

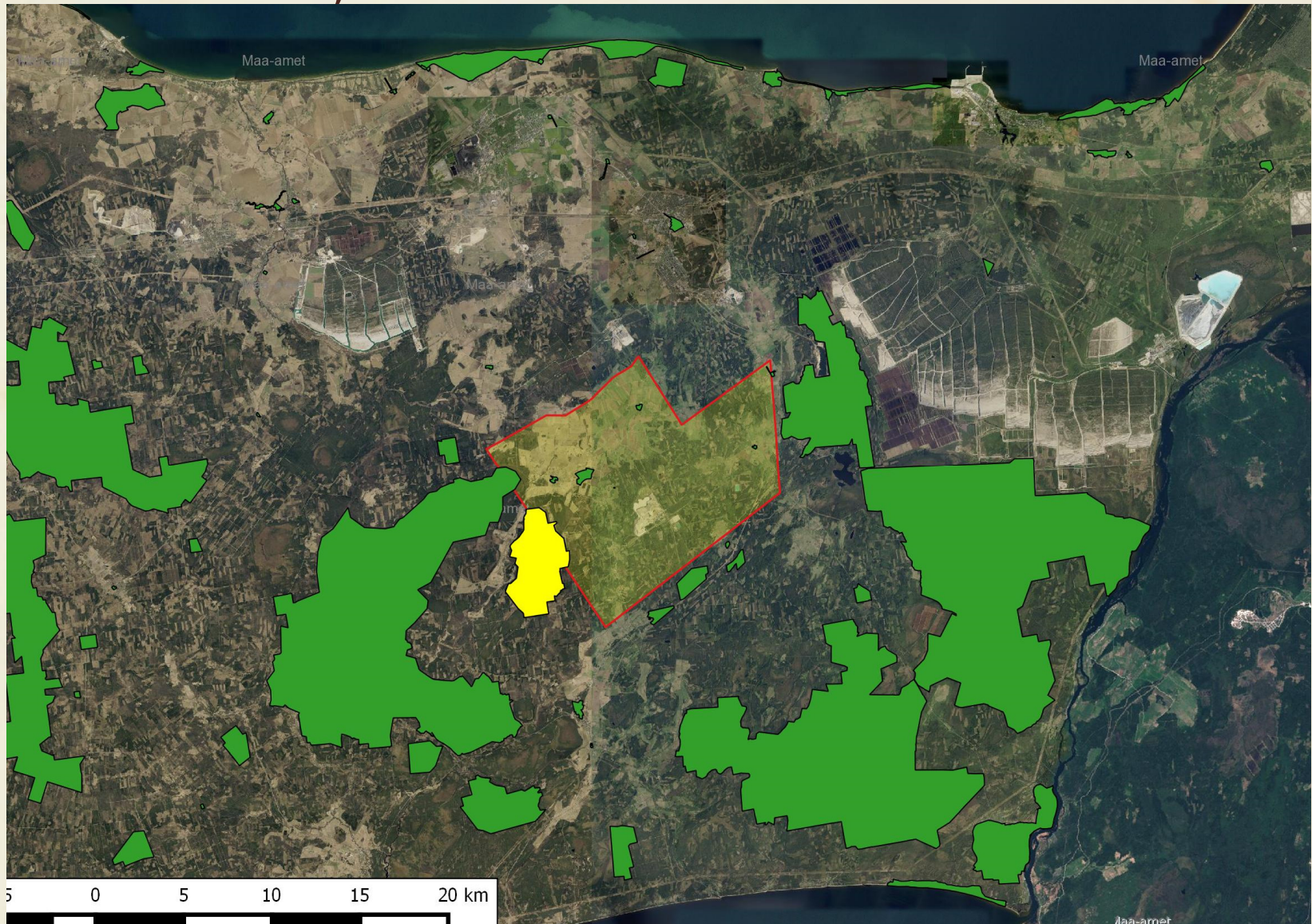


Põlevkivi kaevandamise mõju
Selisoole

Marko Kohv

2016

Selisoo ja Estonia kaevandus



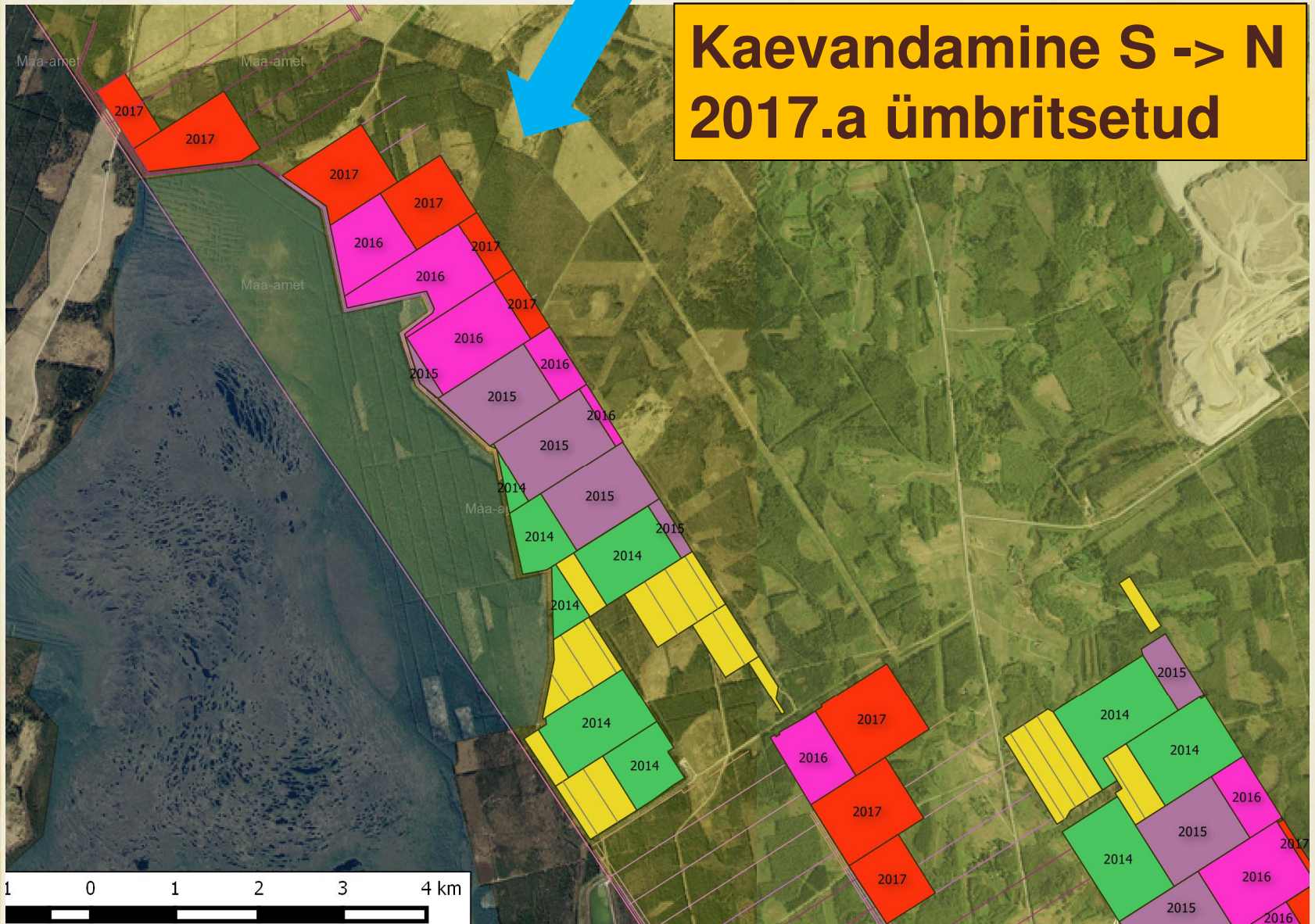
Varasemad tööd

- Põlevkivi ja turbauuringud
- TÜ geoloogia uuringud 2007 ja 2010
- TÜ kuivenduse mõju 2011–2013; 2014 - 2016
- Vähemalt 5 teemakohast teadusartiklit



