

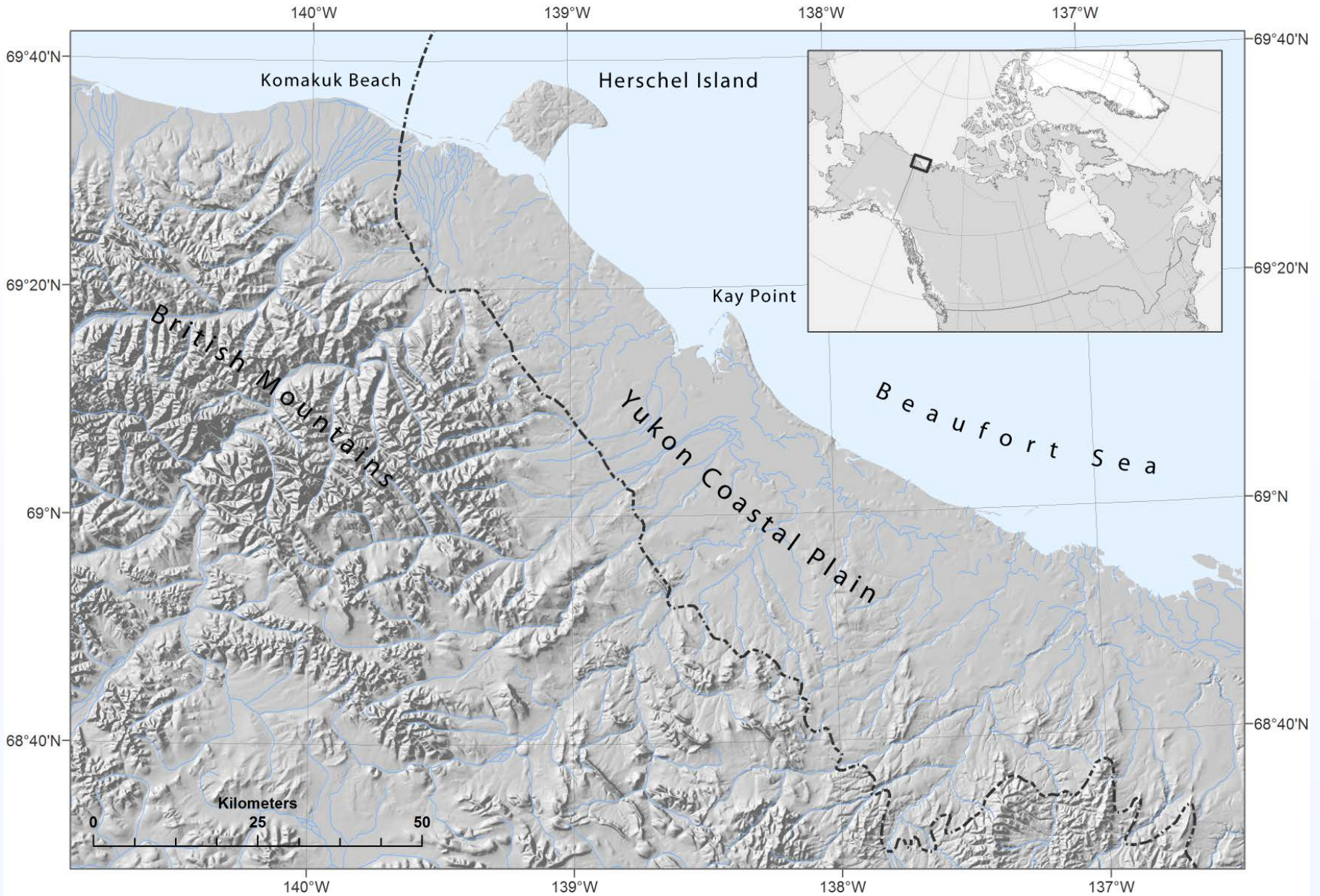
Organic carbon release by coastal erosion in the western Canadian Arctic

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Hugues Lantuit, Michael Fritz, Birgit Heim, Lutz Schirrmeister, Veit Helm and Juliane Wolter

