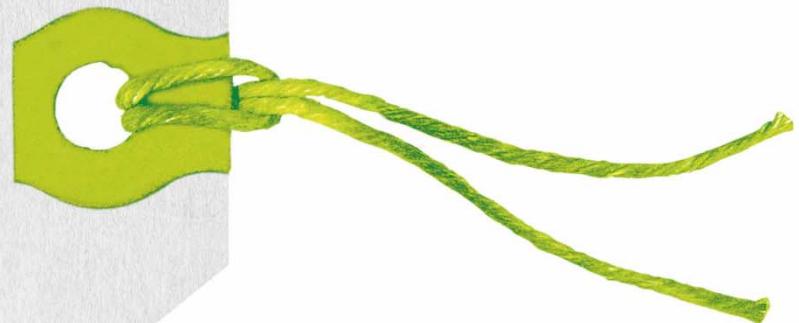


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Use of excavated soils in Flanders

Eddy Van Dyck
Head of the Department of Soil Management
16.09.2009

Content

▢ General situation in Flanders region

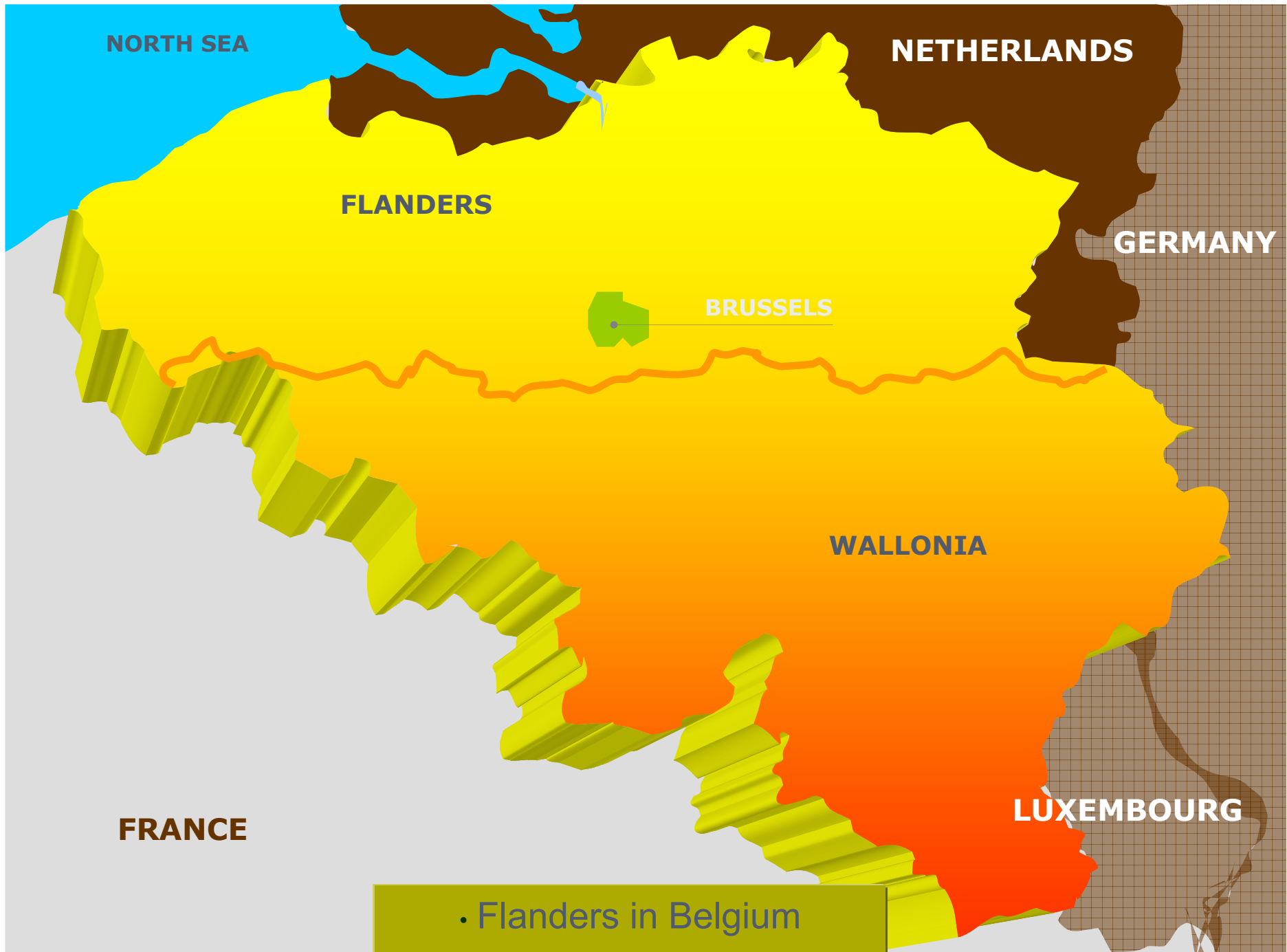
▢ Policy issues

- ▢ legislation
- ▢ protection of participants
- ▢ protection of the environment
- ▢ zero tax

▢ Technical issues

- ▢ threshold values
- ▢ possible re-use of excavated soil





NORTH SEA

NETHERLANDS

FLANDERS

GERMANY

BRUSSELS

WALLONIA

FRANCE

LUXEMBOURG

• Flanders in Belgium

General situation in Flanders Region

- ▶ Remediation works between 1996 and 2008:
 - ▶ 60% ex-situ remediation
 - ▶ 10% isolation
 - ▶ 30% in-situ remediation
- ▶ 20 million ton excavated soil per year
- ▶ 14 soil treatment plants in Flanders
- ▶ biological and physico-chemical treatment methods

General situation in Flanders Region

- ▶ from the excavated re-used soil:
 - ▶ 75% re-used as soil
 - ▶ 5% treated before re-use
 - ▶ 20% used in construction material

Policy issues, legislation

- ▶ Decree of 27 October 2006 on Soil Remediation and Soil Protection ('soil decree')
 - ▶ Objective: to ensure a sustainable soil management which fulfils the needs of the present generations without jeopardising future generations needs. The policy must ensure, maintain and restore the quality of the soil through soil remediation and protection
- ▶ Flemish executive order of 14 December 2007 on Soil Remediation and Soil Protection ('Vlarebo')
 - ▶ Chapter XIII - The use of excavated soil
 - ▶ Soil excavated outside reclamation areas, that is used in accordance with the conditions determined in or in compliance with the soil decree, is not considered in the waste decree

Policy issues, protection of participants

► Soil investigation - technical report

- for excavations above 250 m³
- on sites where risk activities take or took place
- conformity by accredited soil management organisation

► Traceability

- permit for soil transport by accredited soil management organisation
- transport documents