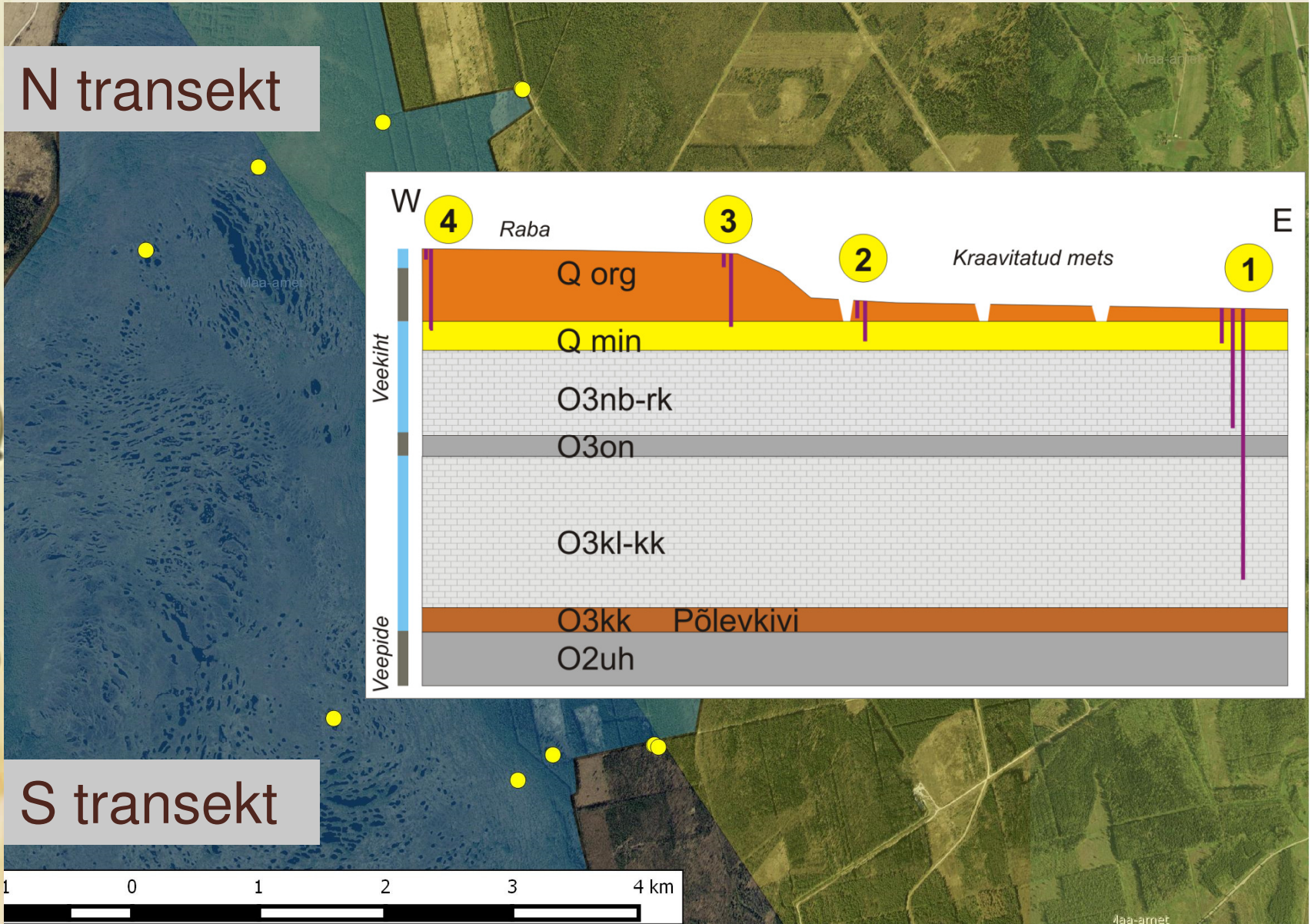
Estonia areng

**Kaevandamine S -> N
2017.a ümbritsetud**



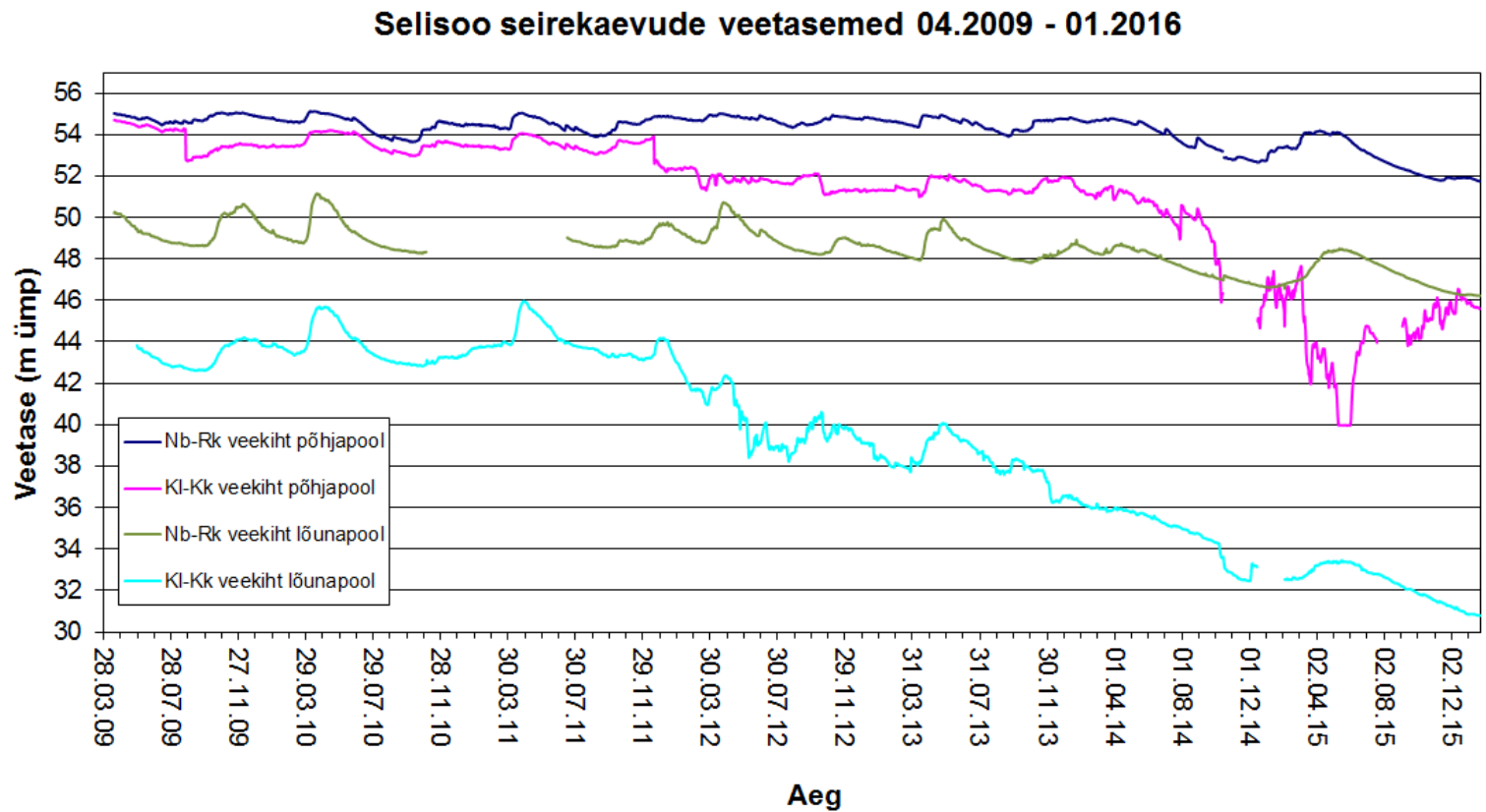
