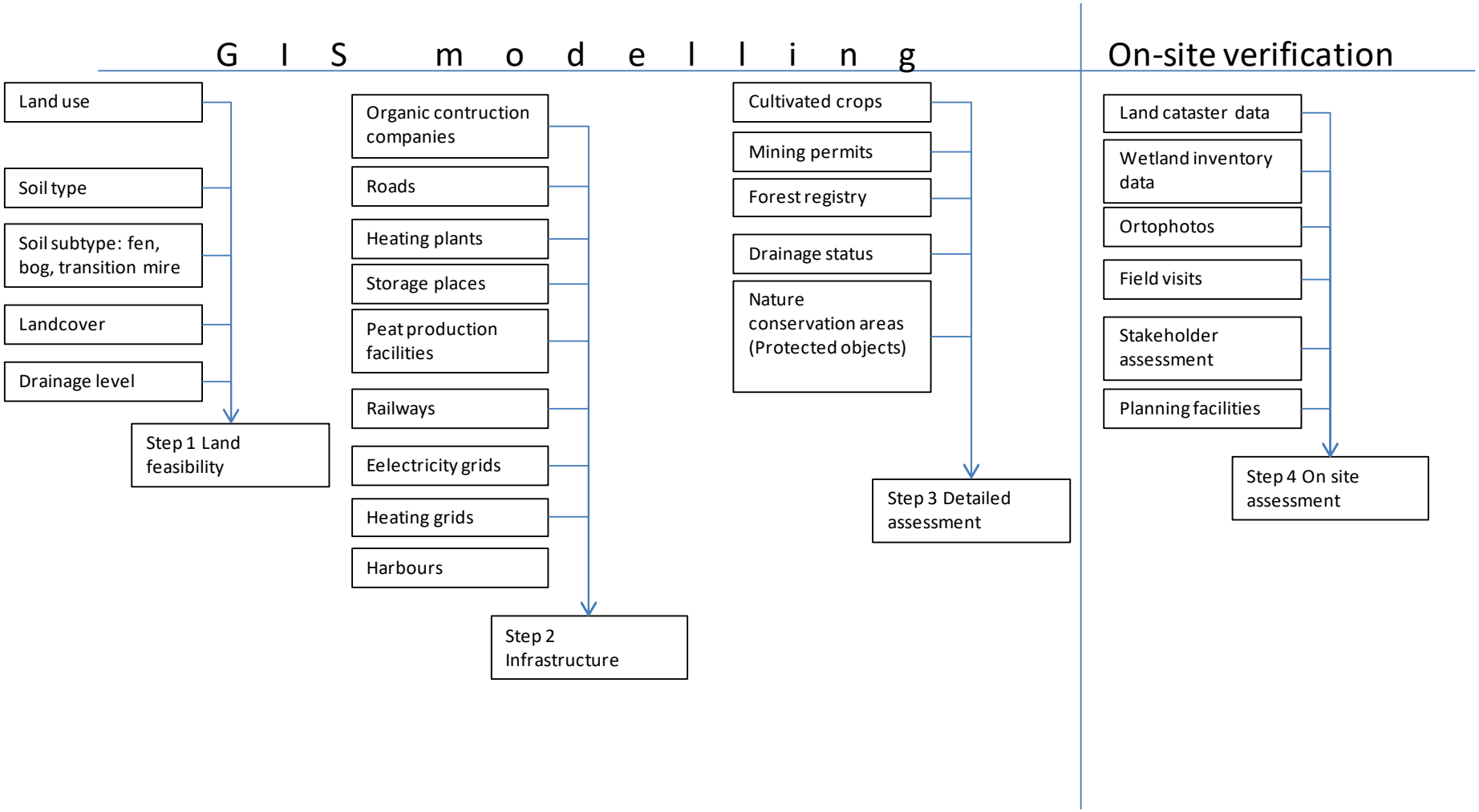
Feasibility of paludiculture in Estonia and the Baltic States
Results from landcover GIS assessment

Paludiculture in the Baltic States. Project kick-off meeting. 18 – 19 June 2018, Estonia