DUE Permafrost 2014

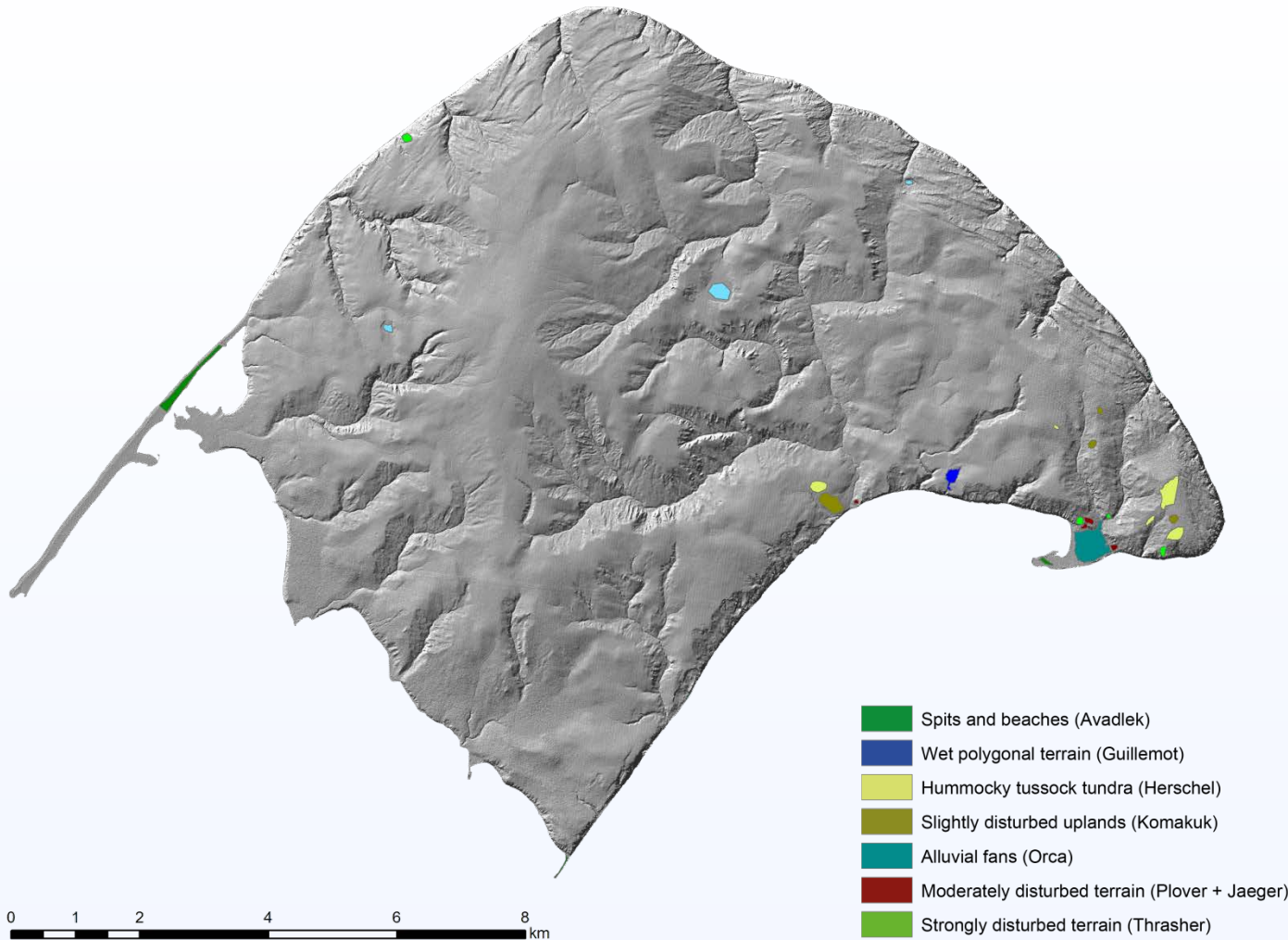
ESRIN, Frascati, 12th of February, 2014

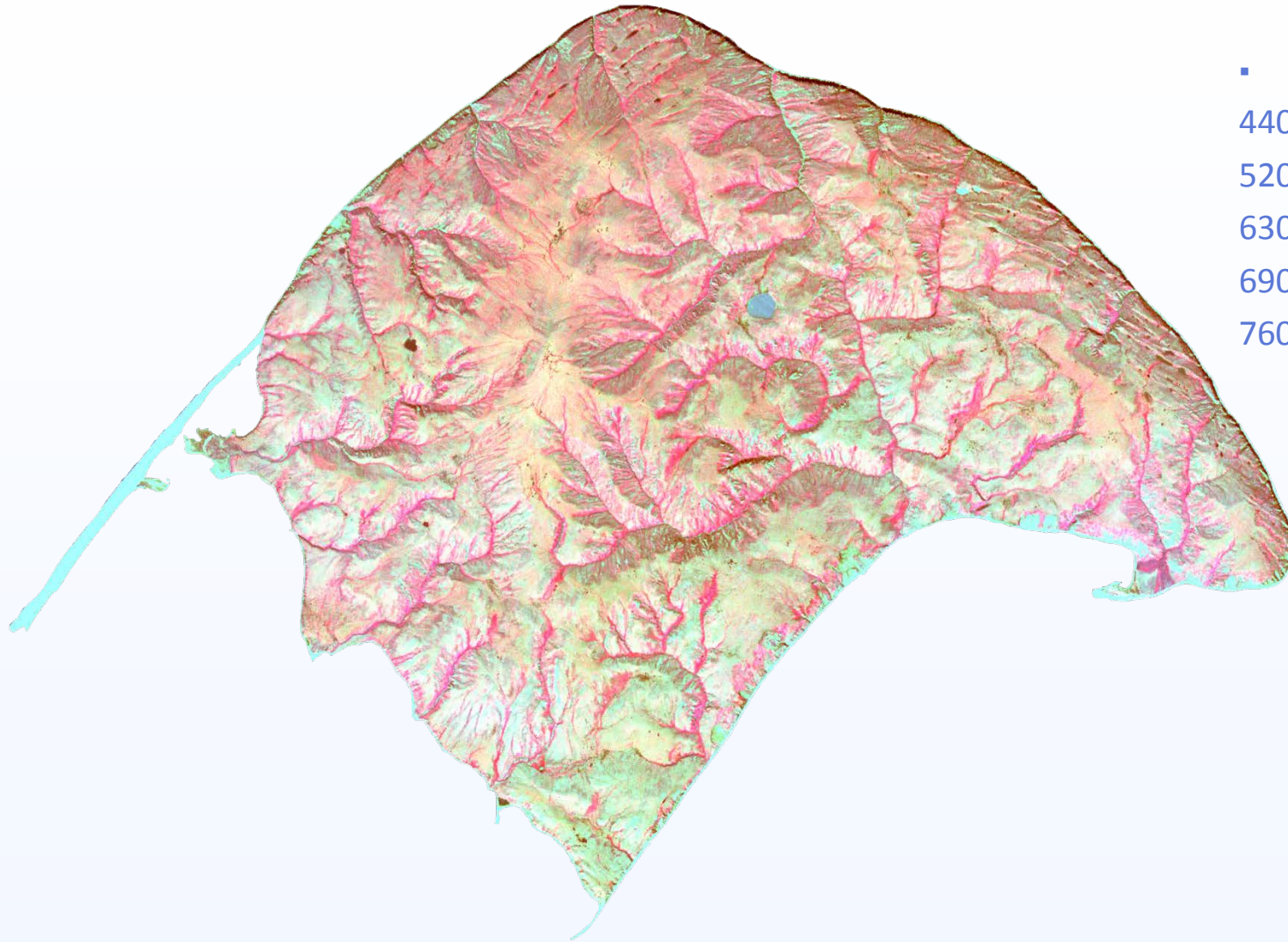