Selisoo veeseire alates 2009 ja 2011

N transekt



S transekt

Veeseire tulemused - aluspõhi

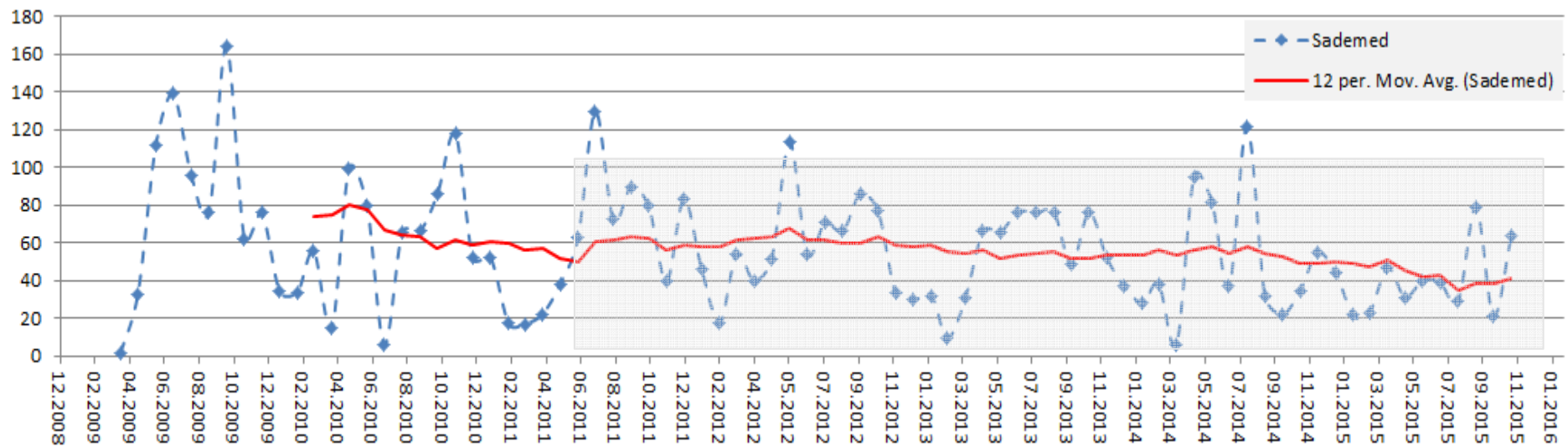
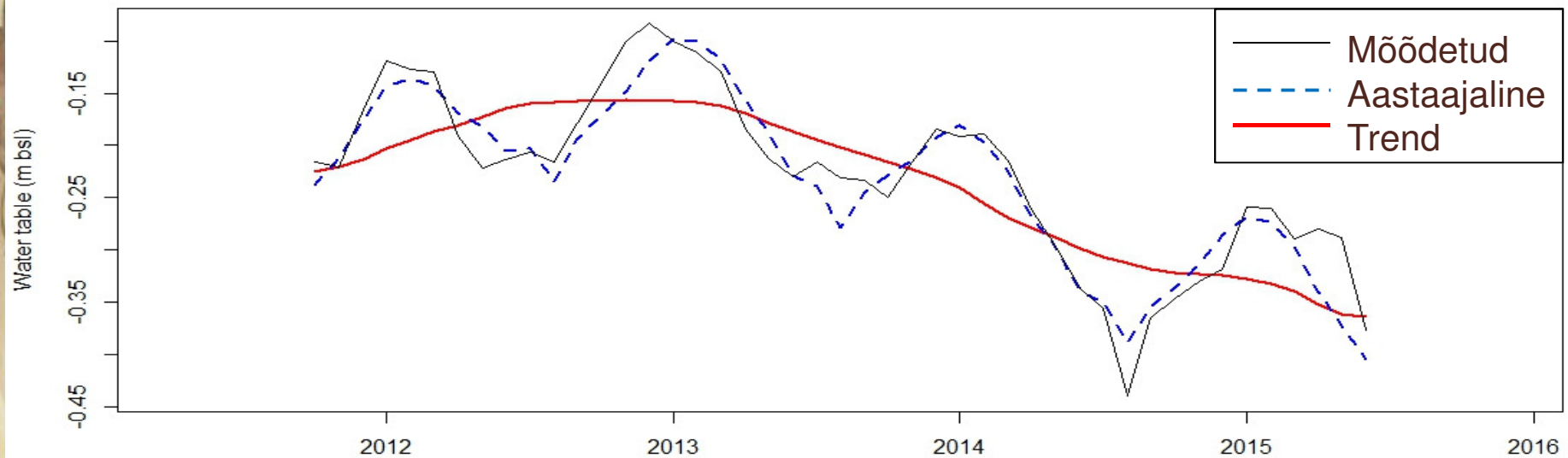


