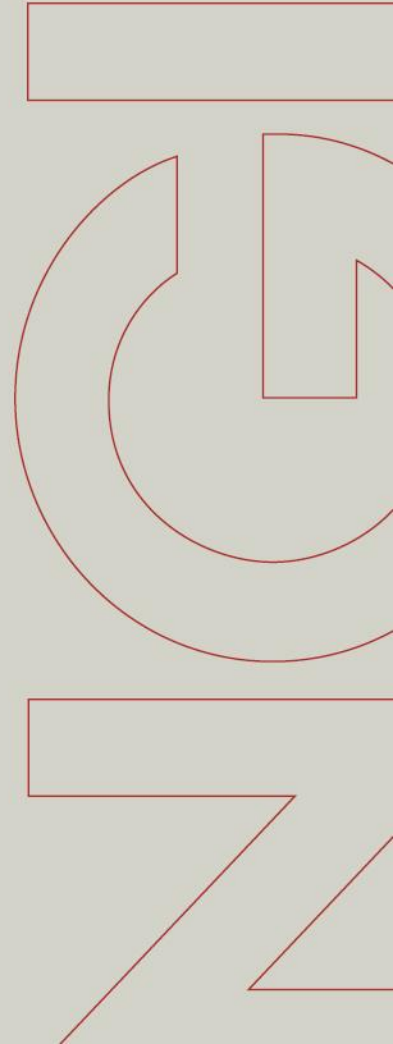


# Stabilization of shooting range soil by iron amendments under various redox conditions

Masteroppgave UMB, IPM, 2012

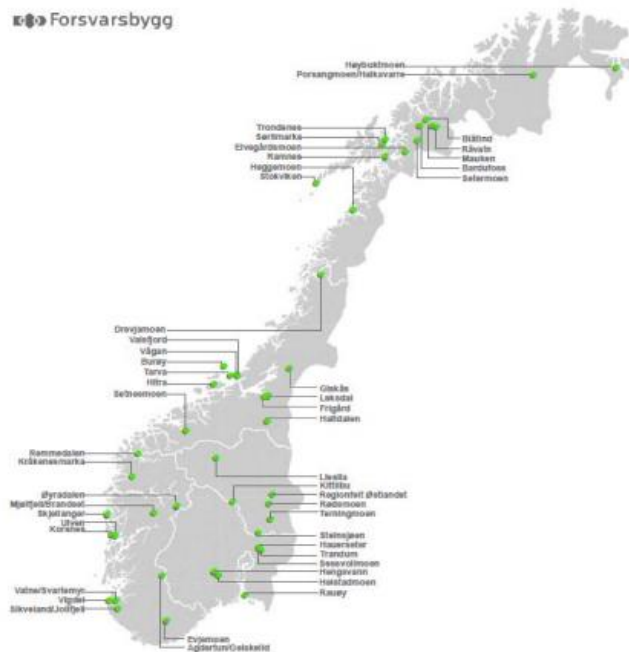


# Hva var målet i dette prosjektet?

- Stabilisering av bly, kobber, sink og antimon i forurenset skytejord med jernsorbenter?
- Vil grad av vannmetning og varierende redox forhold påvirke effekten til jernsorbentene?
- Vil varierende redox forhold påvirke spesieringen av antimon?