Upscaling point data to spatial units.

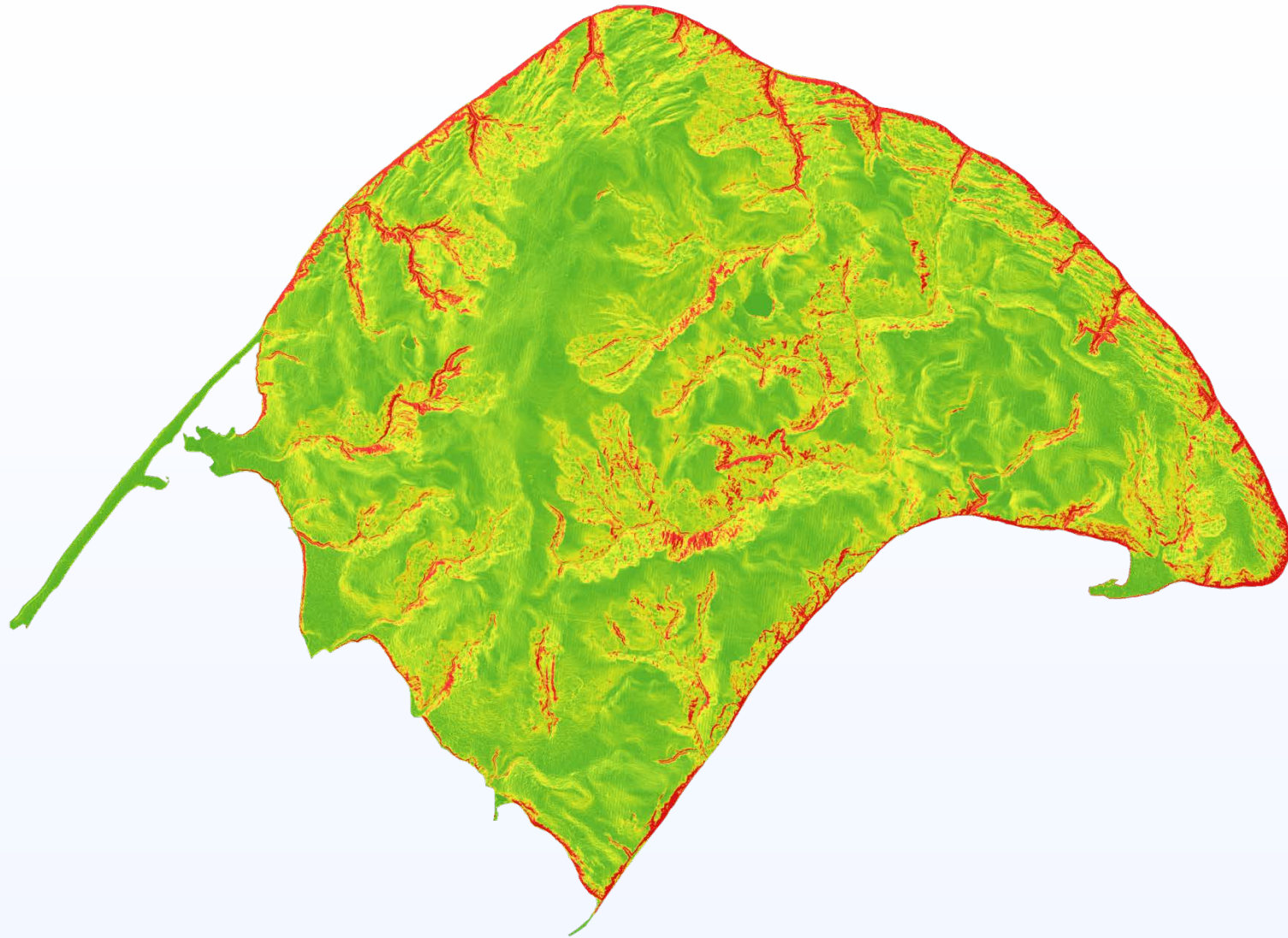
Upscaling of contents to ecological units.