S sügav -13 m
S pindmine - 3

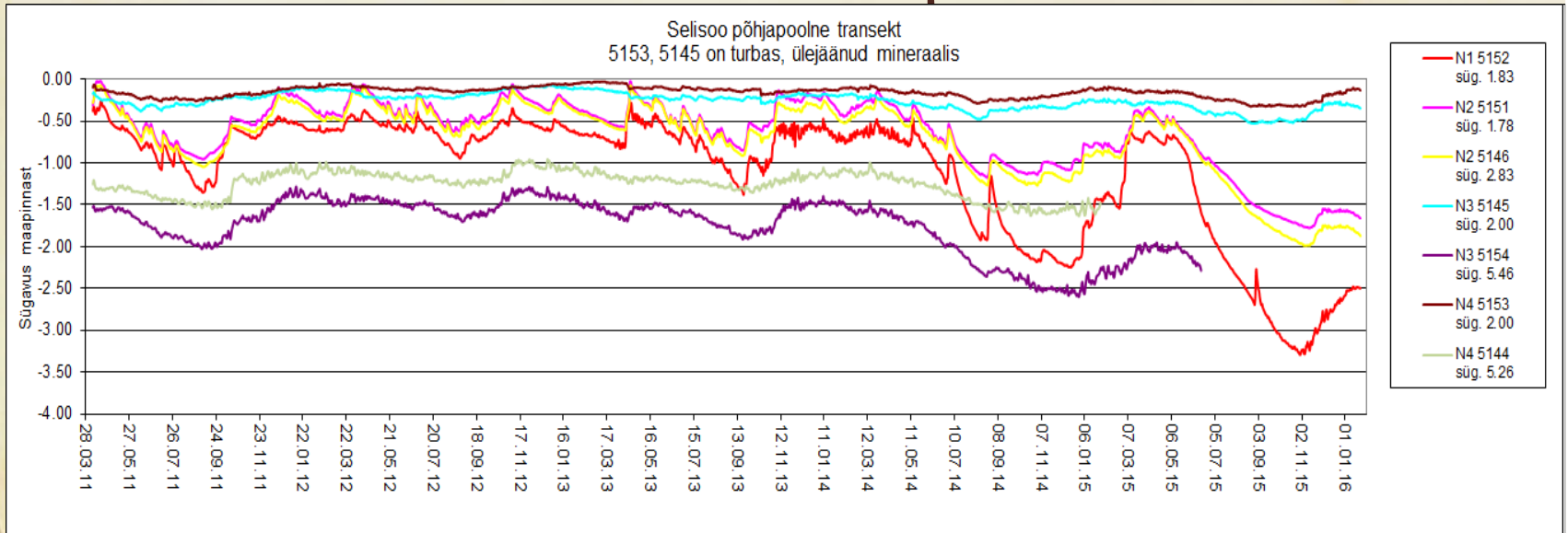
N sügav - 9 m
N pindmine - 3

Veeseire aegread - komponendid

N3 Raba timeseries components



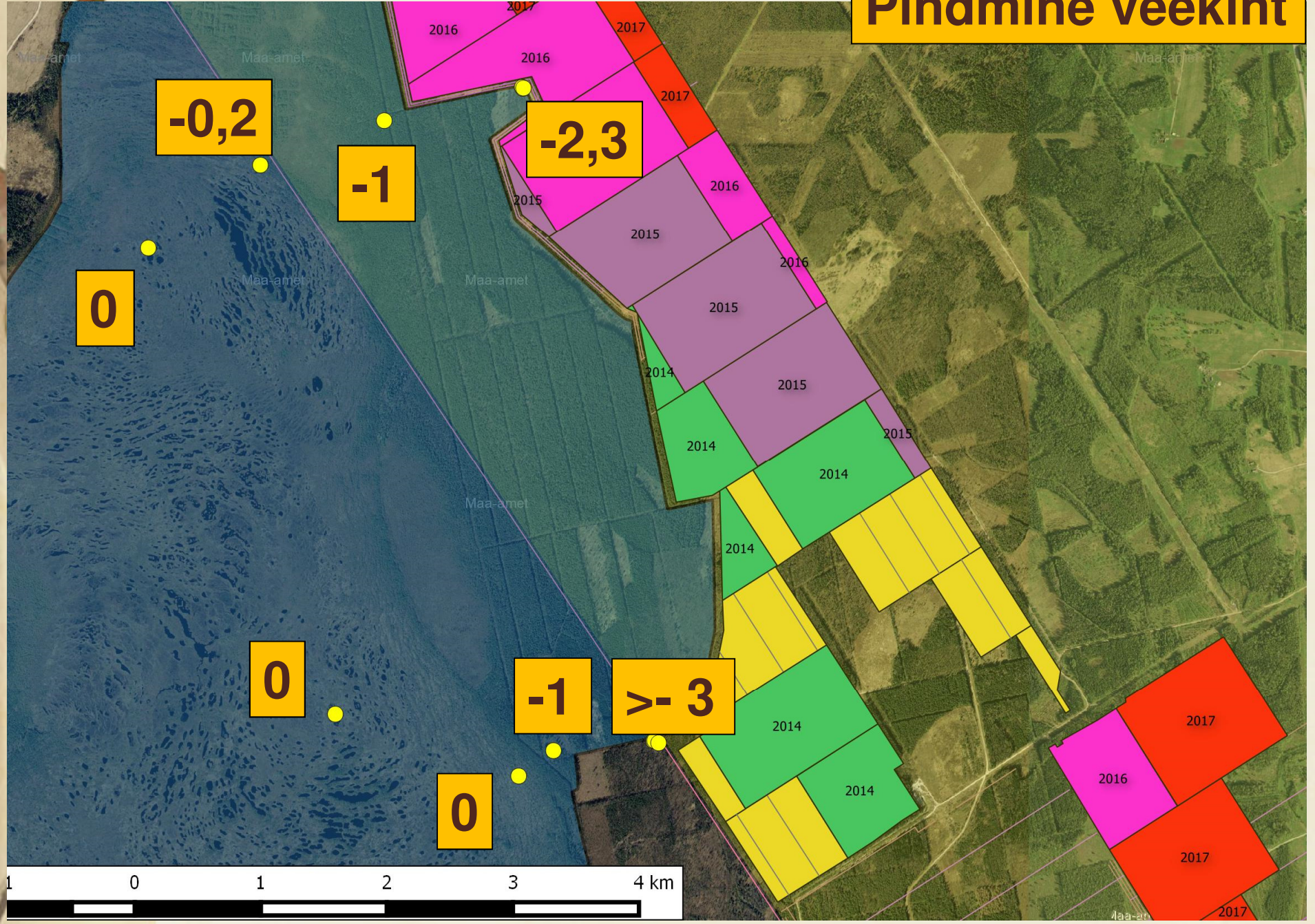
Veeseire tulemused - pinnakate



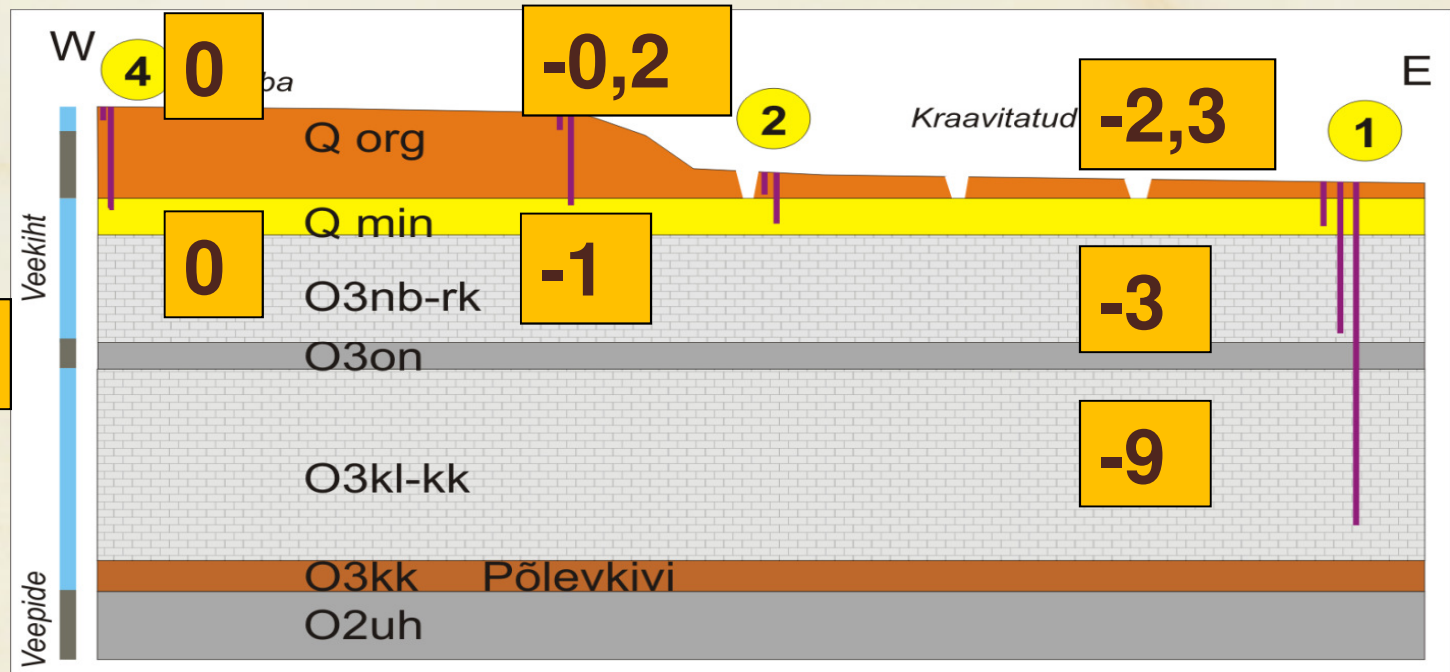
| | | |
|-----------|---|-----|
| S 1 | > | - 3 |
| S 2 | | - 1 |
| S 3 sügav | | - 1 |
| S 3 raba | | 0 |
| S 4 sügav | | - 2 |
| S 4 raba | | 0 |

| | | |
|-----------|--|-------|
| N 1 | | - 2,3 |
| N 2 | | - 1 |
| N 3 sügav | | - 1 |
| N 3 raba | | - 0,2 |
| N 4 sügav | | 0 |
| N 4 raba | | 0 |