# Hvorfor ønsker vi denne kunnskapen?

Forsvarsbygg



- 103 tonn bly
- 73 tonn kobber
- 12 tonn sink
- 7 tonn antimon



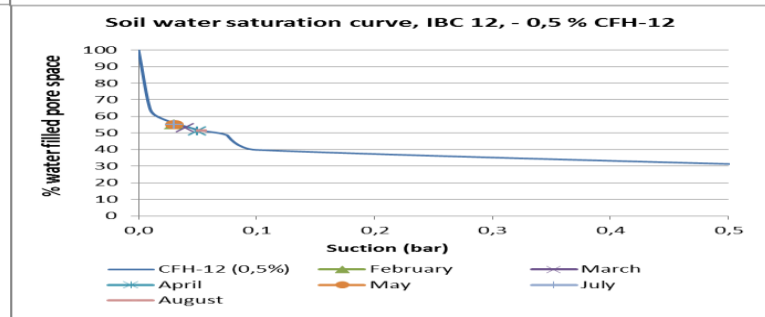
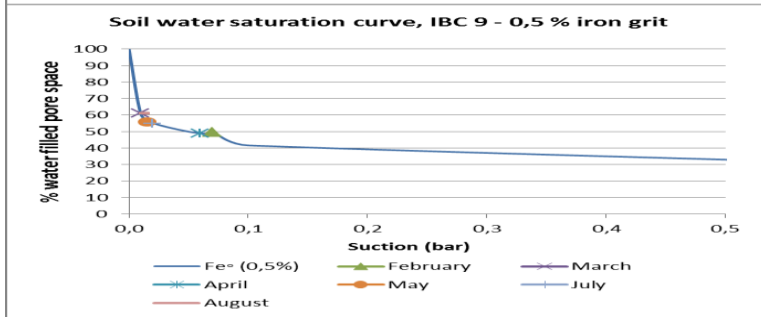
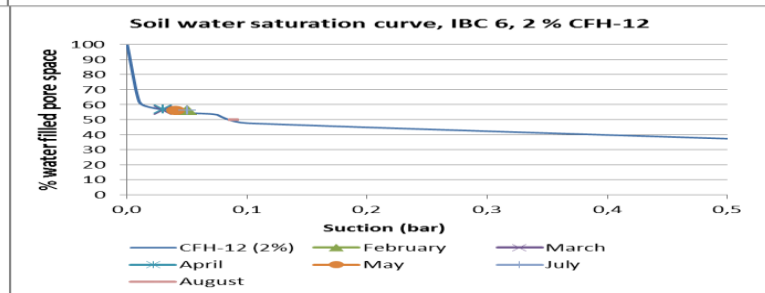
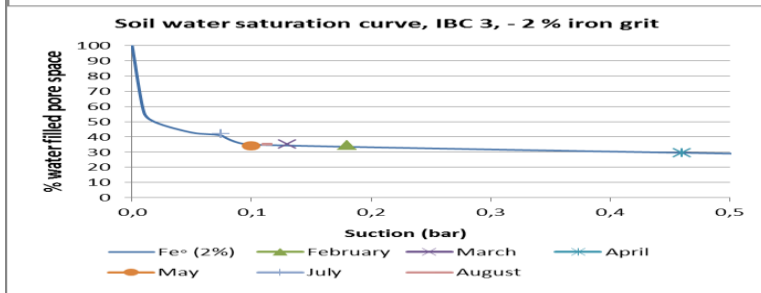
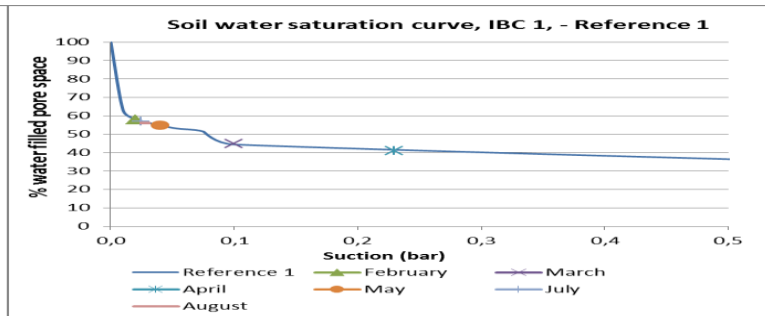
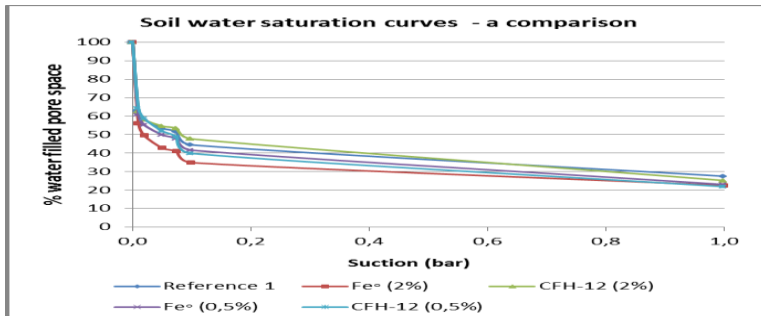
[http://no.wikipedia.org/wiki/7,62\\_x\\_51\\_mm\\_NATO](http://no.wikipedia.org/wiki/7,62_x_51_mm_NATO)

