



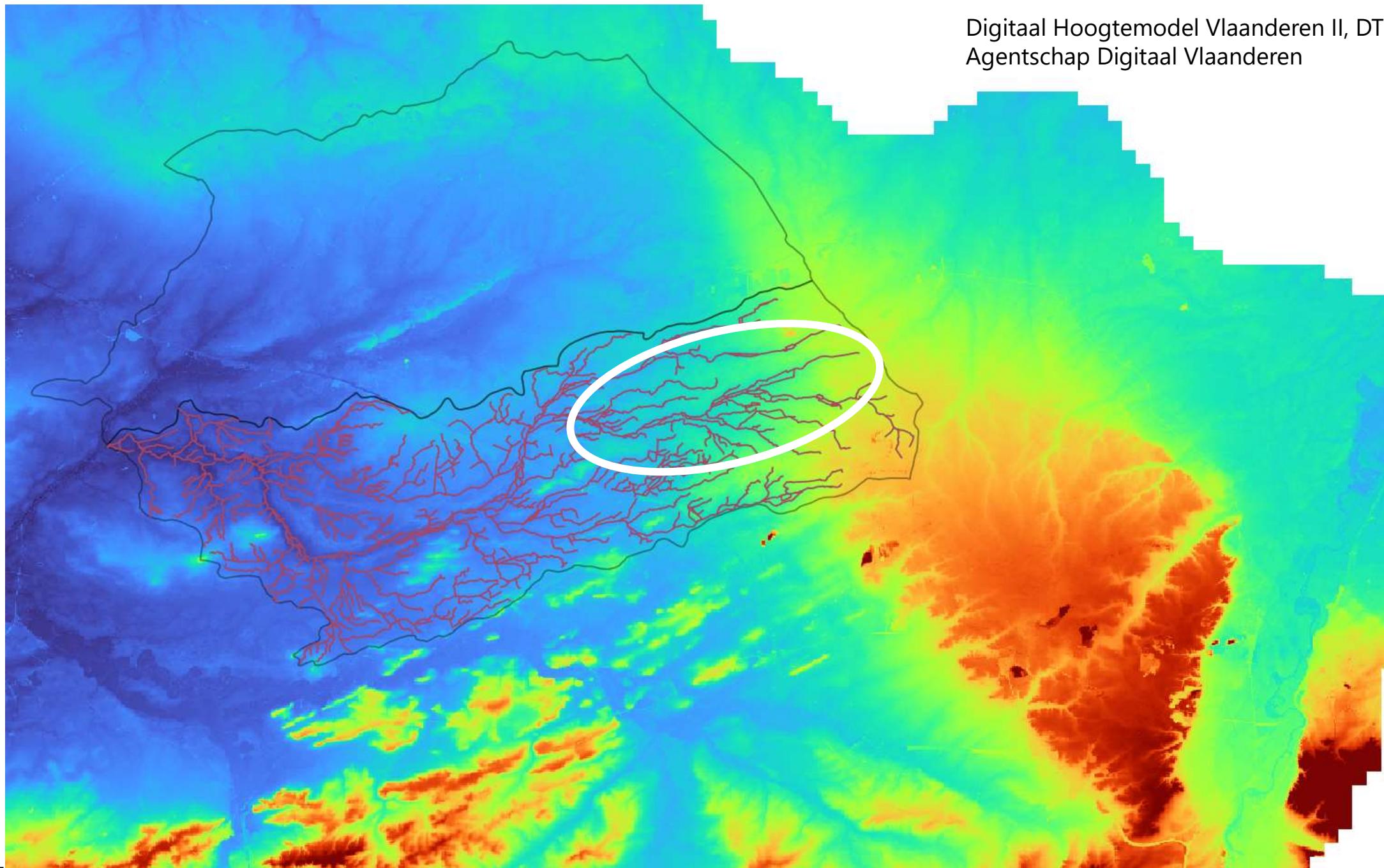
# **Landschapsgenese in het bovenstroomse gebied van het Grote Netebekken**

**sck cen**

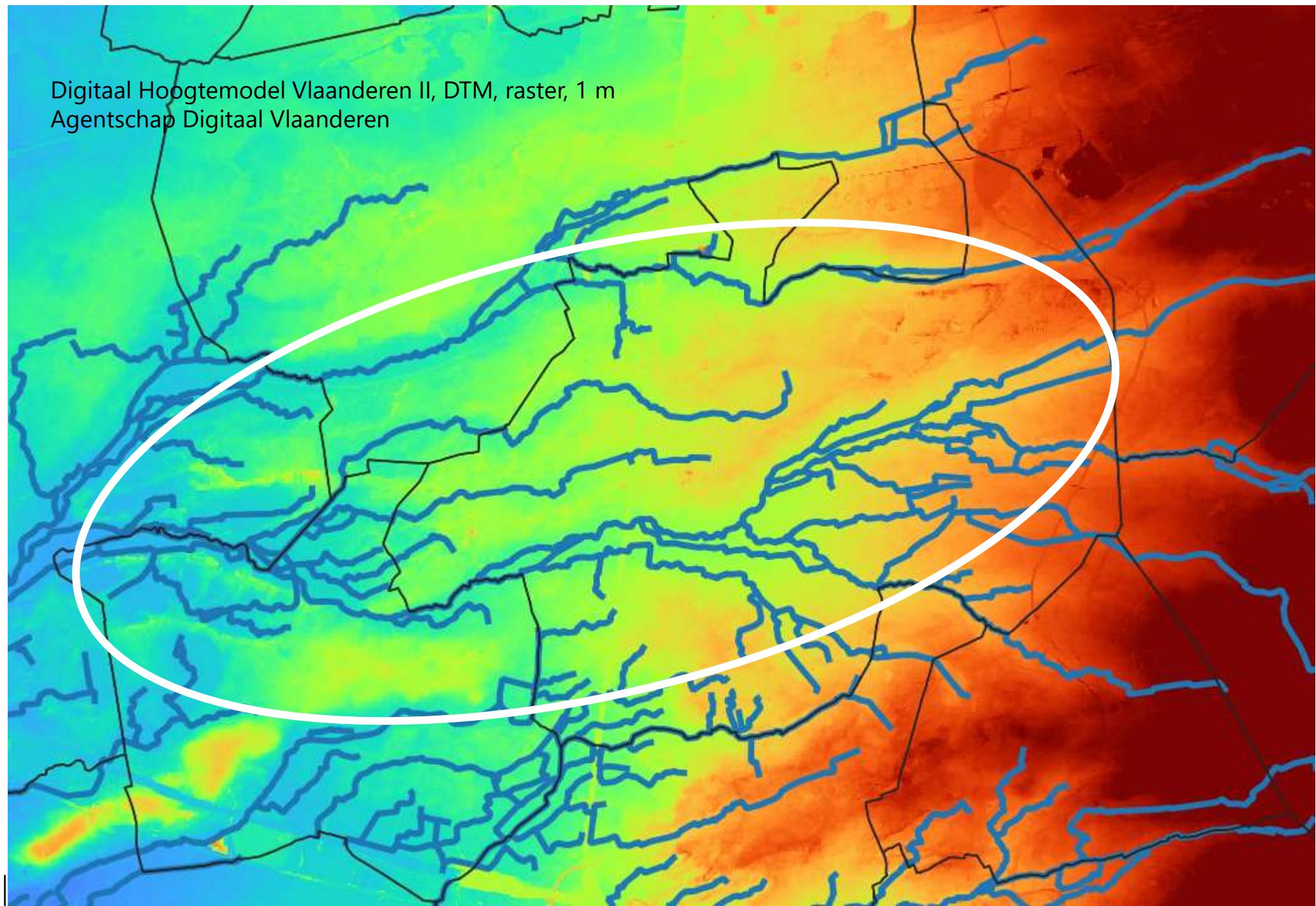
Belgian Nuclear Research Centre

Koen Beerten - 26/10/2023

Landschapsdag Grote Nete, Balen



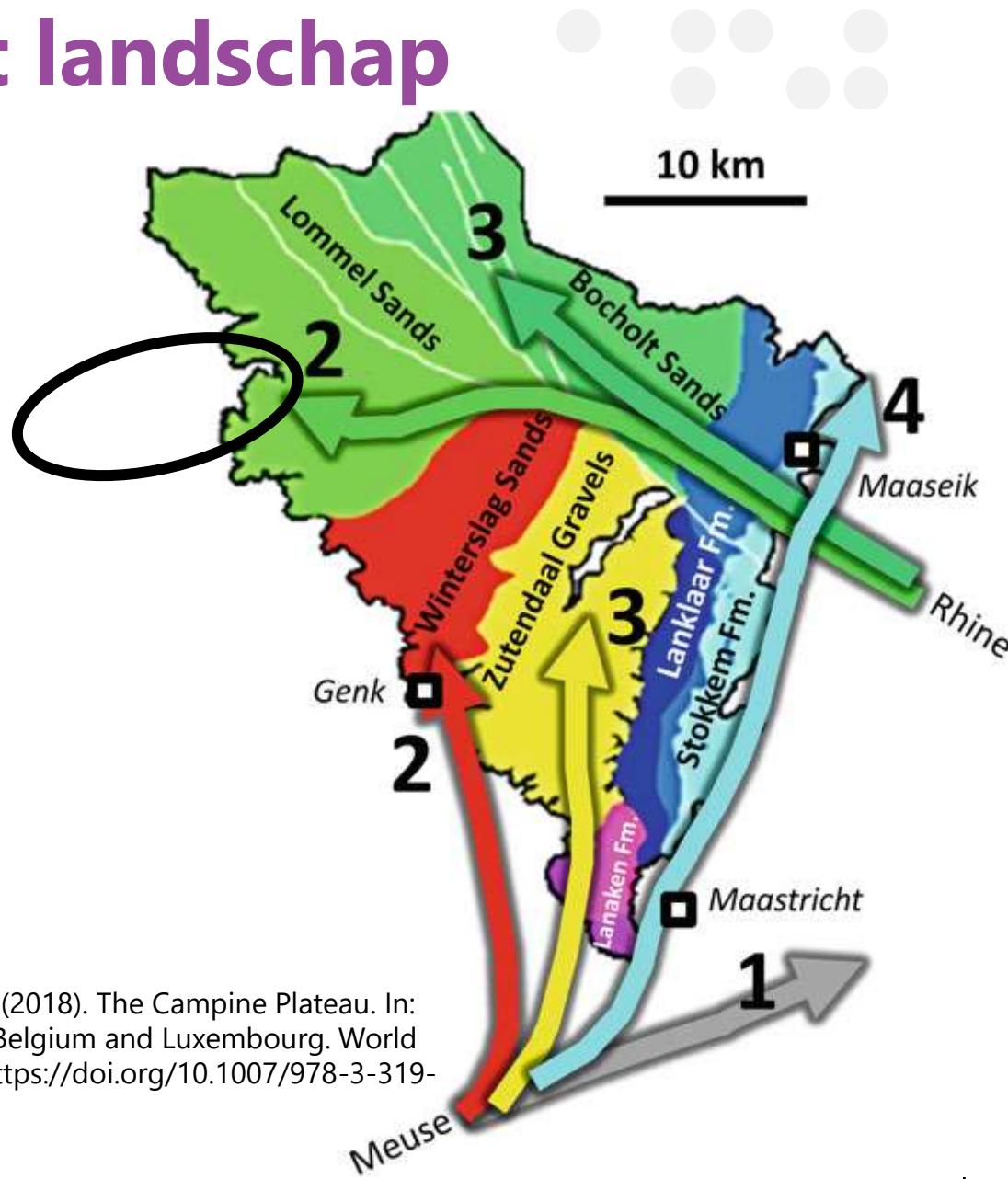
Digitaal Hoogtemodel Vlaanderen II, DTM, raster, 1 m  
Agentschap Digitaal Vlaanderen



# Vroege geschiedenis van het landschap

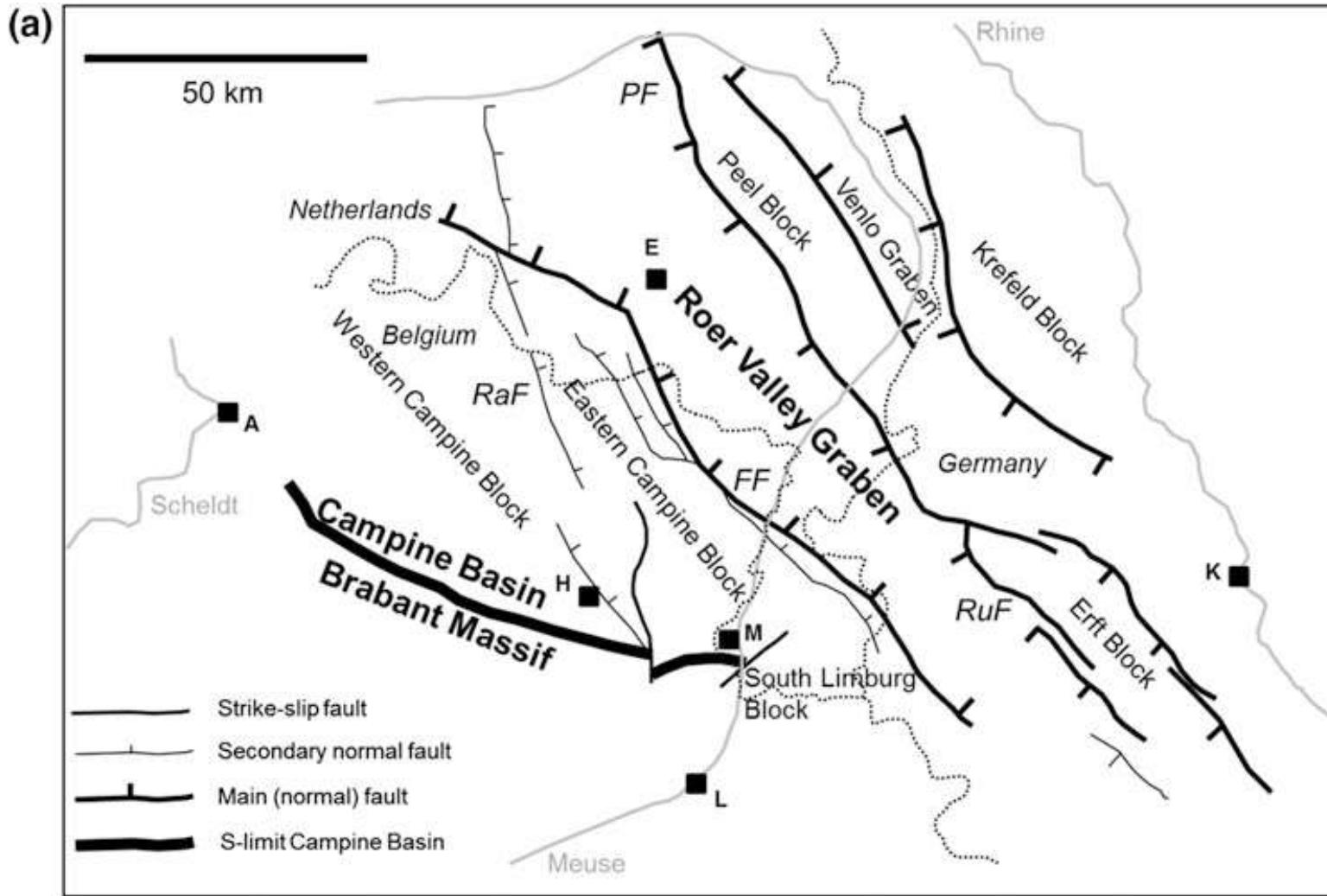
## Maas en Rijn

- 1: tracé van de **Maas** > 1 Mjr geleden
- 2: tracé van de **Maas** en **Rijn** tot ongeveer 700 à 800 duizend jaar geleden
- 3: tracé van de **Maas** en **Rijn** ongeveer 600 duizend jaar geleden
- 4: tracé van de **Maas** gedurende het laatste half miljoen jaar



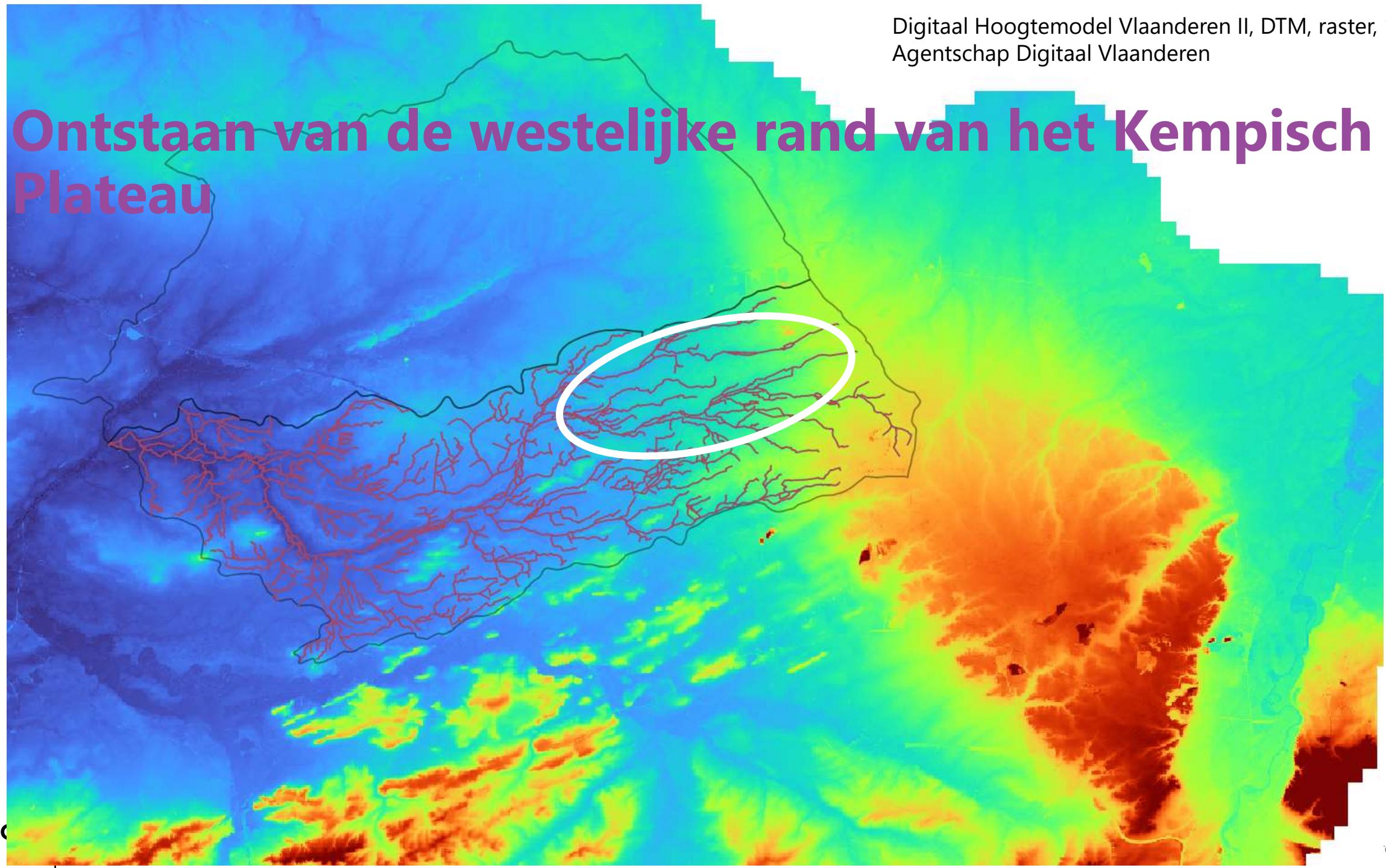
Beerten, K., Dreesen, R., Janssen, J., Van Uytven, D. (2018). The Campine Plateau. In: Demoulin, A. (eds) Landscapes and Landforms of Belgium and Luxembourg. World Geomorphological Landscapes. Springer, Cham. [https://doi.org/10.1007/978-3-319-58239-9\\_12](https://doi.org/10.1007/978-3-319-58239-9_12)

# Gerelateerd aan tektonische bewegingen



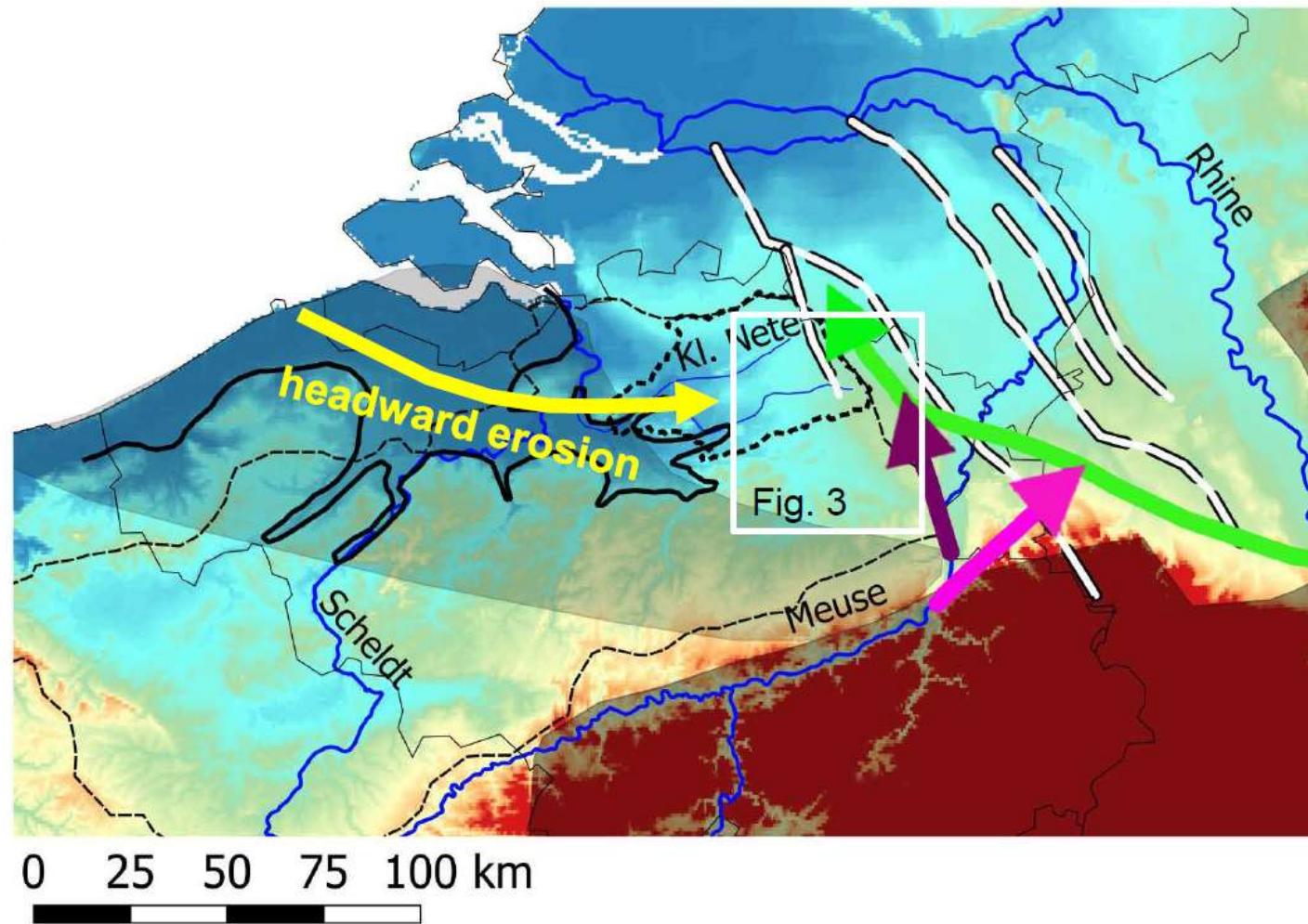
Beerten, K., Dreesen, R., Janssen, J., Van Uytven, D. (2018). The Campine Plateau. In: Demoulin, A. (eds) Landscapes and Landforms of Belgium and Luxembourg. World Geomorphological Landscapes. Springer, Cham.  
[https://doi.org/10.1007/978-3-319-58239-9\\_12](https://doi.org/10.1007/978-3-319-58239-9_12)

# Ontstaan van de westelijke rand van het Kempisch Plateau



# Terugschrijdende erosie waarbij een dalhoofd zich verplaatst (in oostelijke richting)

- National boundaries
- Rivers
- ◻ Nete catchment
- ◻ Scheldt basin
- Flemish Valley
- Roer Valley Graben faults
- Brabant Massif
- Rhenohercynian Massif
- Elevation (m a.s.l.)
  - 0
  - 20
  - 40
  - 60
  - 80
  - 100
  - 120
  - 140
  - 160
  - 180
  - >200
- River palaeogeography
  - Rhine 0.5–1.0 Ma
  - Meuse > 1.0 Ma
  - Meuse 0.5–1.0 Ma



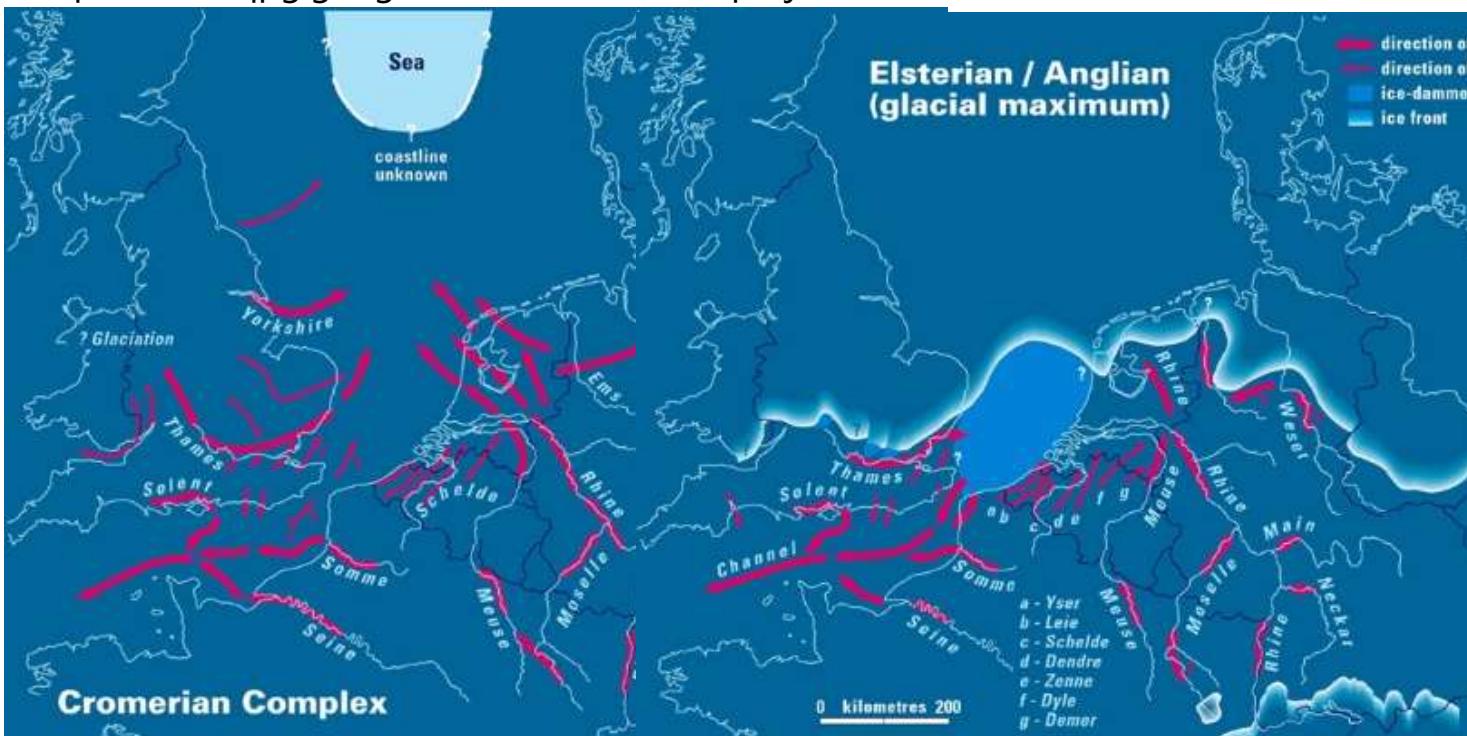
Laloy, E., Beerten, K., Vanacker, V., Christl, M., Rogiers, B., and Wouters, L.: Earth Surf. Dynam., 5, 331–345, <https://doi.org/10.5194/esurf-5-331-2017>, 2017.

# Gebeurtenissen in het Kanaal

Opening van het Kanaal door plotse drainage van proglaciaal meer

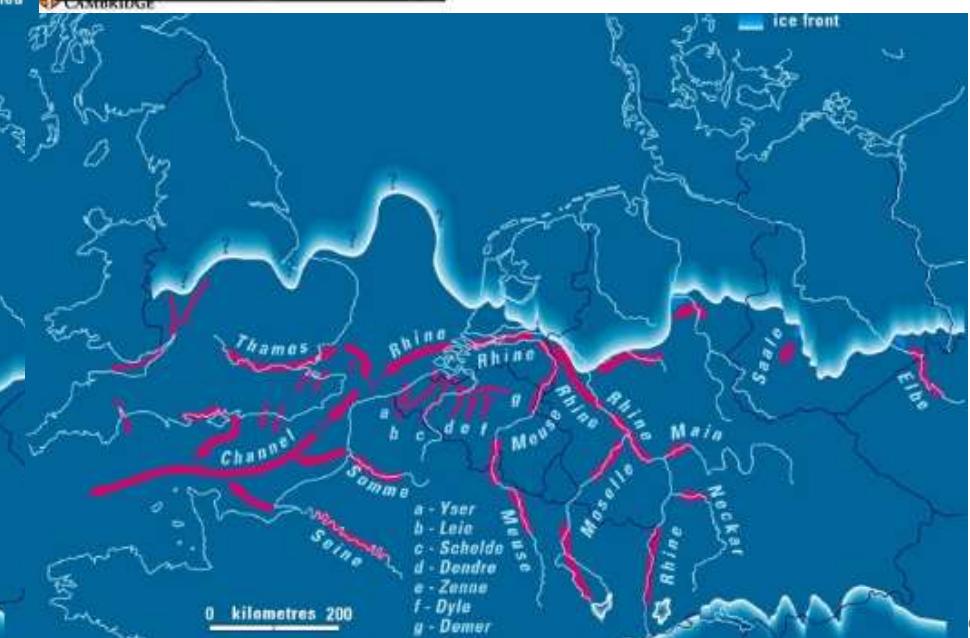
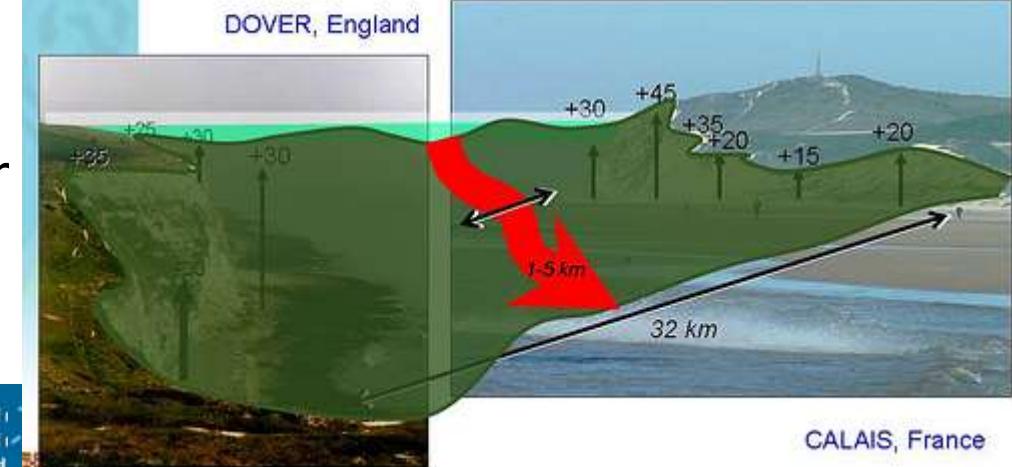
- Land-engte tussen GB en F verdwijnt
- Thames, Rijn, Maas stromen nu allemaal naar zuiden, doorheen het Kanaal

<https://www.qpg.geog.cam.ac.uk/research/projects/nweurorivers/>



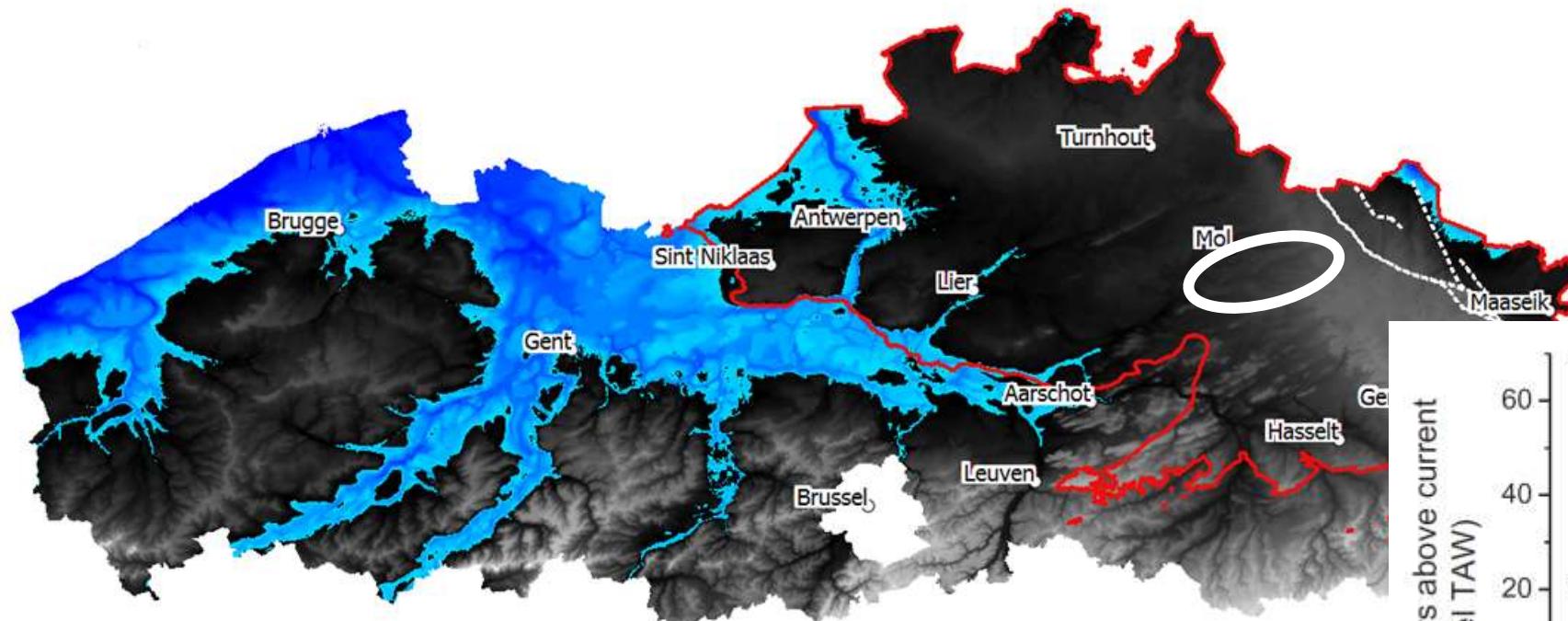
Strait of Dover - Pas de Calais

Col ridge height: ~25 - 30 m

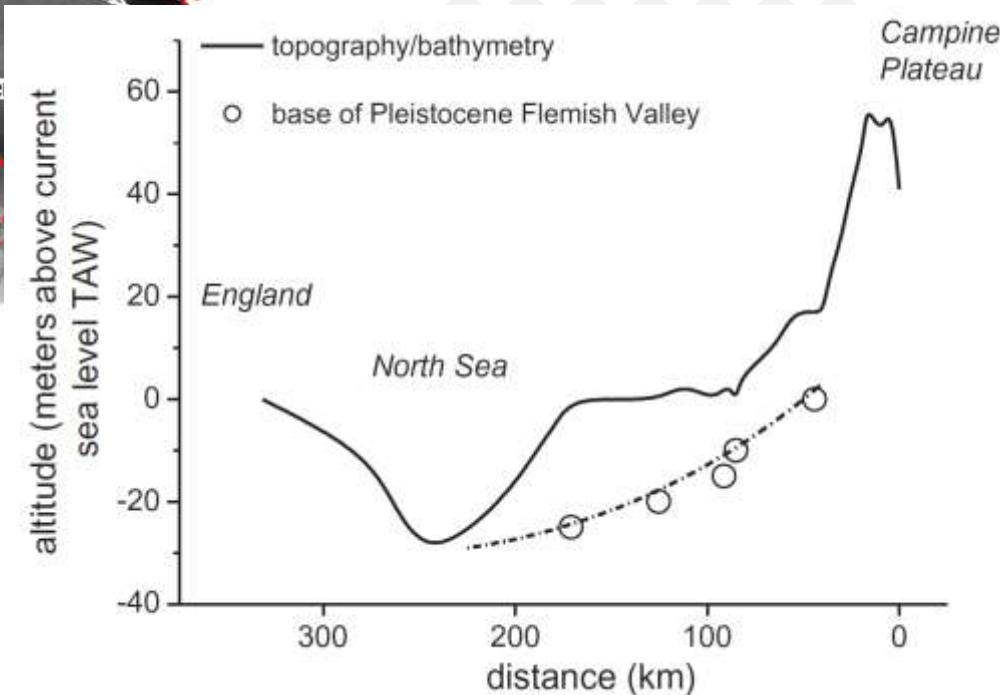


# Vorming van de 'Vlaamse Vallei'

60 km

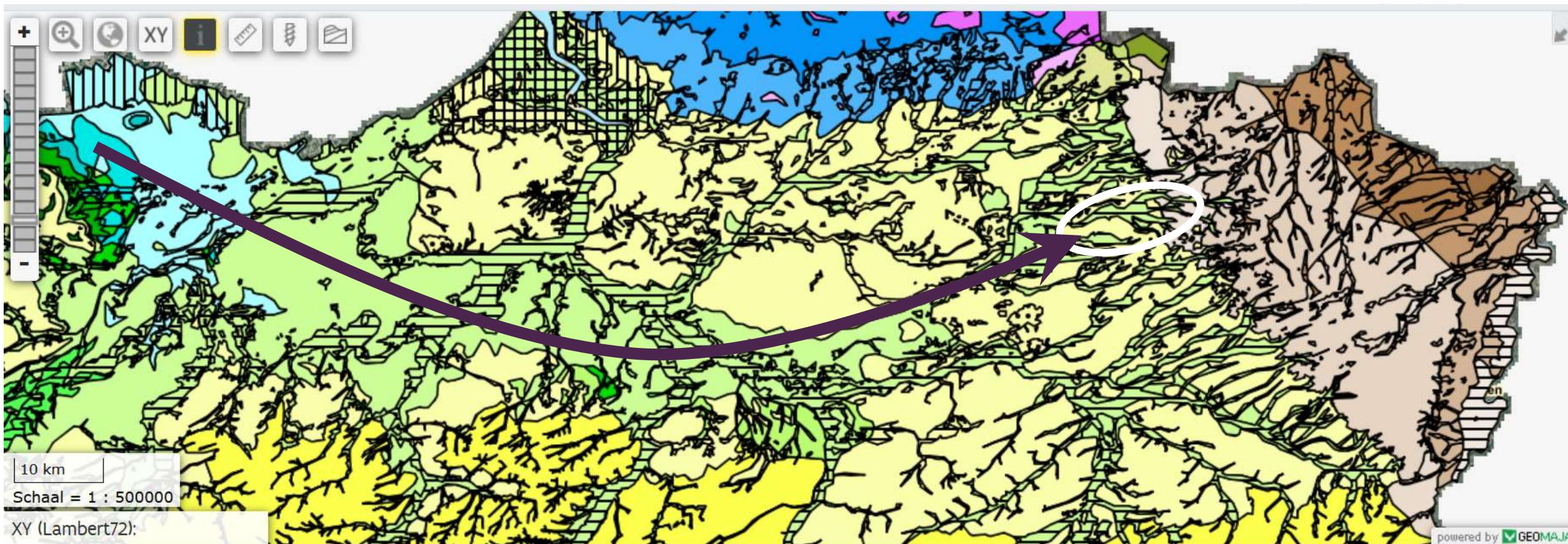


K. Beerten, M. De Craen, L. Wouters, Patterns and estimates of post-Rupelian burial and erosion in the Campine area, north-eastern Belgium, Physics and Chemistry of the Earth, Parts A/B/C, Volume 64, 2013, Pages 12-20, ISSN 1474-7065, <https://doi.org/10.1016/j.pce.2013.04.003>.

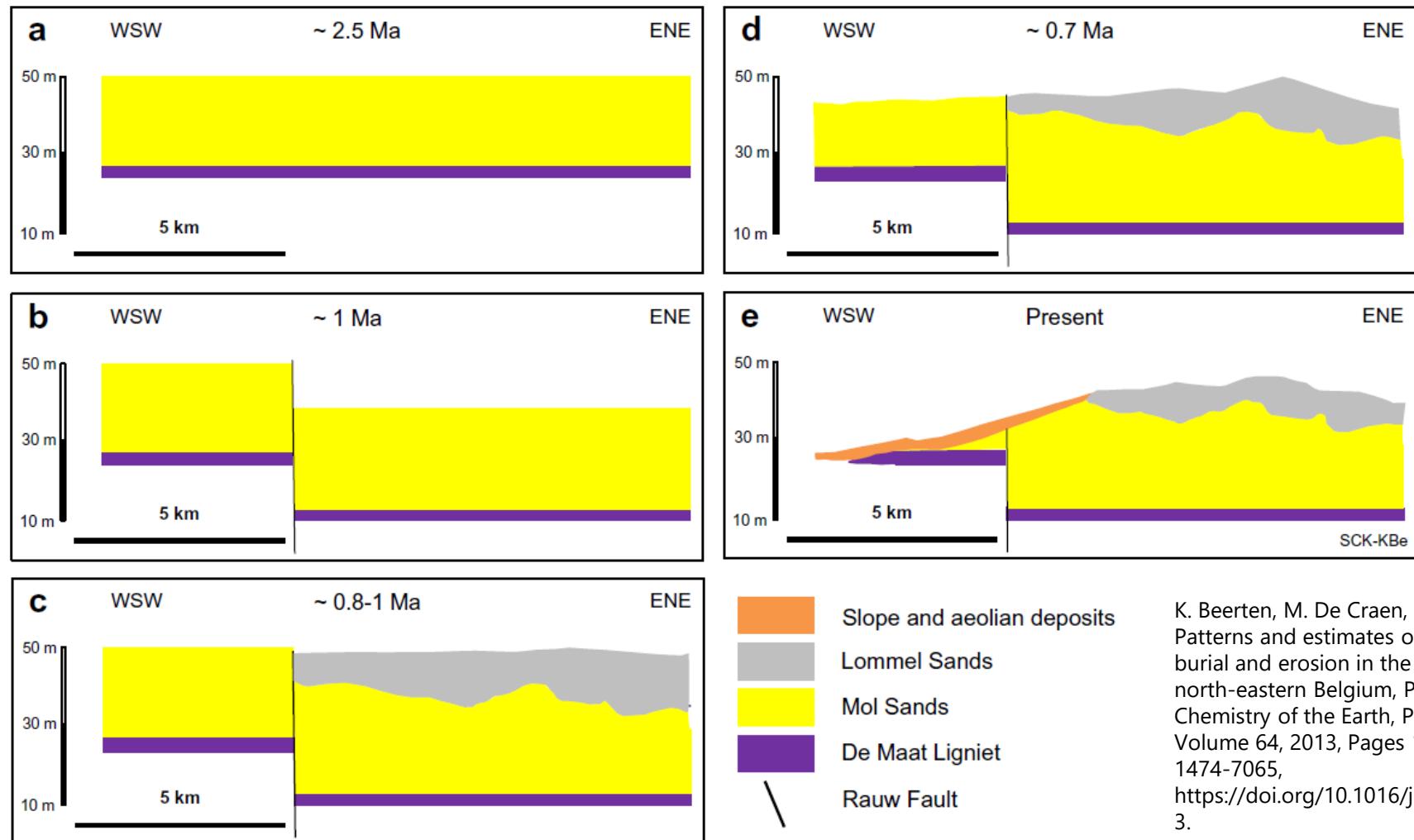


# Bovenloop Grote Nete is oostelijke uitloper van Vlaamse Vallei

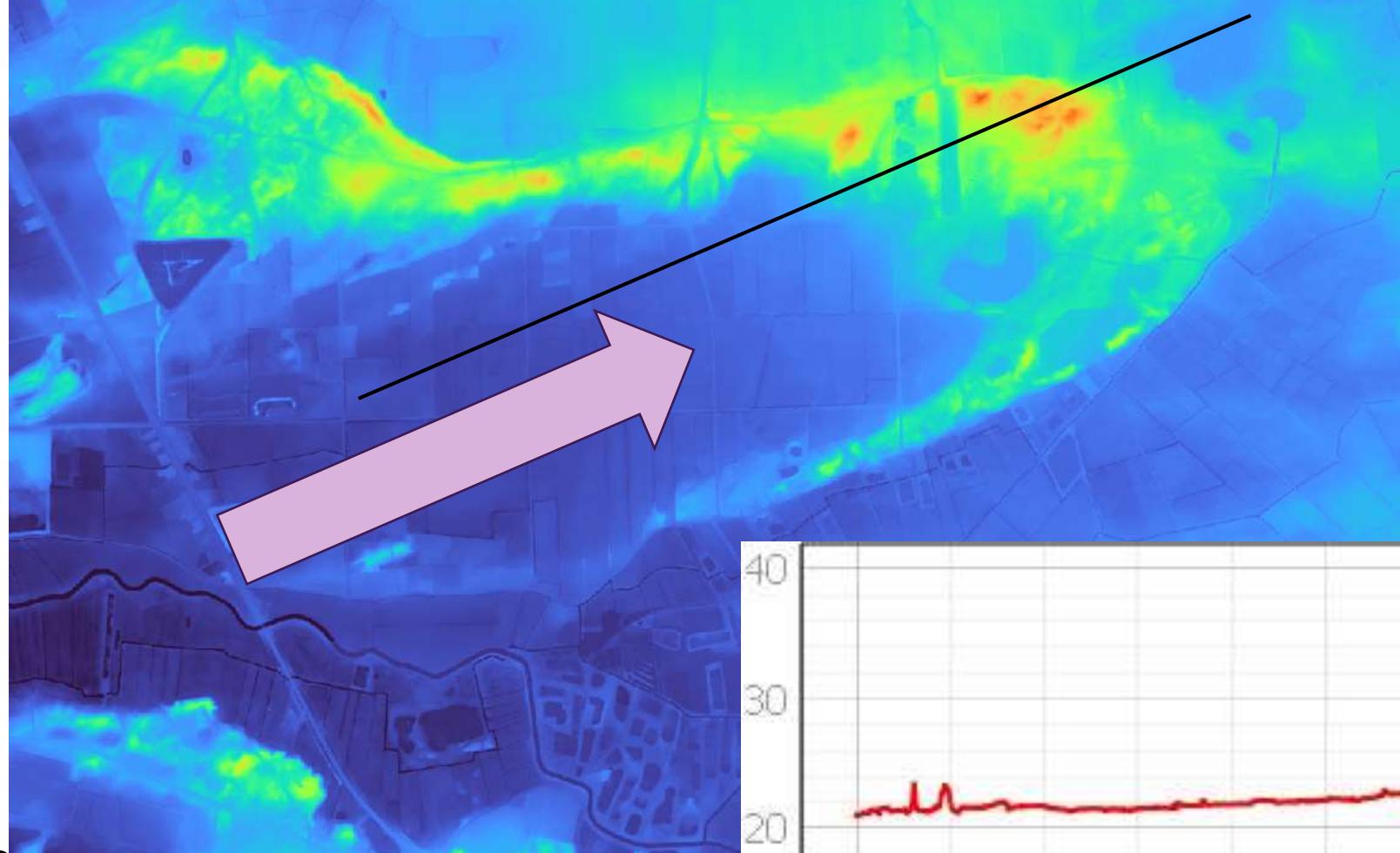
Databank Ondergrond Vlaanderen  
Quartairgeologische profieltypekaart 1:50.000



# 2.5 miljoen jaar evolutie langsheen de westelijke rand van het plateau

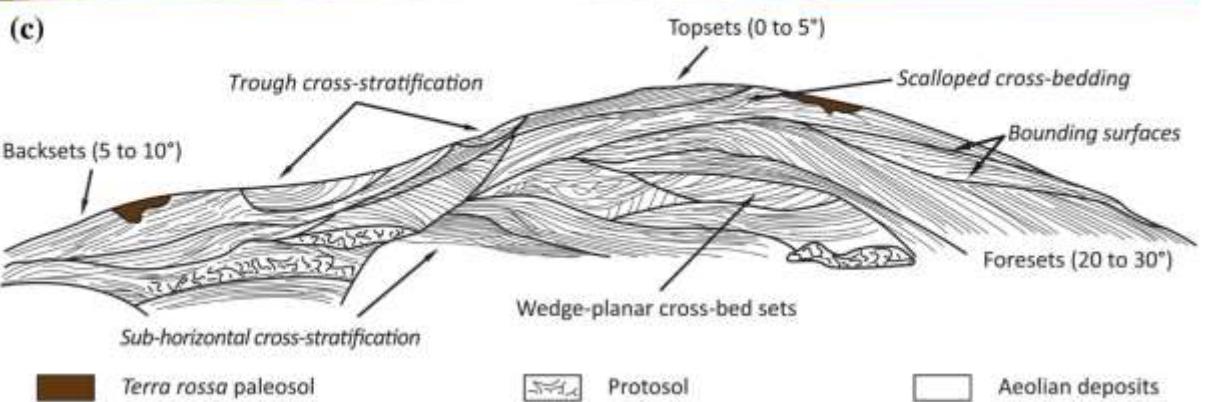
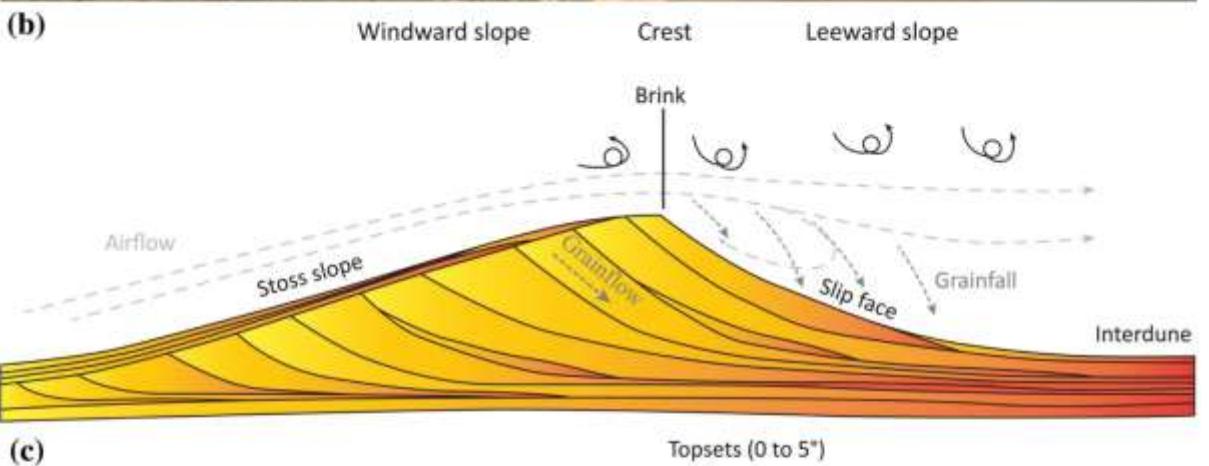


# Paraboolduinen uit het Laat Glaciaal ~ 12000 jaar geleden



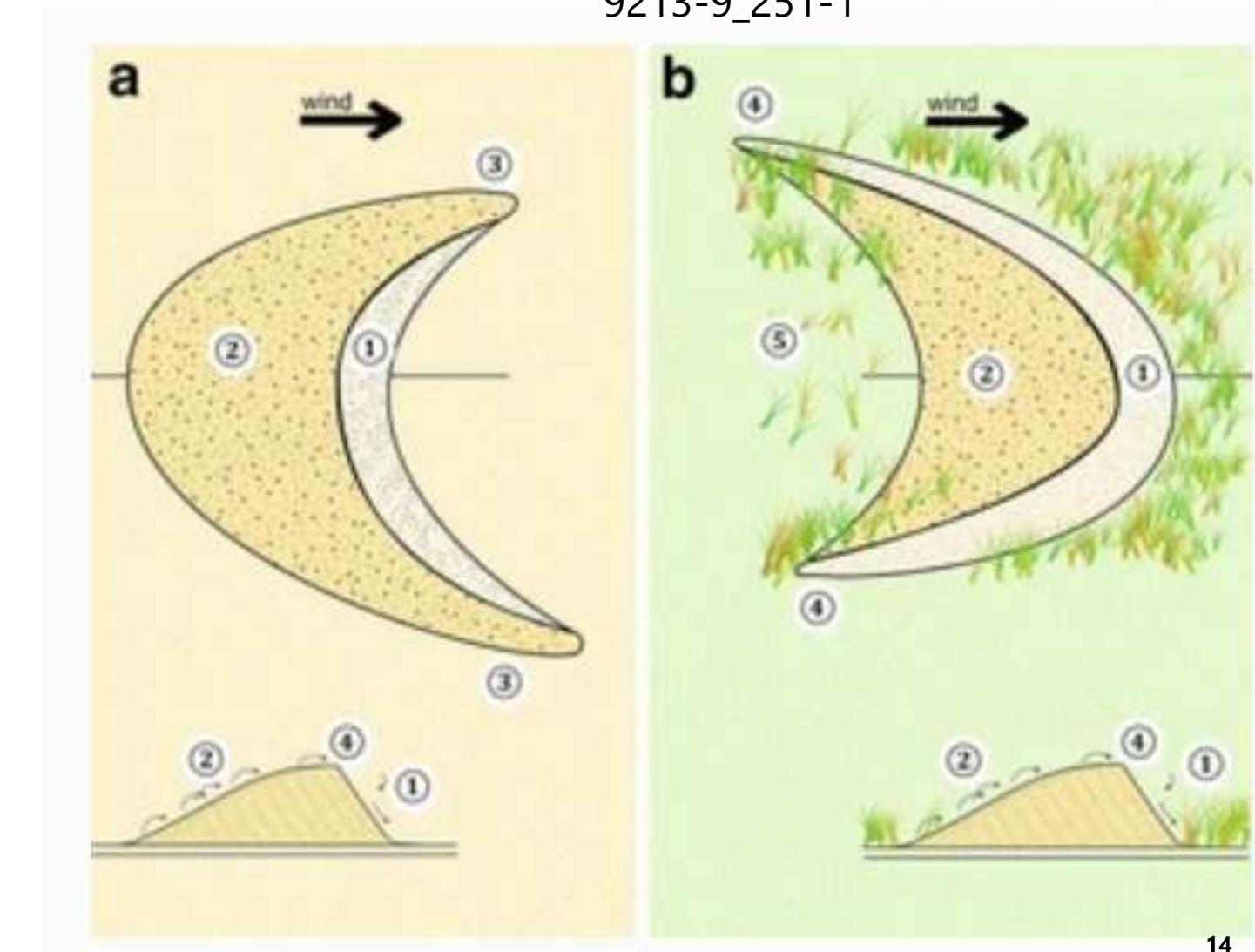


Vimpere, ESPL 2023  
<https://doi.org/10.1002/esp.5648>



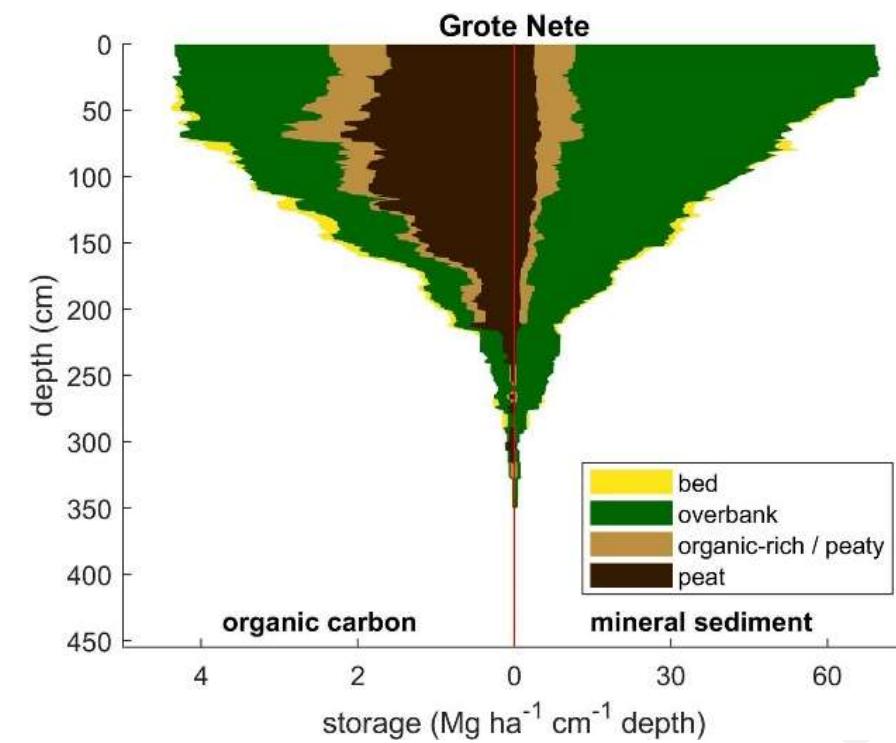
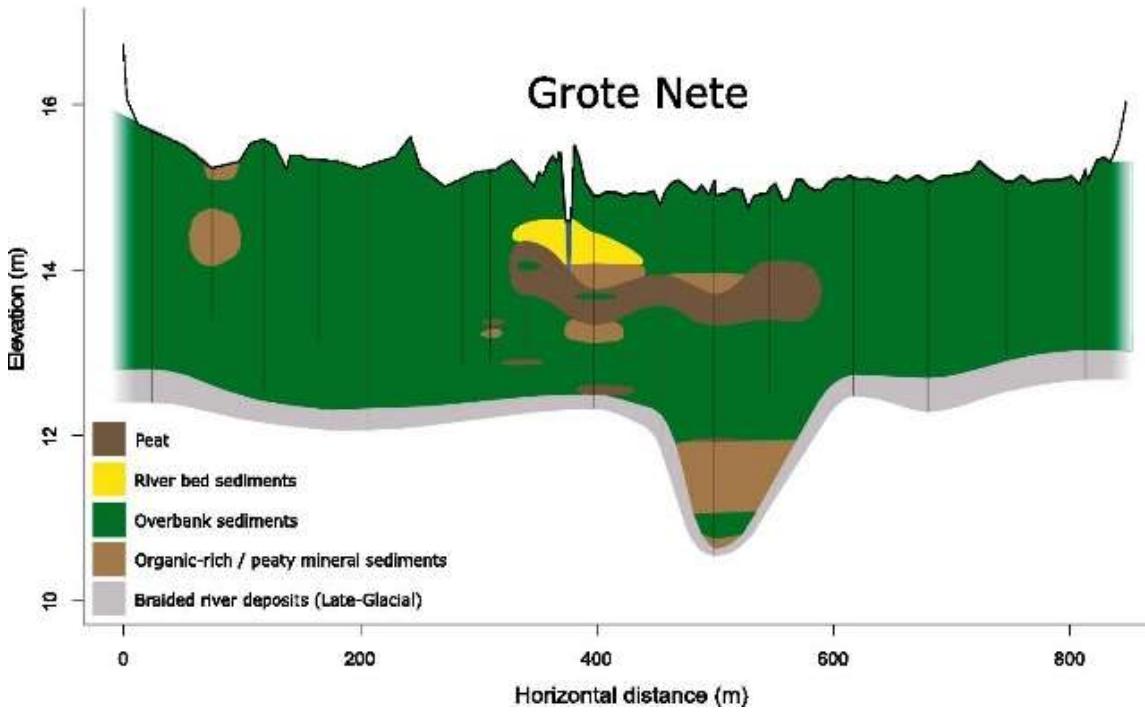
# Voorwaarden paraboolduinen

- Balans tussen
  - Beschikbaarheid van erodeerbaar zand
  - Windrichting- en sterkte
  - Vegetatie

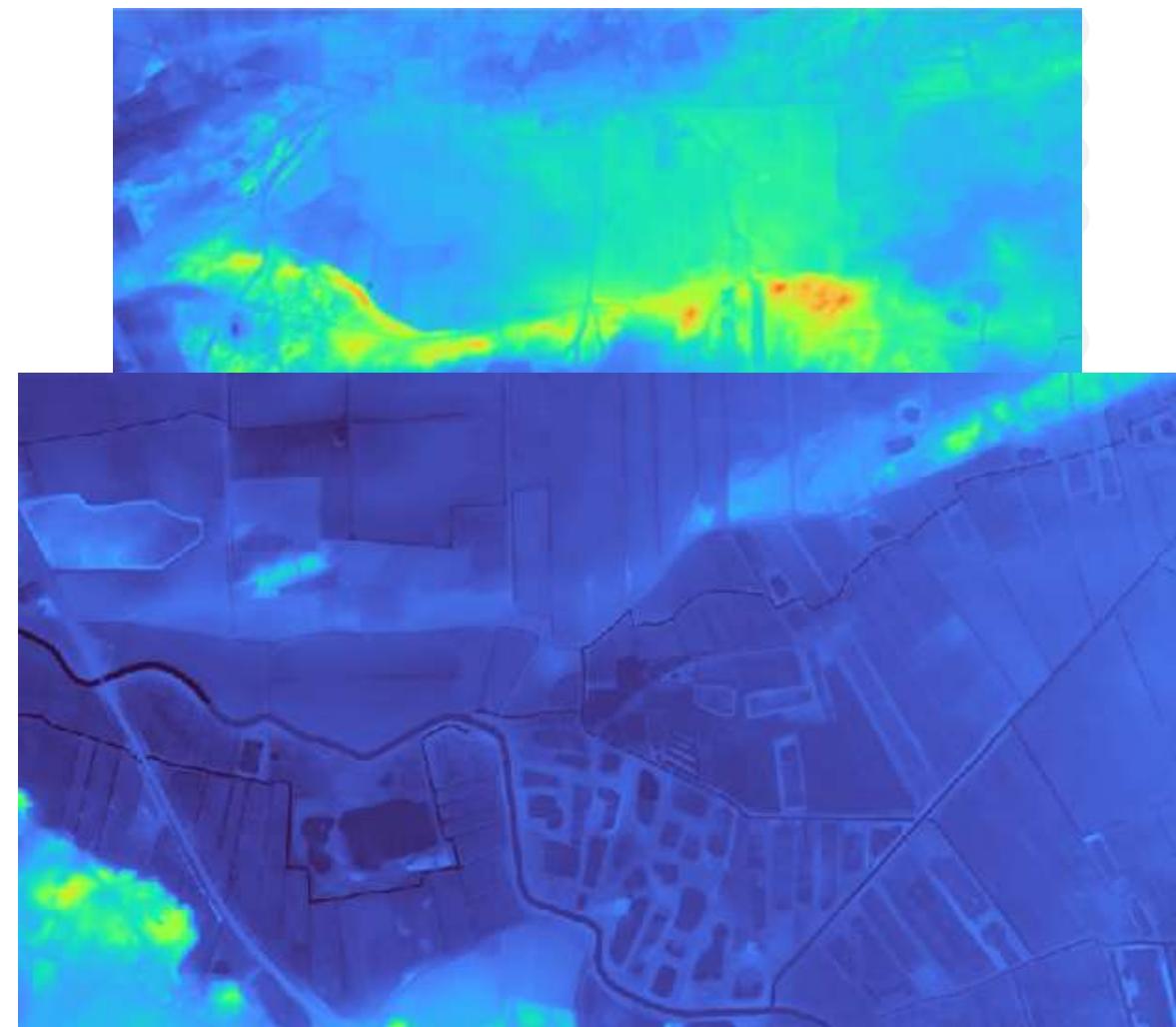
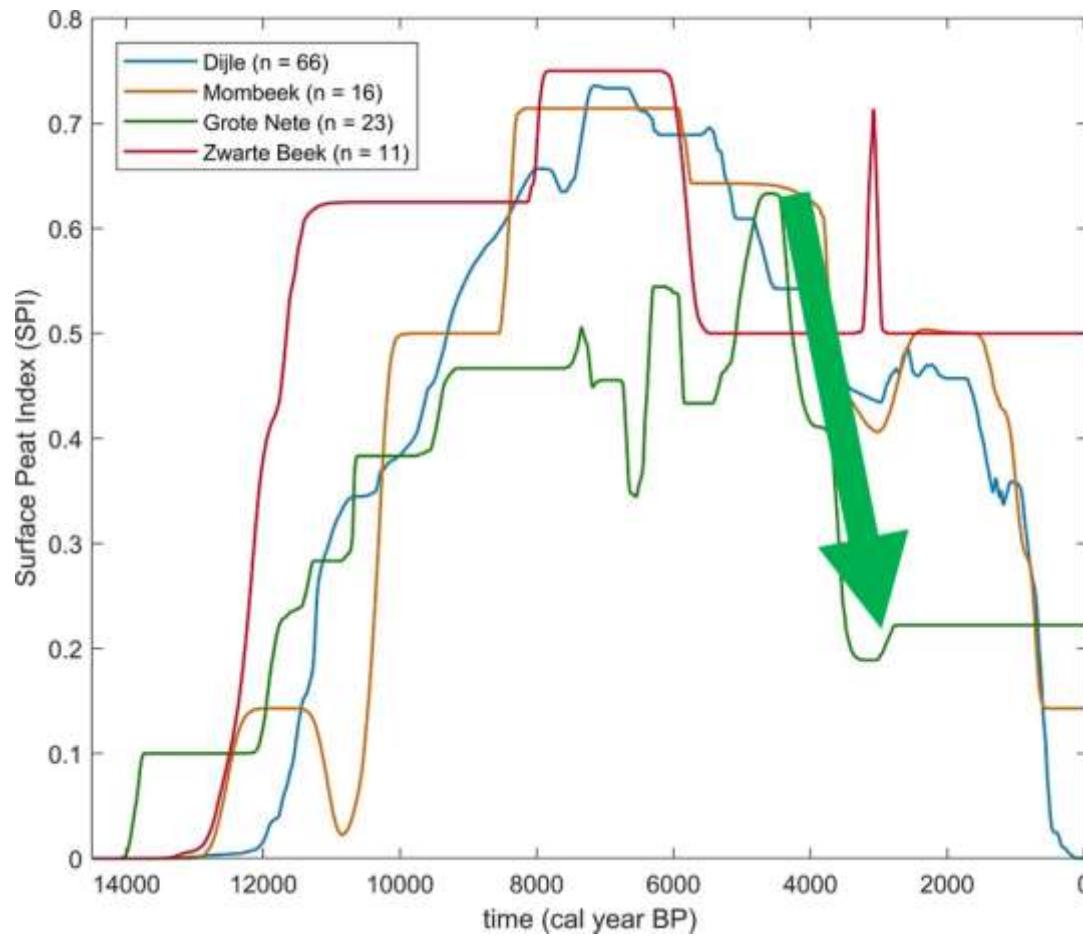


May, JH. (2014). Parabolic Dune. In: Encyclopedia of Planetary Landforms. Springer, New York, NY. [https://doi.org/10.1007/978-1-4614-9213-9\\_251-1](https://doi.org/10.1007/978-1-4614-9213-9_251-1)

# Ontwikkeling van de alluviale vlakte van de Grote Nete

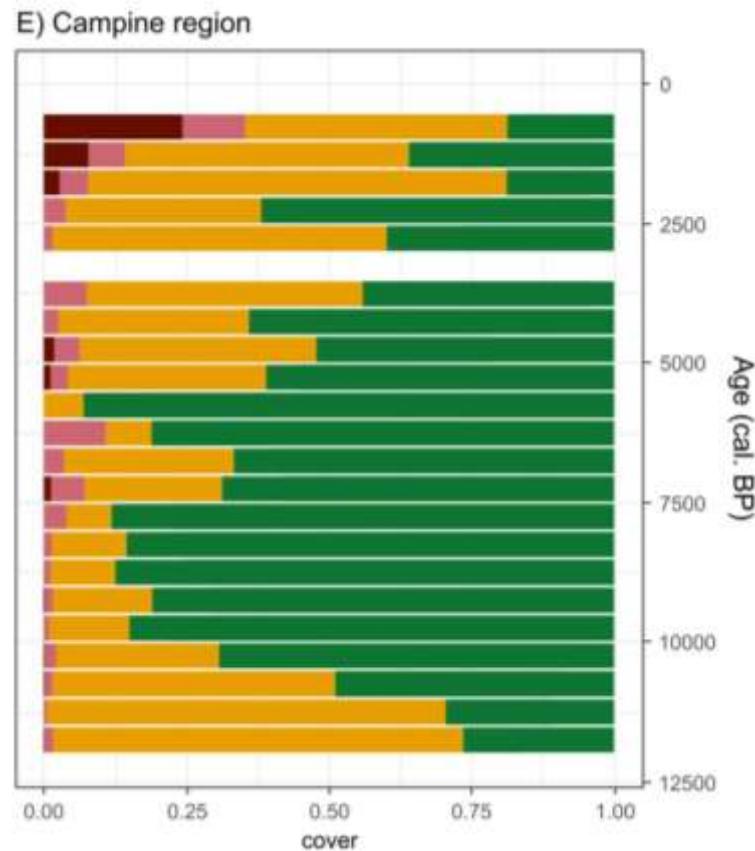


# Veengroei langsheen de Grote Nete en latere ontginding



# De mens laat invloed op landschap gelden

Ontbossing, eerst nog veel grassen, nadien ook heide en akkers



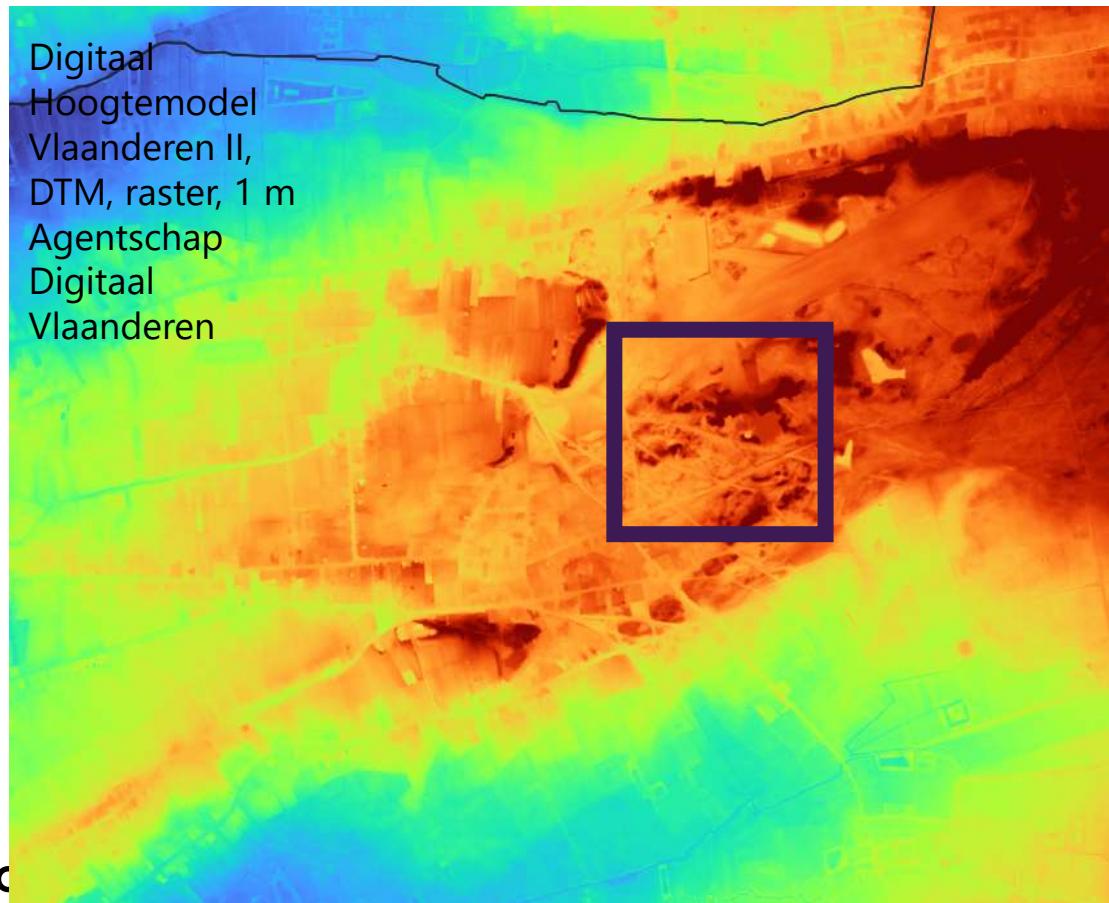
**Akkerland, heide, grasland, bos**

# Stuifzanden: topografische kaart vs. Ferraris (18de E)

Vormeloze ophopingen van zand, tot enkele meters hoog

Ferrariskaart:

<https://www.geopunt.be/?service=https%3A%2F%2Fgeo.api.vlaanderen.be%2Fhistcart%2Fwms%3Flayers%3Dferraris>



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Registered Office: Avenue Herrmann-Debrouxlaan 40 – BE-1160 BRUSSELS

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