

## **Sustainable Soil Management – Essential Conventions, Guidelines and Laws**

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The concept of Sustainable Development is intuitively much appreciated due to its persuasive power – which, however, as yet has not been transformed into effective measures guiding humans' everyday activities. Within each of the concept's so-called 'three pillars' (economics, social matters, ecology), particular problems regarded as actually crucial command political priority and compete for public attention: in economics the financial crisis, in the social field the growing gap between wealth and poverty, in ecology climate change and biodiversity loss. But for sustainable use and management of soil, strategies, guidelines or practical rules are completely missing, in spite of several initiatives and proposals.

The UN Conference on Environment and Development in Rio de Janeiro 1992 – which declared Sustainable Development the general political aim of the 21<sup>st</sup> century – had on its agenda a proposal of an International Soil Convention. It was based on the success of the US Soil Conservation Service established in 1935, on the pioneering scientific work of the Swiss soil researcher Hans Jenny and his book 'The Soil Resource' (1980) and on the World Soil Charter of the Food and Agriculture Organization (FAO) of the UNO proclaimed in 1981, followed by the Council of Europe's 'European Soil Charter' of 1989. But in the Rio 1992 negotiations, the soil topic did not get much political attention against climate and biodiversity, so the proposal of a soil convention was restricted to a Convention to Combat Desertification, ratified in 1994 and enforced in 1996.

In spite of this failure, the efforts for management and conservation of soils continued. In 1998, an initiative in the Protestant Academy of Tutzing (Germany), directed by Dr Martin Held, and going back to a publication of the German Scientific Council on Global Change (WBGU) of 1994, presented a new proposal for an International Soil Convention, with a preamble of 17 general aspects and 30 detailed articles. The UN bodies, however, did not take it into consideration.

In Europe, the European Land and Soil Alliance (ELSA) was successfully established on the municipality and community level. In the European Union (EU), which had already decreed several directives for environmental protection, the EU Commission since 2002 developed a European Soil Protection Strategy, describing the principal threats for the soils together with a concept for their systematic assessment. From this strategy originated the draft of a EU Soil Framework Directive published in 2006 with the aim of legally prescribing soil management and conservation, and how soils fulfil their ecologic, economic, social and cultural functions.

Contrary to the agreement of the EU Parliament, the European Council declined the Directive, due to strict opposition of the agricultural and industrial lobby, and to the refusal of several important EU member states. Further efforts of the EU Commission to ensure agreement with a less stringent version of the Directive failed, so that it was officially dropped from the EU agenda in 2014.

It is the powerful political influence of the agro-industrial lobby which most people regard as main reason of the failure of all these soil initiatives. As much as this lobby deserves societal criticism or rejection, it nevertheless does rely on an objective and politically effective foundation. The continuing increase of the global human population – still amounting at 200.000 individuals per day! – compellingly forces a corresponding raise of food production by more intensive agricultural land use, which is bound to land with suitable soil. Every restriction imposed on it for reasons of nature conservation and environmental protection, such as prohibitions of certain chemical or technical measures, or expansion of nature reserves, is conflicting with the necessity of yield increases. Otherwise, food supply defaults or even famine are threatening. The land surface disposable for food production is finite and cannot grow, is even shrinking.

On the other hand, an adequate and just global distribution of food between highly productive and less fertile regions does not seem to be realizable. A permanent, even aggravating conflict between utilization and protection of land and soil is looming, determined by suitability, ownership, administrative and control regulations, economic interests and changing political-administrative priorities.

The situation is being aggravated by the attitudes of the dominating urban population towards the environment, which are more influenced by intuitive feelings than by sober objective facts. The human well-being is affected by individual desires and fears, preferences and refusals, with growing influence of modern electronic communication. Thus, climate change is being perceived as a threat causing fear, bolstered by the scenarios of the 'World Climate Council' IPCC. In contrast, the loss of biodiversity, which is the subject of a recently established international platform (IPBES) comparable to the IPCC, results in a feeling of regret instead of threat, and this only concerns the cherished parts of species diversity, neglecting the large variety of functionally important small animals, algae, fungi and microorganisms.

In comparison the endangerment of the soil produces in the society or in the media neither worry nor regret, leaving most people totally unconcerned – in spite of continuous reports on soils being the most precious and vulnerable part of the life-supporting environment, on which the human food supply depends, and which after damage or loss cannot be restored. Soil, however, is almost invisible, difficult to grasp in its voluminous totality, and a closer contact with it requires physical and dirtying efforts, which diminishes its social value.

The year 2015 was declared by the United Nations the 'International Year of Soil', raising new hopes and expectations for sustainable behaviour towards this unique resource. But 2015 is also the year of the International Climate Conference in Paris where the final decisions for the global climate policy are being expected to be taken. Therefore it is a compelling necessity to connect climate protection and soil protection on an equal level without competition and at the same time taking into account the utilization requirements of both. The same holds for biodiversity which is nowhere so huge as in the soil and of crucial importance both for its fertility and for carbon storage.

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