, but efforts need to be stepped up. Effective policy and governance requires an integrated knowledge of site-specific properties of soils and their function over the long-term.

Soils are at risk in many regions across the world. Land use change and inappropriate land use still remain to be the main drivers of desertification and increased erosion, deforestation, and salinization. Contamination and soil sealing in urban environments may endanger soil functions. The loss of arable land, soil fertility and soil biodiversity are significant problems, especially with regard to a burgeoning world population and the challenge for securing the global demand for food and biomass.

Protecting our soils is imperative and policy, science and administration need to work together and take forceful joint action to:

1. reduce the expansion of land for settlements and infrastructure. Measures to limit and minimize land consumption must be developed and need to take into account soil diversity.
2. implement and make obligatory, sustainable methods in agriculture and forestry that preserve soils. Most important in this context are the reduction of erosion and the decline in soil organic matter to preserve soil fertility. Minimum thresholds and standards for sustainable agriculture and forestry should be developed in the process of subsidy allocation.
3. avoid input of harmful compounds to soils from industrial production. Agricultural inputs such as pesticides and fertilizers should be applied judiciously with implementation of maximum permissible values where necessary.
4. protect bogs and wetlands because their soils are effective carbon sinks. Although these soils cover only 3-4 % of land surface, they contain about 20-30% of organic carbon sequestered globally. Thus, industrial use of peat and the drainage of peat soils and wetlands should be carefully considered.
5. improve financial and political support of interdisciplinary and international cooperation for the protection and restoration of soils. Some important topics for future work include: sustainable land use and the interdependence of soil diversity and function, agricultural practice and climate change.