

## BelgaSOILS: technosoils and their perception in Wallonia

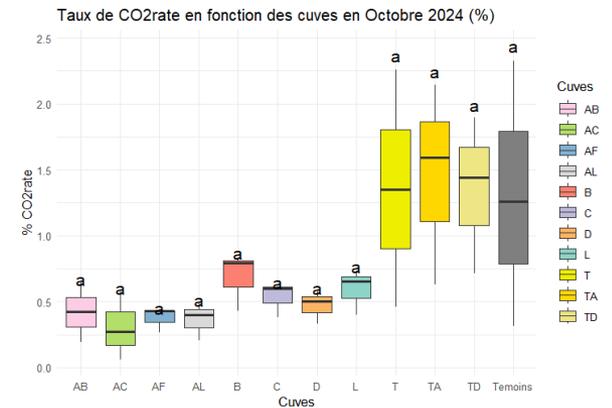
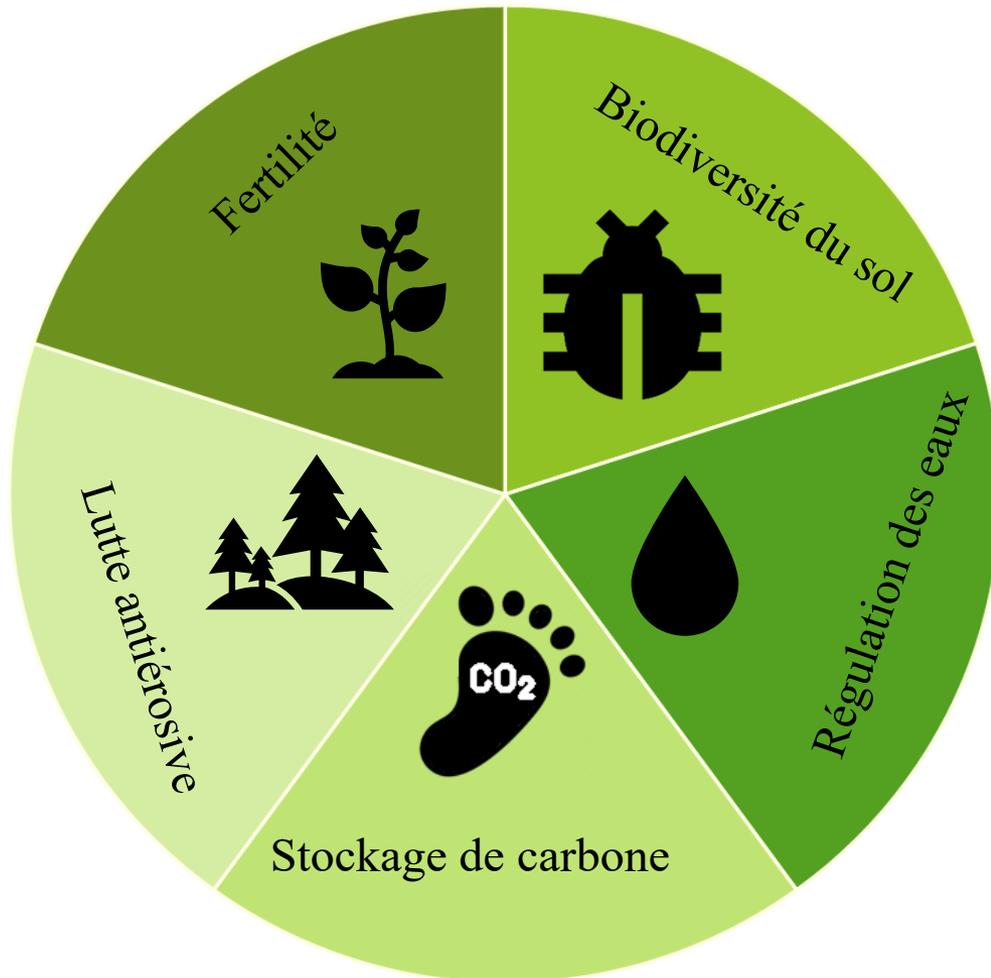


Durabilité et robustesse  
Gestion des terres - Réhabilitations des sites  
Bilan Carbone - Echelle de performance CO2  
Audits de résilience - Applications informatiques...

