

European Sustainable Phosphorus Platform

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15 Marzo 2023

Ripresa attività Piattaforma Italiana del Fosforo



Outline

- What is ESPP
- ESPP in action
- Members
- National platforms and interaction with ESPP

What is ESPP

ESPP is a neutral, non-profit organisation, established in 2014 and funded by its members, which brings together industry, knowledge institutes and public establishments, alongside national nutrient platforms, to **promote and implement phosphorus sustainability and nutrient recycling in Europe.**

Transparency
Clear decision making
Representation

Payment = commitment,
credibility,
independence,
in touch with reality

Decision by consensus
Mediation and not
advocacy

Balances the interests of society & industry from the
perspective of nutrient conservation



ESPP in action

NETWORKING AND CONTACTS

ACCESS to expertise, experience, competence

DIALOGUE with policy makers, technical organisations, stakeholders

COMMUNICATION of proposals for collaboration and calls

SHOWCASE of Members' actions, project results, success stories and innovations

EXCHANGE with national Nutrient Platforms and projects, international organisations

AWARENESS AND COMMUNICATIONS



WEBSITE

www.phosphorusplatform.eu



NEWSLETTER

[SCOPE and eNews](#)
100.000+ emailing list
(11–14% identified opening rate)



SOCIAL MEDIA

[LinkedIn](#)
1.100 followers
[Twitter](#)
2.500 followers

ESPP EU nutrient research & development projects list

EU H2020 (FP), LIFE, INTERREG and national/industry funded R&D projects on nutrient recycling and management

Date: 15-06-2021



European Sustainable Phosphorus Platform (ESPP)
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- 6 Finished non-EU funded research
- 7 Projects to add -

NUTRIENT RECOVERY TECHNOLOGY CATALOGUE

<http://www.phosphorusplatform.eu/techcatalogue>

P-RELATED R&D PROJECTS INVENTORY

www.phosphorusplatform.eu/R&D

ESPP – DPP – NNP nutrient recovery technology catalogue <http://www.phosphorusplatform.eu/techcatalogue>

Disclaimer:

This document aims to provide an indicative overview, not technical information to support decision making. It is accurate to the best of our knowledge, but further information and updates should be sought from the indicated contacts. The information included has been discussed between ESPP and the technology suppliers, and in general validated by these companies. However, ESPP, DPP and NNP do not have resources necessary to audit information provided and information is included as provided by the companies. Inclusion in this document does not constitute any endorsement of technology(ies) by the nutrient platforms, nor validation of intellectual property nor commercial claims.

Sewage P-recovery: full scale plants operating or under permitting/construction	2	CarboREM	14	Susphos	24
Fertiliser industry – E.g. ICL, Borealis ...	2	Other nutrient recovery TR6+	15	Spodofos (ThermusP)	24
Ash2Phos (EasyMining)	3	N2-Applied	15	SIMPhos-process (Cirkel)	25
TetraPhos (Remondis)	4	Ash2Salt (EasyMining)	15	PHOSPHIX™ (Clean TeQ Water)	25
PAKU (Endev)	5	Aqua2N (EasyMining)	16	Update not completed 2022 or underway	26
EuPhore	6	DUCTOR	16	HTCycle	26
TerraNova (HTC)	7	Anuvia Plant Nutrients	17	HAIX ion exchange (LayneRT™)	26
Kubota	7	Hitachi Zosen	17	LYSTEK	27
PHOS4Green (Glatt)	8	AMFER (Colsen)	17	Struvite enhanced: acid (MSE-mobile)	27
Metawater alkaline ash leaching	8	CCm	18	GENIUS (Nijhuis Saur Industries)	27
Struvite precipitation	9	Agro America (VP Hobe)	18	RePeat (Nijhuis Saur Industries)	28
Struvite enhanced	10	Parforce	19	Byosis (Nijhuis Saur Industries)	28
Sludge lysis	10	Slurry acidification	19	Varcor	28
Renewable Nutrients	11	STERCORE pyrolysis	20	Currently no longer under development (to our knowledge) - or integrated into other processes	29
Sewage P-recovery: (TRL 6+)	12	Pyreg (pyrolysis)	21	Extraphos	29
RAVITA (Helsinki HSY)	12	Technologies at R&D scale	21	RecoPhos thermal	29
Phos4Life (ZAR – Técnicas Reunidas)	12	Prayon	21	BioEcoSim (Suez)	29
ViViMag® (WETSUS - Kemira)	13	AguaDB	22	ePhos (Fraunhofer IGB)	30
Kemira iron / aluminium phosphate	13	Flashphos (Uni. Stuttgart, Italmatch)	22		
AshDec (Metso Outotec)	14	RSR (Green Sentinel)	23		
		P-roc	23		

