

## ESPP SCOPE Newsletter n°154 – April 2025

<b><i>Nutrient Circular Economy stakeholder workshop</i></b> .....	<b>1</b>
<i>Proposed EU Circular Economy Act 2026</i> .....	2
<i>Stakeholder proposals</i> .....	2
<i>Research project proposals</i> .....	4
<i>Proposals in discussions</i> .....	6
<i>Conclusions of parallel sessions</i> .....	6
1) <i>Waste status and secondary materials</i> .....	6
2) <i>Animal By-Products</i> .....	6
3) <i>Waste to Resource</i> .....	7
4) <i>Fiscal and financial tools</i> .....	7
<i>Comments on ESPP draft proposals</i> .....	7
<b><i>Workshop on nutrients in the EU Common Agricultural Policy (CAP)</i></b> .....	<b>8</b>
<i>Regulatory and market context</i> .....	8
<i>Nutrient management in the current CAP: “conditionality”</i> .....	8
<i>Beyond Conditionality</i> .....	9
<i>FaST (Farm Sustainability Tool for Nutrients)</i> .....	9
<i>Evaluation of CAP impacts on nutrients</i> .....	9
<i>Examples from Member States</i> .....	10
<i>Stakeholder positions</i> .....	11
<i>Research projects</i> .....	13
<i>Discussion</i> .....	14
<b><i>ESPP members</i></b> .....	<b>14</b>

*This Newsletter summarises the workshops organised by ESPP to input to the **future EU Circular Economy Act** and to the **revision of the EU Common Agricultural Policy (CAP)**, Brussels & online, 21<sup>st</sup> & 22<sup>nd</sup> January 2025.*

### Nutrient Circular Economy stakeholder workshop

Around 120 participants contributed to this workshop, around one third in Brussels and two thirds online.

**Proposals for the EU Circular Economy Act**, developed at this workshop, are [here](#) for comment.

**Robert van Spingelen, ESPP**, opened the workshops summarising why phosphorus stewardship is needed. Phosphorus losses to surface waters cause eutrophication, one of the principal reasons why EU Water Framework Directive quality status objectives are failed. The EU Green Deal and the UN Biodiversity Convention have both committed to reduce losses by 50%.



But phosphorus is also essential for food production, essentially for fertilisers. The EU is nearly 90% dependent on imports and around 30% of phosphate fertilisers used today are imported from Russia, at a price of over a billion €.

Phosphate rock is on the EU Critical Raw Materials list (EU Critical Raw Materials Act [2024/1252](#)). Improving phosphorus use efficiency and recycling of phosphorus are both essential to reduce phosphorus losses and to reduce EU dependency on imported phosphates, and so contribute to resilience and food security.

## Proposed EU Circular Economy Act 2026



**Sylvie Grajales, European Commission, DG Environment**, explained that circular economy is a priority for Ursula Von der Leyen's second mandate as President of the European Commission. Jessika Roswall's title is "Commissioner for Environment, Water Resilience and a Competitive Circular Economy". The new Commission's [political guidelines](#) and the Commissioner's

[mandate letter](#) commit to a Circular Economy Act, which will be a Regulation (decision by Parliament and Council) including supporting demand for secondary raw materials and creating a single market for waste, in particular for Critical Raw Materials.

The proposed Circular Economy Act will follow on from the first and second [Commission Circular Economy Action Plans](#) and is expected to be an "omnibus" Regulation (i.e. including modifications of a number of other existing Regulations). In parallel, relevant work is underway on implementation of the EU Critical Raw Materials Act, to update the [EU BioEconomy Strategy](#), and on an Implementing Regulation to define phosphorus "reuse and recycling rates" as required by the revised EU Urban Waste Water Treatment Directive (UWWTD) [2024/3019](#) (by end 2027).