# Regimentsmyra, Fredrikstad



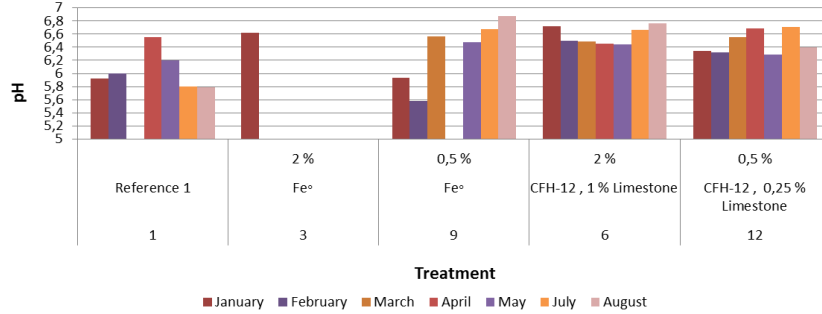
# Etablering og feltarbeid





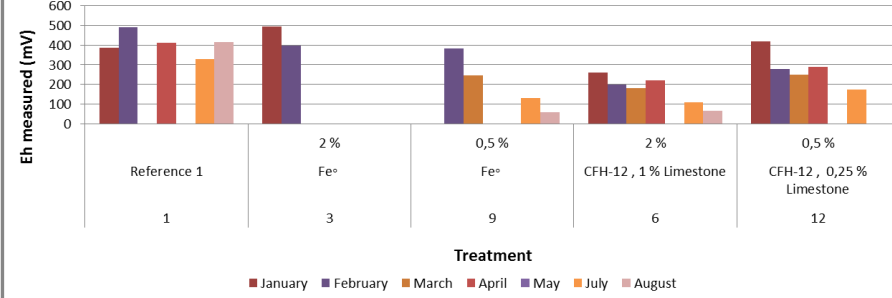
# pH

**pH, 50 % water saturation**