Four sequential assessment stages



GIS model: step 1, Estonia

- Raster-based assessment
- Pixel size: 1 are (10 x 10 m2)
- Four suitability classes harmonised internationally: green (suitable), yellow (minor obstacles), orange (major obstacles), red (not suitable)
- In Estonia: 7 subtypes
- Assessment independently in each country
- Post-assessment integration over the entire Baltic area

Ditches

Streams which are:

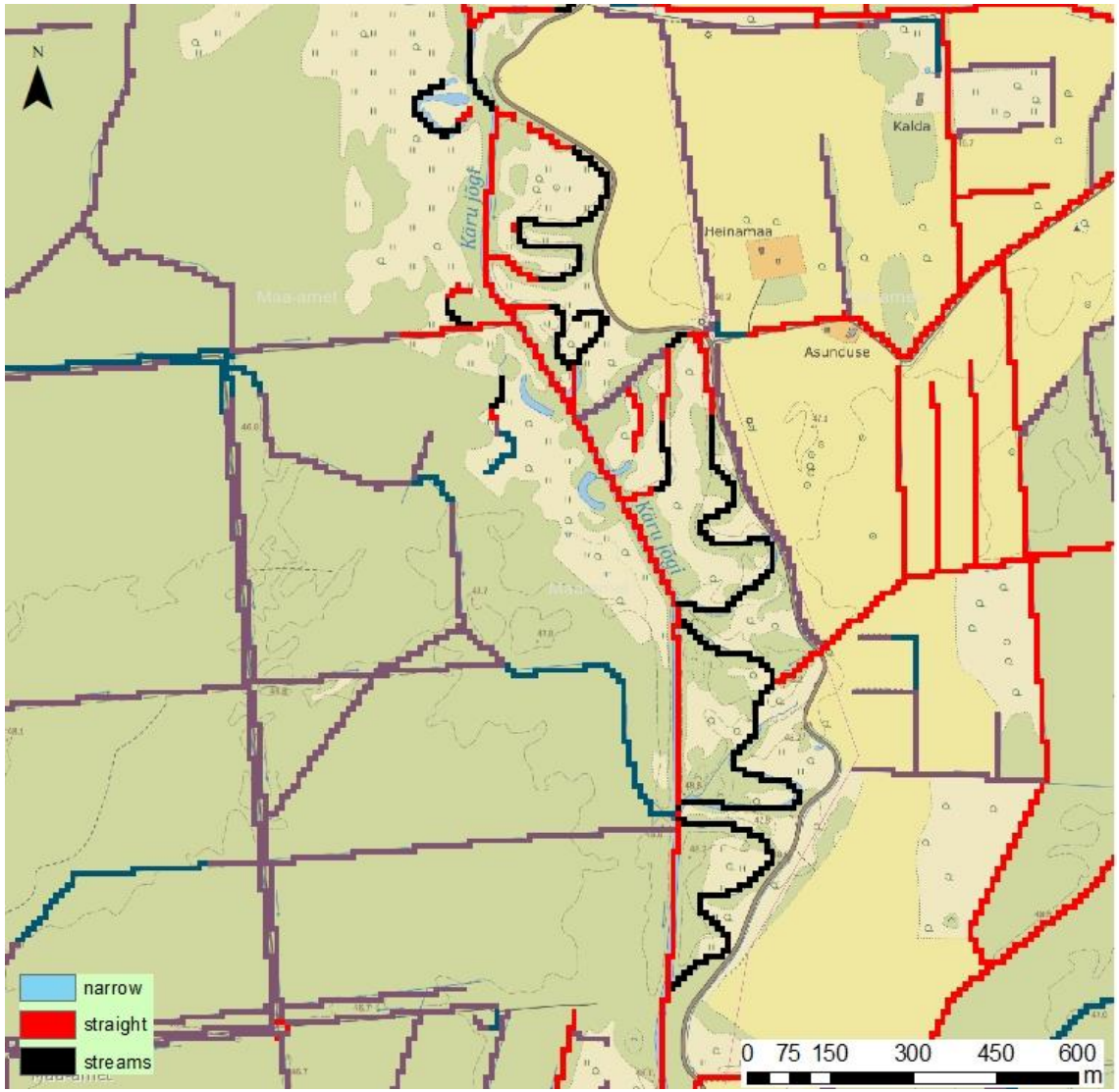
1. Straight

2. Narrow

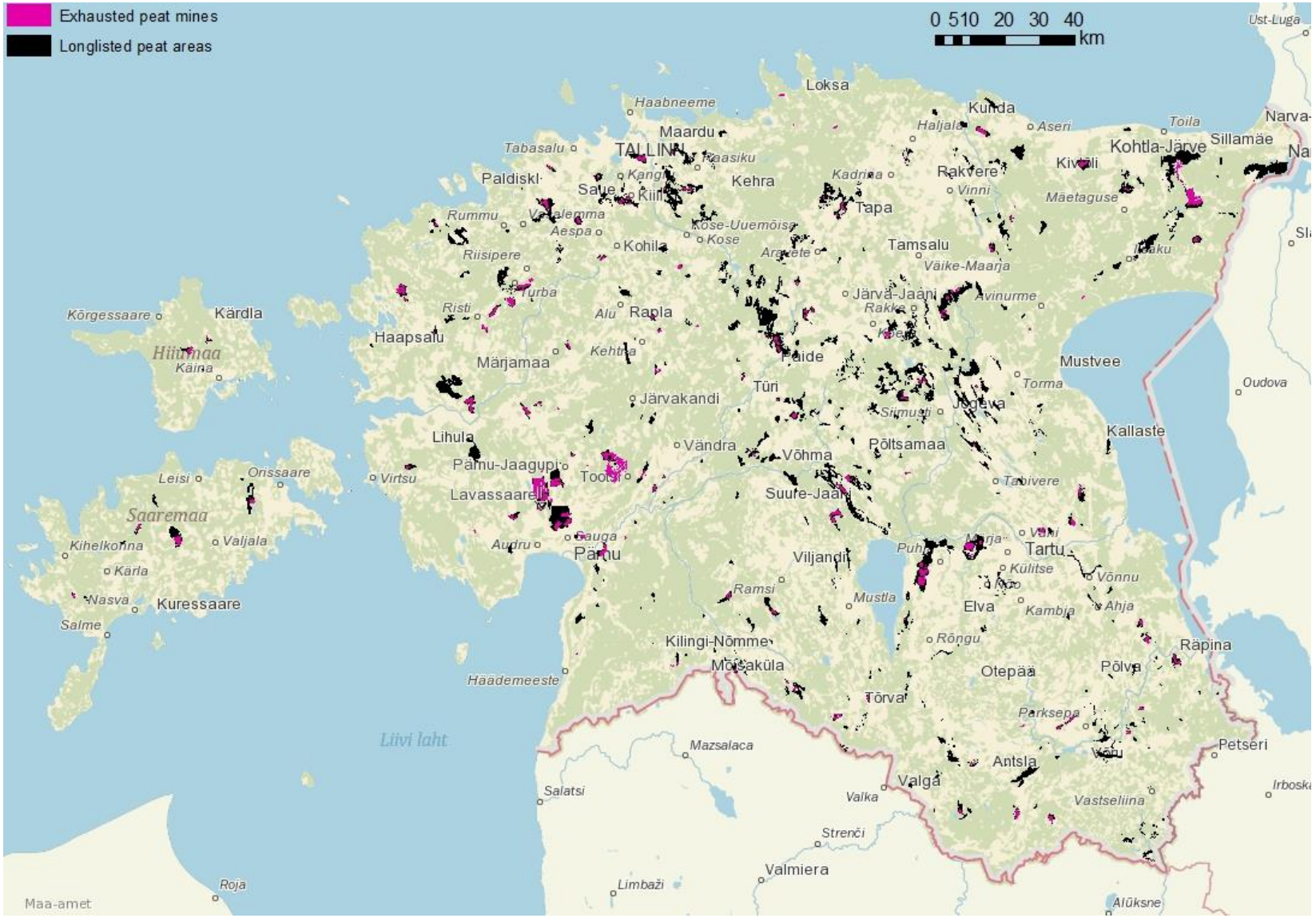
Most of the Estonian streams, according to the model, are both narrow and straight.

’Streams’ pixels: 19M

- ‘Narrow’ pixels: 17M.
- ’Wide’ pixels: 2M.
- ‘Straight’ pixels: 13M.
- ’Sinuous’ pixels: 6M.
- ’Ditch’ (both ’straight’ and ’narrow’) pixels: 10M.

