

# Tour de table

## Belgium: state of the art of soil remediation



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NATO/CCMS Pilot study

Prevention and Remediation in Selected Industrial Sectors: Sediments

Ljubljana, Slovenia, June 17 – 22, 2007



# Legislative framework for soil & groundwater remediation: a complex problem

- Jurisdiction for historical pollution
  - Who is responsible?
  - Who must pay?
- Technical
  - Site investigation & risk assessment
  - Remediation technology at acceptable costs
- General
  - In agreement with policy and legislation on air, water, waste, land use



# Why a legislative framework for soil & groundwater remediation?

- Socio-economic rehabilitation of old industrial sites
- Improvement and preservation of environmental quality and human live
- Reduction of effects of land 'consumption'



# As a result, we need

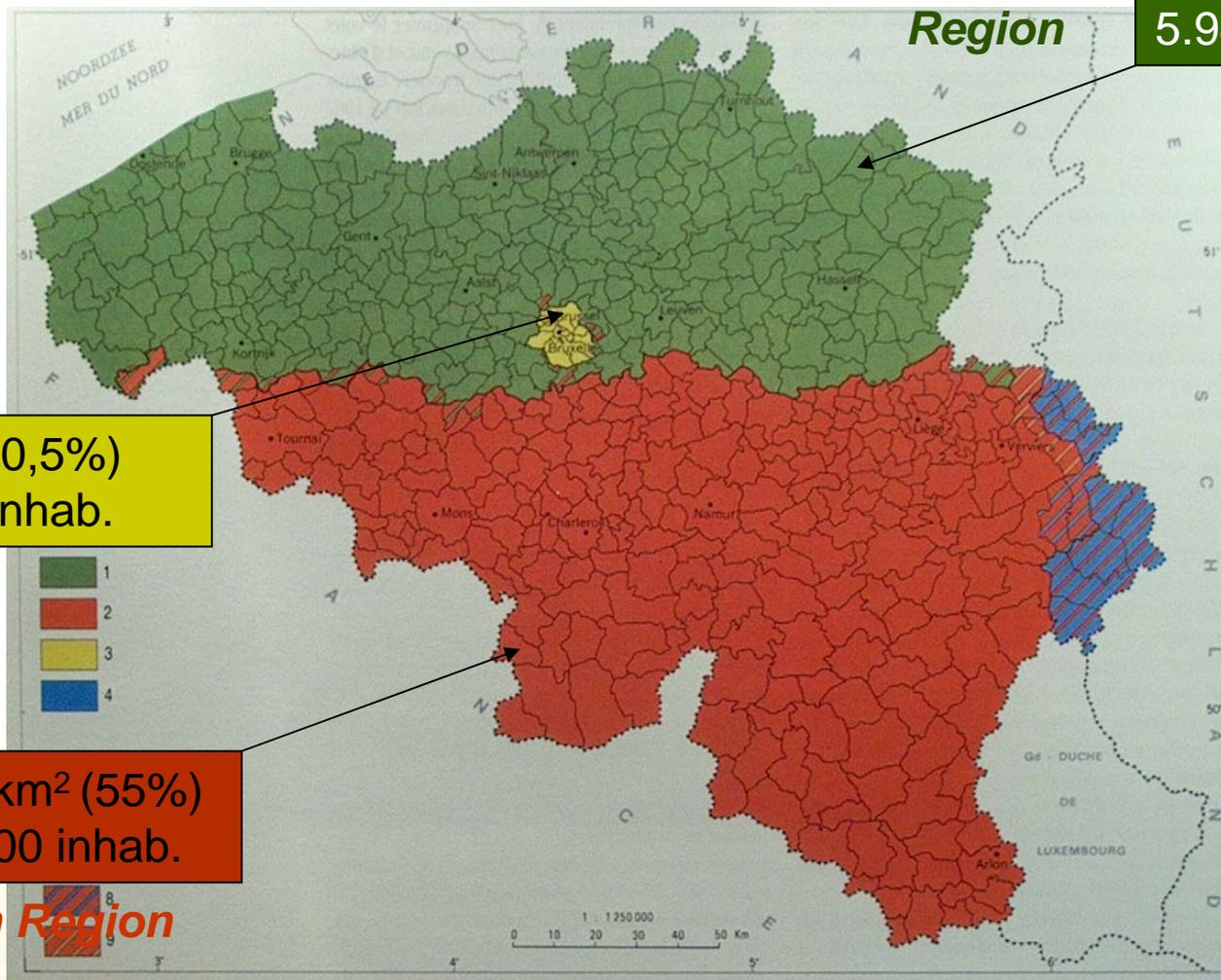
- Legislative framework in the different regions
- At the moment many efforts for homogenisation of efforts on risk assessment and remediation at European level
  - EU groundwater directive, ETAP
  - Platforms: NICOLE, Common Forum
  - Harmonisation of risk assessment methods



