

tration – the right path to take?

“Smallholders and the climate could lose out”

More than three times as much carbon is stored in soils across the world as it is in the atmosphere, making them one of the most important global carbon sinks. Therefore, processes impacting on the soil in which carbon is released, such as deforestation or agricultural activities, significantly contribute to climate change. The debate on the reduction of greenhouse gas emissions from agricultural activities and their consideration in the international climate negotiations has brought soils as carbon reservoirs more to the public eye.

One way to promote increased carbon storage in soils is to include the reduction of emissions from agricultural activities in the market mechanisms of the Kyoto Protocol (KP). As yet, it has only been possible to consider such measures to a very limited degree, if at all. The decision taken at the climate negotiations in June 2013 to initially focus solely on adaptation to the impacts of climate change also rules out any integration into market mechanisms for the time being. However, owing to their high sequestration potential, the question whether and how soils should be taken into account in the land-use sector in the long run continues to stay on the agenda.

■ Too many uncertainties

Healthy soils ensure good harvests, support the adaptation of agricultural systems to climate change and provide further important ecosystem services. Thus, they contribute to food security and development, particularly in rural areas in developing countries. It is undisputed that numerous measures to promote carbon sequestration also have positive effects on the chief functions of soils. However, a one-sided emphasis on their storage capacity, which is what including them in carbon markets would imply, has to be rejected owing to the agricultural reality in many countries of the South. The danger here is that financial and technical resources are focused on emission reduction and are thus not available for other relevant aspects.



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Accounting under the Kyoto mechanisms would mean that industrialised countries could offset measures applied for carbon storage against their reduction commitments. In order to ensure that reduction or storage really have taken place, the highest levels of accuracy need to be achieved in monitoring, reporting and verification (MRV). But in the case of soils in particular, considerable uncertainties still prevail that make the development of accurate MRV systems highly complex and cost-intensive. The possibility of a premature release of stored carbon into the atmosphere adds a further uncertainty factor to such projects.

■ Competition for land will increase

Elaborate MRV systems contribute to the already high transaction costs of agricultural mitigation projects. Therefore, they can only be of interest on a large scale and under good climatic and pedologic conditions. This could encourage large-scale industrialised farming while at the same time neglecting smallholders particularly in marginal areas. The latter lack access to input, knowledge and infrastructure, and therefore the basic preconditions for participating in such processes. Competition for land and thus for the best soils is going to further increase, which especially represents a threat to people without documented land titles. The market-based exploitation of carbon sequestration would additionally aggravate this conflict.

Therefore, financing via market-based tools has to be rejected owing to technical and socio-economic obstacles. Nevertheless, it is true that soils need to be given greater consideration, also with regard to climate change. Many sustainable soil and land management practices are well-documented and are often just waiting to be implemented. Thanks to their wide range of benefits, they might also be supported via other international processes or institutions, such as the Committee on World Food Security (CFS) of the UN Food and Agriculture Organization (FAO).

But in addition, in the context of the United Nations Framework Convention on Climate Change (UNFCCC), support e.g. via Nationally Appropriate Mitigation Actions (NAMAs) in developing countries could boost innovation and financing. Moreover, it could provide incentives for the integration of emission reductions in comprehensive agriculture and land-use strategies whose most important goals continue to be food security and rural development.