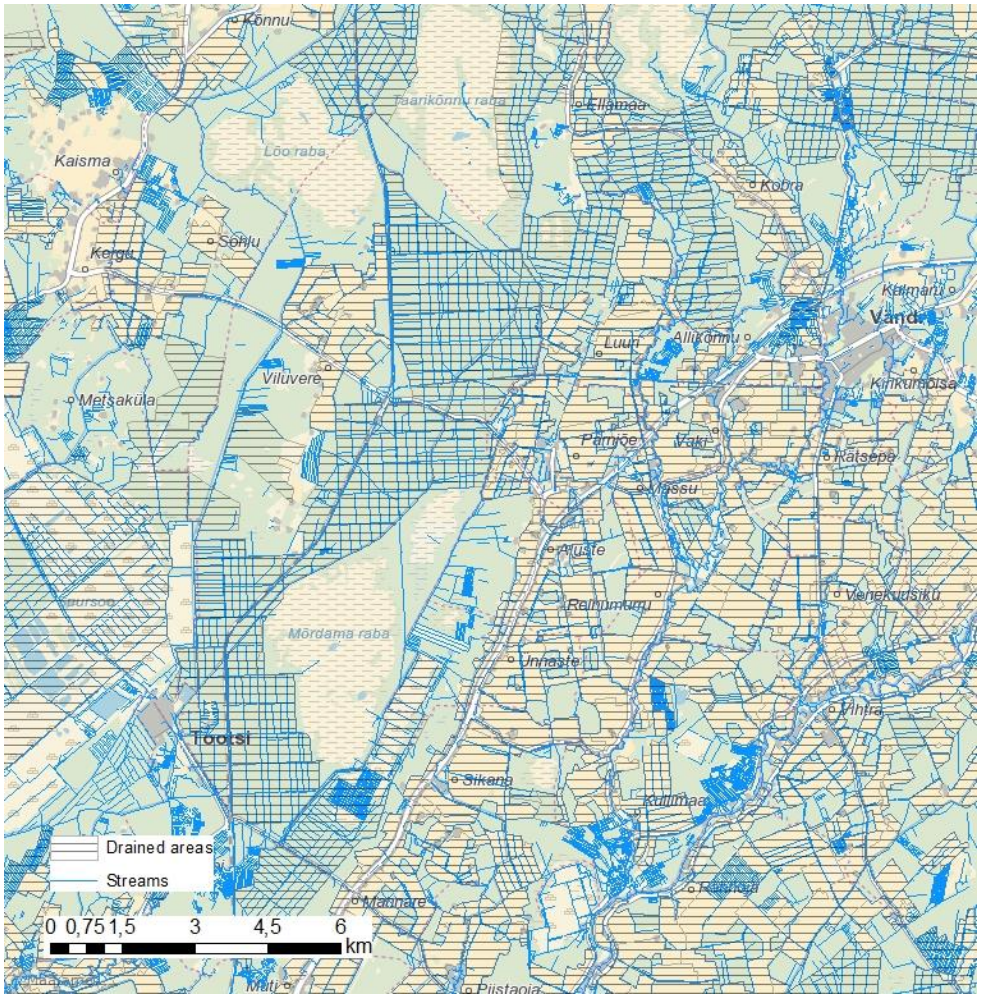


Peat mining longlist



Drained areas

In total, 499 129 ha of wetlands were defined as affected by drainage



Ditch impact

Ditch drain effect radius:

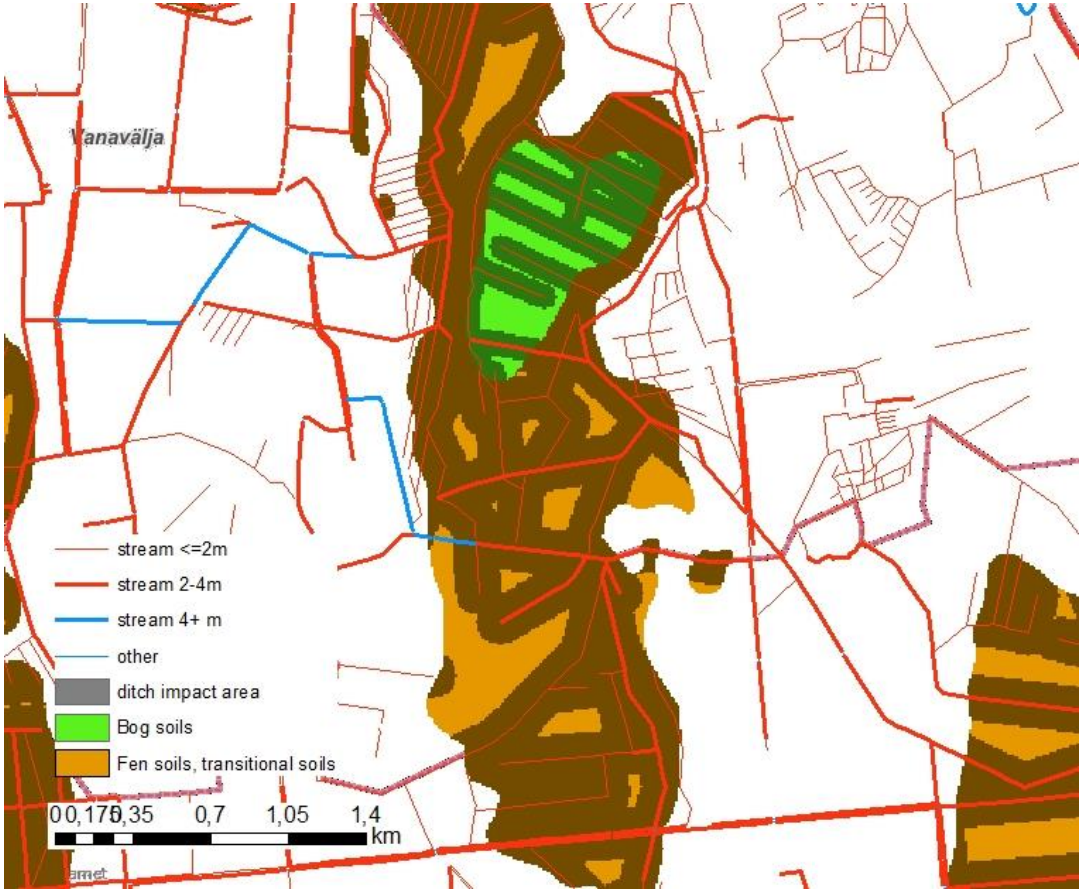
- bog soils 50 m
- fen soils and transitional soils 100m
- flood plain soils 120m.

Peat mines were assumed working as ditches.

Total 473 362 ha of wetland soils have been drained by ditches.

Areal drainage systems cover:

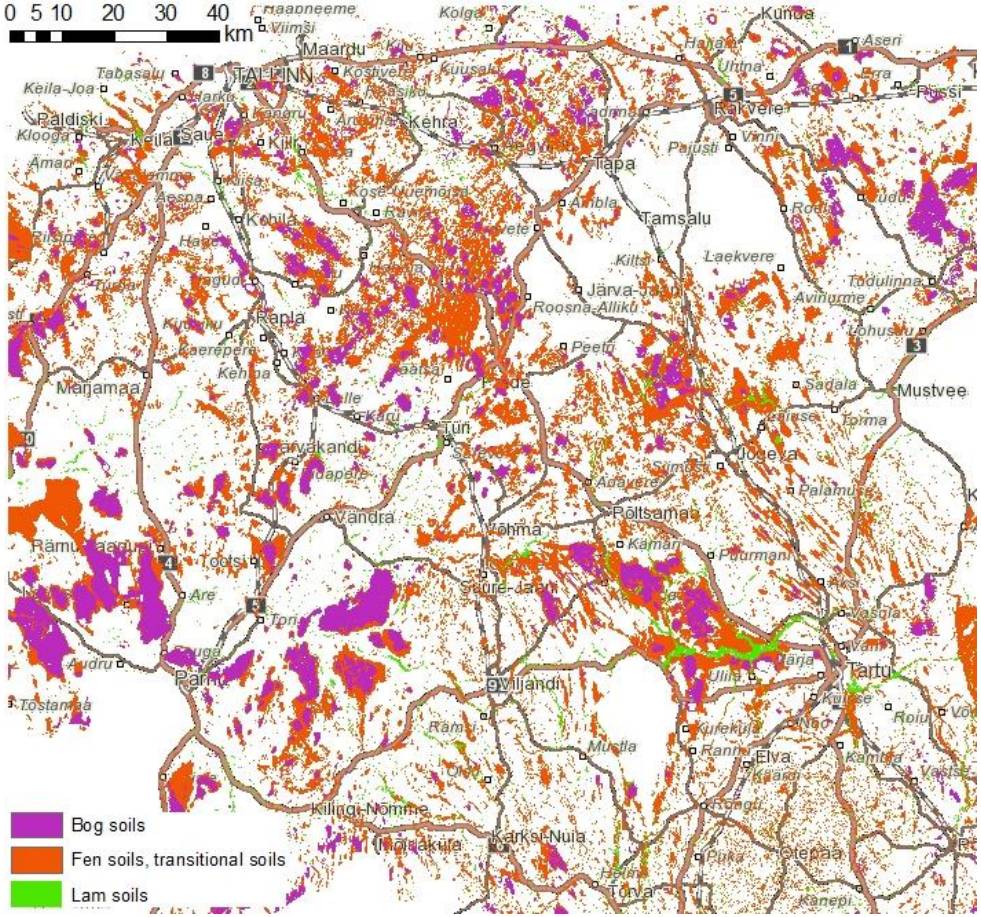
- 644 120 ha of agricultural areas
- 699 821 ha of forests.



