1. **Does the zero draft sufficiently outline a way to achieve sustainable soil management worldwide?**

The guidelines only consider agricultural soils; it would be better therefore to clarify it and to speak of agricultural soil management. On the contrary, other types of heavily impacted by human activities (forest soils, mining soils, organic soils, urban soils etc.) soil should be considered. Moreover, we consider better to refer to all soil functions and typologies, including environmental ones.

1. **Have all the key technical elements to achieve sustainable soil management been included in the guidelines?**

We suggest to better clarify, enumerate and outline all the elements menacing the soils and the actions dealing with their protection/restoration.

For example, in hilly and mountainous environments, protection of agricultural soils cannot be separated from the continuous control and proper maintenance of the territory, fundamental for mitigation of hydrogeological risk and preservation of soil ecosystem services in forest and other non-agricultural land.

From this point of view, actions to limit the triggering of mass movement, particularly surficial landslides (debris flow, mud flow, soil slip etc.), to prevent the collapse of the terrace walls, to control the stormy water run-off should be included. In these cases, the correct application of bioengineering techniques on steep slopes coupled with Agricultural Conservation Practices or classical good agricultural practices for soil conservation in cropland (eg. temporary drainage ditches, grass strips) can greatly reduce not only surficial soil erosion, but are useful to prevent mass movement.

Regarding soil and water contamination, the natural high concentration of contaminants in some soils due to the bedrock geology should also be taken into account.

The more serious threat of soils functionality, desertification, as sum of soil threats, is not considered.

1. **Do the guidelines take into account the great variety of ecosystem services provided by soils?**

Table 1.1 listed the classical ecosystem services provided by soil. They are exhaustive for agricultural soils but should be stressed as their decrease in croplands can be linked also with loss of functionality of non-agricultural soils, especially when nearby (see question 1).

We would like to highlight the need to stress also the useful functions and services provided by soil biodiversity, the intimate engine of soil. Most of the ecosystem services are provided by soil biodiversity, directly or indirectly.

1. **Will the results of the guidelines, once implemented be sufficient enough to achieve the Sustainable Development Goals (SDGs)?**

VGSSM are useful to address the international or national policies on soil, while in the absence of a mandatory or binding legislation they hardly could participate in the process. Nevertheless, they are useful to provide further insight into soil threats management and sustainability. We consider these guidelines not exhaustive of SDG 15, especially target 15.3 because the land degradation is more complex and articulated than SSM. We should consider all the dimension included on this definition, taking also into account that we do not capture the desertification phenomena, widely recognized, considered as the extreme land degradation degree, often associated with no soil management. We underline also that the concept of land is wider than the concept of soil.

1. **Do the guidelines identify activities that should be avoided to achieve multiple benefits through sustainable soil management?**

A detailed review of effects coming from activities that should be avoided is not present in the document to date. It could be helpful to list and assess soil threats and to rank and sort negative practices according to their relative contribution to soil degradation (so as to prioritize the limits to be posed to certain unsustainable human activities).

In addition, the climate change threats on land and soil should be taken into account, considering also the recent scientific development at international level.

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