# Gallia est omnia divisa en partes tres, quarum unam incolunt Belgae

*Flemish Region*

13.522 km<sup>2</sup> (44%)  
5.940.000 inhab.



161 km<sup>2</sup> (0,5%)  
964.000 inhab.

*Capital  
Brussels*

16.844 km<sup>2</sup> (55%)  
3.250.000 inhab.

*Walloon Region*



# Flemish region

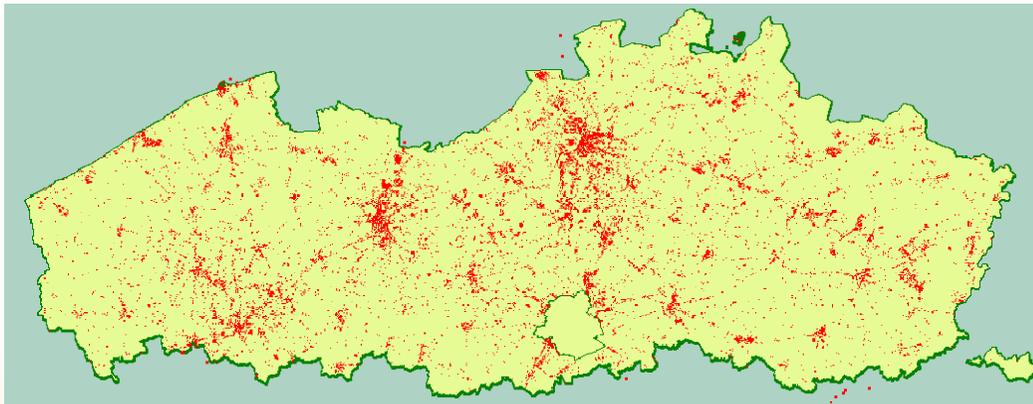
- 22 February 1995: Flemish soil remediation decree
- 5 March 1996: Execution of the VLAREBO
- 2006: Adapted decree



# Flanders: identification of contaminated sites

1. List of high risk activities
2. Registration of contaminated sites
3. Community inventory of sites and activities with high risk