Wetland soils

In total, landcover assessment elicitated:

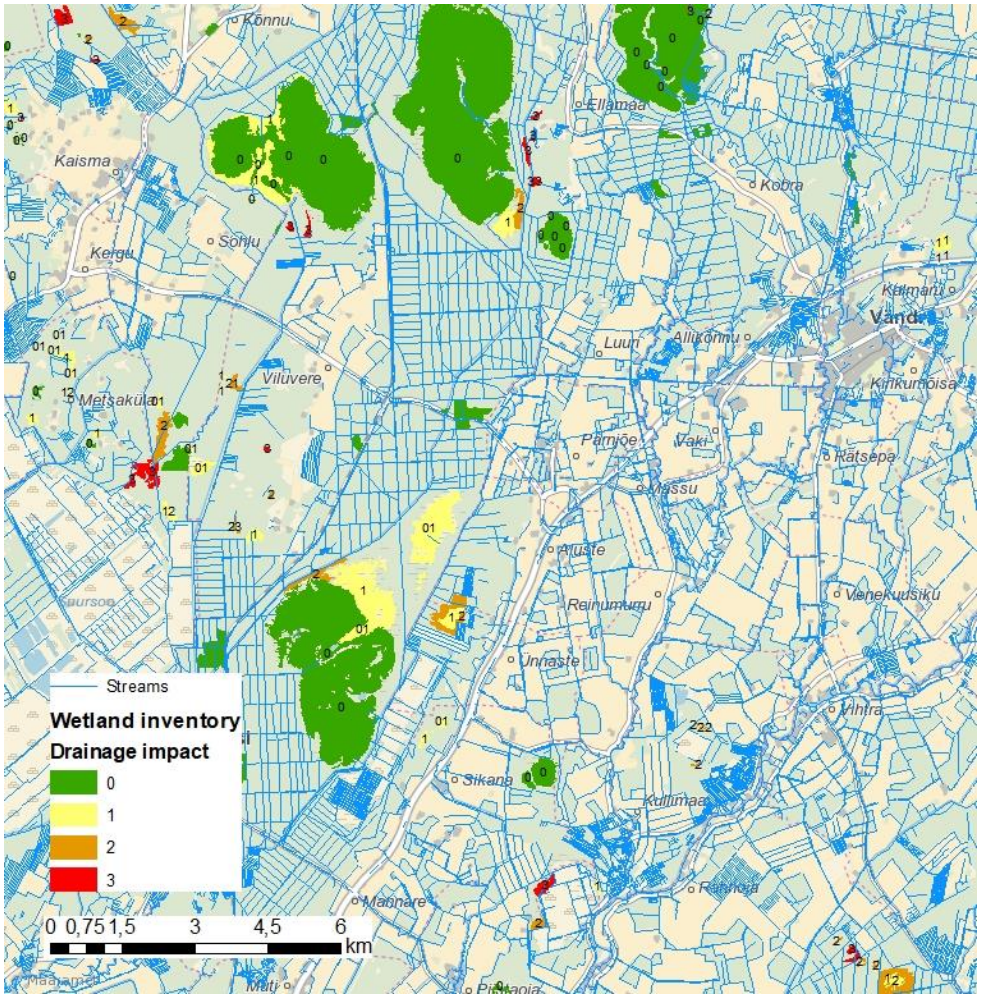
- 217 897 ha of peat soils,
- 734 007ha of fen and transitional soils
- 60 440 ha of floodplain (lam) soils