- 21 training units

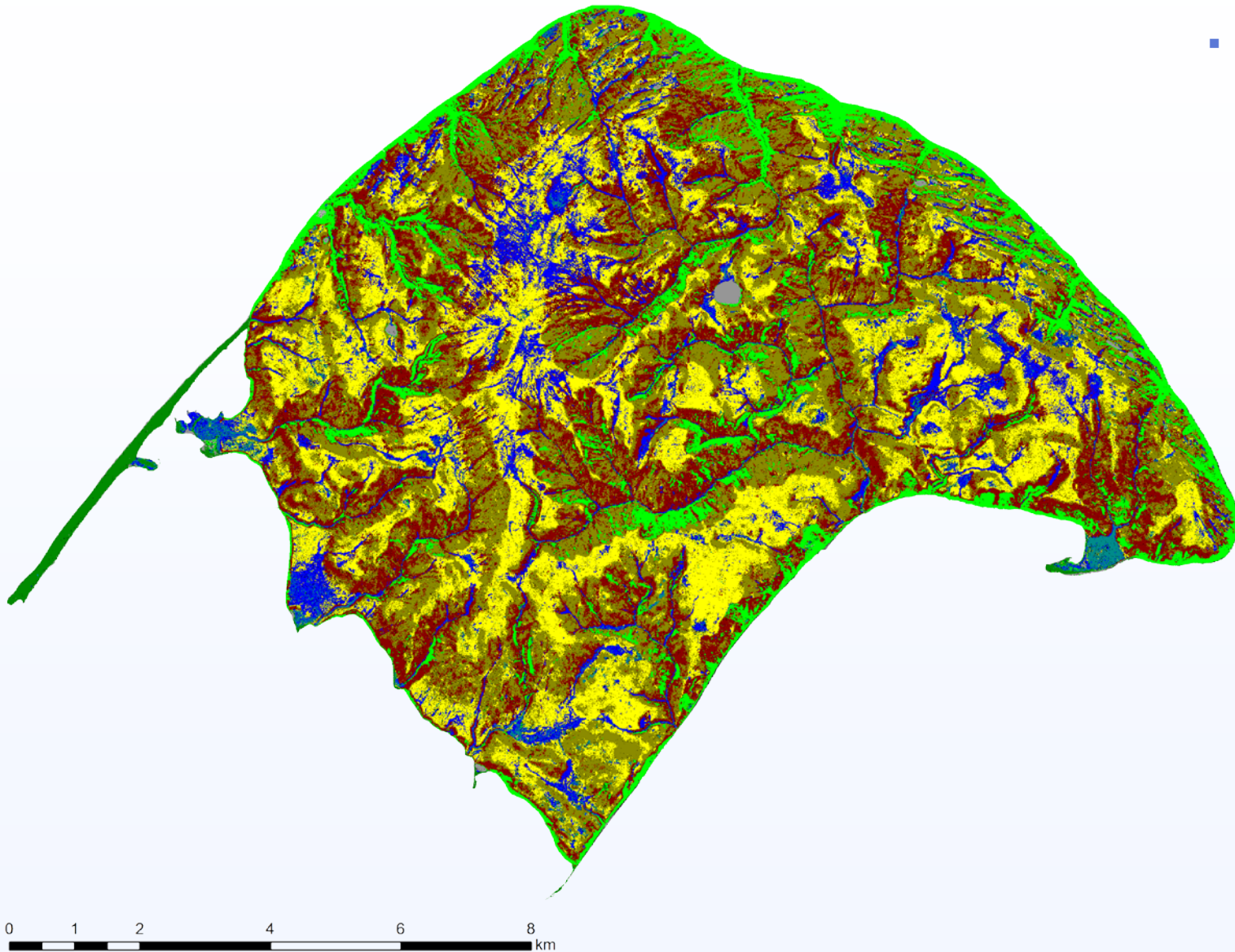




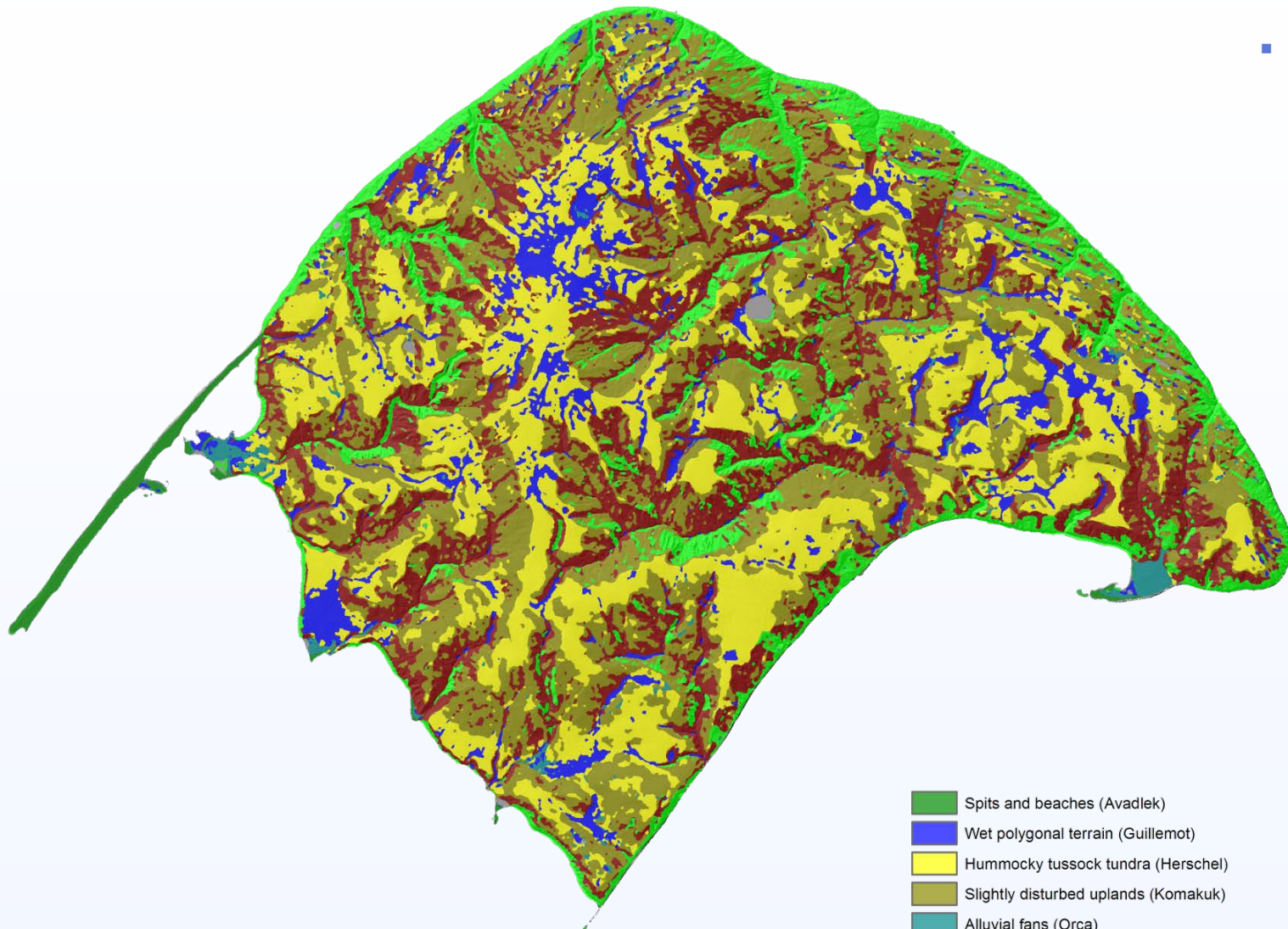
- Horizontal resolution 6,5 m
- 5 bands
440 – 510 nm (Blue)
520 – 590 nm (Green)
630 – 685 nm (Red)
690 – 730 nm (Red Edge)
760 – 850 nm (Near IR)