EU POLICY AND REGULATORY

- Fertiliser supply and food security
- Green Deal
- Integrated Nutrient Management Action Plan
- EU Green Finance 'Taxonomy'
- Nitrogen recovery & recycling
- EU Critical Raw Materials List
- EU Fertilising Products Regulation (FPR)
- Soil Health Directive project
- CAP
- BAT (Industrial Emissions Directive)
- Recycled nutrients in Organic Farming
- Sewage Sludge Directive
- Urban Wastewater Treatment Directive
- Animal Feed Regulation
- R&D – Horizon Europe – LIFE – Interreg
- National policies e.g.
 - Implementation of Germany and S
 - P-recovery of
 - Austria proposal
 - P-recovery of &
 - Baltic Nutrient R Strategy (HELCOM)



EU POLICY AND REGULATORY

Key dossiers expected in 2023

- Fertiliser supply and food security
- Green Deal
- Integrated Nutrient Management Action Plan
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ESPP ACHIEVEMENTS IN 2022 AND 2023

- European [Green Deal](#)
 - Reduction in nutrient losses of at least 50% by 2030
- Legal obligation to recover P from sewage notified by [Austria](#)
 - 3rd European country, after Switzerland and Germany
- [Regulatory proposal](#) for Urban Wastewater Treatment Directive revision
 - Includes framework to set minimum reuse & recycling rates for N & P
- EU [Fertilising Products Regulation](#) entered into force July 2022
 - Composts, digestates, recovered phosphates, ashes, biochars
- Recovered precipitated phosphates in [Organic Farming](#)



ESPP ACHIEVEMENTS IN 2022 AND 2023



[Scope 143](#)



Summary soon to be published



[N-recovery working group](#)

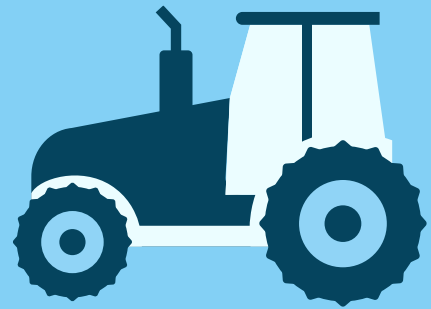
Members



Members

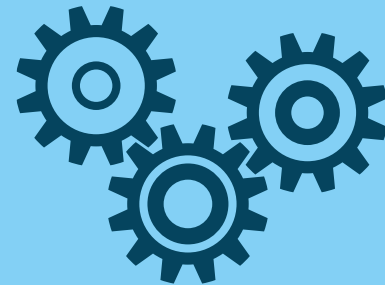


ESPP collaborations



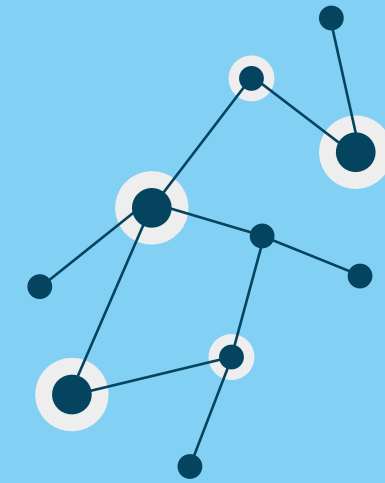
Farmers' organisations

COPA-COGECA,
iFOAM



Industry associations

EUREAU, FERTILIZERS
EUROPE, CEFIC



Networks

ECN, EBA



International organisations

NGOs, UNEP,
OECD, FAO

P

National and regional Nutrient Platforms

National and regional platforms

- Netherlands
- Germany
- Switzerland
- Ireland
- V4 (Czech Republic, Hungary, Poland and Slovakia)
- Sweden
- Italy

International platforms:

- North America Sustainable Phosphorus Alliance - 2017
- Japan PIDO - 2011
(Phosphorus Industry Devel. Organization of Japan)



Nutrient
platforms



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Nutrient
platforms

ESPP and national Nutrient Platforms

INFORMATION

LINK TO EU

SUPPORT

Roles and objectives of national Nutrient Platforms

SPECIFIC NATIONAL CHALLENGES AND OPPORTUNITIES

NATIONAL NETWORKING

Inventory of ITA competence and actions

- ITA network to develop synergies
- innovation transfer and joint projects

INPUT TO ITALY POLICY

- Sewage sludge management
- Manure emissions and nutrient losses
- Specific eutrophication challenges (Adriatic)

INTERNATIONAL INNOVATION

Optimising participation in and benefits of EU projects

- monitor international R&D, transform into ITA implementation

EUROPE INTERACTION

ITA input to EU policies

- communicating national competence and innovation in Europe

Keys to success of national Nutrient Platforms



TRANSPARENCY

- Statutes
- Decision taking by funders

DIFFERENT FUNDING MODELS POSSIBLE

Diversify funding sources to avoid dependency and stop-and-start

CLEAR DEFINITION OF WHAT PLATFORM WILL DO

- clear and agreed objectives
- realisable actions

MULTIPLE HELIX

- companies
- government
- R&D
- farmers organisation
- NGOs

CONTACTS



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*Thank
You*