➡ > 100,000 potential contaminated sites



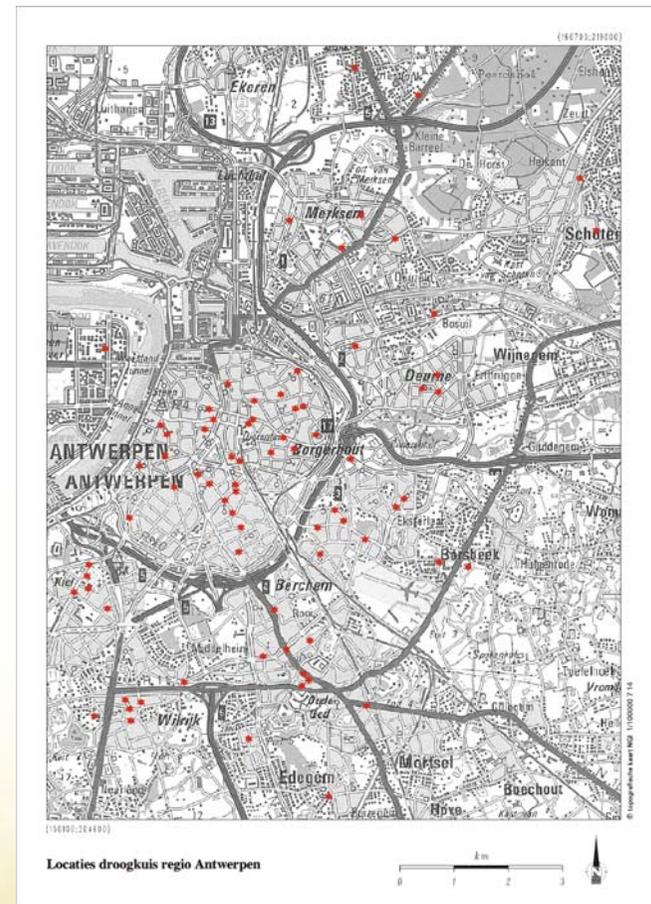
# Flanders: new and old pollution

- New pollution (after 1995)
  - Immediate need for remediation in case of trespassing the Soil Remediation Criteria
  - SRC are based on:
    - Nature
    - Agriculture
    - Residencial
    - Recreation
    - Industry
- Old pollution (before 1995)
  - Need for remediation in case of
    - Risks
      - Ecological
      - Human exposure
      - Risk of spreading
    - Designation of the site by the Flemish government to OVAM
      - Brownfields



# Flemish region: remediation study

- Identification of contaminated site
- Preliminary investigation
- Descriptive examination
- Soil Remediation plan
- Financial guarantee
- Remediation activities and monitoring
- Final evaluation