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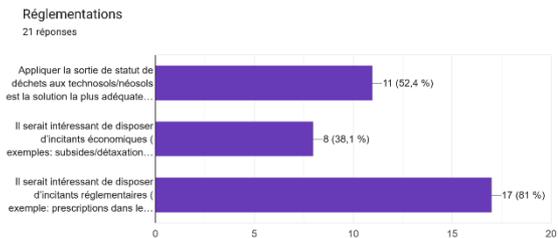


# BelgaSOILS



## Context and methodology of the survey

- ✓ **Two complementary on-line surveys between 2023 and 2025**
- ✓ **2023–2024 : 120 contacts, 11 responses + 10 follow-up interviews**
- ✓ **2025 : 23 responses (Assenas/Fedexsol /ISSeP conference)**
- ✓ **Targets:**
  - **soil experts,**
  - **contractors,**
  - **project developers,**
  - **public authorities,**
  - **facilitators**
  - **citizens**



Votre connaissance des technosols  
22 réponses



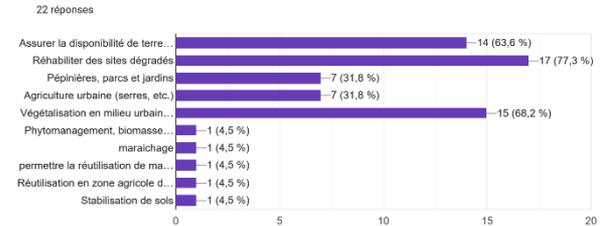
# First survey (2023-2024)

- ✓ Topic still new for most stakeholders
- ✓ Perception and Outlook:
  - **“Technosols have a bright future”**: mainly neutral to positive answers
  - **“Applications will remain marginal”**: rather agreed by a majority
  - Strong awareness of **regulatory challenges**
  - **Technical challenges of production** clearly acknowledged

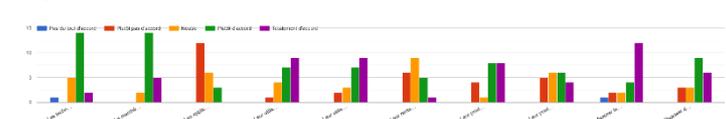
## ✓ Expected Ecosystem Services :

- Highest interest in:
  - ❖ Fertility
  - ❖ Biodiversity
  - ❖ Drainage
- Significant interest in:
  - ❖ Carbon storage in soils
- Lower interest in:
  - ❖ Impermeability/watertightness

Quels usages envisagez-vous pour les technosols, et lesquels vous intéresseraient particulièrement ?



Et en quelle mesure êtes-vous d'accord avec les options suivantes?



## First survey (2023-2024)

### ✓ Applications:

- Urban agriculture
- Greening of urban areas (parks, roundabouts, green roofs, etc.)
- Rehabilitation of degraded sites

=> These uses are consistent with ULiège trials (soil respiration, plant growth, water content)

### ✓ Price expectations and main barriers:

- Price should not exceed that of natural soil (majority view)
- Higher price acceptable if there is clear added value (functionality, performance)
- Main barriers:
  - Complex regulations and waste status
  - Lack of certification
  - Heterogeneity of products (variability of resources)
  - Environmental and long-term risks

# Second survey (2025)

## ✓ Perception and Outlook:

- 27% know the topic well
- 41% have already heard about technosols
- 32% discover the topic
- Overall positive perception: **technosols seen as promising, with significant growth potential if legislation supports their use**

## ✓ Expected Ecosystem Services :

- Functions considered most important:
  - ❖ High biodiversity potential
  - ❖ Fertile substrate
  - ❖ High water retention capacity
  - ❖ Adequate drainage / permeability
  - ❖ Resistance to erosion
  - ❖ Carbon storage in soils
- Impermeability is not generally requested

# Second survey (2025)

## ✓ Applications:

- Rehabilitation of degraded sites
- Urban greening
- Protection of soil resources
- Urban agriculture and use in nurseries, parks and gardens

⇒ These uses are still consistent with ULiège trials

## ✓ Main challenges:

- Technical and environmental performance
- Regulatory complexity
- Need for robust traceability
- Need for independent certification

# Convergences

- ✓ **Strong consensus that technosols and neosols have a promising future**
- ✓ **The market is still emerging and not yet mature**
- ✓ **Technical, environmental and regulatory challenges are clearly identified**
- ✓ **Traceability and quality assurance are seen as essential**
- ✓ **Independent certification is widely requested**

## Conditions for market success

- ✓ **Clear and workable regulatory framework (including “end-of-waste” solutions/regulations)**
- ✓ **Regulatory and possibly financial incentives to support uptake**
- ✓ **Independent certification scheme comparable to recycled aggregates**
- ✓ **Strong guarantees on technical performance and environmental safety (short and long term)**

# Strategic recommendations

- ✓ **Build on the experience gained with recycled aggregates (acceptance, certification, specifications, guarantees)**
- ✓ **Design robust traceability systems and quality control procedures**
- ✓ **Position technosols firmly within circular economy strategies (waste valorization, resource savings, public works)**
- ✓ **Work closely with public authorities to co-design a suitable regulatory framework**

# THANKS FOR YOUR ATTENTION !



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