Drained inland mineral soils and drainage systems on mineral soils *(separate case of implementation of IPCC 2013 Wetlands supplement)*

Training seminar on QA/QC procedures in Land use, Land-use change and Forestry sector
18th – 19th May, 2015
Riga, Latvia

Arta Bārdule
Latvian State Forestry Research Institute 'Silava'
Riga street 111, Salaspils, LV-2169, Latvia
arta.bardule@silava.lv

SILAVA

Drained inland mineral soils
Situation description

- Most (> 90%) of the agricultural land on mineral soils is drained.
- Accurate activity data of total area of drained inland mineral soils (where drainage systems are active) is not available.
- Activity data of fraction of the total area of drained mineral soil which is occupied by ditches or drainage canals is not available.
- **Should CH_4 emissions be quantified for area of drained mineral soil where there are ditches or drainage ditches?**

Inland wetland on mineral soils
Hydro power stations

- There are 158 hydro power stations in Latvia.
- Accurate activity data of total area of water basins of hydro power stations are not available.
- Area of 3 the biggest (Pļaviņu, Rīgas, Ķeguma) hydro power station in Latvia is 10.2 kha.
- Expected CH_4 emissions according T1 method and default emission factor provided by IPCC 2013 are **2.4 Gg CH_4 yr^{-1} or 60 Gg CO_2 eq. yr^{-1}.**

Inland wetland on mineral soils

Forests on naturally wet mineral soils

- Forests on wet mineral soils cover 10 % of the total forest area (383 000 ha according data of NFI).
- A Gleysol *(a wetland soil that is saturated with groundwater for long enough periods to develop a characteristic gleyic colour pattern)* is typical for forests land on wet mineral soils in Latvia.
- **Do Latvian forests on naturally wet mineral soils fit to IWMS definition?**
- Expected CH_4 emissions from IWMS according T1 method and default emission factors provided by IPCC 2013 are 90 Gg CH_4 yr^{-1} or 2251 Gg CO_2 eq. yr^{-1}.

Inland wetland on mineral soils
Drainage ditches

- There is considerable area of drainage ditches on mineral soils *(only in forest land approximately 9000 ha)*.
- Ditches might also be considered as inland wetlands on mineral soils.
- Expected CH_4 emissions from forest ditches according T1 method and default emission factors provided by IPCC 2013 are **2.1 Gg CH_4 yr^{-1} or 52.2 Gg CO_2 eq. yr^{-1}.**
- In cropland and grassland these emissions should be several times higher.

Thank you for attention!

SILAVA