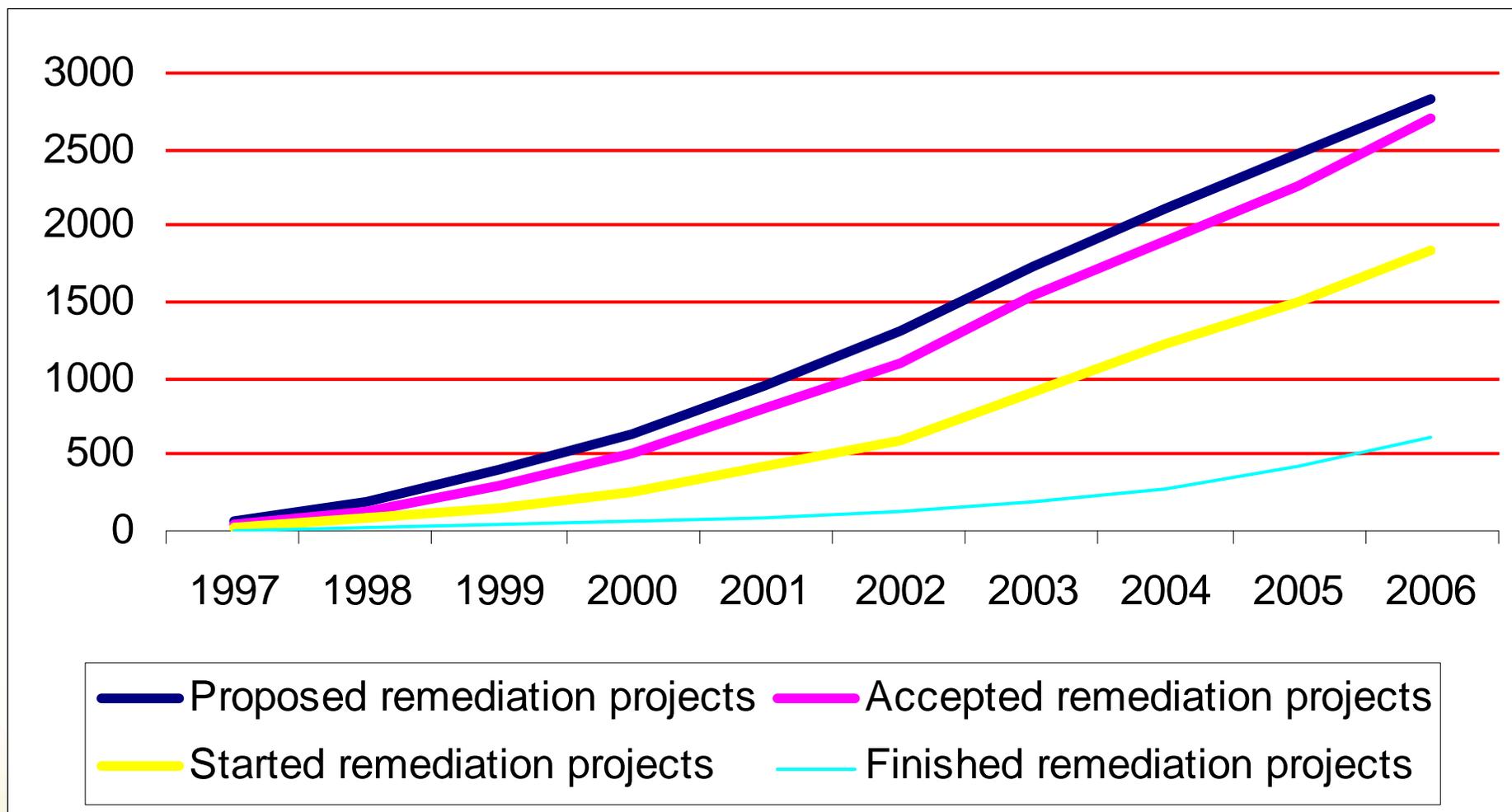


# New decree and rules

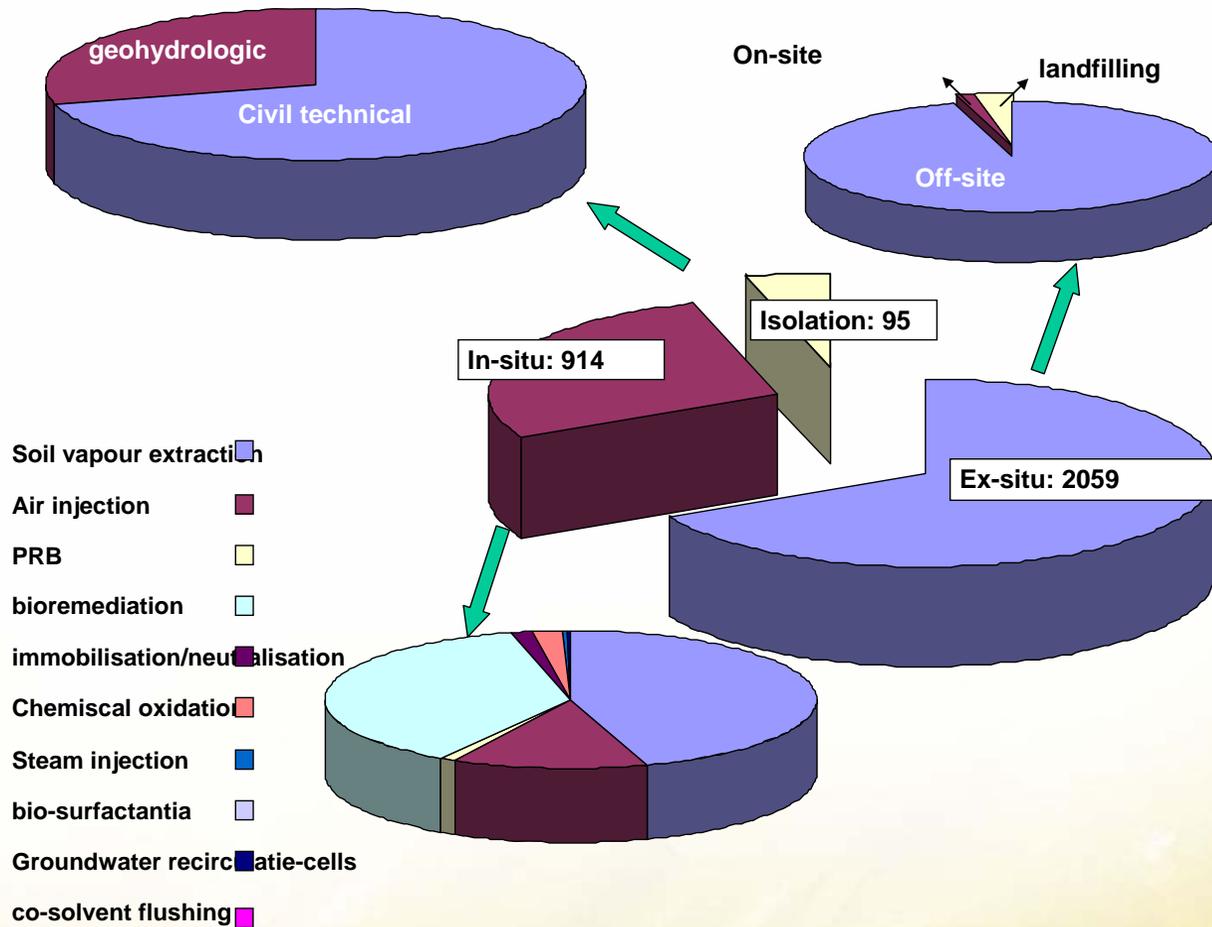
- Phasing of remediation process
- Prioritisation
- Flexible procedures (Preliminary and Descriptive Investigation)
- Soil protection (funding- prevention)
- Sediment issues
- Damage claims regulation
- Risk-based remediation
- Sector funding (BOFAS, VLABOTEX)
- Limited Soil Remediation Project
- Financially acceptable/restrictions in use
- BATNEEC-based



