




Long term phosphorus removal in soil infiltration systems

Swedish experiences

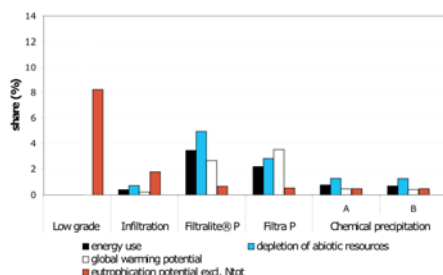


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Background to our research

- Start of PhD project 2007
- LCA proved the strengths of soil treatment
- Uncertainties regarding P removal capacity
- Insufficient knowledge about removal mechanisms
- Swedish guidelines requires precise prediction of long term P removal



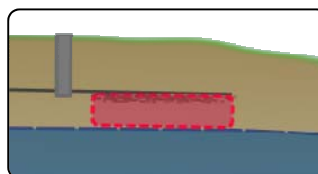
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Research approach

- Overcome the limitations of Inflow/Outflow (I/O) measurements
 - Variation in time
 - Influence by groundwater
 - Temporary bio accumulation
- Use a strict perspective on physical limitations of soil treatment systems (similar to how other types of systems are handled in the Swedish guidelines)

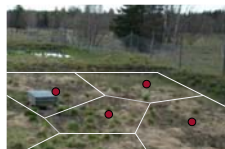


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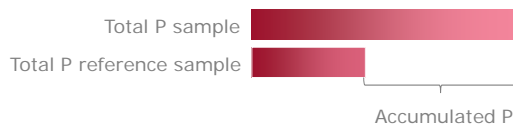
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Method



