

How to identify larger tracks of organic soils in western Sub-Saharan Africa to prevent their reclamation?

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Deforestation and drainage of tropical peatlands and organic soils stops their ability to sequester carbon and leads to the emission of huge amounts of greenhouse gases both through microbial oxidation and fire. In the light of the expected expansion of oil palm plantations in western Sub-Saharan Africa, there is an urgent need to identify organic soils in this region in order to avoid them being drained.

All tropical organic soils with more than 20% soil organic matter or more than 12% soil organic carbon surpass the threshold for soil carbon of the High Carbon Stock Study (<http://www.carbonstockstudy.com/>) if their organic layer is deeper than 15 cm (Barthelmes et al. 2015).

This presentation summarizes the available information on locating organic soils in western Sub-Saharan Africa and introduces practical guidance for this region at a national level. The multitude of useful legacy soil and suitable proxy data (e.g. hydromorphic soils, wetlands, wetland vegetation, depressions, floodplains) will be addressed.

If a specific landform is identified to predominantly contain high soil carbon areas, it should be totally excluded from any reclamation that includes deforestation and drainage. Landforms that may include some high soil carbon areas should be mapped at high resolution to distinguish organic from mineral soil at local scale (by combining LiDAR and comprehensive field surveys).

Barthelmes A, Ballhorn U & Couwenberg J. 2015. Consulting Study 5: Practical guidance on locating and delineating peatlands and other organic soils in the tropics. The High Carbon Stock Science Study, Malaysia. Available at: <http://www.carbonstockstudy.com/resource-centre/reports>