Lessons learned from the Phos4You project and introduction to the presented results
Phos4You final conference, Essen & online, 22 – 23 September 2021 Marie-Edith Ploteau & Anke Althoff, Lippeverband
Phos4You context

EU list of CRM
Inclusion of P-Rock

Phos4You approval
12 Partners
7 Countries
11 Mio. € budget
60% ERDF

Sewage sludge ordinance
P-recovery mandatory

Phos4You final Sharing results at conference

EU FPR 2019/1009
Adoption of the EU fertilising product regulation

P-recovery Mandatory implementation in Germany

P-Recovery Mandatory implementation in Switzerland

Essen & online, 22 - 23.09.2021 | Phos4You final conference | Ploteau Marie-Edith | Lippeverband

© EuroGeographics Association for the administrative boundaries
Chart n° 2
What have we learnt?
Content

• Studied technologies to recover phosphorus

• Pathways for the recovered phosphate materials

• Regional/local scenarii for P-recycling deployment
Main lessons and introduction to results

STUDIED TECHNOLOGIES TO RECOVER PHOSPHORUS WORKED
Tests with sewage sludge ashes in existing demonstrators

Phosphoric acid

Tetraphos®

Parforce

Phos4life™
Tests with sewage sludge in demonstrators run by the Phos4You-Partner
Tests with wastewater from small WWTPs in demonstrators run by the Phos4You partners

- Microalgal biomasse
- P-rich biomasse
- CaP

- Microalgae PBR
- Filtraflo™-P with CCM
- Struvia™ @small WWTP
LCA carried on on P-recovery processes

About methods

• P-recovery technologies assessed in the reference system in which they are implemented
• System expansion approach and avoided burden approach were applied and gave similar results

About results

• Positive environmental impacts on mineral resource depletion
• Variable impacts on global warming or fossil resource depletion
Main lessons and introduction to results

RECOVERED PHOSPHATE MATERIALS USABLE IN EXISTING VALUE CHAIN
Possible pathways for P-materials identified
Practical assessment of the P-materials through the fertiliser sector

Global players

Regional players
Scientific assessment of the P-materials

©UGent

©Lippeverband/Ploteau M-E

Fertilizer, substrate and time effect on Ryegrass dry matter

- P salt CL
- S1 > S2 (S1 = S2 only at 1st cut)
- Increase followed by a decrease
- P salt CL ≥ TSP ≥ Zero P
- Cumulative DM compared to TSP
- + = 108% on S1; 124% on S2

Lippeverband, 2021 | Phos4You final conference | Ploteau Marie-Edith | Lippeverband

Chart n° 13
Clarification on how the P-materials fits in the legal frameworks & political context

Essential support of the nutrient platforms and networks

Auf European and national levels

- EU FPR 2019/1009 + Strubias CMCs
- REACH-regulation (EC) 1907/2006
- Waste directive 2008/98/EG for End-of-waste status
- Regulation on shipments of waste (EC) 1013/2006
- EU Green Deal/Farm-to-Fork_Strategy/Circular economy action plan...
Main lessons and introduction to results

REGIONAL/LOCAL SCENARIOS FOR P-RECYCLING DEPLOYMENT DRAFTED
Engagement with regional & international stakeholders essential and to be pursued
Extensive case studies for deployments of regional P-recovery
Partners present results in this 2-days conference, in reports and publications
The partnership expresses its gratitude for all supports provided to Phos4You!