The objective is adoption by Parliament and Council of the Circular Economy Act by end 2026, with a first public consultation in Spring 2025. The objectives of the Act are that circularity should improve EU competitiveness, reduce import dependencies and contribute significantly to EU greenhouse emission reductions. Key pillars of the Act will be:

- Electrical and electronics recycling: revision of the WEEE Directive 2012/19
- Developing the market for secondary raw materials, including by reforming End-of-Waste (faster, coherent National EoW), Extended Producer Responsibility, Public Procurement (note that revision of the EU Public Procurement regulations is currently open for public [consultation](#) to 7<sup>th</sup> March 2025), industry policy, fiscal and trade policies. Actions should be prescriptive to open the market for secondary materials, but also flexible to adapt to technical and economic developments.

Concerning the definition of phosphorus reuse and recycling rates under the revised UWWTD Directive, significant questions concern the crop-availability (fertiliser value) of phosphorus in sewage sludge or sludge digestate, and organic forms of recovered P (such as biochars).

## Stakeholder proposals



**Gari Villa-Landa and Paula Lindell, EurEau** (the European Federation of Water Services) underlined the need for policy coherence for the circular economy and a holistic approach addressing technology, regulation and governance. Also, prevention of pollution at source is essential, as contaminants in secondary materials are an obstacle to circularity.



To develop the circular economy potential of water services, in particular through resource and nutrient recovery from urban wastewater and sludge, an enabling framework, that recognises the need for different solutions for different realities, is needed:

- Regulatory: clear End-of-Waste criteria for resources and nutrients recovered from sludge and wastewater and further consideration of wastewater and sludge as inputs under the EU Fertilising Products Regulation.
- Coherence: between regulations, definitions, and sectoral policies.
- Market pull (to promote the use of recovered resources and nutrients): including through minimum recycled phosphorus ratios in mineral fertilisers.
- Sludge quality and user confidence when valorising sewage sludge to land: the update of the Sewage Sludge Directive should ensure quality and user confidence with standardised quality assessments.
- Funding: innovative financing models outside the water financing schemes, based on the realisation of the benefits of resource and nutrient recovery from urban wastewater and sludge for the society.
- Technology: advanced technologies for resource and nutrient recovery are expensive and, with exceptions, not mature enough. Investment and time are needed for scale-up to full-scale.

**Jean-Yves Stenuick, Aqua Publica Europea** (EU association of public water operators) highlighted circular opportunities when sludge is applied to agricultural land, incinerated with resource recovery or used to produce renewable energy by e.g. anaerobic digestion.

The Sewage Sludge Directive should be updated to align with latest

scientific evidence, to increase public trust and reduce discrepancies across the EU. It should include crop-based quality standards, be broadened to other applications (e.g., land restoration), and establish EU quality standards for composts and digestates including sewage sludge. More research into resource recovery from sludge and wastewater is critical.

Aqua Publica Europea called for the establishment of a stable EU market for recovered resources with clear quality standards and incentives to encourage their use.

Regulatory actions needed include End-of-Waste criteria (e.g. nutrients, char, cellulose) and clarification of regulation when different waste streams (e.g., food waste) are mixed for co-digestion. Use of recycled nutrients could be supported through the CAP or the EU Taxonomy.

Aqua Publica Europea finally stressed the importance of an enabling regulatory framework to allow for the planning and investment certainty needed and for source control measures to reduce contaminants and improve the quality of outputs.



**Jean Benoit Bel, ACR+** (Association of Cities and Regions for Sustainable Resource Management) reminded of the importance of the Waste Hierarchy. Reducing food waste brings much greater benefits than recycling it. Yet there are today no binding EU targets for prevention and very limited funding.

Better sorting/separation of biowastes is needed. The separate collection obligation, fixed by the Waste Framework Directive art. 10 at 1<sup>st</sup> January 2024, remains widely non implemented by Member States.

