COUNTRY UPDATE: FLANDERS (NORTHERN BELGIUM)

Van Haren Tom, Deckers Jef, Dirix Katrijn, De Koninck Roel, Hambsch Lorenz, Rombaut Bernd, De Nil Katrien

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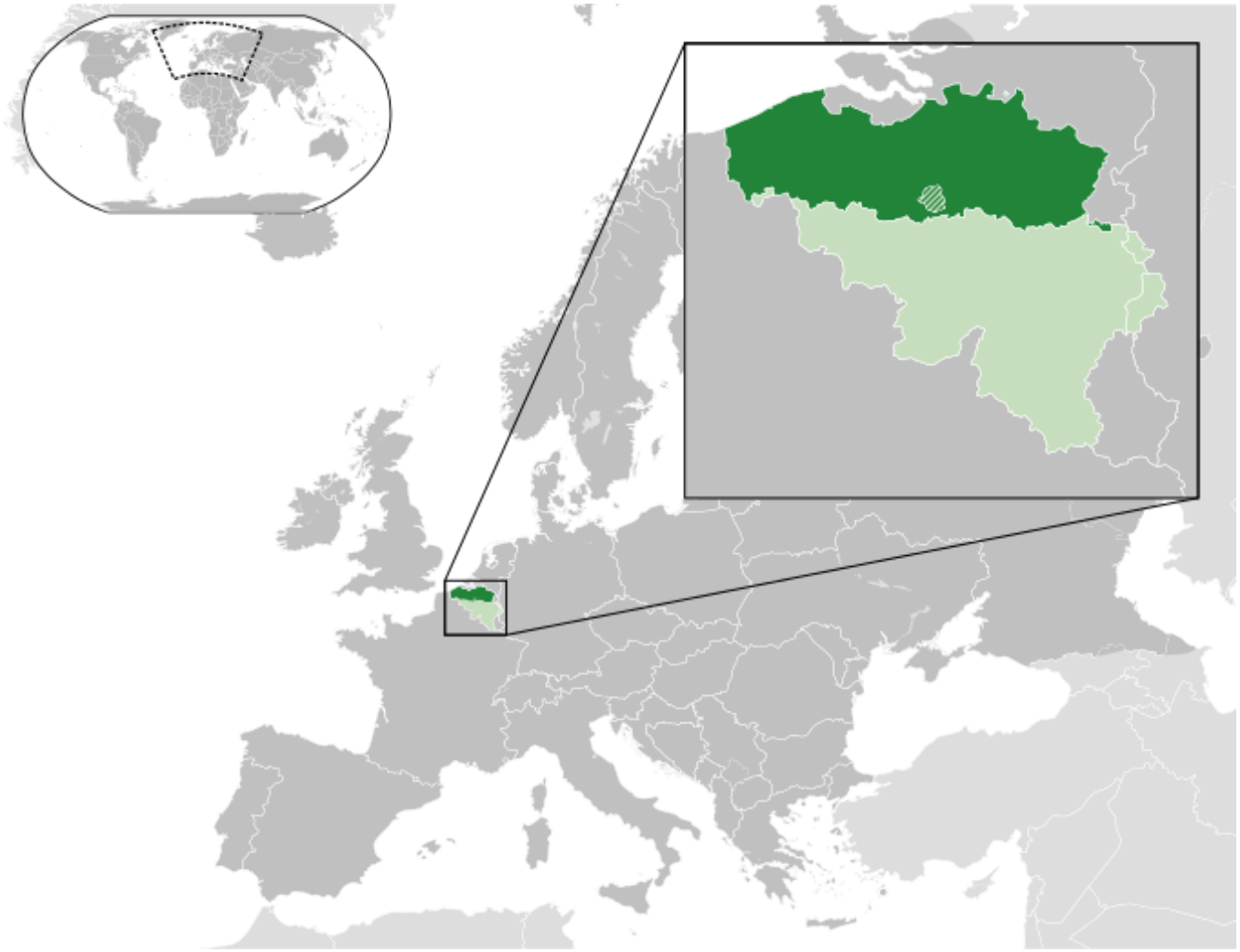
Flanders?



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Context

- By order of 'Flemish Planning Bureau for the Environment and Spatial Development'
- G3Dv2-model (2013): first 3D geological model of Flanders (

Goals 2013 – 2018:

- **Detailed models** for subsurface applications
- **Faults in 3D** (SKUA-GOCAD)
- **Linking** geological and hydrogeological units/models
- Large existing **seismic dataset**
- **Parametrization** of near-surface resources (voxel models)
- **Cross-boundary** harmonization of models (H3O-projects)
- **Integration** existing and new models into **comprehensive models**
- **Intergration in DOV**

- **G3Dv3-model(2019):** Updated & refined 3D geological model of Flanders
- **H3D-model (2019)**: G3Dv3-model translated into hydrogeological model for Flanders and adjacent areas

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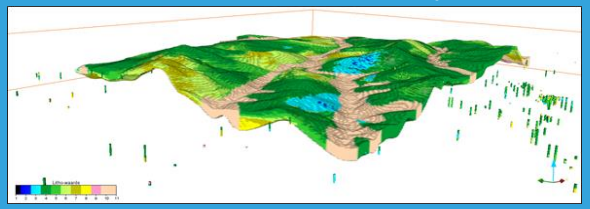
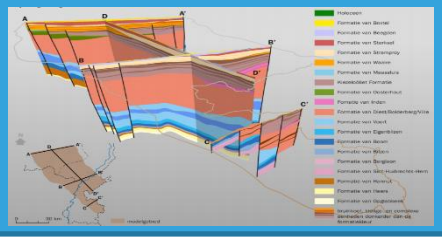
2013 - 2018

New models

Voxel models of resources (2015 & 2017)



H3O-projects (2014 & 2018)

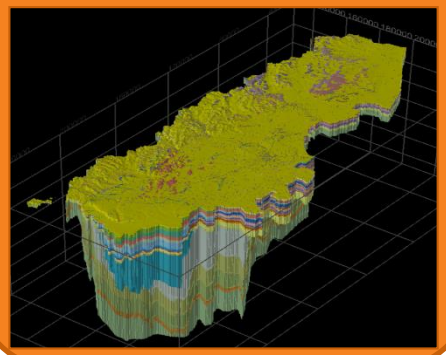


3D Faults

Modifying, updating & refining previous models

Existing models

G3Dv2



HCOV

Integration & automatization

G3Dv3 + H3D models

DOV database

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Flanders State of the Art

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2013 - 2018

New models

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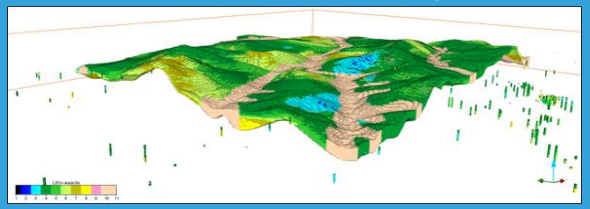

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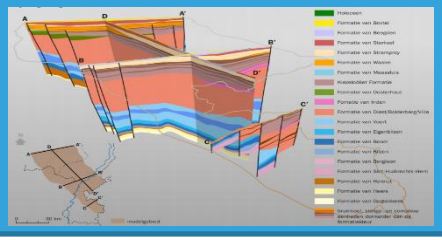

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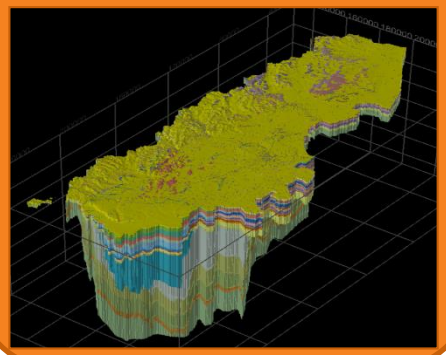

HCOV

Integration & automatization

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Presentation Katrijn Dirix 17h - 'Trends & Innovation'

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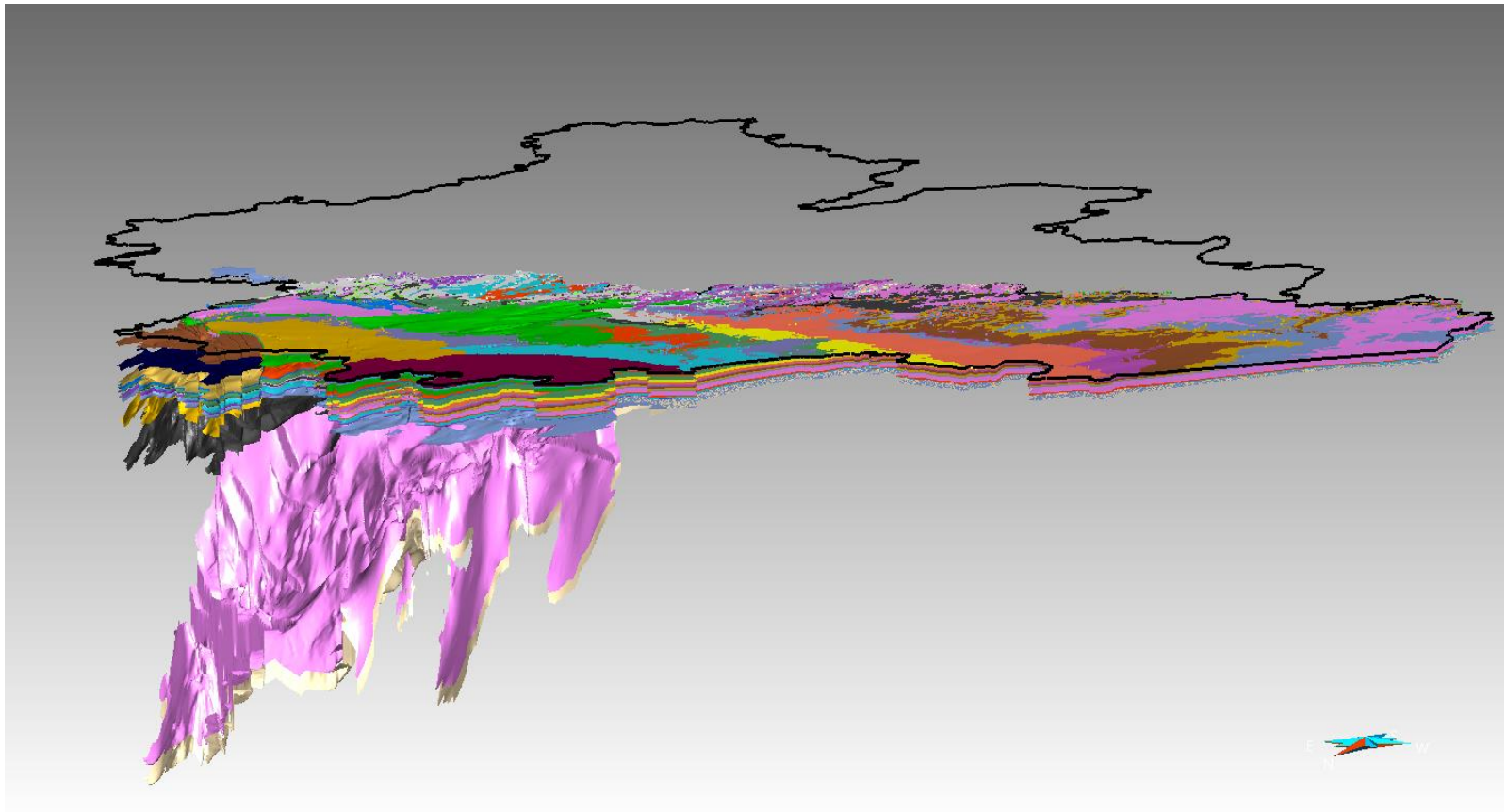
Flanders State of the Art

G3Dv3



- 117 geological layers
- 139 hydrological layers

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2019 – 2023: What's next?

- **Model refinement and parametrization for shallow subsurface applications** in urban areas
  - Antwerp as test area, 25x25mx0.5m
  - Testing model layers (Anthropogene, Quaternary, Neogene, ..) & parameters (lithology, grain size, glauconite, lime content,…)
  - Integrating soil and CPT data next to boreholes

- **Model refinement and parametrization for deeper subsurface applications**
  - Upper Carboniferous reservoirs

- **Cross-boundary projects**:
  - H3O - De Voorkempen
  - GeoERA (GeoConnect3D)

- Data: **Quality** control & evaluation

- All data freely available, open webservices on DOV, https://www.dov.vlaanderen.be

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Demo & presentation

- **‘The need for automated workflows for the integration of regional 3D geological models’**

  Session Trends & Innovation -17h - by Katrijn Dirix

- **The “Virtual Borehole app”**

  During the Breaks on Wednesday & Thursday – by Katrien De Nil

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THANKS FOR YOUR ATTENTION

Any questions? Ask us:

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