Inventory of wetlands

169 759 ha of wetlands not affected by drainage

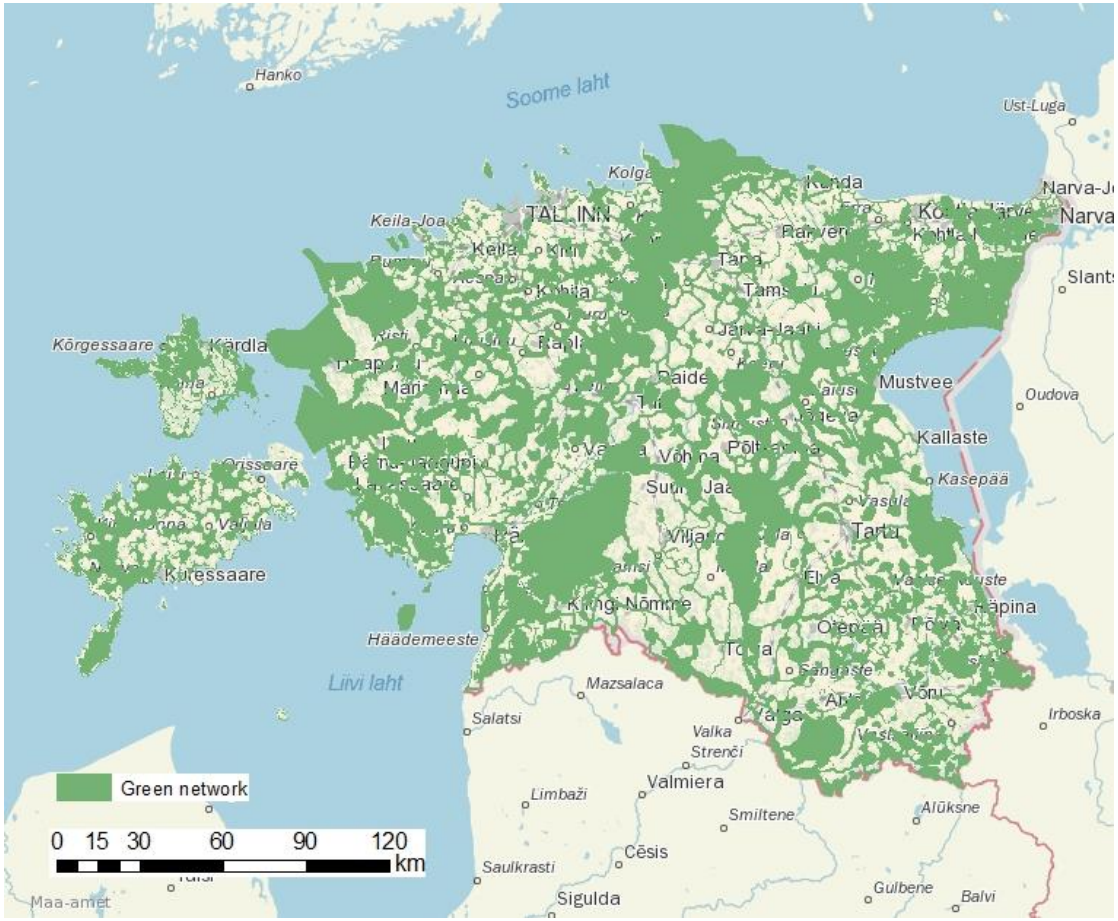
98 414 ha as either affected or not assessed in that parameter