Policies should coherently support circularity: fertiliser regulations, soil policy, environmental policies, CAP. Economic instruments are needed to support circularity, such as ecotaxes. Coherent definitions are needed for terms such as “bio-based fertiliser” or “recycled fertiliser”. National data collected on biobased materials is incoherent. The placing on the market of fertilisers using bio-based and recycled inputs is complex, often prohibitively so.

A specific problem is the Animal By-Product (ABP) status of biowastes (separately collected household, canteen and similar organic wastes). The ABP Regulations pose obstacles to recycling and are complex and incomprehensible to operators.

See the **Life Biobest project policy recommendations** for bio-waste management ([Feb. 2025](#)). These include:

- Improve monitoring and enforcement of existing EU biowaste separation and collection obligations;
- Set legally binding EU targets for both quantity and quality of biowaste collection, maximum amount of biowaste

remaining in residual municipal waste, maximum remaining residual waste;

- Taxes to discourage landfill;
- Variable gate fees depending on quality of biowaste;
- Variable waste charging (Pay and Save As You Throw);
- Fully integrate incineration into ETS (Emissions Trading Schemes);
- Develop markets for composts and digestates: recognition in EU Soil Health policy, support use by farmers through CAP and Rural Development Plans;
- Address fragmentation in compost and digestate quality criteria and establish an EU QAS (quality assurance standard), with stricter requirements than the EU Fertilising Products Regulation (e.g. on organic contaminants).



**Pär Larshans, RagnSells**, a Scandinavian waste valorisation company built around sustainability objectives since 1881, explained the “10 Billion Challenge” launched by the company. This aims to feed the world population without depleting natural resources by developing use of secondary resources in agri-food production.

RagnSells sees wastewater treatment plants as resource centres, producing clean recovered phosphate, ammonia, renewable energy and water for reuse.

The company now has two Ash2Phos plants under construction, in Schkopau Germany and Helsingborg Sweden. Each will recover purified calcium phosphate from 30 000 t/y of sewage sludge incineration ash (see ESPP nutrient recycling technology [Catalogue](#)). An agreement has been signed to supply this for animal feed to Friesen Group, Canada, (see [ESPP eNews n°90](#)) because this is currently not allowed under EU Animal Feed Regulation 767/2009.

See also Ragn-Sells proposals on rethinking the Waste Hierarchy to enable circular economy in [ESPP eNews n°93](#).



**Arnoud Bouxin, FEFAC** (European Feed Manufacturers’ Federation), explained that animal feed has always been strongly circular. Pigs and chickens are traditionally fed food and leftover and inedible fraction of crops. Today’s feed industry continues use of circular inputs, in particular very many agri-food processing by-products.

Prerequisites are safety, traceability and producer responsibility (overseen by national competent authorities), transparency and consumer confidence.



This is confirmed in FEFACs' [Food Sustainability Charter 2030](#) (published 2020) and detailed in FEFAC's [Circular Feed – Optimised Nutrient Recovery Through Animal Nutrition](#) (June 2022).

FEFAC's feed circularity ambition is built on four principles:

- Appropriate safety and quality requirements for (human) food versus (animal) feed
- Avoid food / feed land use competition
- Nutrient digestibility in feed (nutrient use efficiency)
- Proximity source / use

Important emerging opportunities for feed circularity include better use of former foodstuffs, that is human food products which cannot be sold for reasons of logistics or because of manufacturing problems, and feeds for aquaculture.

However, a range of different materials are today not legally allowed into animal feed in Europe, despite and nutrient value. These include:

- Food wastes
- Ruminant PAP (processed animal protein)
- Materials excluded by some inappropriate standards
- Purified mineral nutrients from extraction processes
- Nutrients recovered by growing algae, unicellular organisms

These restrictions were set sometimes long ago and based on safety concerns at the time, or on the precautionary principle. FEFAC is currently coordinating an informal 'Circular Feed Platform', bringing together around ten industry and stakeholder associations (including ESPP). The aims are to promote feed circularity and develop a consensus-supported Circular Feed Action Plan. This will identify regulatory restrictions and justify why they may be reconsidered, providing feed safety can be secured, which may require an update of the risk assessment by EFSA and an assessment of the effectiveness of risk management measures; It will also identify research and data needs and provide guidance to industry and stakeholders.