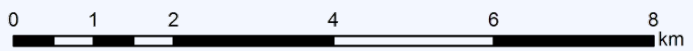
- 4 x 4 circle majority filter



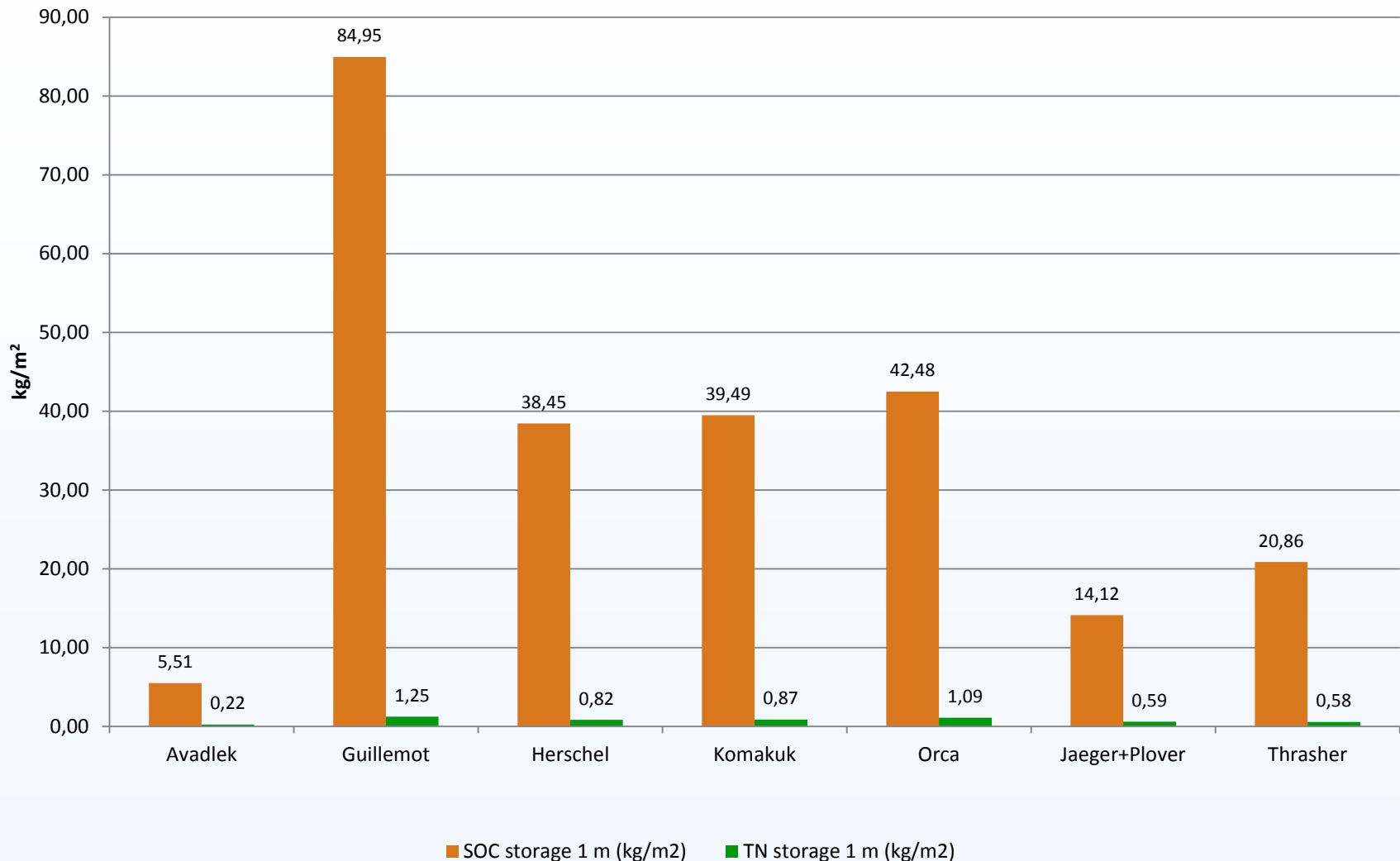
- 75 % agreement between ground truth points and classification

