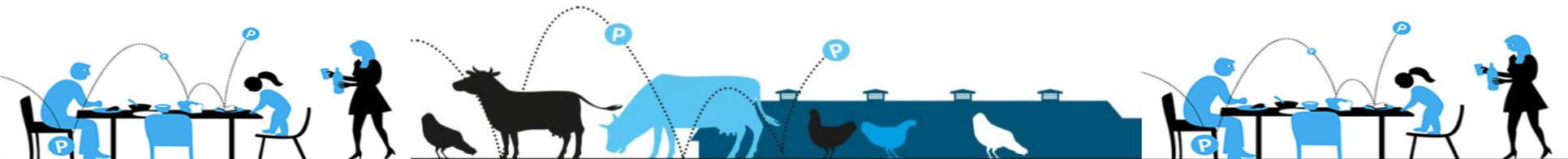


Road from ESPC1 to ESPC3

Conference Objectives

Ludwig Hermann

ESPC3
Finlandia Hall, Helsinki
11-13 June 2018



ESPC1, Brussels, 6.-7.03.2013

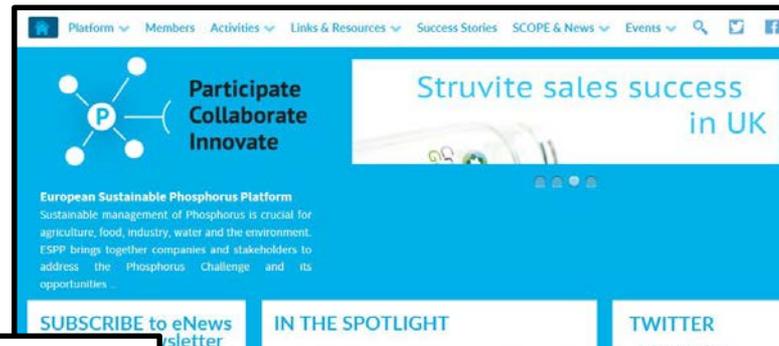
Launch of the European Sustainable Phosphorus Platform

Conclusions – 7 key messages

- *Business development* – pilot projects, finance, integrated P management
- *Smart cooperation* – dissemination, creating trust, supply & demand
- *Knowledge & research* – benchmarking, risk assessments, LCAs, agronomy, soil status
- *Incentives for efficient use & recycling* – recycling targets, certification
- *Harmonisation of legislation* – fertiliser regulation, Nitrates Directive, WFD
- *Developing EU policies* – EU as front runner, strategic raw materials, EIPs
- *Raising awareness* – at public, political and professional levels



European Sustainable Phosphorus Platform



Platform Members Activities Links & Resources Success Stories SCOPE & News Events

Participate Collaborate Innovate

Struvite sales success in UK

European Sustainable Phosphorus Platform
 Sustainable management of Phosphorus is crucial for agriculture, food, industry, water and the environment. ESPP brings together companies and stakeholders to address the Phosphorus Challenge and its opportunities.

SUBSCRIBE to eNews newsletter




European Sustainable Phosphorus Platform

SCOPE NEWSLETTER

October 2017 n° 125

Innovation

BIG P Conference, Old Trafford, Manchester
 Challenges of tightening phosphorus discharge limits for big and small sewage works: technologies, economic costs, environmental costs, biosolids.

SYMPHOS: Phosphorus industry & phosphorus use innovation
 Summary of the 4th International Symposium on Innovation and Technology in the Phosphate Industry.

US Phosphorus RCN
 US P-RCN (Research Coordination Network) final meeting shows many publications and some outstanding questions.

North America Phosphorus Forum
 The Sustainable Phosphorus Alliance (North America) second stakeholder Forum, Washington DC, looked at phosphorus management today and tomorrow.

Newtrent's manure management technology catalogue
 US dairy company Newtrent launches online selection tool for manure nutrient recycling technologies and suppliers.

Recycled fertilisers

Health and safety

Ecotoxicity of fertilisers & potassium monophosphate
 Potassium, nitrogen and phosphate fertilisers and relevant mineral salts were tested for ecotoxicity on aquatic snails and fish.