**Jessica Fitch, ECOFI and EBIC** (European Consortium of Organic Fertilisers Industry, European Biostimulants Industry Consortium), stated that the EU Animal By-Products (ABP) regulations are today not fit for purpose, because they fail to enable safe circularity of animal-origin materials.

Animal by-products should be a priority for developing circularity, in the frame of the food system hierarchy (preferred uses: human food, animal feed, fertiliser, energy), because of their nutrient value, organic matter and potential biostimulant properties; reduced nutrient losses. This also enables redistribution from nutrient hotspots

to where farmers and soils require them and local development potential.

A [joint letter](#), signed by 16 organisations (including ESPP), 2024, calls on the European Commission to rethink the ABP regulations. DG SANTE has replied that the possibility of a review is under consideration.

ECOFI and EBIC's proposals for the Circular Economy Act are:

- Commit to a rewrite of the Animal By-Product regulations to facilitate safe circularity,
- Streamline administrative procedures and dossiers, and avoid duplication and incoherence between authorisations for different uses,
- Define criteria for standardised methods, not case by case or origin-based,
- Differentiate between "sanitisation" of materials and "fundamental transformation" (e.g. incineration, hydrolysis),
- Clarify interpretation of Animal By-Product End-Points. Does achieving an End-Point remove restrictions ? Traceability ?
- All national ABP End-Points, which have enabled safe recycling for years, should be analysed for transposition into EU End-Points,
- Avoid limitative input material lists in the EU Fertilising Products Regulation.

**Circular Economy proposals** from Business Europe, the European Economic and Social Committee, ECOS NGO (Environmental Coalition on Standards), Suez and Ragn-Sells are summarised in ESPP eNews [n°93](#) and [n°94](#).

## Research project proposals



**Daniel Frank** presented the analysis carried out for ESPP of policy proposal made by R&D projects. Over 600 R&D projects were contacted resulting in 34 responses (totalling nearly 1 000 pages). These were then grouped by theme or object. Some 40 policy proposals were identified covering a range of EU regulations, markets for recycled nutrients, stakeholder engagement and research.

Proposals supported by a significant number of projects include:

- policies should support product quality;
- simplifying acceptance of recycled nutrients under EU and national fertilisers regulations;
- developing an official definition of "bio-based fertilisers";

- providing policy, regulatory and/or financial market support for recycled nutrients;
- improving access to data concerning recycled fertiliser products, organic and organo-mineral fertilisers on the market;
- stakeholder engagement and communications.

It was highlighted that the summary document would be a living document and can help future R&D projects as a starting point and reference document for their policy recommendations to avoid duplication.

“Summary of R&D project policy proposals on nutrient circular economy”, Daniel Frank [www.danielfrank-communications.com](http://www.danielfrank-communications.com) for ESPP, 2 January 2024. Document online here: <https://www.phosphorusplatform.eu/policy2025>



**Laura Van Schöll, NMI**, summarised proposals from the ESNI Working Group on Policy. ESNI, coordinated by Biorefine, brings together research organisations to share experience and identify research needs. Proposals include:

- improve information on national fertiliser and waste regulations and on national implementation of EU

legislation (e.g. on waste): translation into English, single point of access, indication of contact point);

- harmonise definitions and vocabulary between different EU regulations, and ensure that definitions are clear: e.g. for organic fertiliser, reuse / recover / recycle, manure, fish sludge. This should use [IATE](#) (Interactive Terminology for Europe);
- value of clear EU guidance (good example: the EU Fertilising Products Regulation [FAQ](#));

A problem raised by a number of participants is the absence of continuity of R&D knowledge. Research is increasingly structured around 3-4 year projects, with cyclic loss of people and expertise. R&D project reports and data ‘disappear’ because project websites cease to exist at the end of the project (end of funding). The ESNI working groups aim to address this and supply continuity of expertise and knowledge, and project outcomes are published on [Biorefine e-Library](#).