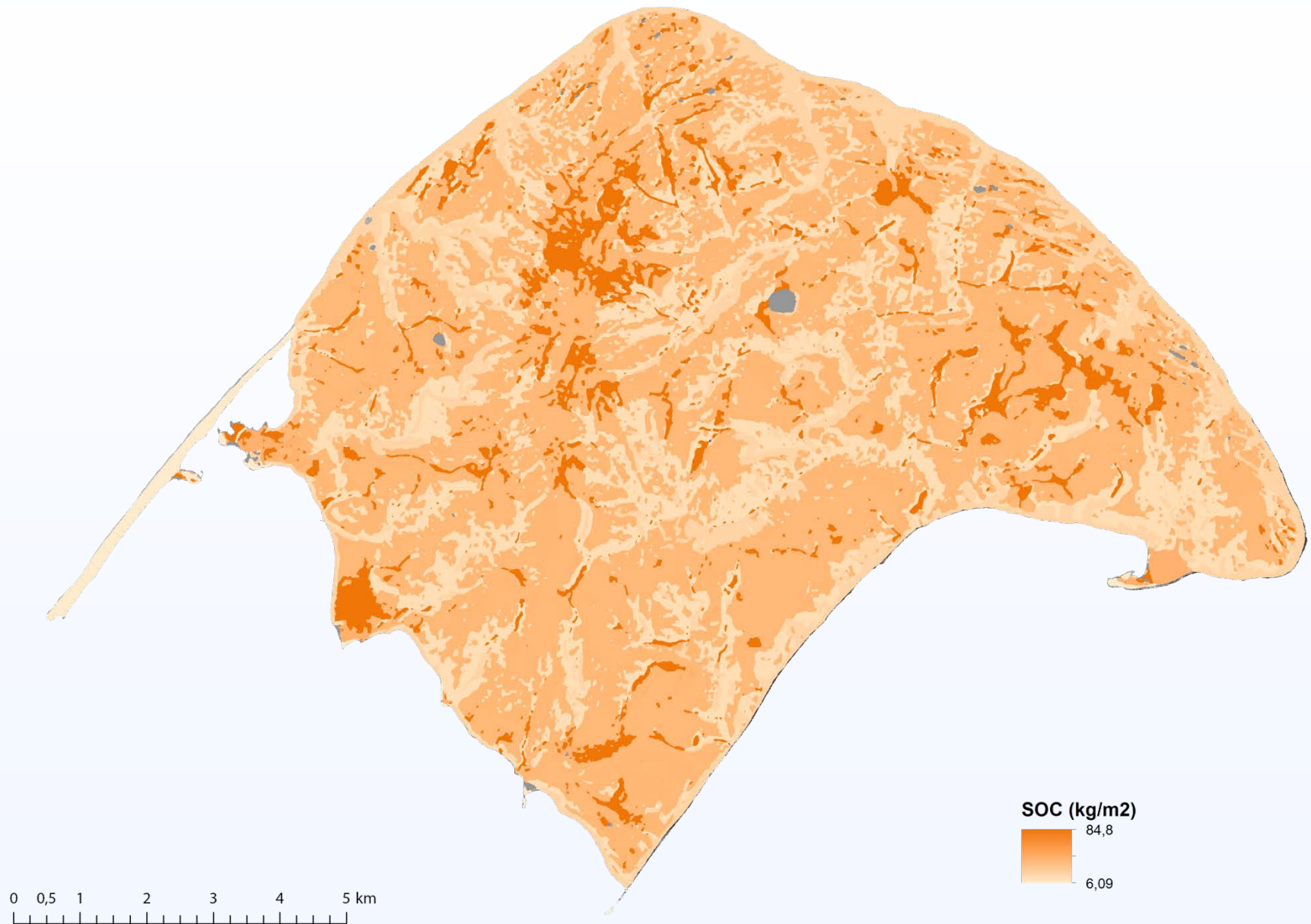


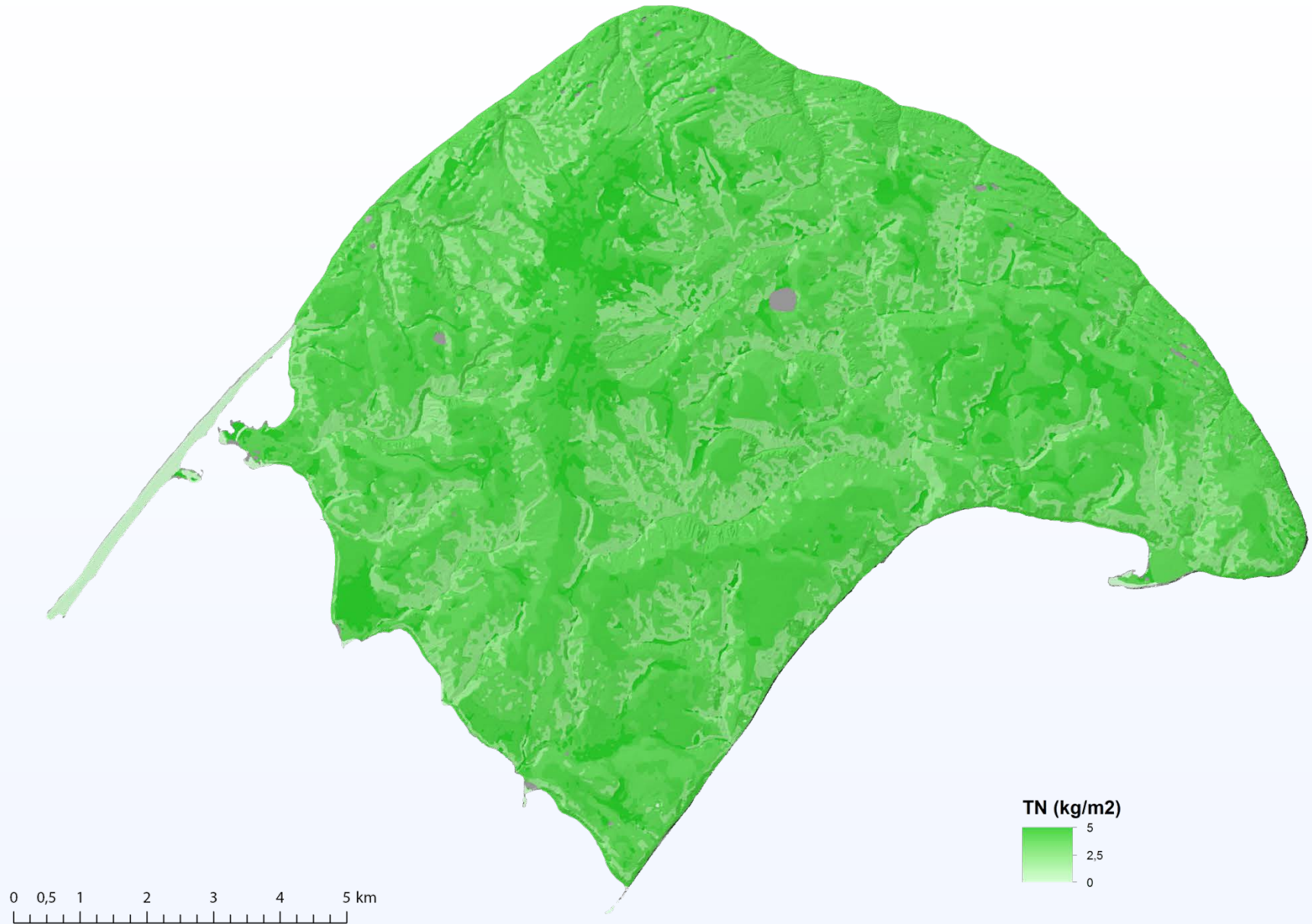
- Spits and beaches (Avadlek)
- Wet polygonal terrain (Guillemot)
- Hummocky tussock tundra (Herschel)
- Slightly disturbed uplands (Komakuk)
- Alluvial fans (Orca)
- Moderately disturbed terrain (Plover + Jaeger)
- Strongly disturbed terrain (Thrasher)



