

Gypsum Initiative

Reducing P losses from agricultural fields to coastal waters

What is gypsum?

- $\text{CaSO}_4 \cdot 2 \text{H}_2\text{O}$
- Phosphogypsum, flue-gas desulfurization gypsum, natural gypsum, recycled gypsum
- Gypsum must be free of harmful substances and excess P

How it works?

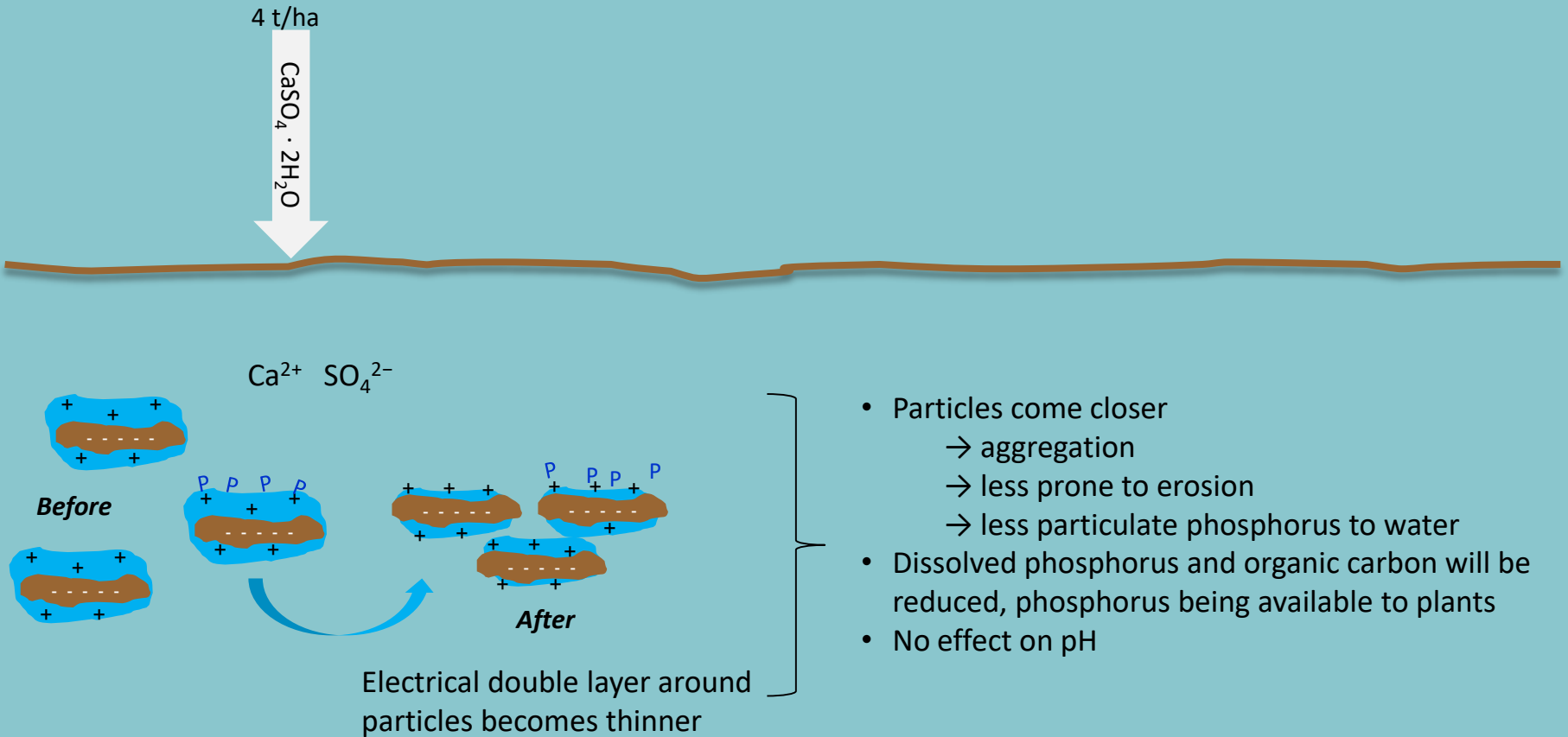
- Mechanism well-known, lots of research
- 50% immediate decrease in the losses of total suspended solids and phosphorus
- Organic carbon losses also reduced
- Effect lasts about 4 years
- Allows time for slower measures to work (legacy phosphorus)
- Can be applied to a large field area (not in lake catchments)
- No major agricultural restrictions

Reduction potential

- Finland 430 t/y phosphorus (out of the total load of 3110 t/y)
- Current national aim: to amend 50 000 ha till the year 2022
 - In addition to 6000 ha already amended
- Ultimate potential: nearly a million hectares (45% of the total field area)
- Other countries?



How gypsum works?





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Gypsum Initiative project
<https://johnnurmisensaatio.fi/en/projects/gypsum-initiative/>

SAVE project
[SAVE – Saaristomeren vedenlaadun parantaminen peltojen kipsikäsittelyllä \(helsinki.fi\)](https://saveproject.fi/)