New book on phosphorus food science
 17 chapters current knowledge on P metabolism, P in food, P and health and nutrient interactions.

Ecotoxicity of recycled phosphate products
 Contaminants analysed and ecotoxicity tested for 3 struvites, 5 thermal recovered phosphates, and leachates, suggesting low risk to the environment from use in agriculture.

Circular economy and recycling

France conference on phosphorus recycling in agriculture
 First ever national meeting on recycled phosphorus in agriculture discusses recycled nutrient products quality, policy, legislation and circular economy.

Resource efficiency in practice: improving farm nutrient management
 EU funded, 8 regions project to identify optimal nutrient

IN THE SPOTLIGHT

Everglades Foundation George Barley Water Prize - Stage 2 US\$ 80 000 prize

Now open for submissions - deadline to request materials = 15th July 2017

THE GEORGE BARLEY WATER PRIZE

Stage 2 of the Everglades Foundation George Barley Water Prize is **currently open for applications** for teams capable of testing their solution for two consecutive weeks processing c. 24 litres/hour (see exact specifications in application materials). Applicants will submit daily inflow and outflow samples from their technology. A total of \$80,000 will be awarded in November of this year to the top 3 teams in Stage 2. You can apply to stage 2 whether or not you applied to stage 1. **The deadline to request Stage 2 application materials is 15th July 2017 and the deadline to submit applications is 31 August 2017.** Beyond Stage 2, the Pilot Stage, the third stage of the George Barley Water Prize, will qualify 10 teams to compete at a Pilot location in Canada in early 2018, with awards totalling \$800,000. Finally, the Grand Prize will see the top 4 teams compete in Florida for the ultimate \$10 million award. Information www.barleyprize.com

TWITTER

@phosphorusfacts

7 Nov. Nutrient sustainability for food industry, led by ESPP at Sustainable Food and Beverage Conference, Coventry UK @wbcsd @weAgriFood

RT @vroumeas: #Wine is leading in the food industry to reduce their environmental impacts with immediate quality gains #AEC17 #circularecon...



NEWS

ESPP eNews no. 12 - June 2017
 June 15, 2017
 Newsletter about nutrient sustainability, European Sustainable Phosphorus Platform

ESPP: a coalition for action

- **Wide objective:**
Phosphorus stewardship
 - *global food security*
 - *circular economy*
 - *environmental protection*
 - *healthy diet and food safety*
- **Bring together:**
 - *water & waste industries,*
 - *mineral and organic fertilisers, chemicals,*
 - *P-recycling technology suppliers,*
 - *national & regional governments,*
 - *knowledge institutes ...*



Success story:

NutriTrade Baltic local fish

- Local fisherman incited to catch cyprinids
 - restore food web (algal grazing zooplankton)
 - remove nutrients from the sea
- Promote new markets for local fish products:
 - recipes, chefs, new processing routes & consumer products
- Biogas production from processing by-products
- Cost: c. 66 €/ kgP removed (not inc. sales)

Launched 2015. John Nurminen Foundation / NutriTrade
<http://nutritradebaltic.eu/pilots/pilot-fish/>



Example: communicating success stories

- **Actions:**
 - *vision & awareness*
 - *stakeholders & networking*
 - *dissemination*
 - *policy and regulation dialogue*



How ESPP functions

Decision by consensus

Mediation rather than advocacy

- enable dialogue between stakeholders
- develop shared proposals for policy
- communicate with regulators

Example: Joint Statement on the EU Fertilisers Regulation proposal, between EU federations in the mineral fertilisers, organic fertilisers, soil improvers, digestate, animal by-products, limiting materials and wastewater industries, 20th November 2017 www.phosphorusplatform.eu/regulatory



Joint statement on the EU Fertilising Products Regulation
20th November 2017

Our organisations jointly underline the importance of addressing a number of **important outstanding issues in the proposed EU Fertilising Products Regulation**, including those indicated below. Not all of our organisations are directly concerned by all of the points listed, but we consider that they require attention to achieve a final regulatory text which is workable in implementation, which will facilitate innovation and development of the nutrient circular economy and nutrient stewardship, whilst ensuring the protection of farmers, consumers and the environment.