Soil organic carbon and total nitrogen storage in 1 meter



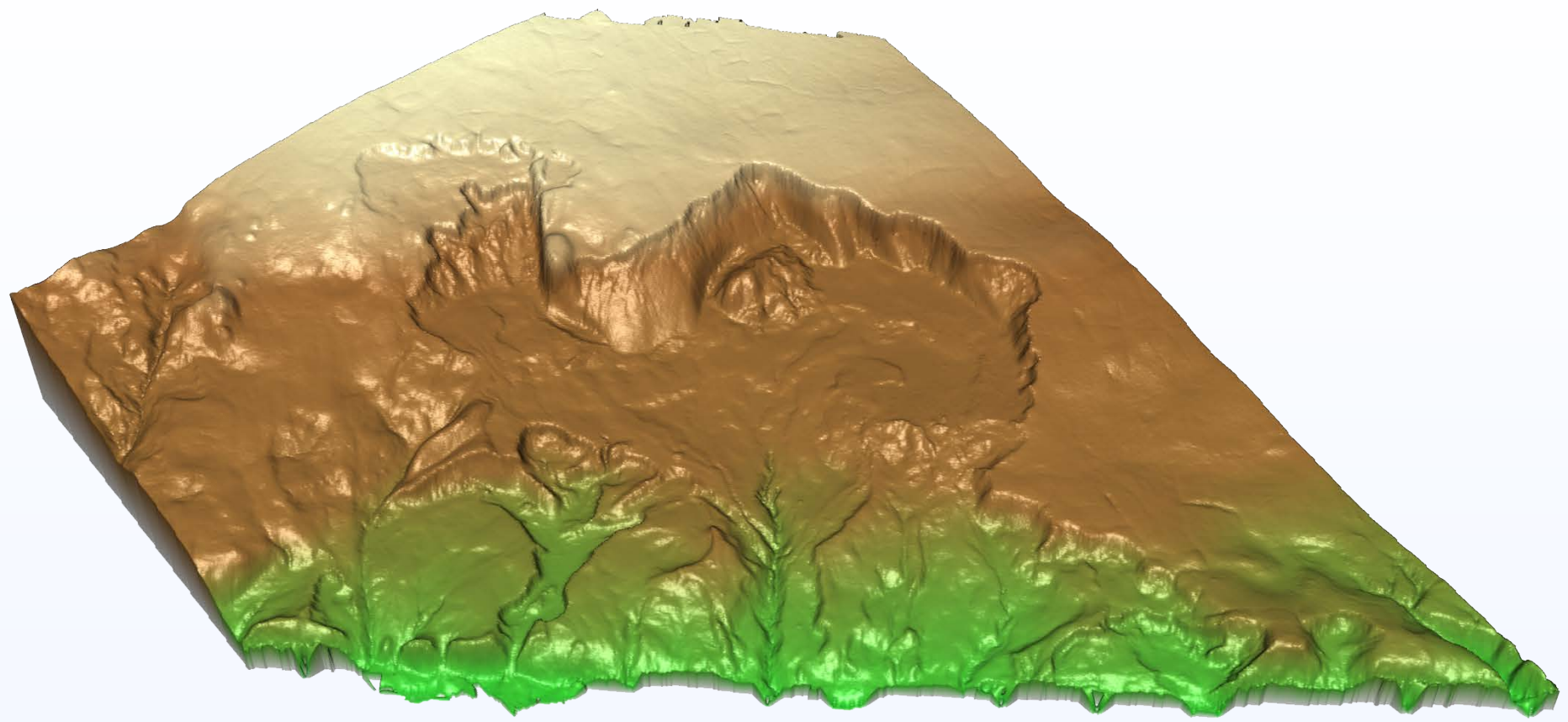


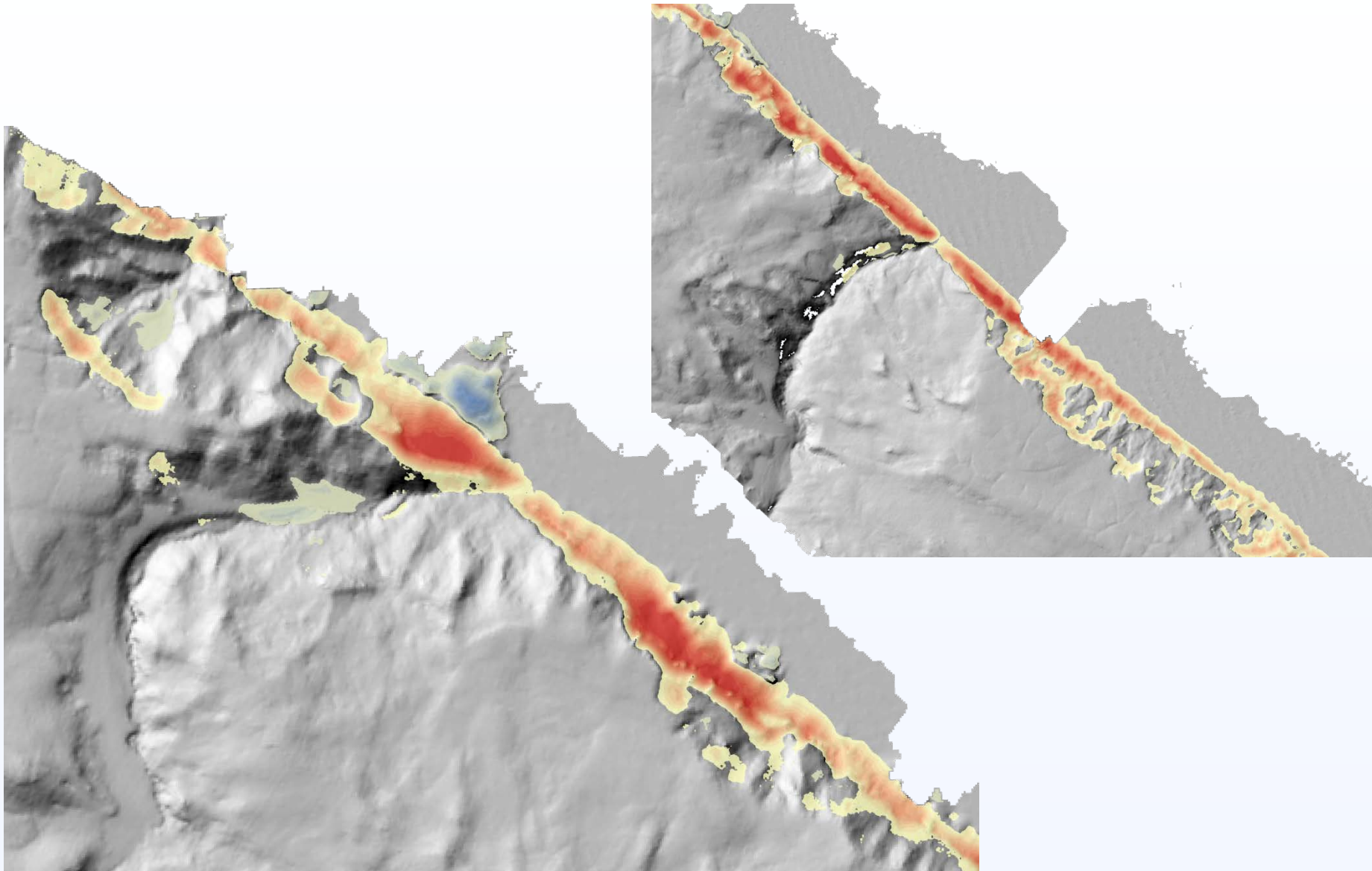


Compare two DEMs from consecutive years.









And where is permafrost?






PG2150 0-5cm

Whirl-Pak



An aerial photograph of a coastline. On the left, a green, grassy cliffside meets a dark, rocky shore. The ocean extends to the horizon, with varying shades of blue and green. The water near the shore is a darker, more turbulent blue, while the water further out is a lighter, calmer blue. The sky is a pale, clear blue.

Thank you for your attention