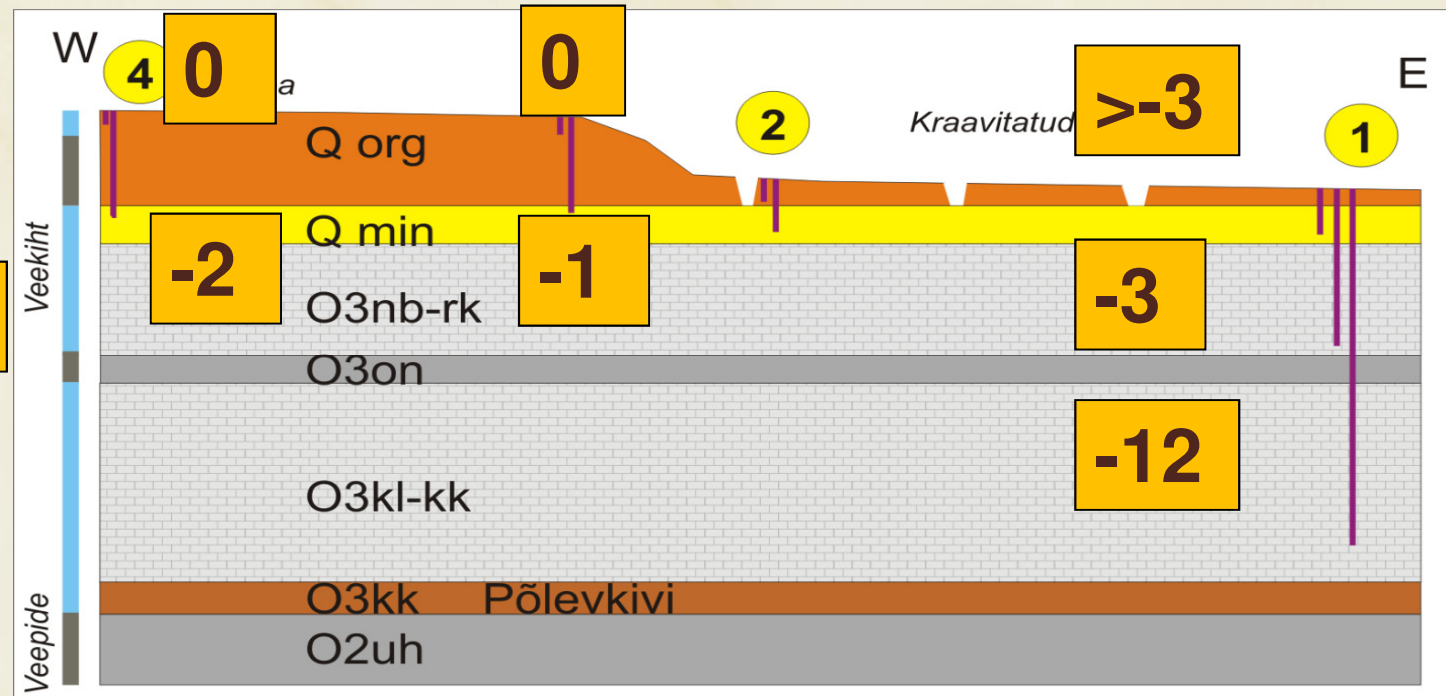
Pindmine veekiht



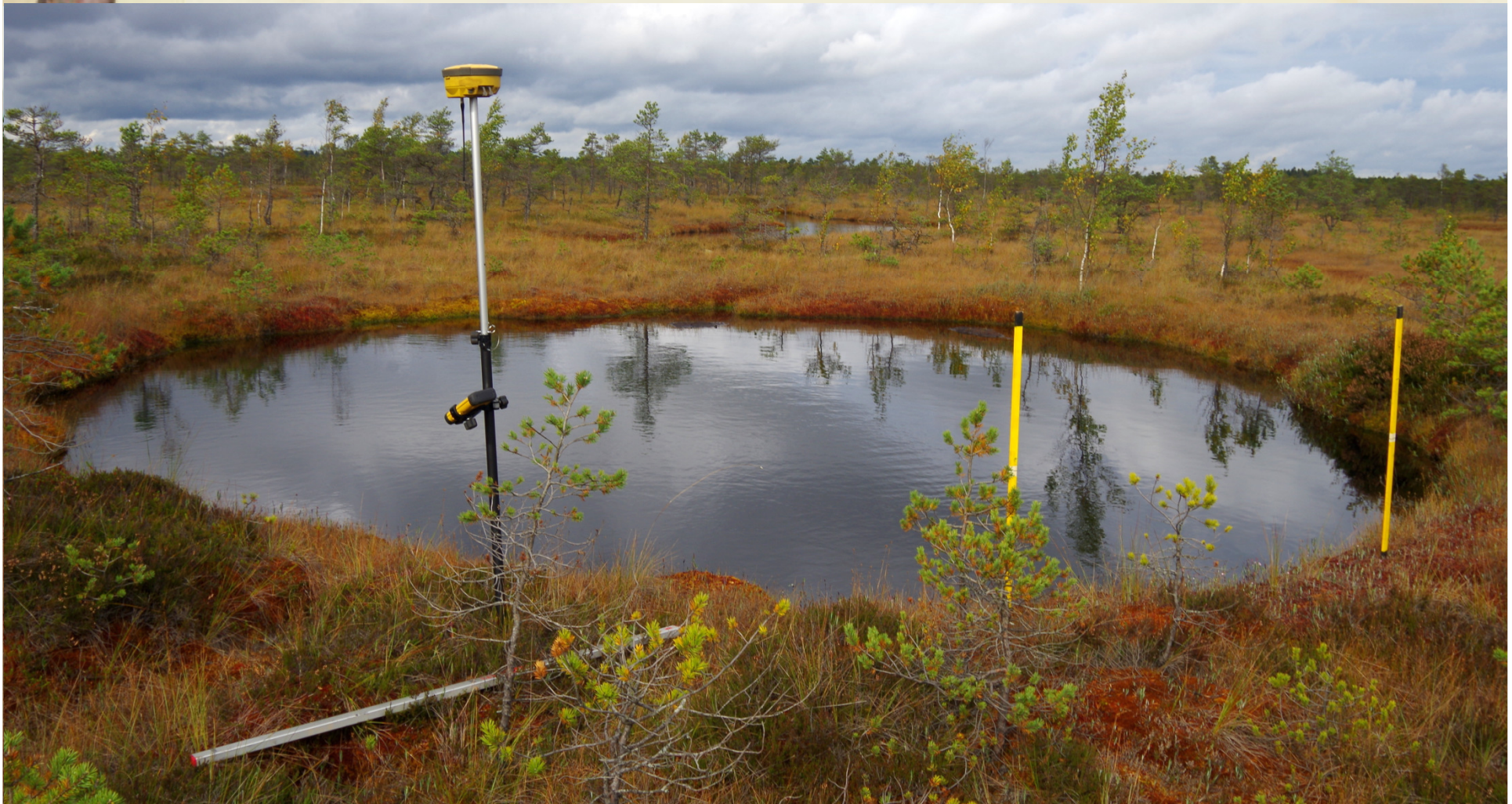
N transekt



S transekt



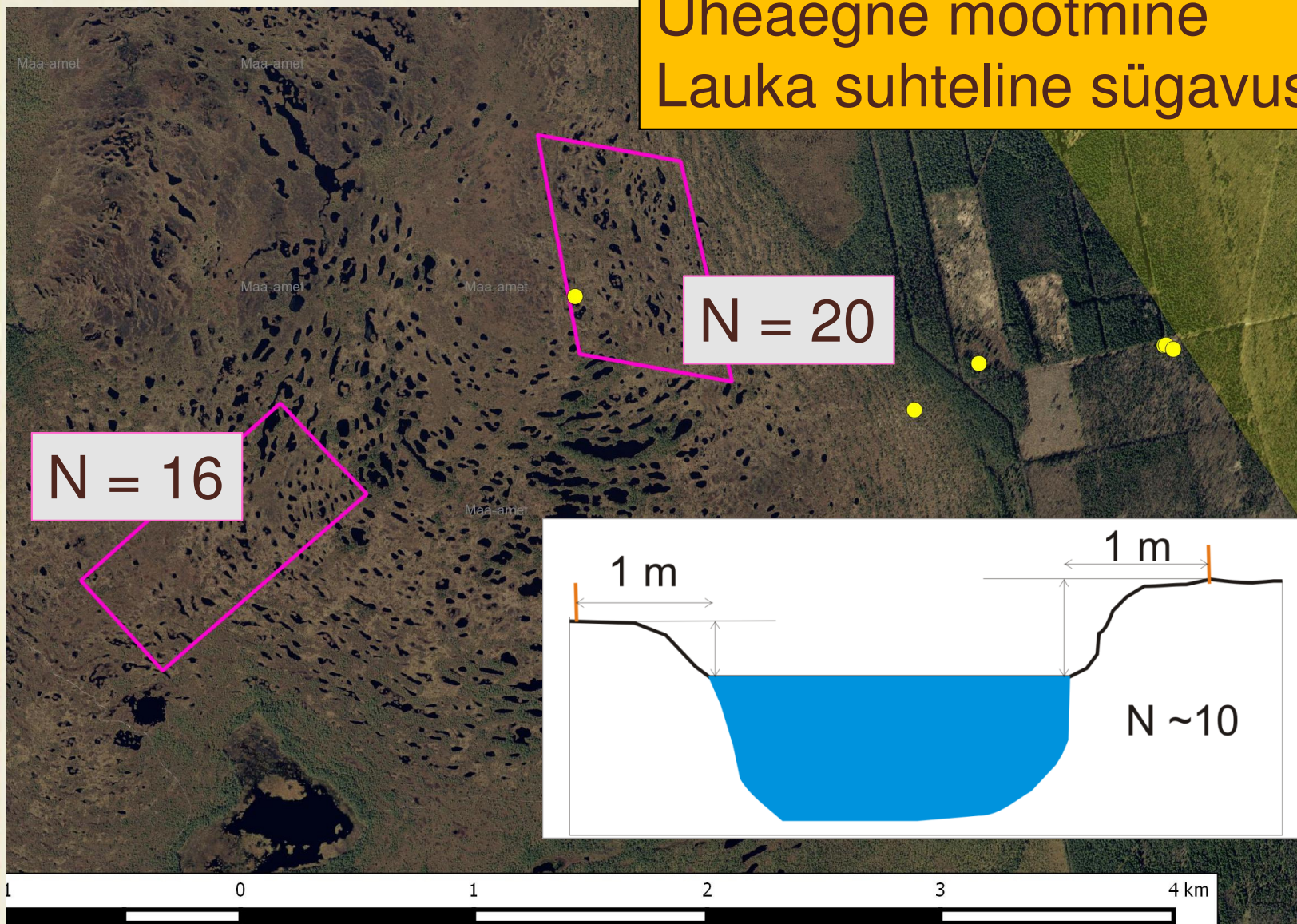
Selisoo laukad 2016. a



E poolsed laukad tundusid sügavamad...

Selisoo laukad 2016. a

Üheaegne mõõtmine
Lauka suhteline sügavus



Selisoo laukad 2016. a

E poolne ala

keskmine: 24,9 cm