Green networks

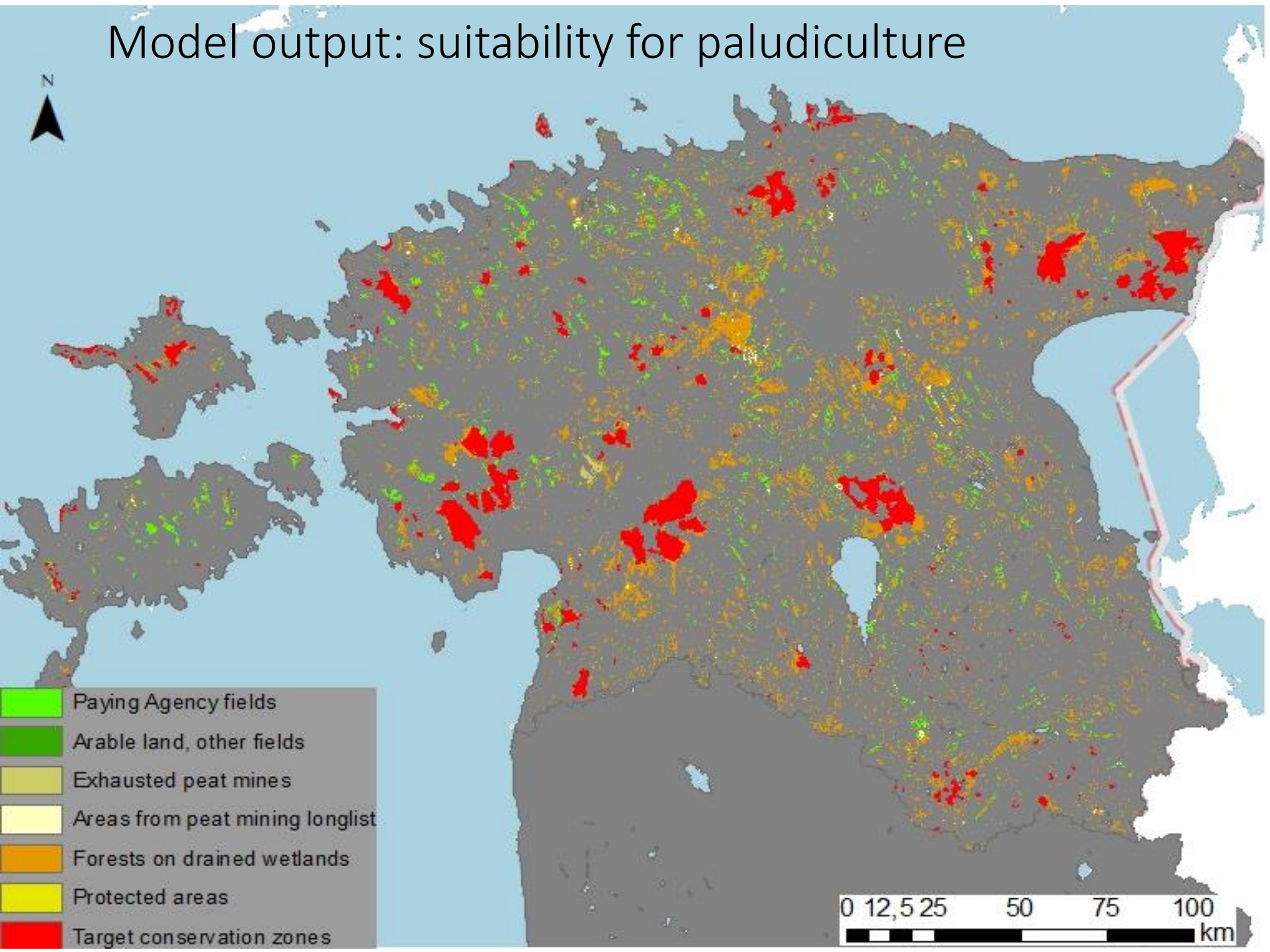
Peat could be mined in the areas of less green networks

Green networks cover 2 495 358 ha



Peat mining shortlist

Model output: suitability for paludiculture



Baltic synthesis

	# areas	Total area, ha
Green	852 271	588 924
Yellow	582 780	334 047
Orange	446 468	1 033 854
Red	269 707	610 641