The signatories call the co-legislators to **conclude this important dossier rapidly**, because implementation is strongly awaited by industry and stakeholders to develop the Circular Economy, whilst **ensuring dialogue** with industry and operators to **ensure that the final text is functional**.

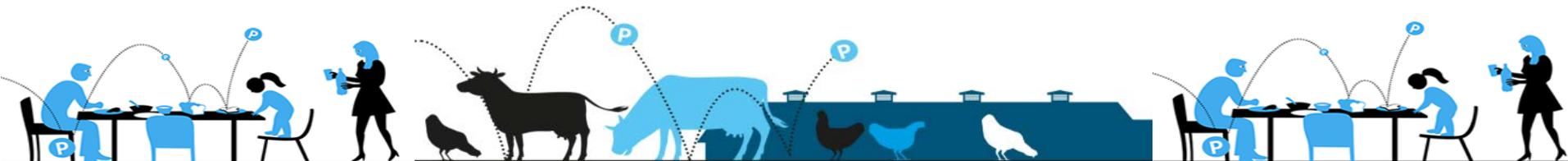
In this context, the European Parliament report adopted 24/10/17 and the Council discussions provide in many respects a good starting point for trilogue discussions.

We particularly underline the following issues:

Positive from the European Parliament as adopted

- Confirm the proposed "Mineral" (<1% organic carbon) and "Low-carbon" fertilisers definitions** both in Annex I (PFCs) and Annex III (labelling).
- Need to **resolve the exclusion of industry by-products**, which are not waste, as highlighted by the European Parliament⁴.
- Importance of developing **implementation guidance** and of ensuring **assessment of Regulation implementation**⁵.
- Favour the **co-existence of production lines for CE-marked and National fertilisers** on the same production sites by validating the production site if lines for the processing of input materials authorised are clearly separated from production lines for the processing of other input materials⁶.
- Confirm the objective to **accelerate and support the "STRUBIAS" process**⁷.
- Polymers**, for controlled release fertilisers and for improving stability⁸: ensure that biodegradability criteria are feasible and agronomically appropriate.

Page 1 / 4



ESPC2, Berlin, 5.-6.03.2015 - TAKING P TO THE NEXT LEVEL

Launch of the German Phosphorus Platform

12 policy action proposals: 5 cont'd from 2013 (EU policies, rule harmonisation, knowledge & research, awareness, incentives) +

- Circular Economy – closing the phosphorus loop as flagship*
- EU fertilising products regulation – first deliverable of the CE package*
- P-recycling from animal by-products – include ABP as raw material*
- Nitrates Directive – allow recycled mineral fertilisers beyond 170 kg in NVZ*
- National/regional objectives & action plans – P re-use and recycling*
- Reduce P-losses from agriculture and food waste – use efficiency*
- European Institutions (EEA, EIP, JRC) – data monitoring, evaluation of P-flows*



Developments in Europe

30 % of PM_{10} air particles in Milan result from livestock ammonia emissions



Phosphorus is the first (non morphological) cause of EU Water Framework Directive quality status failure



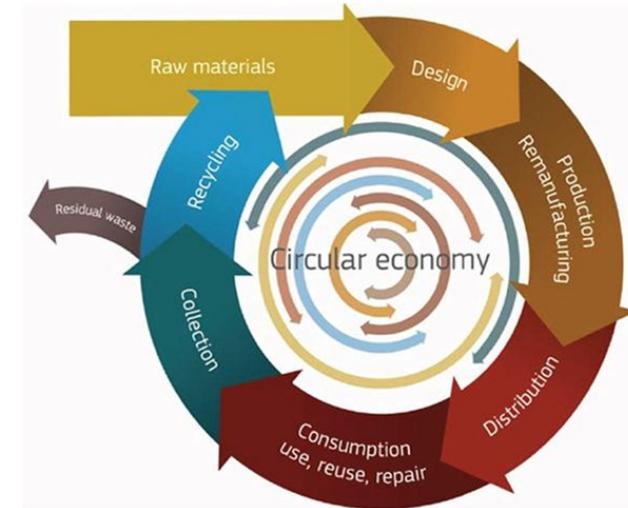
European policies driving nutrient recycling