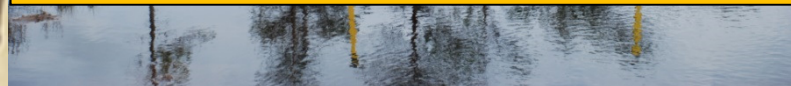
mediaan: 24,9 cm



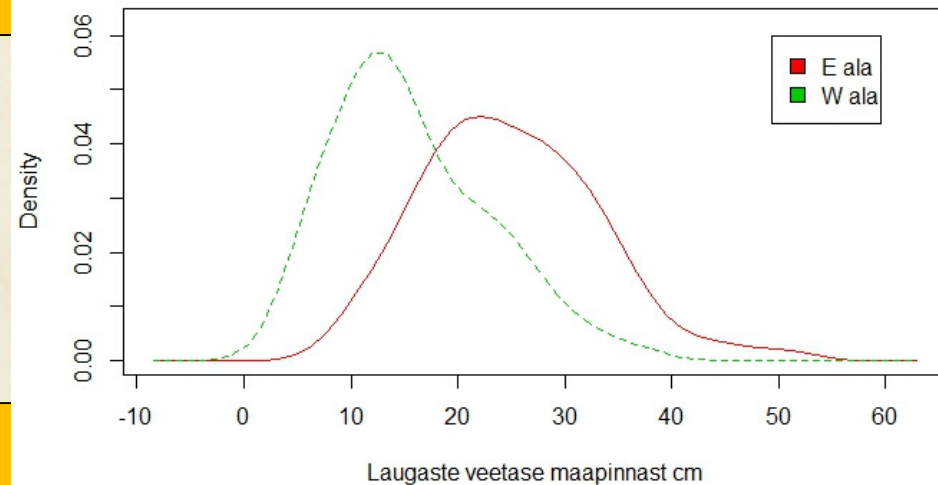
W poolne ala

keskmine: 15,8 cm

mediaan: 14,9 cm



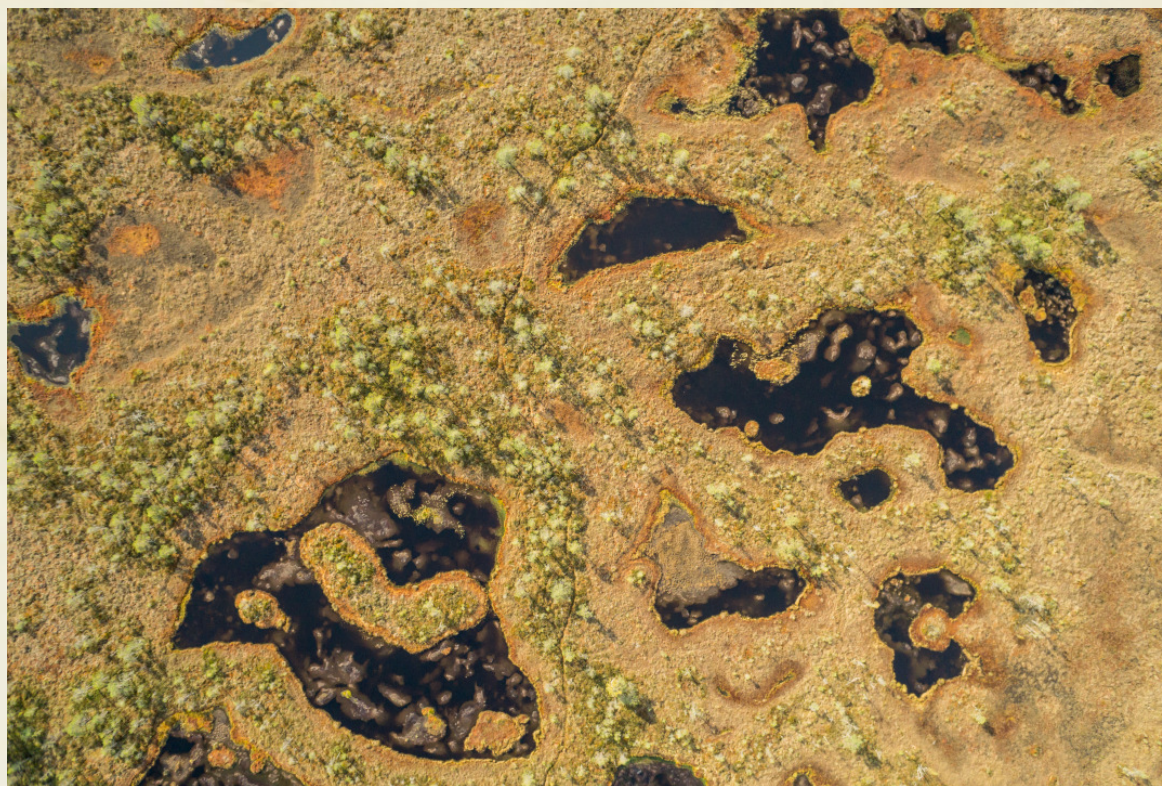
Selisoo laugaste veetasemete erinevus



Selisoo laukad 2016. a - droon

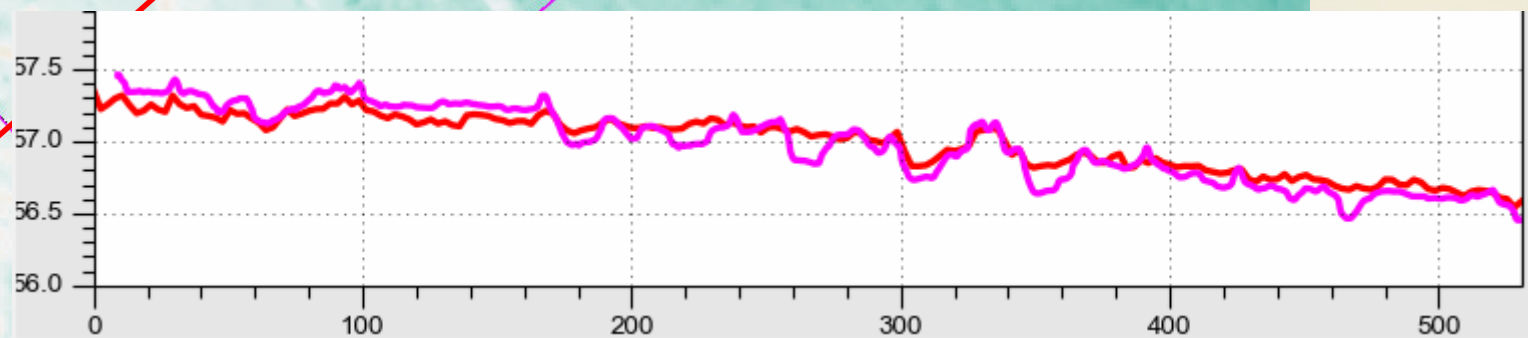


Droonifotode põhine
Ortofoto (2cm/px)
Kõrgusmudel (20 cm/px)

