

## HISTOSOLS IN LATVIA AND WRB SOIL CLASSIFICATION

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**Abstract.** Organic soils (Histosols according to the World Reference Base for Soil Resources – WRB) are important source for CO<sub>2</sub> emissions if used as a cropland. National System for Greenhouse gas (GHG) inventory, evaluation and reporting requires detailed information about the soil cover within the area of concern, e.g. Latvia agricultural land. Inside the country soil information is available in the form of national (genetic oriented) soil classification however international institutions requires the use of WRB. Fundamental differences in soil classification systems make difficulties for direct comparison of soil taxa. Some solutions for overcoming of this problem are proposed and discussed here. Technically it will be possible after digitizing all soil maps for agricultural land at the scale 1:10000 and developing relevant algorithm for transition from one soil classification to another. Supplementary information from soil survey database will be used for conversion of classification taxa. The definition of Histosols includes following requirements and their correspondence with taxa of Latvia Soil Classification.

<i>WRB definition</i>	<i>Correspondence with Latvia soil taxa</i>
Soils having organic material, either:	
1. starting at the soil surface and having a thickness of $\geq 10$ cm and directly overlying continuous rock or technic hard material, or coarse fragments, the interstices of which are filled with organic material;	Rendzina
2. starting $\leq 40$ cm from the soil surface and having within $\leq 100$ cm of the soil surface a combined thickness of either:	
a. $\geq 60$ cm, if $\geq 75\%$ (by volume) of the material consists of moss fibres; or	Typic raised bog peat soil
b. $\geq 40$ cm in other materials.	
– old alluvium	Alluvial muck soil
– well decomposed fen peat	Fen peat humic soil and Fen peat mucky-humus soil
– medium decomposed fen peat with sphagnum and hypnum additions	Transitional mire mucky-humus soil and Typic transitional mire soil

There are very rare Rendzinas in Latvia and they are not used for farming. Typic raised bog peat soils also are not under tillage, but mostly used for peat extraction or few of them for cranberry cultivation. Therefore only other types of soil could be relevant for agricultural activities and mostly are used as permanent grasslands.

**Key words:** soil classification; greenhouse gas inventory; organic soils.