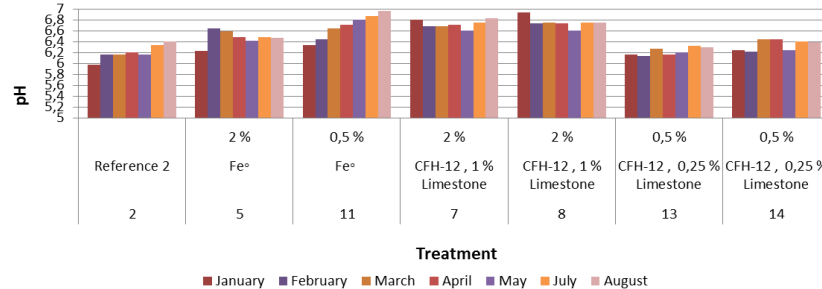


# Eh

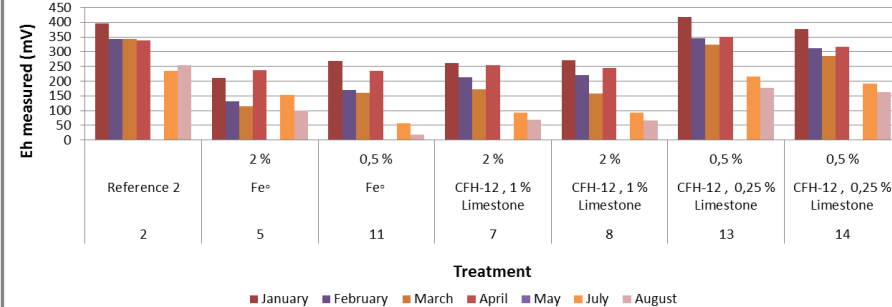
**Eh, 50 % water saturation**



**pH, 100 % water saturation**

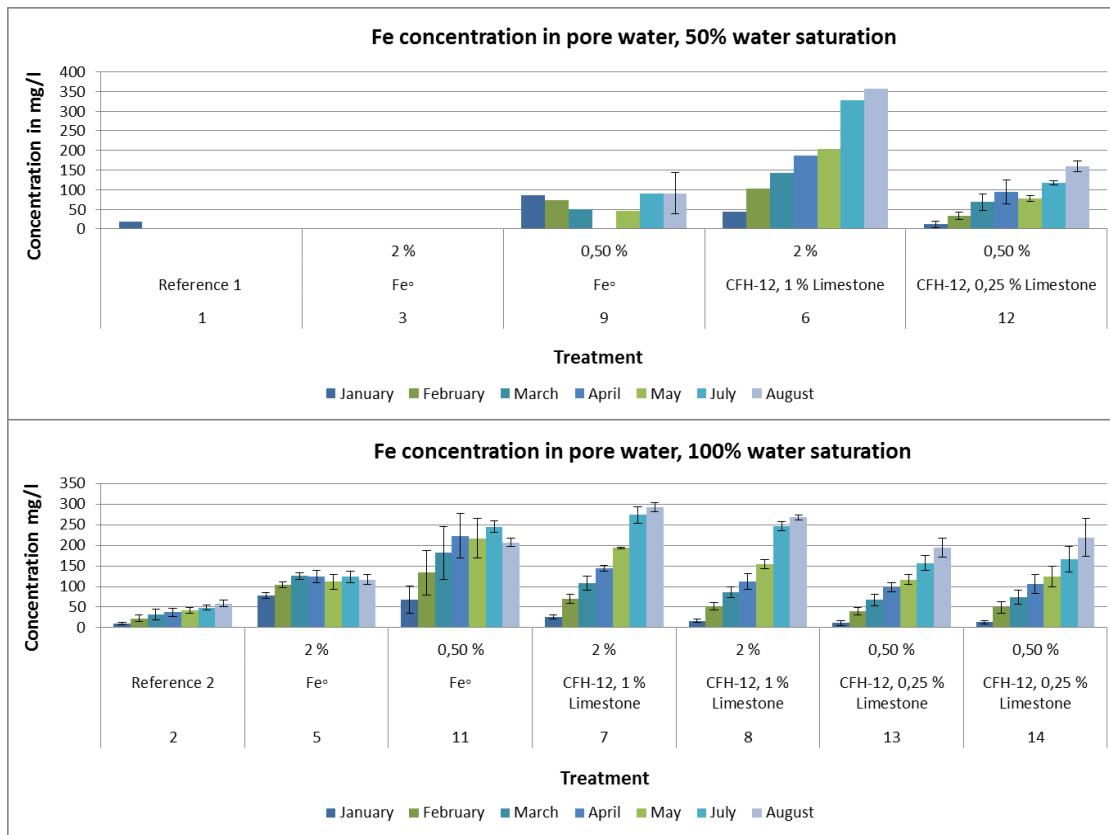