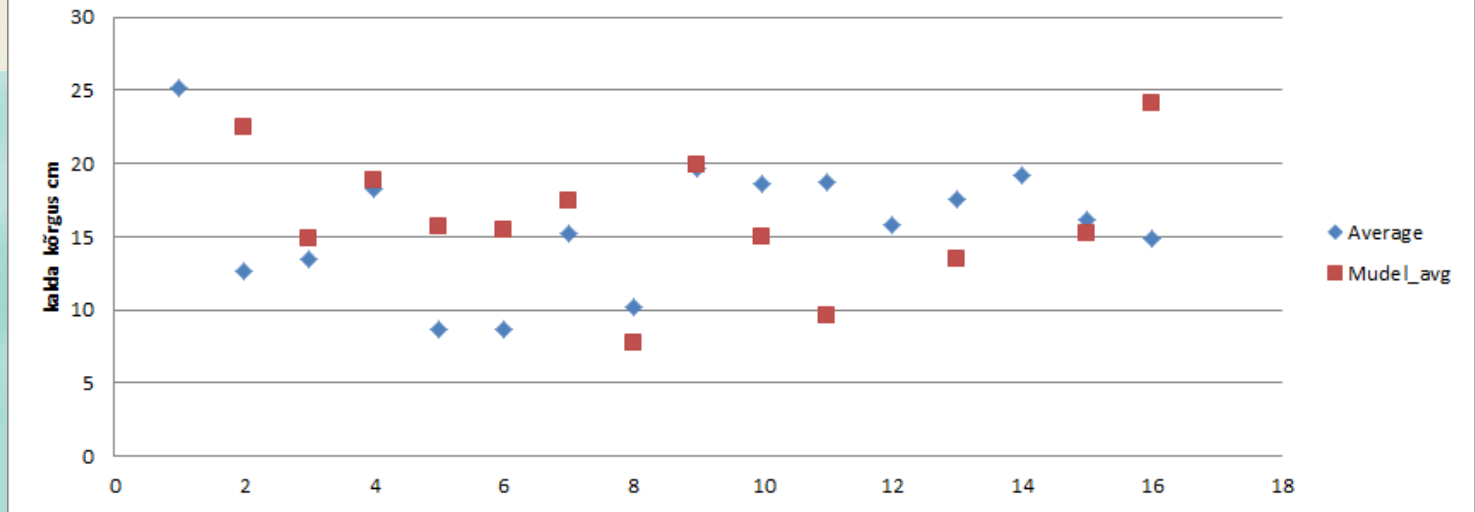


Droonimudel vs lidarmudel

| | |
|-------------|----------------|
| Droonimudel | 0,2 m / piksel |
| Lidarmudel | 2 m / piksel |