*ESPP notes that the website problem is now partly resolved, as EU-funded R&D project reports are now stored permanently and publicly on the EU CORDIS website (see example of [Fertimanure](#)). However, reporting on EU CORDIS is often incomplete, and some cited scientific articles are inaccessible without payment to the publisher. Also, CORDIS does not cover LIFE or INTERREG projects, and the knowledge access / search interface could be improved.*



**Andrea Salimbeni, Re-Cord**, presented joint proposals for circular economy policies developed by the fertiliser and waste water sectors in Italy. Several EU policies are identified as already supporting phosphorus circularity (revised UWWT Directive, CRM Act, EU FPR). Others offer a framework which could support nutrient circularity: Agricultural ETS (Emissions Trading Systems) and CBAM – if extended to nutrients, [Conflict Minerals Regulation](#).

Proposed overall objectives are:

- Reduce nutrient losses in the agri-food system, promote precision farming nutrient application.
- Recognise phosphorus as a “Strategic” material for food security.
- Increase economic competitiveness of secondary materials and legally enable a commercial market for secondary materials (precursors)
- Create a long-term market demand for recycled nutrients. Farmers cannot pay higher prices for fertilisers, so economic support for recycled nutrients will be needed in some cases.
- Ensure sustainable recycling systems.

Concerning the revised EU Urban Waste Water Treatment Directive (UWWTD), Italian operators consider that recycling rate of 75% of sewage works inflow is feasible. Rates should be defined to ensure that phosphorus is effectively used by taking into account crop availability or industrial functional use. Challenges include: how nutrient removal and phosphorus recovery obligations will impact on the waste water treatment energy neutrality objective?

Work is considered necessary to:

- Provide reliable information for water and waste operators on BAT (best available technologies) for phosphorus recycling
- Define feasible subsidy schemes to support recycled nutrient uptake, for example following the example of the existing biomethane incentives. How to finance such incentives?
- Monetise the social value / externality cost of reducing non-renewable resource consumption (comparison to carbon pricing).

## Proposals in discussions

Workshop participants expressed differing positions regarding 'Waste' status of secondary raw materials:

- 'Waste' status is important, because it ensures safe management, and so market confidence.
- If a legal status is identified for 'Secondary Materials', this should not be easier or not coherent with regulatory status 'By-Products'.
- Rather than creating a new legal status for 'Secondary Materials', prefer to facilitate the change of status from 'Waste' to 'Product'.
- Current 'End-of-Waste' procedures are too complex and too slow.
- Tacit End-of-Waste (industry self-declaration) should be generalised (for certain types of waste = non-problematic). Authorities should be obliged to respond to such declarations within a specified deadline.
- The European Commission should develop EU Guidance on End-of-Waste.
- A material which is recycled onsite should not be considered 'Waste'.

Several participants noted the need for studies to evaluate and justify the positive environmental and social externalities of nutrient circularity (e.g. non-consumption of non-renewable resources). This could then be monetarised in systems such as ETS or CBAM.

## Conclusions of parallel sessions

From each of four parallel sessions, rapporteurs identified points to modify or add into ESPP's draft proposed input for the EU Circular Economy Act.

### 1) Waste status and secondary materials



**Rapporteur: Daniel Frank.** Key aspects for wastes are safety, simplification of recycling and regulatory coherence and clarity:

- The Commission's announced objective to create a single market for waste must be conditional on showing safety. This requires defining what level of risk is acceptable (no material, recycled or virgin, has zero contaminants).
- Coherence and simplification:
  - Same dossier, same decisions (with adaptations as necessary) for authorisations for food, feed, fertilisers ...