2014 EU Consultative Communication on Sustainable Use of Phosphorus

Proposals include:

increasing knowledge and research, P-recycling,
risk of soil contamination by mineral or recycled fertilisers

see www.phosphorusplatform.eu/scope107



2015: EU Circular Economy Package Flagship initiative = new EU Fertilisers Regulation

ESPP in action.
In responses to EU public consultation:
**54% of respondents cited
bio-nutrients or
phosphorus**



European policies driving nutrient recycling

2015-2018 (ongoing) – Revision of EU Fertilisers Regulation

- Current Regulation = (virgin) mineral fertilisers only
- New = composts, digestates, soil improvers, biostimulants, recycled nutrients, end-of-waste
- Will open EU market for recycled nutrient & organic carbon products and also for recycling technologies
- Currently in Council - Parliament trilogue decision process
- Many issues remaining

STRUBIAS (ongoing)

- Definition of criteria for EU Fertilisers Regulation for
 - struvite and phosphate salts
 - ashes used directly as fertilisers
 - ashes chemically processed to produce fertilisers
 - biochars and pyrolysis products

ESPP in action.

ESPP amendments adopted by European Parliament

- acceleration of STRUBIAS
- “low carbon” fertilisers category (with Fertilisers Europe, ECOFI)
- traceability
- widening input materials for food industry by-products, plant materials, animal by-products ...

see www.phosphorusplatform.eu/regulatory

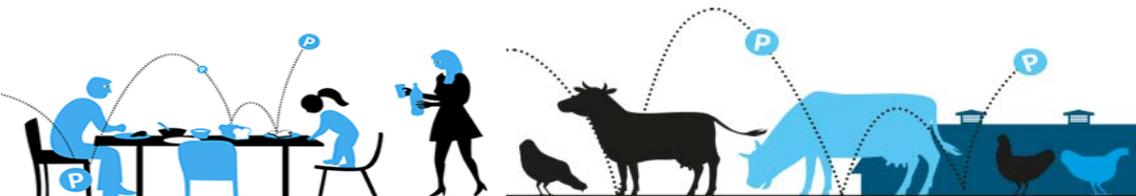


EUROPEAN COMMISSION

European Commission > DocsRoom > Document detail

Proposal for a Regulation on the making available on the market of CE marked fertilising products and amending Regulations (EC) No 1069/2009 and (EC) No 1107/2009

Document date: 17/03/2016 - Created by GROW.A.S.DIR - Publication date: 17/03/2016



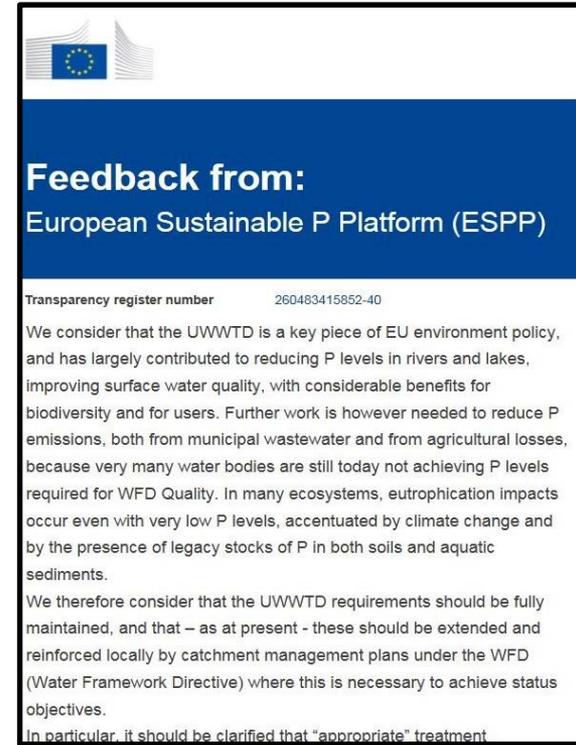
European policies driving nutrient recycling

Nutrient loss abatement policies

- *Urban Waste Water Treatment Directive 1991/271*
- *Nitrates Directive 1991/676*
- *Water Framework Directive 2000/2000*
- *Groundwater Directive 2006/118:*
phosphorus on monitoring list 2014
- *National Emissions Ceilings Directive 2016 revision*
→ 19% ammonia emissions reduction by 2030

ESPP in action

2017 submissions to EU consultations on revisions of water protection policies





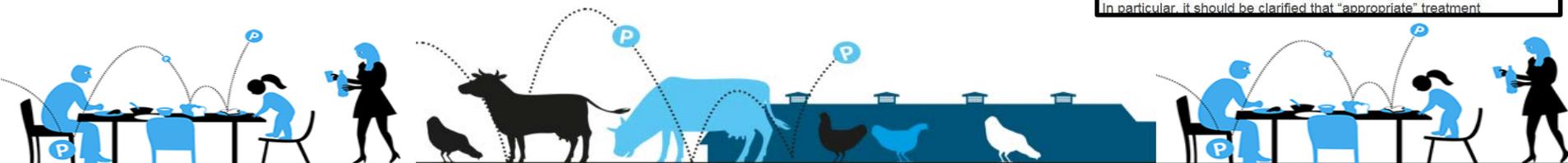
Feedback from:
European Sustainable P Platform (ESPP)

Transparency register number 260483415852-40

We consider that the UWWTD is a key piece of EU environment policy, and has largely contributed to reducing P levels in rivers and lakes, improving surface water quality, with considerable benefits for biodiversity and for users. Further work is however needed to reduce P emissions, both from municipal wastewater and from agricultural losses, because very many water bodies are still today not achieving P levels required for WFD Quality. In many ecosystems, eutrophication impacts occur even with very low P levels, accentuated by climate change and by the presence of legacy stocks of P in both soils and aquatic sediments.

We therefore consider that the UWWTD requirements should be fully maintained, and that – as at present - these should be extended and reinforced locally by catchment management plans under the WFD (Water Framework Directive) where this is necessary to achieve status objectives.

In particular, it should be clarified that "appropriate" treatment



National policies driving nutrient recycling

Switzerland 2016 obligatory P-recovery from sewage sludge and animal waste ash (or separate storage pending recovery)

Germany 2017 new sludge ordinance (AbfKlärV) makes P-recovery obligatory for all sewage works > 50 000 p.e.

See ESPP eNews n° 7 <http://www.phosphorusplatform.eu/scope-in-print/news/1408-eneews7>



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Principales nouveautés dans l'ordonnance sur le traitement des déchets

L'ordonnance sur le traitement des déchets (OTD) est soumise à une révision totale. Voici en résumé les principales modifications :

- Des exigences sont formulées pour la valorisation de certains déchets, laquelle n'était pas encore réglementée dans le droit fédéral. Il s'agit notamment des biodéchets (y compris réglementation relative aux possibles installations de traitement) **et des déchets riches en phosphore.**
- Un plan d'élimination des déchets est exigé pour tout projet de construction. Le maître d'ouvrage est tenu de déterminer les déchets dangereux pour la santé et pour l'environnement (p. ex. amiante, déchets de chantier contenant des biphényles

Scope Newsletter n° 118

<http://www.phosphorusplatform.eu/scope118>



National policies driving nutrient recycling

Finland government 2017 objective to process 50% of manure and sewage sludge for nutrient recycling

HELCOM Recommendation 38/1 2017 (9 countries + EU) - requires

- “maximum recycling or recovery of phosphorus and other useful substances and compounds” from sewage sludges.
- biosolids to land only to crop needs
- P-recovery from ash if sewage sludge is incinerated
- annual reporting of % P recovered from waste water

See www.phosphorusplatform.eu/eNews9

<http://mmm.fi/en/recyclenutrients>



ESPC3, Helsinki, 11.-13.06.2018

From nutrient stewardship to EU Nutrition Mission Criteria and ideas (for discussion)

1. *Bold, inspirational with wide societal relevance*
Need to foster inclusivity – nutrition is relevant to all
2. *A clear direction: targeted, measurable and time-bound*
Clean water, fertile soils, impact on ecosystems, planetary boundaries
3. *Ambitious but realistic*
e.g. Half nutrition footprint on biosphere by 2030
4. *Cross-disciplinary, cross-sectoral and cross-actor innovation*
Include consumers, food industries, farmers, policy makers, NGOs
5. *Multiple bottom-up solutions*
e.g. Turning agriculture from a greenhouse gas emitter to a carbon sink, maintain/restore soil carbon

Criteria by Mariana Mazzucato)

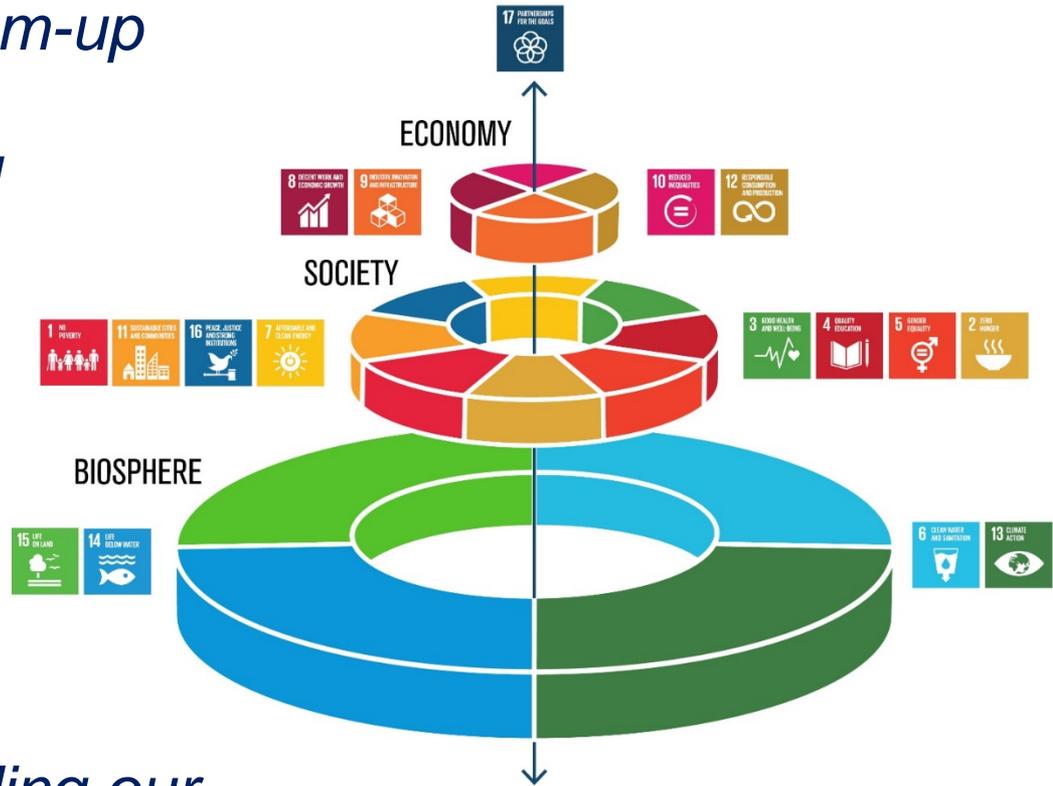


ESPC3 approach: Bottom-up

Use Economy as a tool

Target Society for a better life for all

Save the Biosphere
 the only resource providing our life supporting systems



(Source: Stockholm Resilience Institute)



HELSINKI
11-13 June
2018



European
Sustainable
Phosphorus
Conference

***Good luck in developing our
Nutrient Mission!***