# Numbers of soil remediation projects



# Soil remediation techniques



(excl. P&T: 1901 projects of which 33 with re-infiltration)



# Capital of Brussels

- 13 May 2004: Ordonnance on contaminated sites based on:
  - Need for (construction) sites
  - Combination of very old contaminations and new contaminations
  - High degree of economic rotation
- 9 December 2004: execution
- 2007: New ordonnance on contaminated sites



# Capital of Brussels

- 9 December 2004:
  - List of risk activities
  - Standards at which a risk evaluation study must be started
  - Method for risk evaluation
  - Criteria for assimilation of old soil investigations
  - Changes concerning decree on gasoline stations (BOFAS)
- 20 January 2005:
  - Circular concerning transactions of polluted or presumed polluted soil
  - Vademecum concerning content of projects and reports



# Capital of Brussels

1. Based on removal of risks for
  - Human health
  - Environment
  - Dispersion
2. Difference between historical and new pollution
3. Inventory of high risk activities (> 7000 sites)
4. At stopping of activity or any change of activity or by selling.





# Capital of Brussels

- 1022 Preliminary soil investigations
- 497 Risk evaluations
- 233 remediation plans
- 17 000 soil attestations



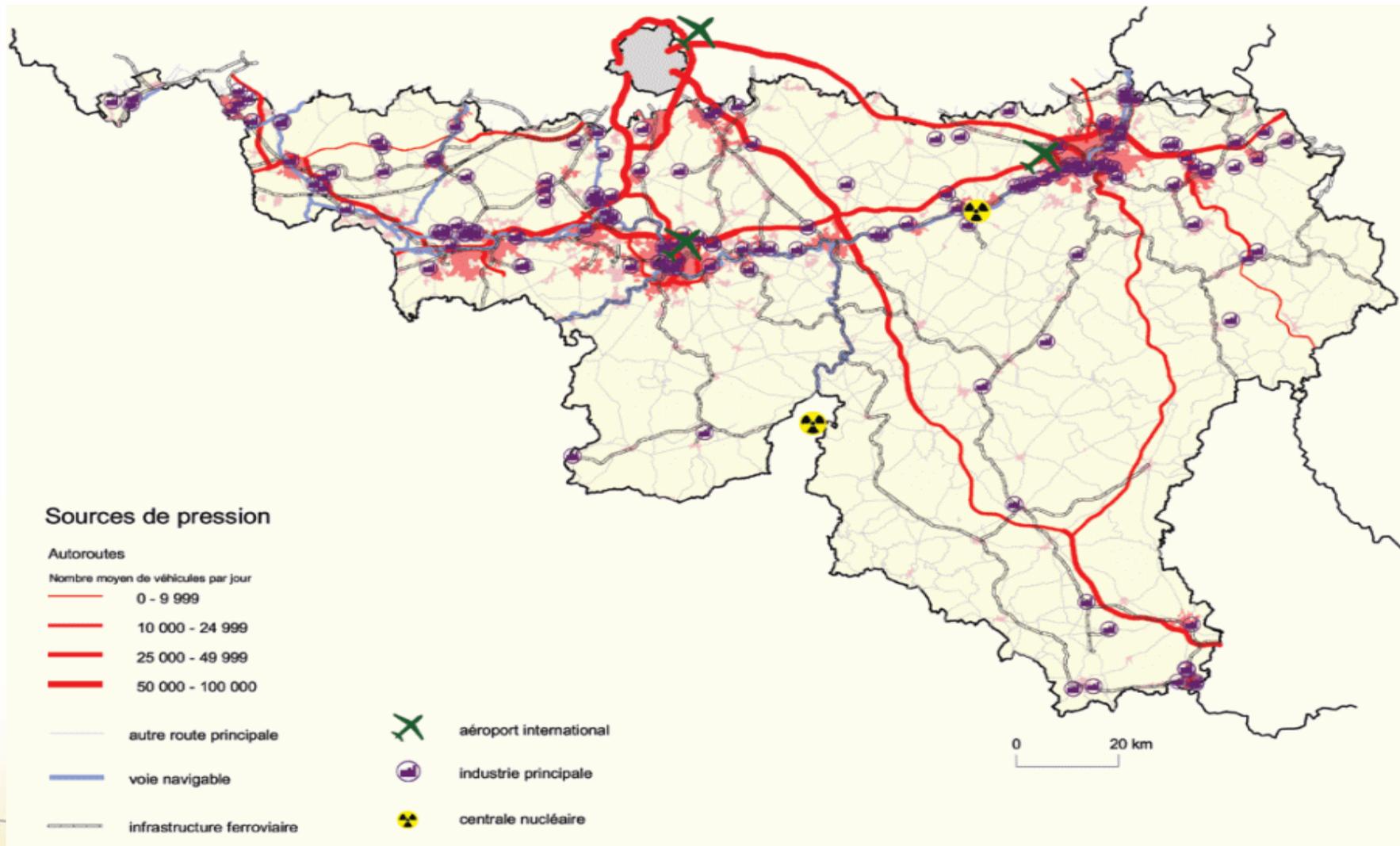
# Walloon region

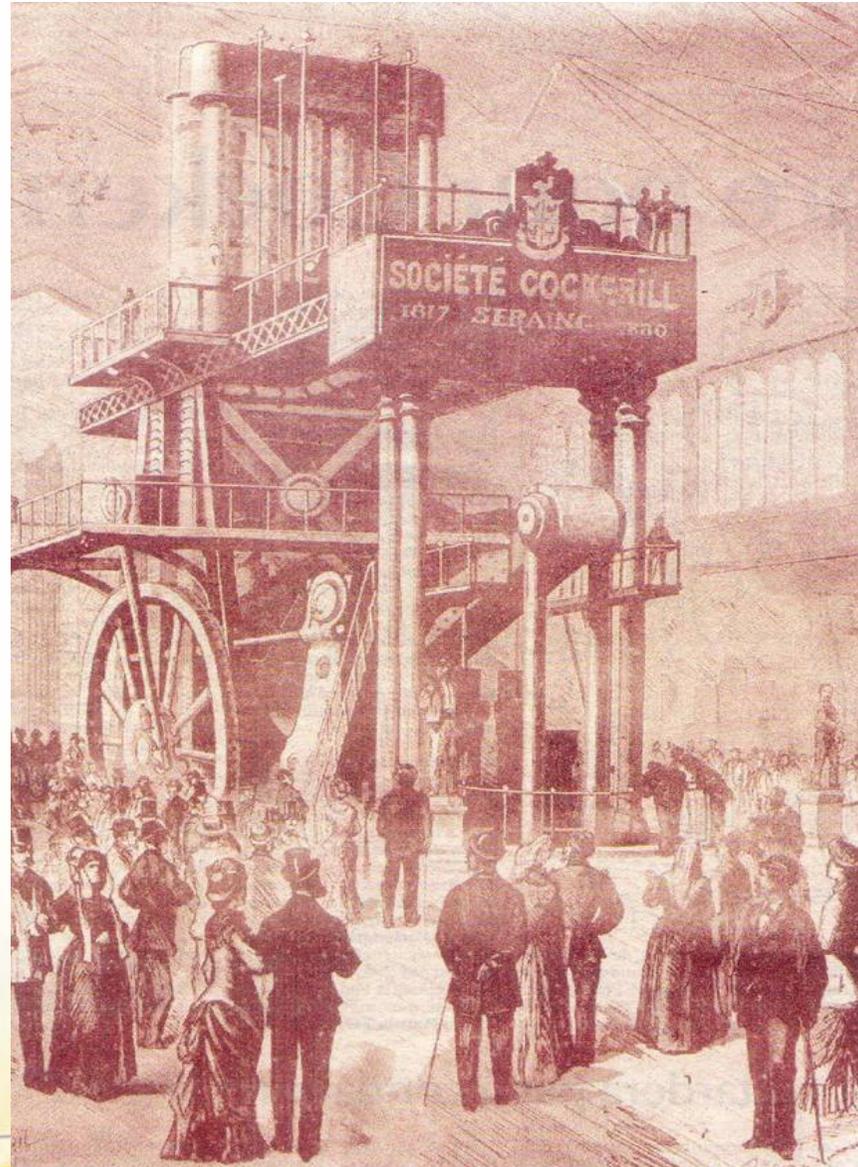
- Objectives

- Accelerate the redevelopment of large contaminated sites
  - Needs for space
  - Green image
  - Needs for soil investigation and screening
  - Needs for treatment procedures
  - Needs for prioritisation
- Improvement of environmental quality
- Deliver garancy to new land owners