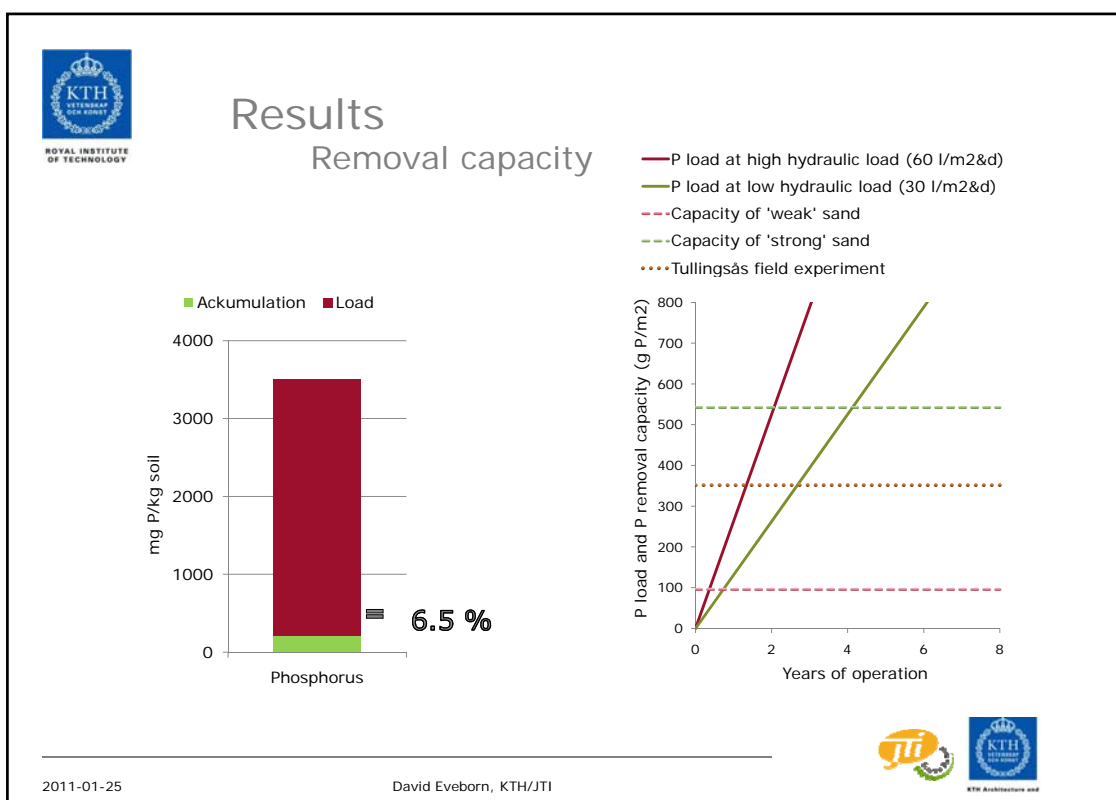
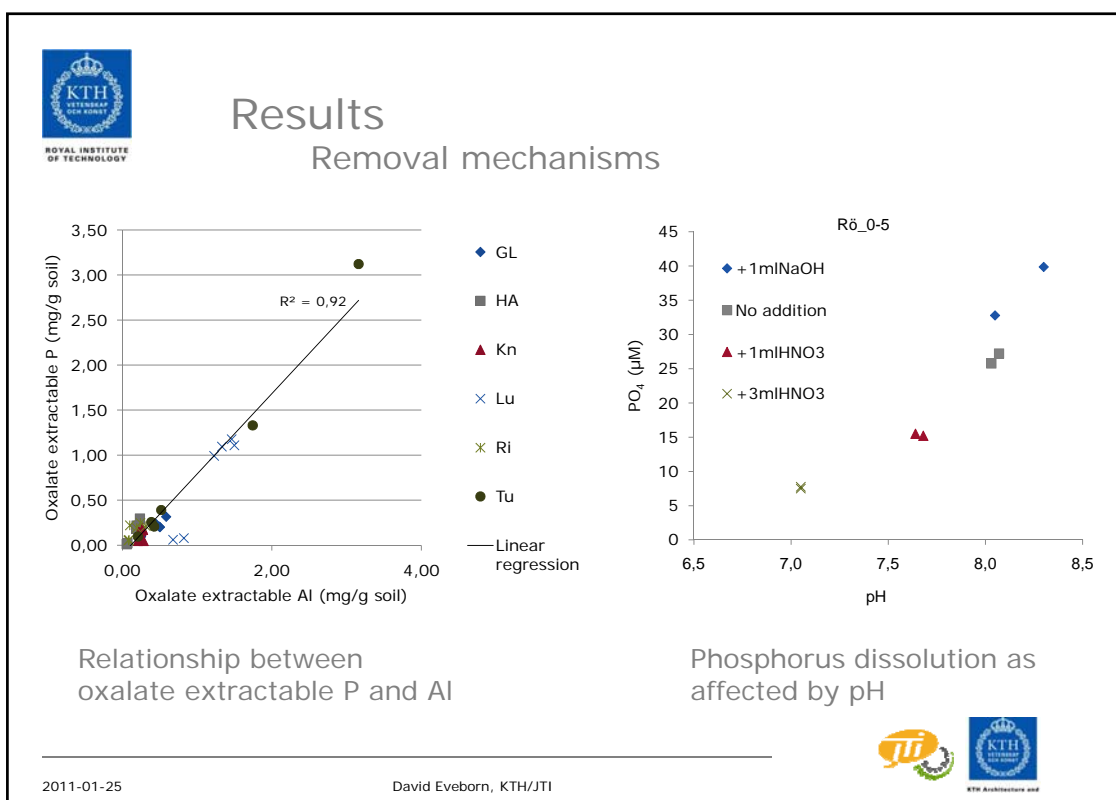
- Sampling of old soil treatment systems
- Chemical characterization of the soil
- Batch experiments
- Mass balance calculations



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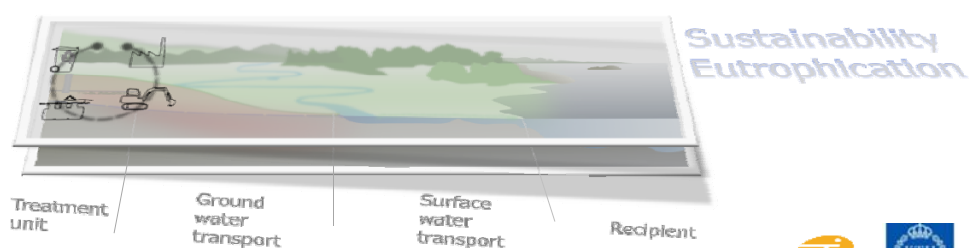






What does this mean?

- We can expect large emissions of P from soil treatment systems
- However, it would be misleading to say that these emissions will be a good indicator of the environmental IMPACT caused by these systems
- The regulation needs to be more target oriented



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