

Following 4 statements have been drafted to initiate discussion on the first fact-finding session 'Healthy soils for sustainable land management in the 21st century' on 7/11/2019.

1 The economy and pressure on soil quality: Fierce economic competition can push primary producers towards unsustainable soil use for which they, however, are not solely accountable. For instance, physical degradation is caused by ill-timed tillage and harvesting forced by too strict contracts with the processing industry, which in turn operates in its own economic reality. A 'typical' Flemish example is widespread occurrence of subsoil compaction in field-grown vegetable plots. Current Flemish legislation grants much freedom in terms of choice of crop rotation and producer-processing industry contracts. A further (careful) intervention seems pertinent and justified because avoidance and remediation of soil physical degradation offers multiple benefits to soil users and society: lowered leaching of nutrients from underneath compacted subsoil, increased soil biodiversity and accompanied general disease suppression and reduced soil erosion losses.

2 Reconciling nutrient and sustainable OM management: The current Flemish manure and nutrient policy aims to reduce nutrient losses from agriculture and horticulture to bring water quality in line with European objectives. The focus is on area-specific standards for use of N and P. Successful integration with sustainable soil OM management, however, must be viewed on a much smaller scale because it is highly farm-specific. The Flemish agenda to advance net soil P-mining in conventional agriculture will moreover expand the need to remove P, and mostly alongside C from manure by pre-processing. The government must make more effort to guide farmers in setting up C and nutrient balances. To this end forming and disseminating on-line tools that advise on soil C, N and P management would be most appropriate.

3 A policy to deal with diffuse pollutants: Too little is known on the occurrence, fate and risk imposed by novel more diffuse pollutants like PFAS, plastics, antibiotics and endocrine disruptors. Flanders should more voluntarily reflect on ways to deal with diffuse pollution instead of its current more "traditional" hotspot approach. Nature-based remediation (e.g. phytoextraction) may offer a sufficiently low-cost way of dealing with diffuse pollution on larger areas. But current financial support schemes will then also need to be rethought to enable required longer-term initiatives, and even allow support for lowering levels of non-hazardous contaminants like orthophosphate. Secondly, there is a need to raise awareness among major soil users and the general public on occurrence and longevity of diffuse pollutants in Flemish soils and on their likely provenance.

4 Powerful demonstration of a healthy soil's added value: Soil users have to clearly perceive benefits of adopting sustainable soil management practices. But soil improving management requires time and good soil quality often only displays added value in 'bad years'. We therefore need to better demonstrate the effectiveness of soil improving innovations. Implementing soil quality monitoring will firstly strengthen the Flemish government's authority to raise awareness on the importance of soil health. Secondly, mainly multiyear continued demonstration should be supported, also by 'Model' land users that engage themselves to act as demonstrator. Such initiatives closer to public and managers (farmers, foresters, ...) will be more accessible and ideally local knowledge networks follow along.