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Tailored Improvement of  
Brownfield Regeneration  
in Europe

# Phytoremediation: A green solution

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# Content

1. Short introduction
2. The processes
3. Important to consider
4. Conclusion



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# 1. Introduction

Phyto = plant (old greek)

Remedium or remediation =  
restoring of balance

→ **Treatment of contaminated  
soil by use of plants**

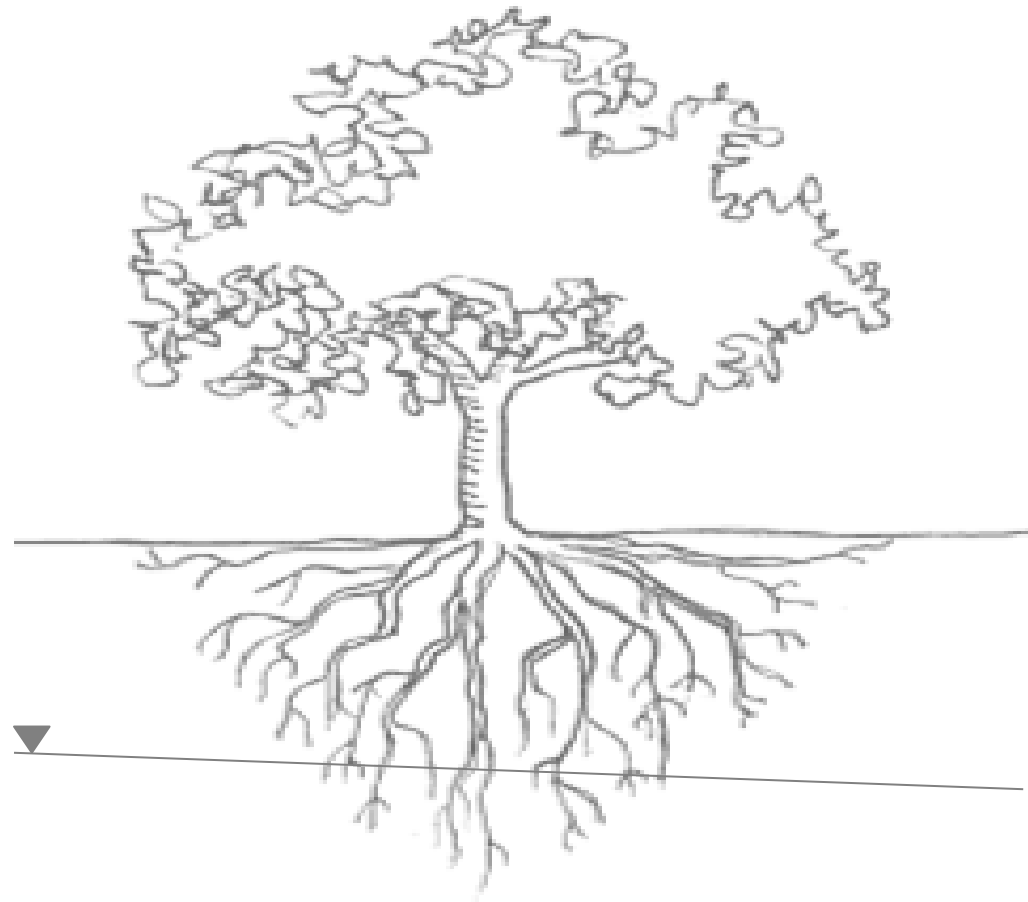




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## 2. The processes

What happens within and around a tree?