**Eh, 100 % water saturation**

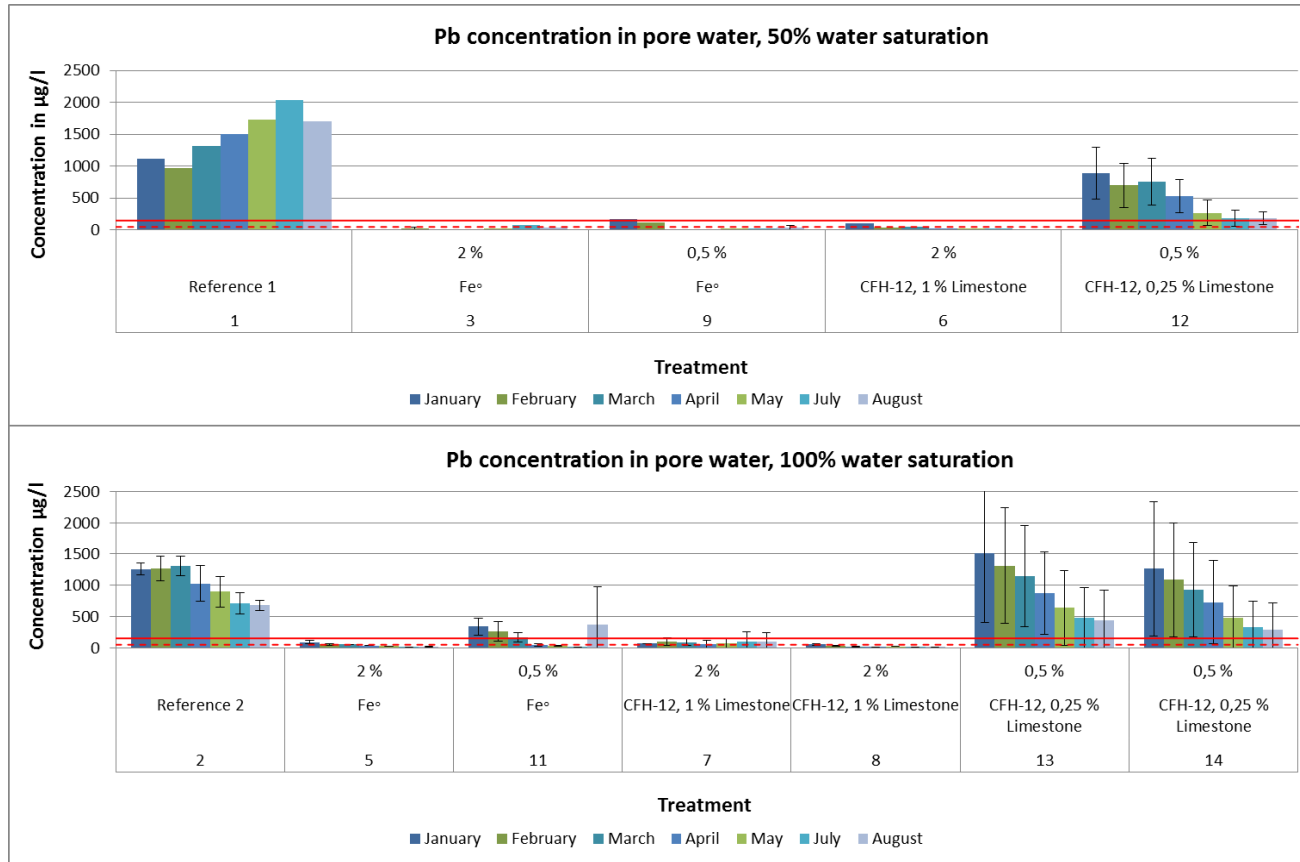




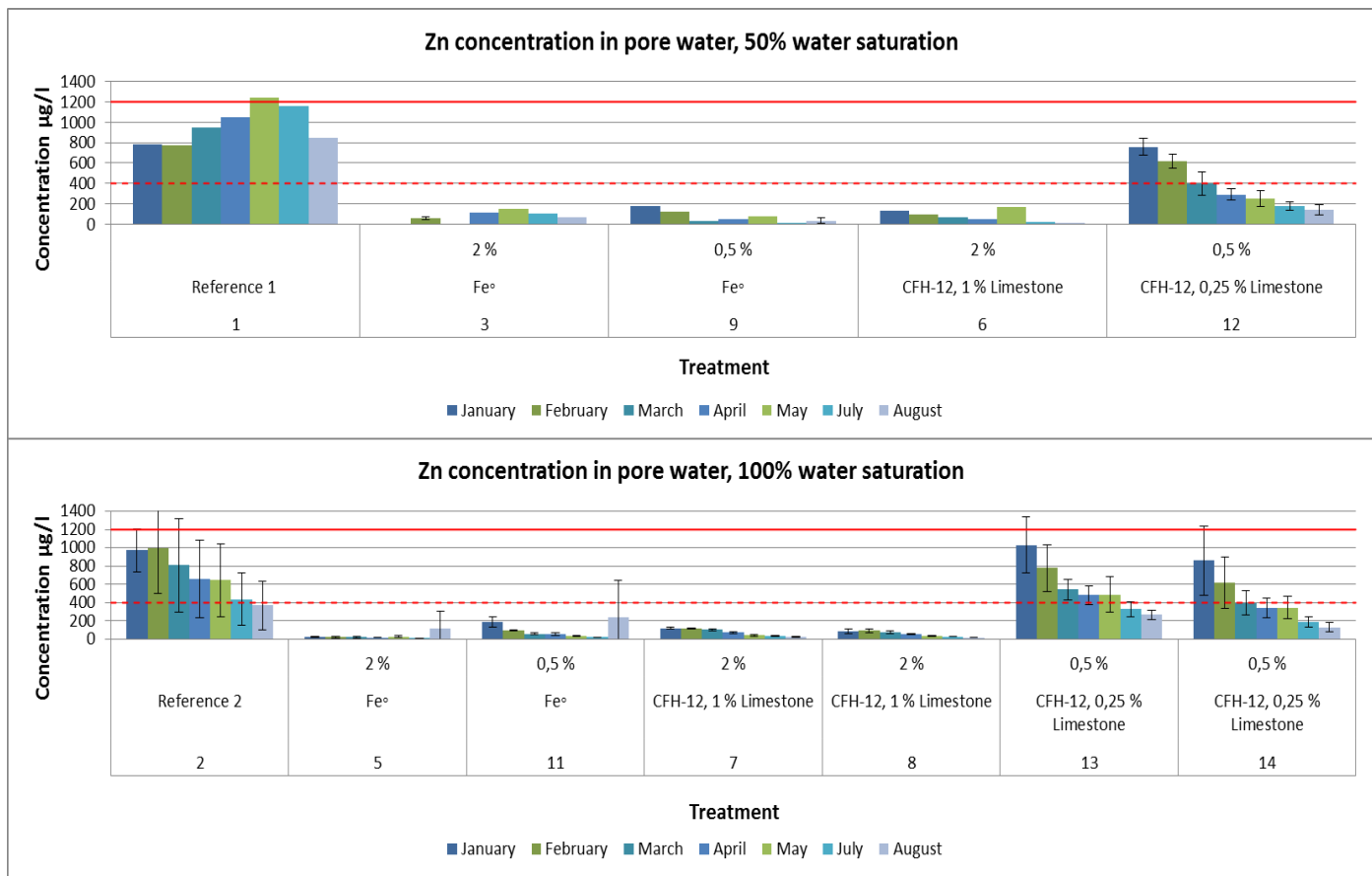
# Porevannskonsentrasjoner av jern



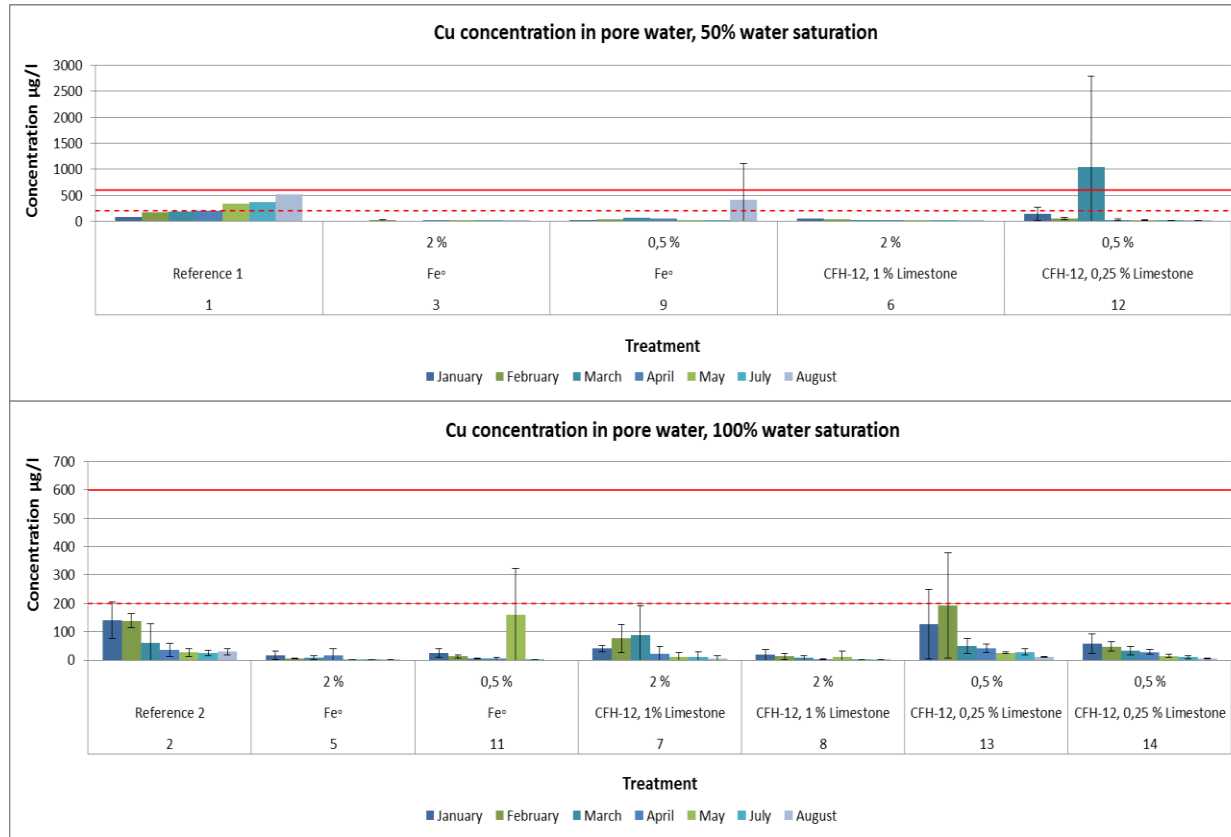