# Industries

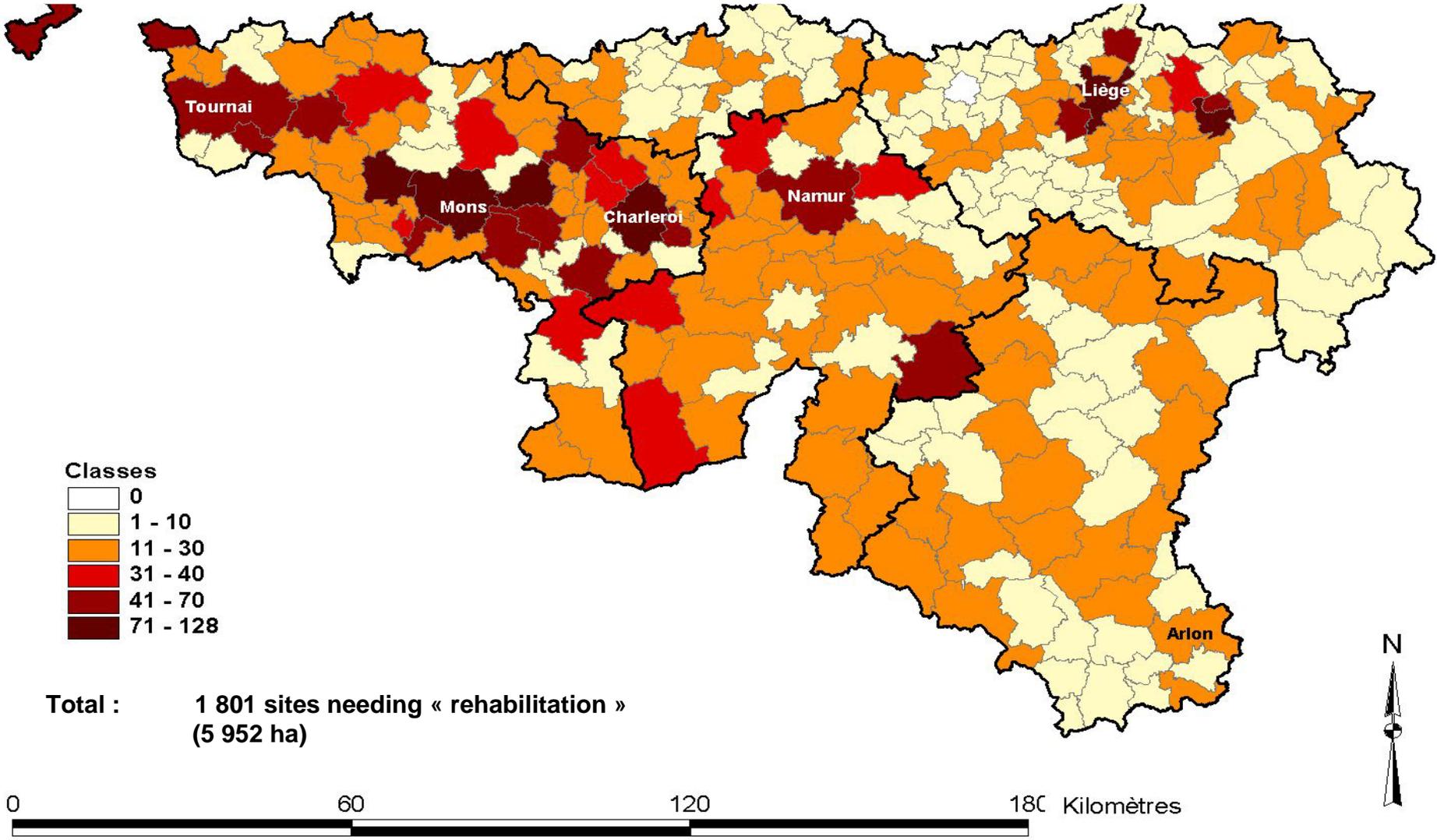




*Vapor Machine  
Cockerill  
at the national exhibition,  
(1875)*



# The Brownfield situation in Wallonia : density distribution per municipality



# Walloon region

- ✓ 01/04/2004 : Law on Cont'd site management defining : Who ? How ? When ? Where ?  
+ project of enforcement decree on Soil Screening Values and soil remediation experts



To date : the law of 01/04/2004 is not in force yet



*Brownfield site Carcoke  
in Tertre*



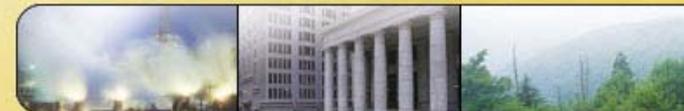
# Walloon region

✓ 30/08/2005 : « Marshall Plan » : a political programme for the economical revival of the Walloon Region

➡ « Measure 2.6. : brownfield reclamation »

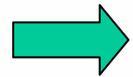
Budget : 343 Million Euros

- ➡ Reclamation of 100 derelict sites presumed as «unpolluted » or « weakly polluted » : budget 100 Million Euros
- ➡ Reclamation of 24 polluted brownfields (SPAQuE) : Budget : 243 Million Euros



# Walloon region

✓ 30/08/2005 : « Marshall Plan » : a political programme for the economical revival of the Walloon Region



✓ 23/02/2006 : « Programme-Law » for economical revival and administrative simplification



That « simplifies » the administrative procedures for brownfields (modification of the law of 01/04/2004)

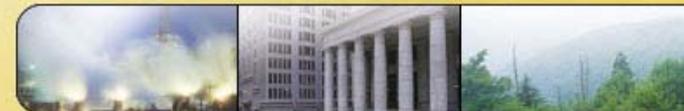
Sites that have priority according to the government views (SRPE) : no permits needed



# Walloon region

✓ Various :

- Registration of contaminated sites : inventory still limited to brownfields and uncontrolled waste deposits
- List of risk activities : proposal
- Technical guidance : various guides are ready and submitted for consultation; others are still in progress
- Remediation techniques : a method is under development aiming at furnishing a methodological framework for the selection of the best appropriate techniques



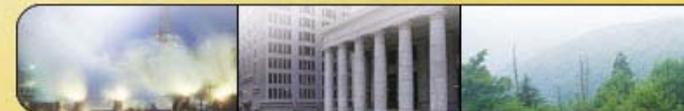
# Walloon region

✓ Various :

- Partnership programme 2004-2006 between Walloon Region, Brussels Region and Quebec for the « sustainable remediation of contaminated sites » : various key-elements for improving the current practices (global strategies, decision tools, remediation techniques) have been identified.

A second phase of the project (2007-2009) should be initiated soon .

(See : [www.assainissementsoutenablespaque.be](http://www.assainissementsoutenablespaque.be))



# With thanks to:

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<http://www.ovam.be>



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<http://www.ibgebim.be>



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<http://www.spaquet.be>