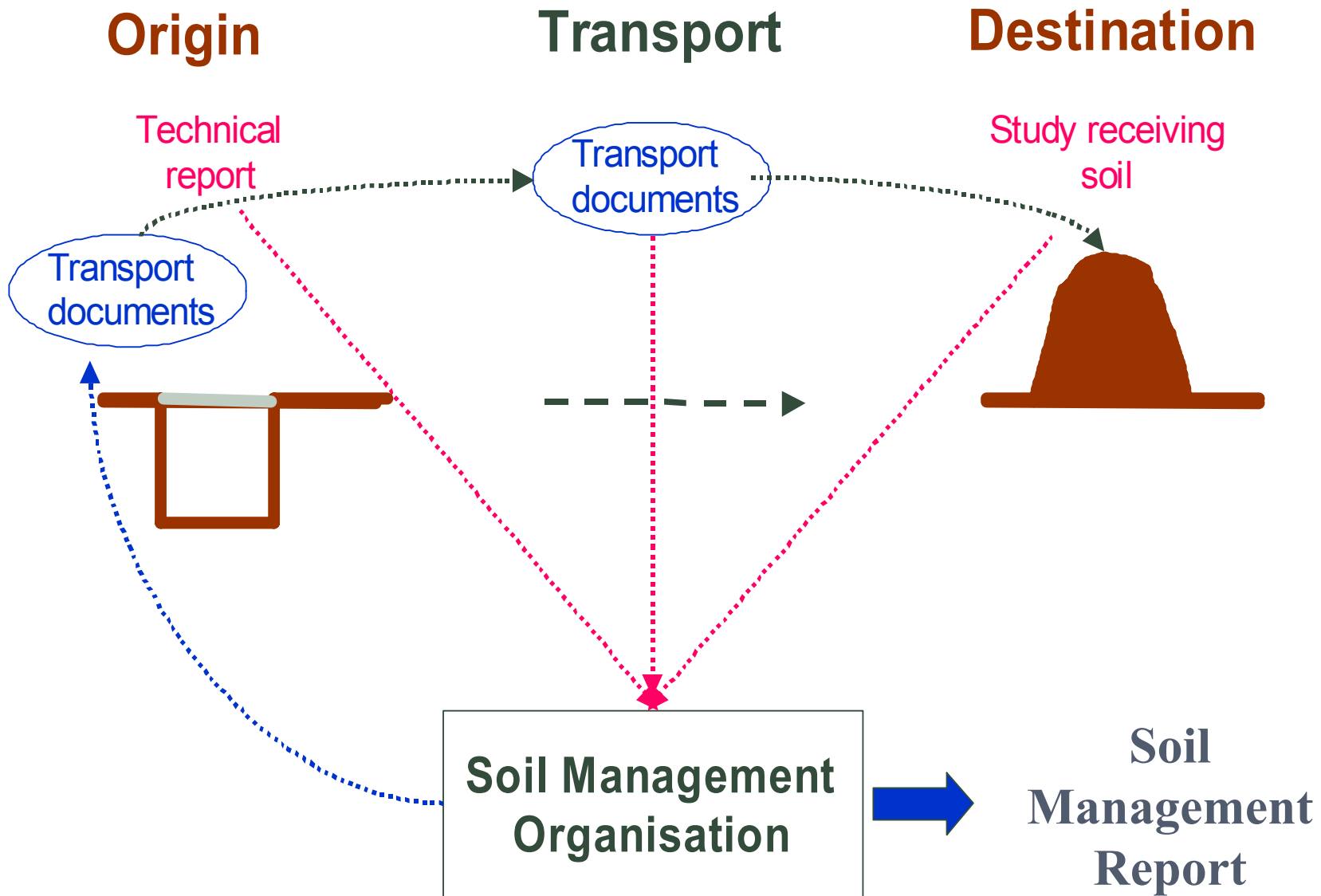
Policy issues, protection of participants

▀ Study of receiving soil

- ▀ no groundwater pollution
- ▀ no additional risks
- ▀ conc < receiving soil

▀ Soil management report

- ▀ after re-use
- ▀ delivered by soil management organisation
- ▀ confirmation soil transfer was executed in accordance with the guidelines



Policy issues, protection of the environment

- ▶ Soil that is contaminated in such a way that it can not be used in residential area, can't be used anywhere
- ▶ Soil that is too contaminated to be re-used or treated is seen as waste
- ▶ Possible uses of soil based on chemical characterisation
 - ▶ as soil
 - ▶ for construction purpose
 - ▶ in a solid material

Policy issues, zero-tax

▶ No environmental taxes for:

▶ re-use of soils

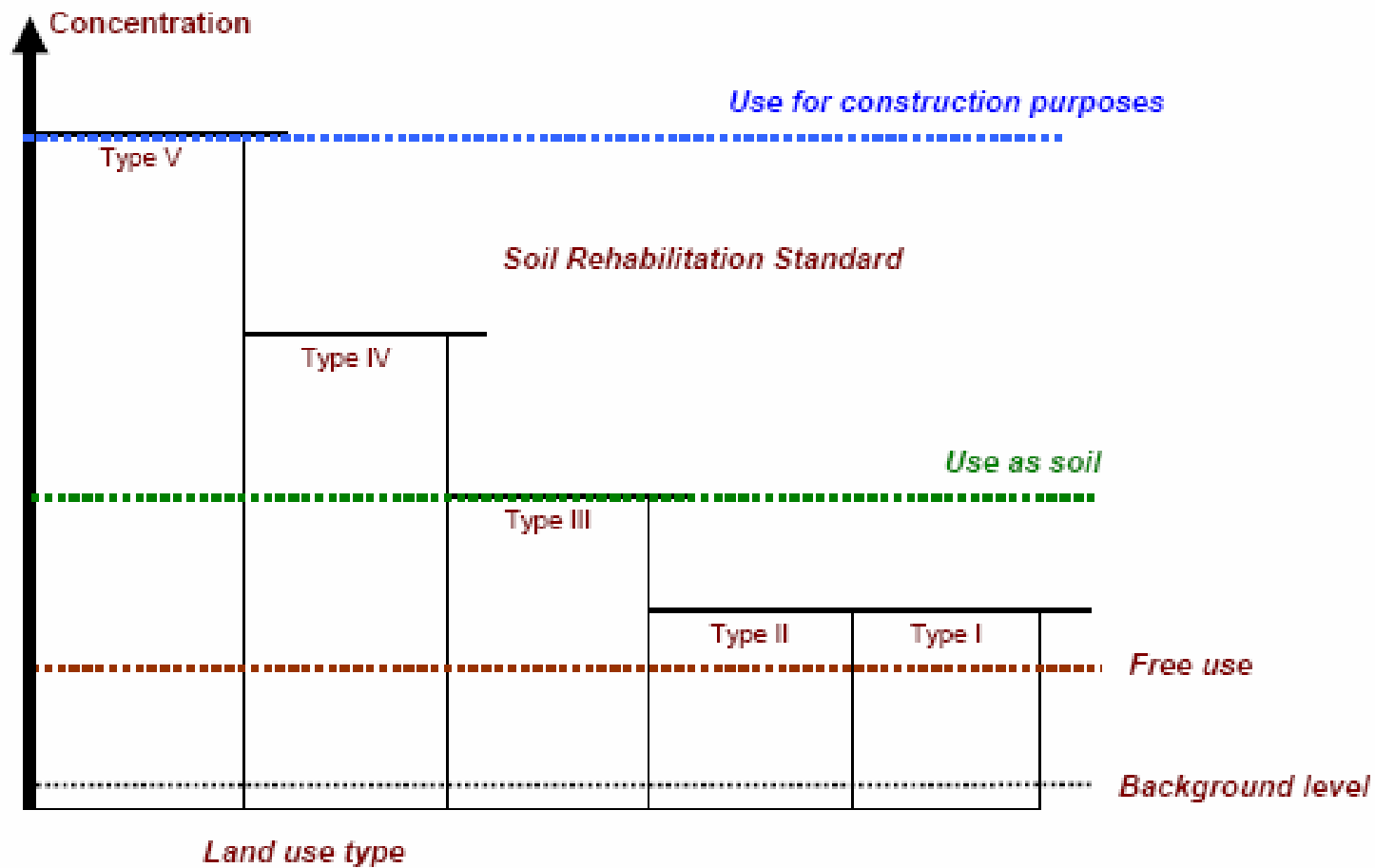
▶ waste originating from remediation operations

- when dumping, incinerating or co-incinerating
- with formal approval by OVAM
- with declaration of non-treatability

▶ non treatable

- using BATNEEC criteria
- when cost for treatment exceeds cost for dumping (dumping taxes are approximately 100 euro / tonne)
- advice from OVB (society of entrepreneurs of soil remediation activities)

Technical issues, threshold values



Technical issues, possible re-use of excavated soil

- ▶ As soil, outside a Cadastral Work Zone
 - ▶ free use
 - ▶ conc < receiving soil/ < 80% of Land Rehabilitation standard when having a study receiving soil
 - ▶ conc > LRS III : treatment before use

- ▶ As soil, inside a Cadastral Work Zone
 - ▶ Land with similar environmental characteristics
 - ▶ conc < 80% LRS
 - ▶ Risk to human health / effect on the environment / similar activities: conc > 80% LRS, no additional risk, following code of good practice

Technical issues, possible re-use of excavated soil

- ▶ As soil, on location
 - ▶ pipes, wires, cables (construction, repair), repair of levees
 - ▶ use on the same place under the same conditions in the same application

- ▶ For construction purposes / in or as a solid material
 - ▶ leaching limits
 - ▶ maximum concentrations
 - ▶ list of well defined applications

Questions?



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