Kallaste keskmise kõrguse võrdlus W-osa



E ala

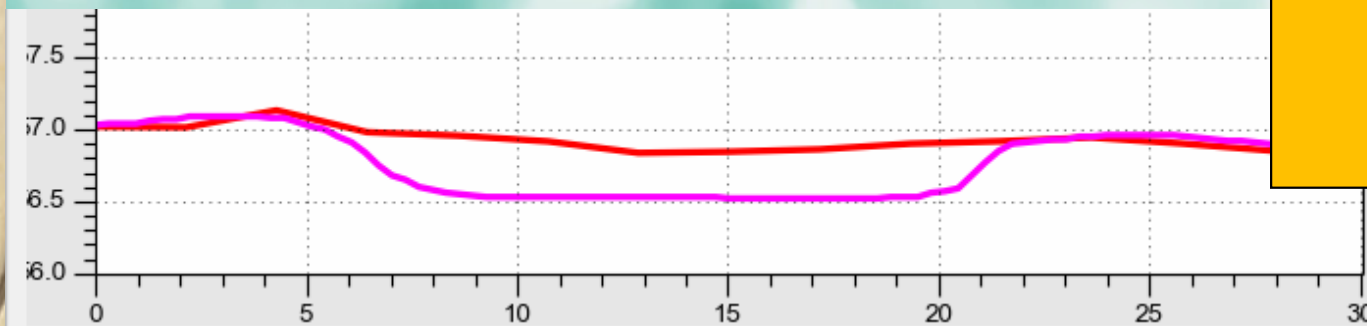
käsi: **24,9**

mudel: **23,1**

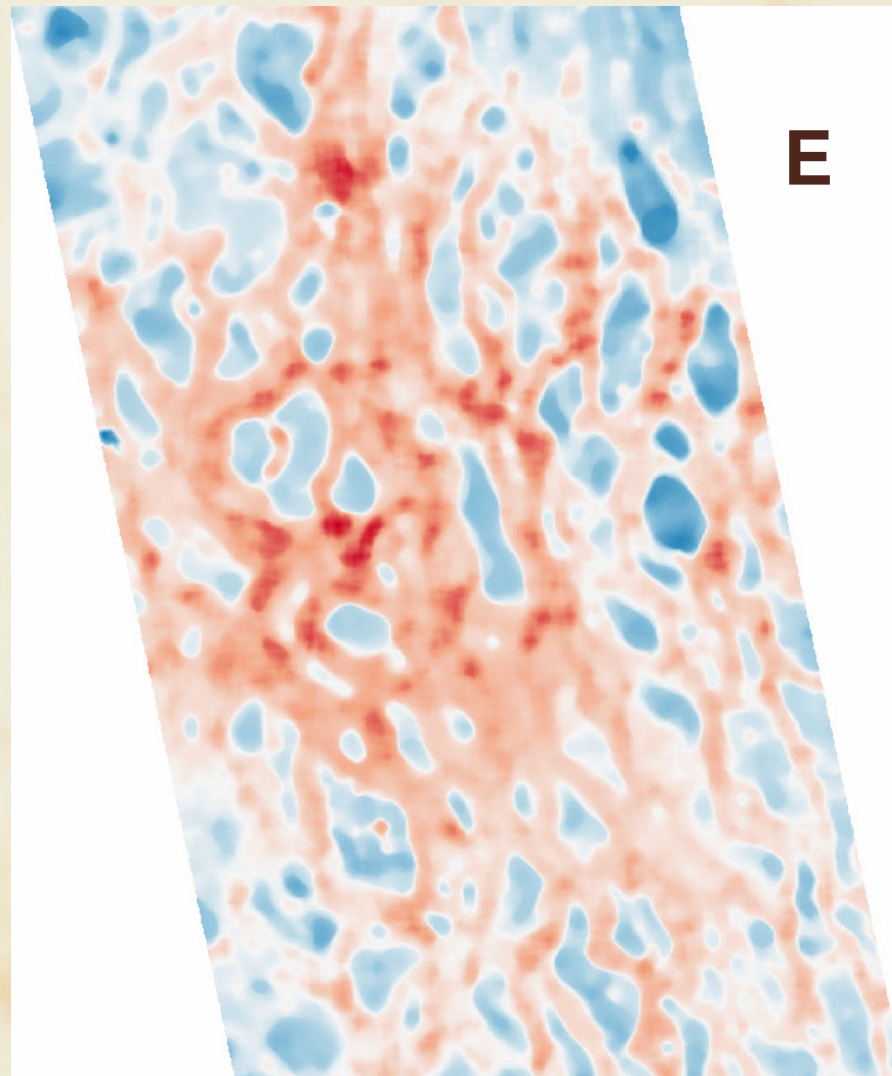
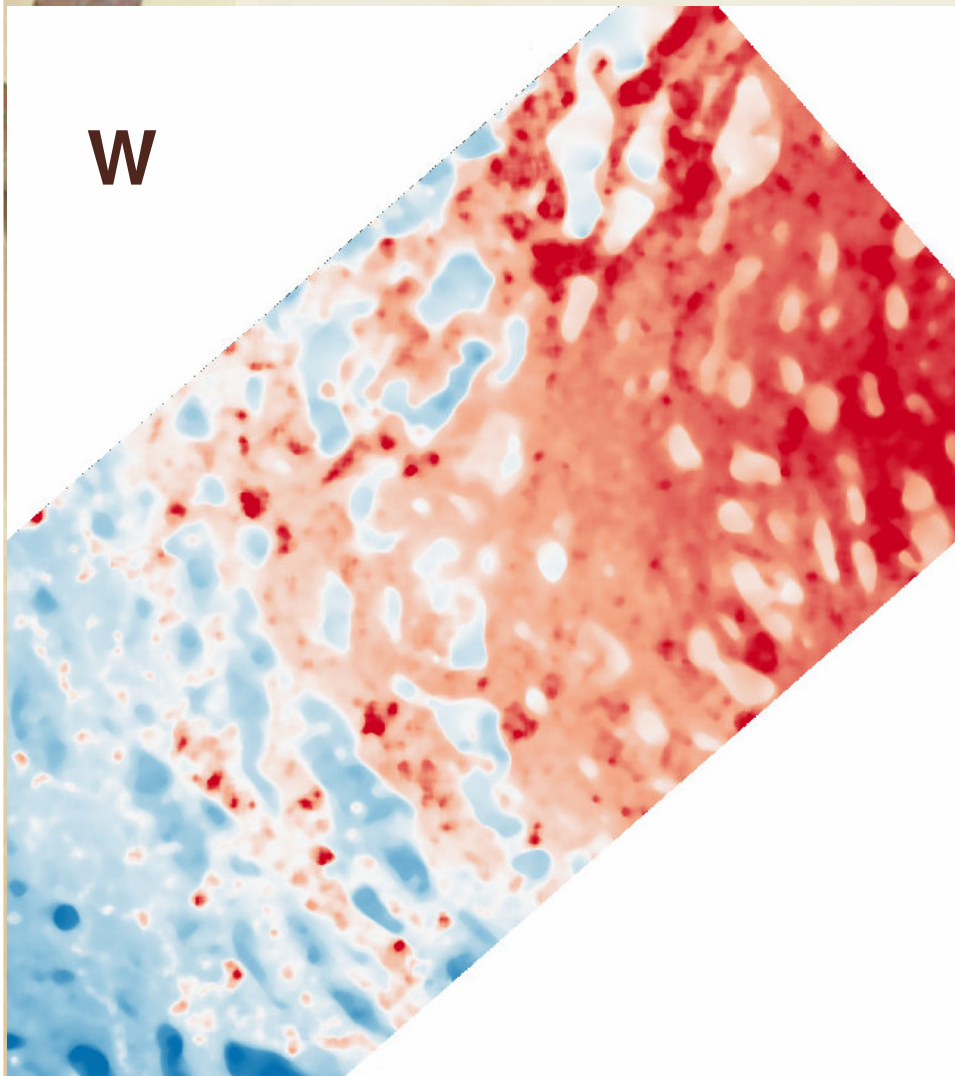
W ala

käsi: **15,9**

mudel: **16,1**



E ja W alade dem võrdlus



E ja W laugaste võrdlus

106

87

36%

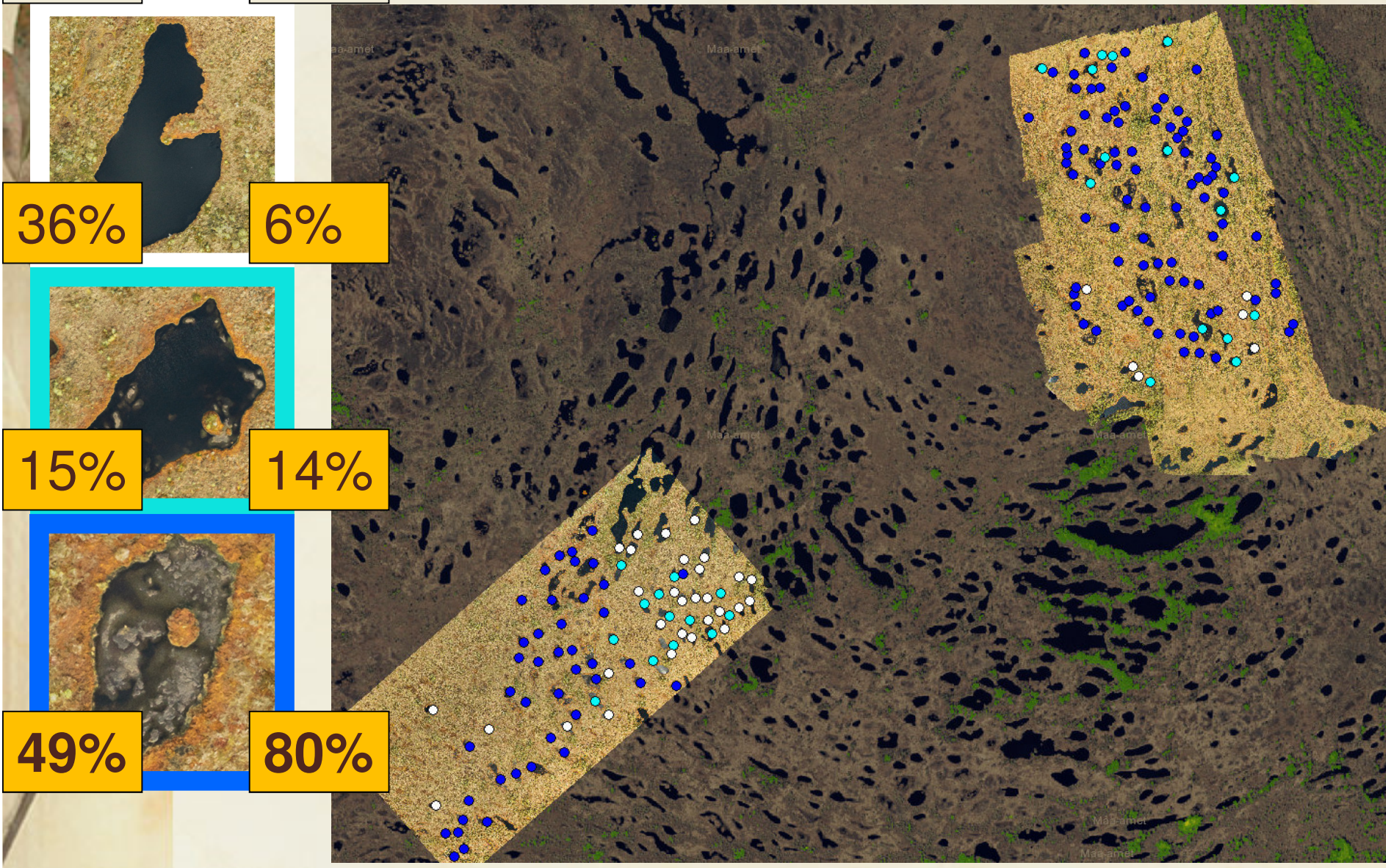
6%

15%

14%

49%

80%



Kokkuvõte

Jätkuv (tugev) veetasemete langus
mineraalpinnases Selisoo ümber

**Esimesed märgid mõjust ka raba peale
veetasemete langus
laugaste veetasemete langus
laugaste põhjade üles tõusmine**

2017. a lidar kordusmõõtmine – võrreldav
ülepinnaliselt 2013 a. mõõdistusega

