

Comparative development and impact of sustainable land management policies and practices in five selected countries

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ABSTRACT

Although some authors (e.g. Pimentel et al., 1995) have suggested that the impact of land degradation is not that catastrophic as others (e.g. Stoorvogel and Smaling, 1990; Oldeman et al., 1991) have suggested, since the 1930s there has been worldwide concern about the effects of soil erosion (by water and wind) and other forms of land degradation. After the problems experienced in the Dust Bowl in the USA in the 1930s, attention has been paid to various soil and water conservation measures in both developed and developing countries. Initially Governments have stimulated the establishment of physical control measures, such as terraces and check dams, later followed by vegetative measures such as grass strips and tree planting. This was first achieved through top-down regulations, and Forestry Departments were often in charge of the implementation. Gradually it was realised that this was not the way to involve and convince farmers. Subsequently the measures were implemented through more specialised agencies, such as ICONA in Spain, and later with the help of incentives, such as food aid in the developing countries. In some cases farmers were mobilised to work together on the established of the measures. Because of the low success rate of this top-down approach with line interventions, as evidenced by the lack of maintenance by the farmers, it was realised that a more participatory approach had to be followed. The line interventions contributed mainly to water retention and not directly to soil conservation and soil fertility. And these type of measures required relatively much labour and other inputs for farmers to implement on their own. The emphasis then shifted to area interventions such as cover crops for reducing the impact of raindrops, and mulching and composting for improving soil fertility. And gradually forms of completely voluntary ways of collaboration between farmers were developed, making use of social capital. More recently Conservation Agriculture has been promoted, initially mainly by NGO's, and this aims at less disturbance of the soil, continuous land cover and suitable crop rotations. Over the years attention has also been paid to safeguarding indigenous soil and water conservation measures, such as trashlines, stonebunds, and soil pits, and these were also introduced in other areas and countries.

This paper will analyse whether and to what extent countries have followed such general trends in their soil and water conservation policies, since the 1990s often referred to as sustainable land management or natural resource management policies, or whether countries have also followed their own specific strategies. A historical and a comparative analysis of the development of these sustainable land management policies is made in five selected countries in different continents (Bolivia, Ethiopia, Indonesia, Spain and Tunisia), also aiming at a global assessment of the effectiveness, efficiency and impact of these successive policies.

Keywords: soil and water conservation, sustainable land management, policies, incentives, impact