- Definitions and interpretations, e.g. of wastes "comparable" to biowastes: need for EU Guidance and for an EU contact point for interpretation.
- Ensure coherence between regulatory definitions and waste codes.
- End-of-Waste:
  - publish (in English, centralised EU website) all national and "case-by-case" End-of-Waste decisions and criteria used for these decisions.
  - Mutual recognition by other Member States should be automatic by default.
  - Maybe some form of quality management scheme plus self-assessment could be used to render coherent the currently very variable national / regional / case-by-case End-of-Waste approaches ?

### 2) Animal By-Products



**Rapporteur: Daniel El Chami, TIMAC AGRO.** Social acceptance and confidence in safety are essential. Overall, the Animal By-Products (ABP) regulations provide safety as required. However, along with TSE Regulation 999/2001 and Feed Regulation 767/2009, they today pose major obstacles to recycling because

of their complexity and inappropriate exclusions and restrictions. Decisive action is needed to facilitate ABP recycling while ensuring high safety standards for the final recovered product.

- The ABP regulations include the requirement for regulatory authorities to supervise operators (processing, transport, storage). This is important to guarantee safety.
- Declaration of recycled content can be a positive message for products, but labelling the origin of recycled inputs can be problematic for food products, so labelling obligations should not be too precise.
- The concept of ABP End-Point does not today exist for use in feeds or food products.
- Need to align different regulations and authorisation processes better.
- Annex III of the Feed Regulation 767/2009 should be amended to remove inappropriate restrictions on safe recovered mineral nutrients.



### 3) Waste to Resource

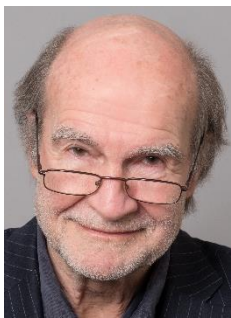


**Rapporteur: Robert Van Spingelen, Ostara and ESPP President.**

- The Waste Hierarchy should be adjusted to consider the value of recovered products.
- The EU should fix targets for self-sufficiency of natural resources.
- The Commission's objective of enabling a "free" market for waste should read "open" market. "Free" is

considered to mean a market governed only by supply and demand, whereas "open" is considered to mean governed by a legislative framework but without discriminatory trade barriers.

### 4) Fiscal and financial tools



**Rapporteur: Ludwig Hermann, Proman.**

- EPR (Extended Polluter Responsibility): penalise pollutants to support recycling.
- Authorise access to market of recycled products on the basis of objective quality and safety data, irrespective of origin of input

materials, depending on the application/use.

- Ensure that any costs or obligations imposed on EU industry to develop circularity (e.g. recycled content quotas, raw materials consumption tax ...) are also applied to imports. Such import obligations must cover all relevant materials in the value chain (e.g. Border Adjustment Mechanisms for nutrients in fertilisers must also concern nutrients in imported soya for animal feed).

### Comments on ESPP draft proposals

Several participants considered that the proposed ESPP input document for the Circular Economy Act was largely good, with some reformulation and ideas to add.

Participants suggested to add the following to this document:

- Traceability obligations for secondary materials are in many cases not an obstacle. Traceability is already in place across the food chain.
- Include circularity into the EU Corporate Sustainability Reporting Directive (CSRD) 2022/2464 and the three EU public procurement directives 2014/24/EU, 2014/25/EU, 2014/23/EU.
- Agriculture-ETS: extend to include virgin nutrient use, with compensation for nutrient recycling.
- Develop and implement circularity indicators.
- Mixing of different materials in AD: sewage sludge, food waste.
- For R&D and pilot plants for recycling processes: delays for permitting for operating sites and for waste transport for recycling R&D should be shortened and tonnage ceilings should be increased to full-scale pilot testing.
- Recycling should be a strong element of BAT-BREFs under the Industrial Emissions Directive.
- For existing industrial sites wishing to modify their process to take in secondary raw materials, the default should be "no new IED permit needed".
- Definitions: by-product, food industry waste, biowaste. