

Shallow geothermy, a geological potential in Belgium ?

Brussels, 10.2.2010

**The Geological Survey of Belgium
at the support of geothermal applications**

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Geological Survey of Belgium**



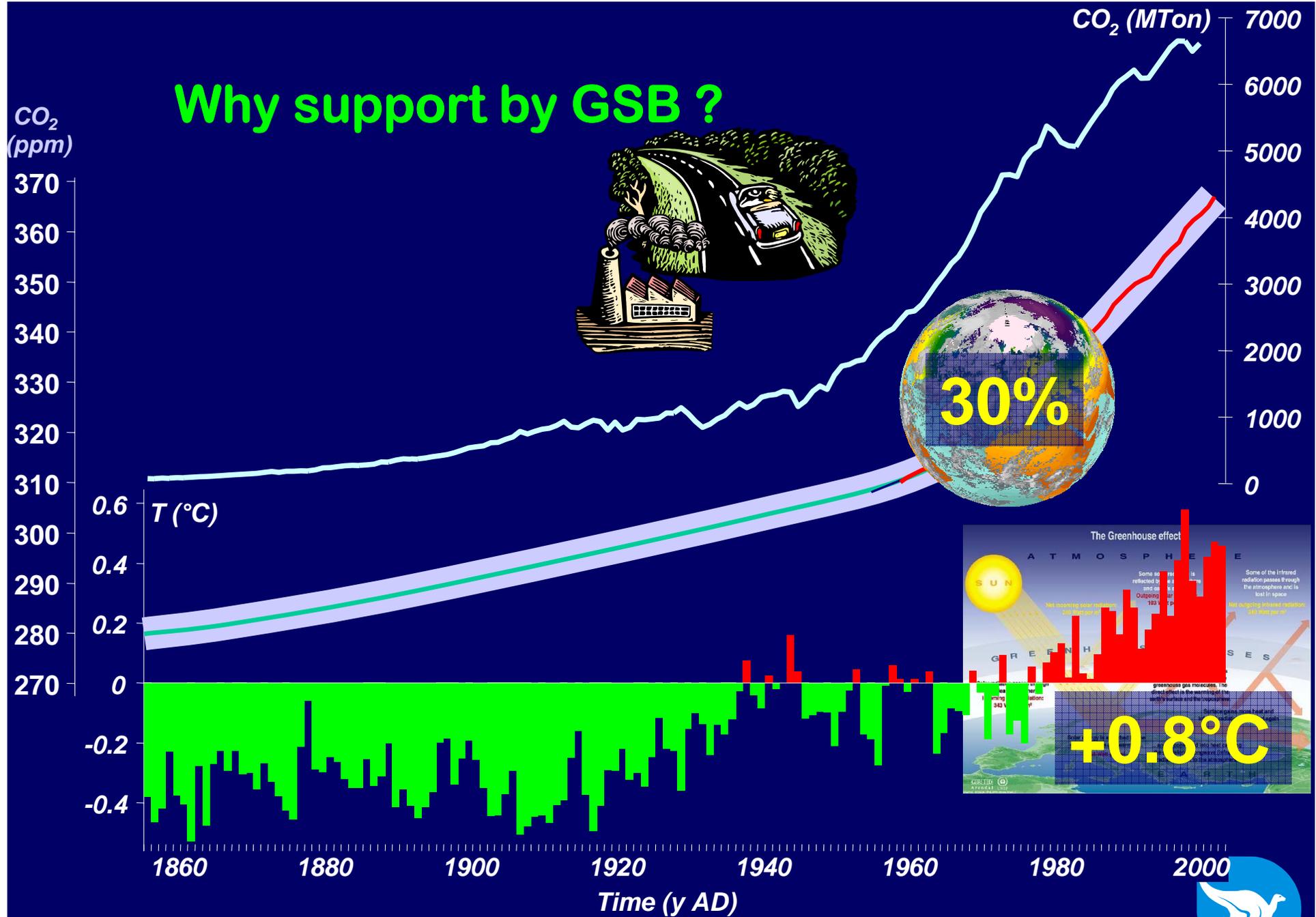


OMI data for NO₂ with Google Earth (May 2006)

Why support by GSB ?

**Belgium, the centre of
the area with the
densest greenhouse
gas emissions in
Europe**

Why support by GSB ?



museum



EC 2007 triple target for 2020

20% reduction of greenhouse gas emissions

20% share of renewable energies

20% saving of energy consumption

↳ Renewable Action Plans by member states

lowering atmospheric CO₂ levels technology options considered

Reduce energy use

rational energy (end-use)

energy efficiency (supply - conversion)

reduce demand

Switch to different fuels

natural gas (instead of coal)

renewables

biomass

wind

hydro-power

solar

geothermics

nuclear power

Carbon capture and storage

WWW.GEOTHERMICS DAY.BE

Geothermics Day

Friday 9th October 2009

UMONS - Faculté Polytechnique de Mons
Amphithéâtre Stiévenart
Rue du Joncquois, 53
7000 Mons



Programme

- 08:30 Welcome and Registration
09:15 Introduction speech : MICHEL DUSAR (GSB)
09:30 BURKHARD SANNER (EGEC)
Geothermal Energy as a key factor in sustainable energy supply
10:00 VICTOR VAN HEEREN (Geothermy Platform)
The Dutch Geo-Scene: developments, perspectives, economics and policy issues
10:30 SIMON LOPEZ (BRGM)
Geothermal district heating in Paris Basin - a 30 years experience
11:00 Coffee Break
11:30 NOËL VANDENBERGHE (KUL)
The Belgian Perspective
11:45 PETER VAN TONGEREN (VITO)
Low exergy applications of low-enthalpy geothermal prospects
12:15 LUCIANE LICOUR (UMons-FPMs)
Geothermal resource of Hainaut : from 20 years of exploitation to new prospects
12:45 Lunch
14:15 Discussion Forum
15:30 Visit of the Geothermic Site of Saint Ghislain : ALAIN RORIVE (IDEA/UMons-FPMs)
17:00 End of the day



DISCUSSION FORUM

During this forum, several subjects will be discussed. Amongst them:

- the potential of geothermal energy in the future;
- the role of geothermal energy in the field of renewable energies;
- the support and the obstacles of geothermy;
- the public view of geothermics resources...

Attendance will be invited to discuss with speakers and panel members on the subject of geothermy.

ROUTE

Informations about the route will be available on the website www.geothermicsday.be in the section « Location »

REGISTRATION

Remember that payment of registration fee the day of the event will only be possible by cash.



a precursor to the
present meeting
Geothermics Day, Mons
9.10.2009
emphasis on deep
geothermics
cooperation GSB, FPMS, VITO



deep drilling by GSB

- **Start: Turnhout well 2706 m in 1952-55**
102°C at 2155 m
- **Geo-energy applications**
 - ➔ **geothermics**
 - ➔ **hydrocarbon prospects**
 - ➔ **gas storage**
 - ➔ **CO₂ storage**
 - ➔ **compressed air storage**
 - ➔ **fluid waste storage**
 - ↳ **conflicts of interest !**

Other geological wells with geothermal interest

Saint-Ghislain, Baudour, Ghlin (special purpose well)

Meer, Beerse-Merksplas (gas show)

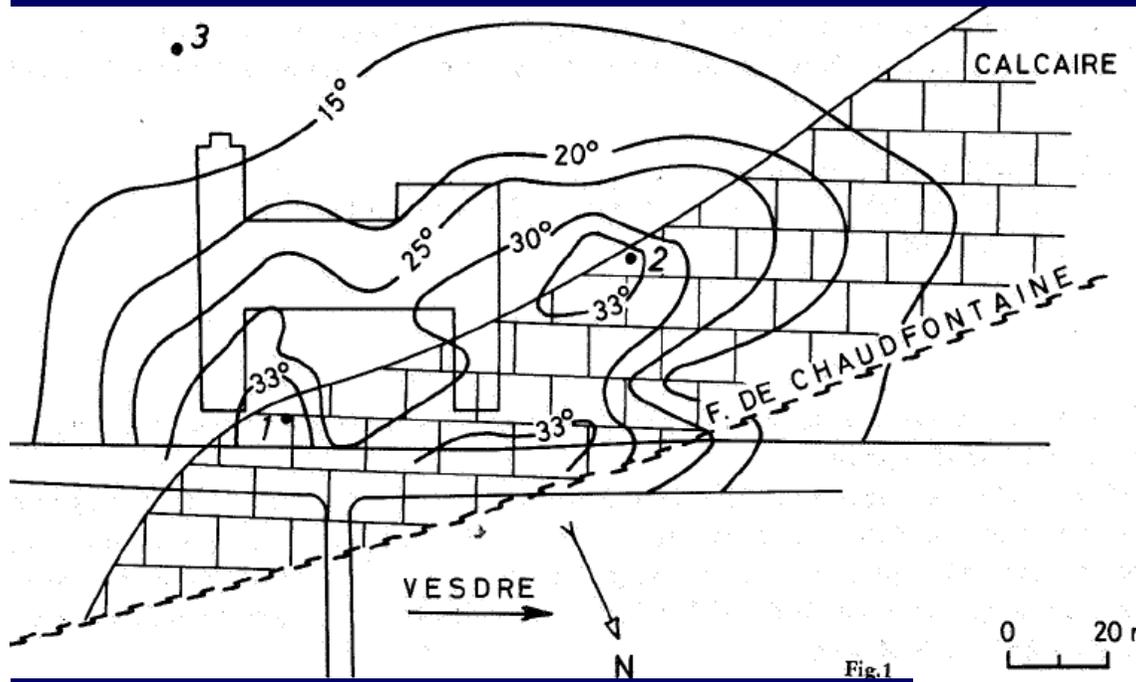
Chaudfontaine, 's Gravenvoeren

Beerse-Merksplas-1
production well
drilling, 1983
TD 1761 m



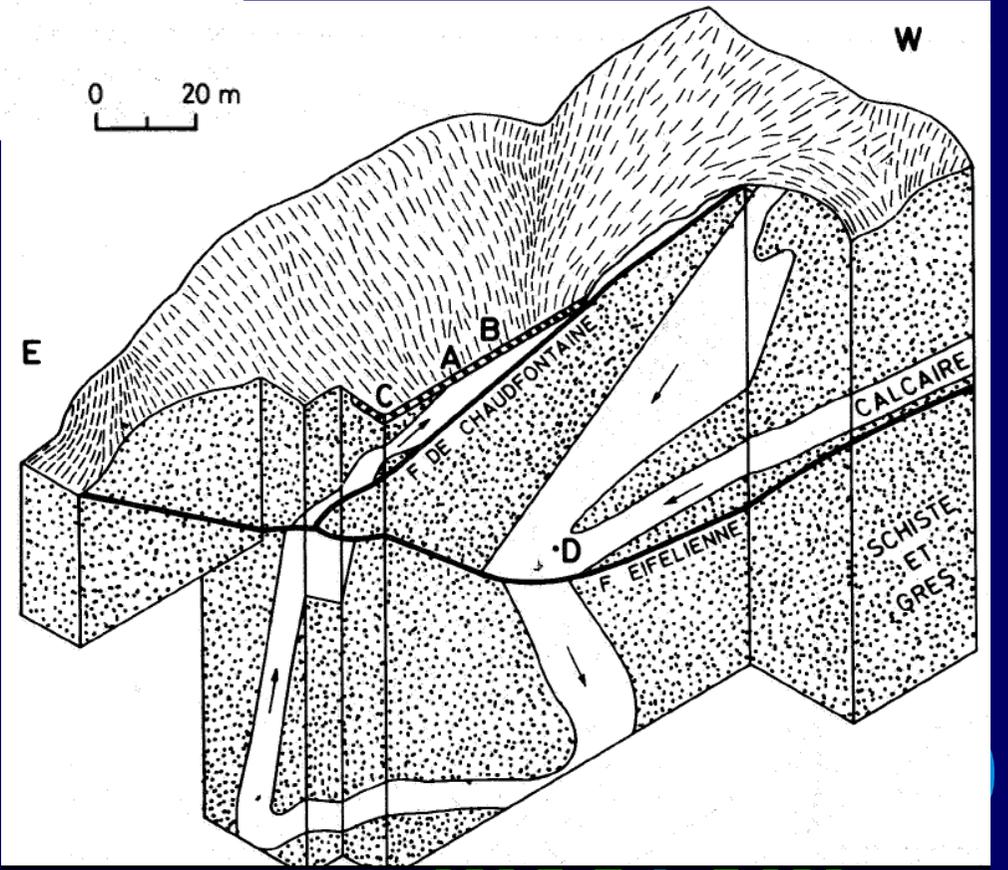
geothermal project
Beerse-Merksplas (Campine)
pilot loop test





Chaufontaine thermal anomaly

deep circulation model for thermal water of meteoric origin till 1500 m depth and 50°C temperature increase



repository for geological data and borehole samples



Dinantian limestone



core repository Laeken

ca 45 000 m of cores

available for research

MUSEUM





lithotheque at GSB

> 200 000 samples

**GSB as repository of your digital and material data
also offering high-quality interpretation services**

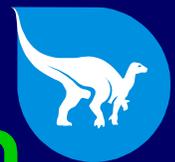


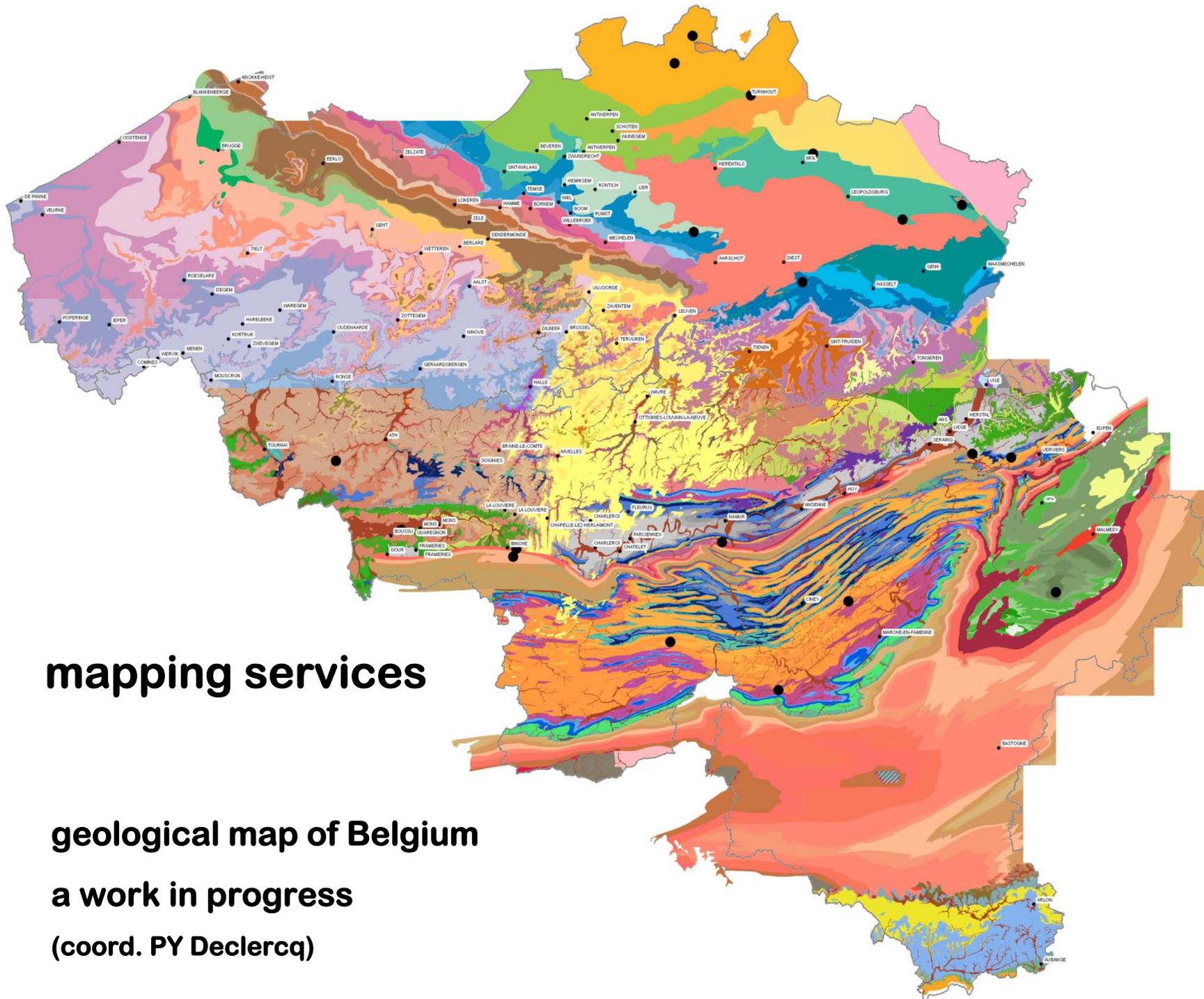
cuttings



core

museum





mapping services

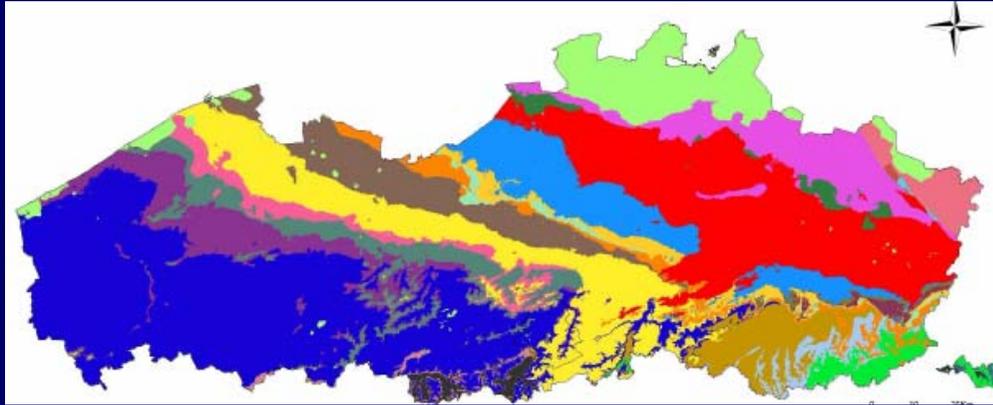
geological map of Belgium

a work in progress

(coord. PY Declercq)

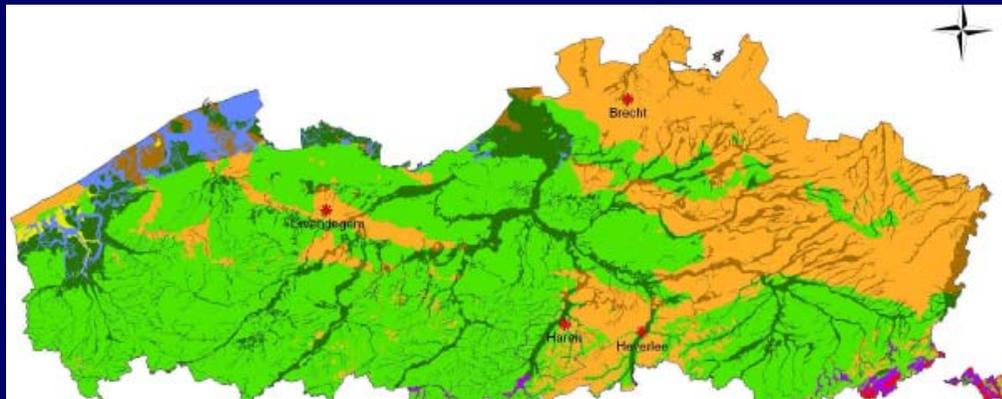


mapping services



compilation study
seismic risk mapping VLA

- 30 m geological map



empirical
seismic ground category



stratigraphic
seismic ground category

(compilation P. Vancampenhout)

EU - ICT Policy Support Programme

THERMOMAP project

Area mapping of superficial geothermic resources
by soil and groundwater data

= Pilot-Project for mapping
resources of superficial geothermic energy
in Europe

2010 - 2013

Thermomap : fostering the information on shallow geothermal potential across Europe

Targets

collect existing pedological, geophysical, geological, climatological and land use data

harmonise information to a European standard

combine datasets to extract geothermic relevant parameters

develop an open-source GI-System

visualise in WebGIS resources in superficial zones

ThermoMap Partners

Public institutions

- ❖ University Erlangen (project leadership)
- ❖ BRGM
- ❖ MAFI
- ❖ IGR
- ❖ NERC
- ❖ ÍSOR
- ❖ RBINS-GSB
- ❖ University Salzburg
- ❖ IGME

Private sector

- ❖ EGEC
- ❖ Rehau
- ❖ Gbl

the Sleeping Beauty waits to be awakened