# Porevannskonsentrasjoner av bly



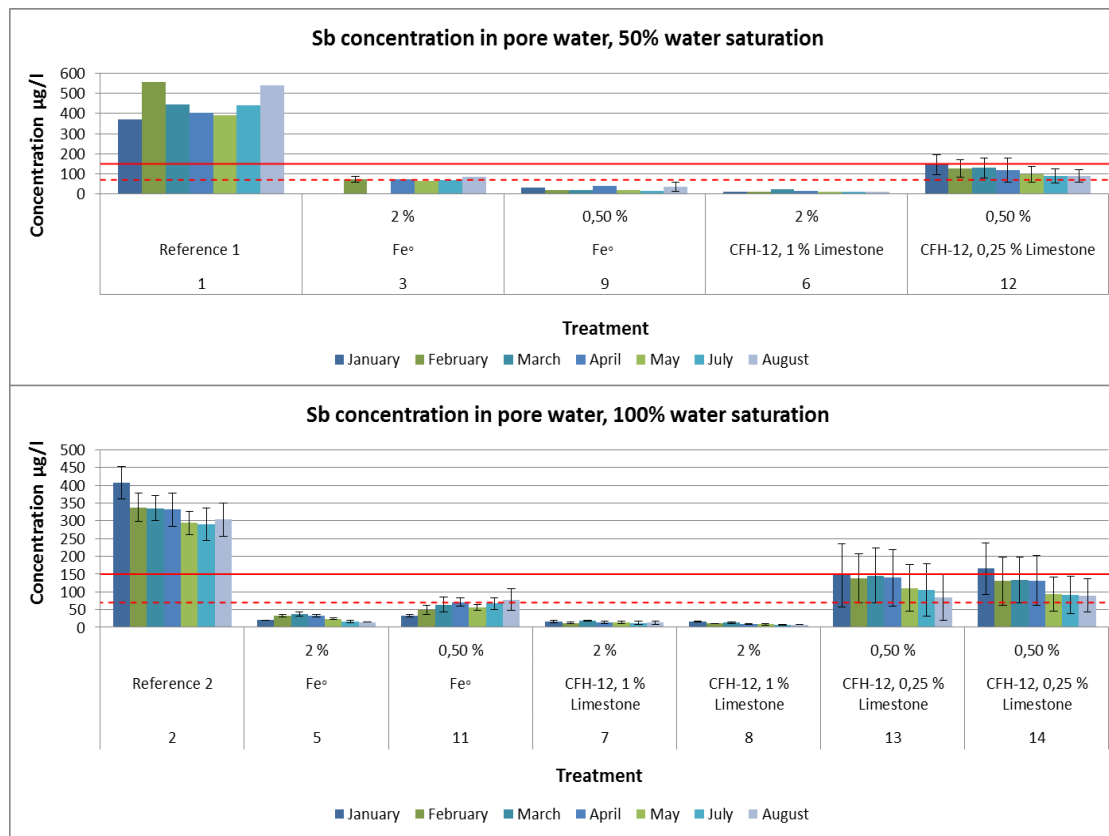
# Porevannskonsentrasjoner av sink



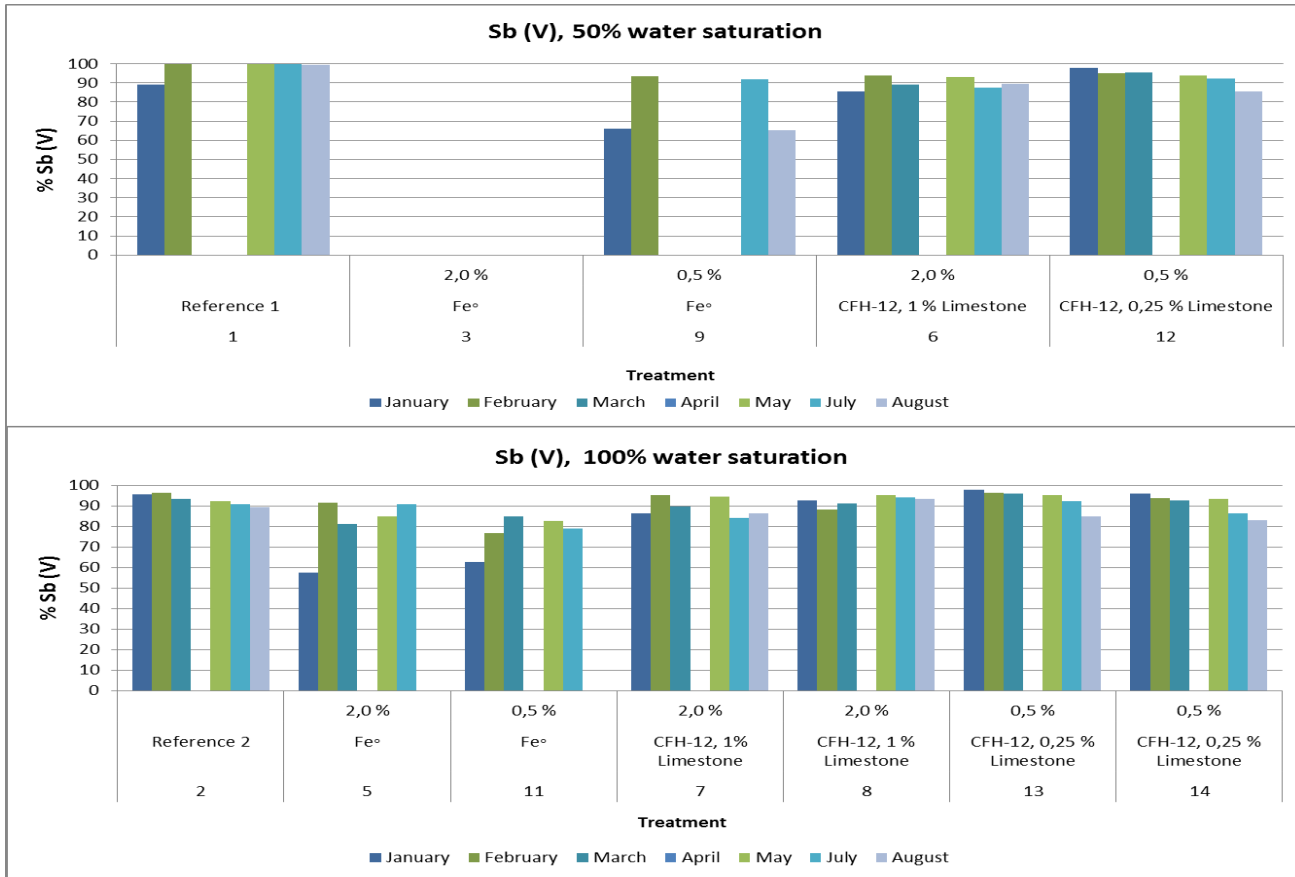
# Porevannskonsentrasjoner av kobber