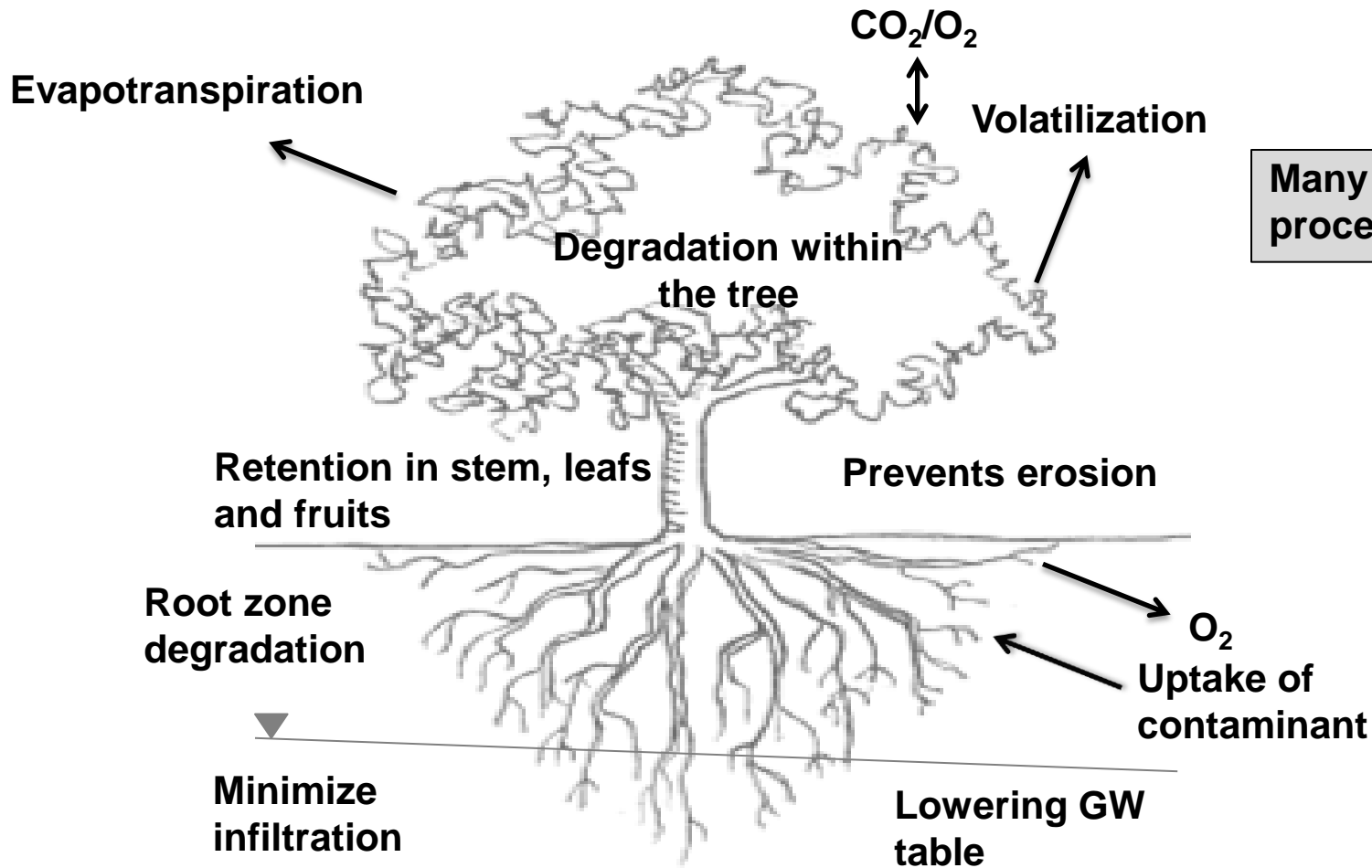




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## 2. The processes

What happens within and around a tree?



Many other processes





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## 2. The processes

- **Phytoextraction:**  
Transfer of pollutants to the vegetation.
- **Phytovolatilization:**  
Volatilization of components through trunk or leaves.
- **Rhizo- and phytodegradationionion:**  
Degradation of contamination in the root zone or inside the plants.
- **Hydraulic control and soil fixation:**  
Plants bind the soil and minimize infiltration.

### 3. Important to consider

- Phytoremediation takes time – years or even decades.
- Limited by soil toxicity and climate.
- Only useful for shallow contamination.
- The costs equals natural attenuation.
- Decrease downwards migration of contaminants.
- Plants enhance degradation by natural degraders.
- Fixates the soil.
- Looks nice during treatment.

## 4. Conclusion

- Often not an option at urban sites - unless a park is desired.
- Very useful for large size areas with shallow contamination.
- Very useful for low-priority sites which needs to be handled.

**Thank you for your attention!**



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