

**Abstract 1190**

**A TRIAL WITH ECOSYSTEM SERVICES IN SOIL OF FOUR ARABLE FARMS**

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**Text:** A focus on ecosystem services (ES) is key towards a more sustainable management of our natural resources, besides an environmental policy on mitigating the effects of threats like soil pollution and climate change. Many ES rely significantly on the functioning of soils. Consequently, there is an urgent need for rulers and indicators of soil related ES. In the Netherlands, two decades of soil sampling in a monitoring network with the Biological Indicator of Soil Quality (BiSQ) have resulted in a substantial database of soil organisms and their habitat characteristics. Extensive additions from ecological literature have expanded the data set to become a very rich source for both fundamental and practical applications. Abiotic and biotic reference values for soils with a presumed healthy status were derived for ten soil type land use combinations. These references were considered as targets for sustainable land management, for different soil type and land use characteristics. The concept was tested at four arable farms on silt loam in the Netherlands. Overall, ten ES had a lower performance than at the reference sites. However two ES had a higher performance than the reference, i.e. climate functions and natural attenuation. Furthermore, ES were reflected in the typical soil management systems of these four farms, i.e. intensive, conventional (2x) and organic.