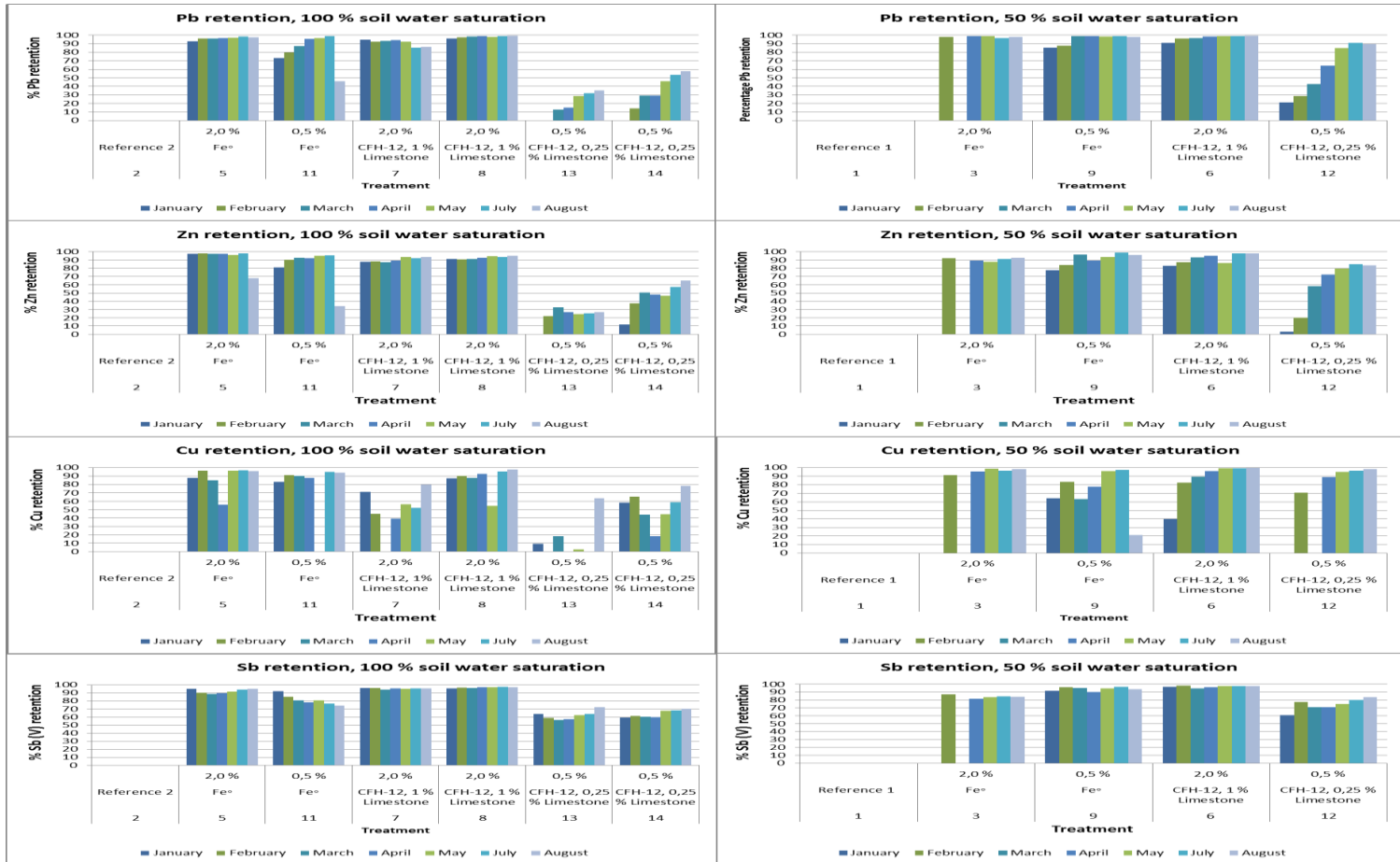
# Porevannskonsentrasjoner av antimon



# Spesiering av antimon



# Remedierungseffekt



# Hva var målet i dette prosjektet?

Er det effektivt å stabilisere forurenset skytejord  
jernsorbenter?

Vil grad av vannmetning og varierende redox forhold  
påvirke effekten til jernsorbentene?

Vil varierende redox forhold påvirke spesieringen av  
antimon?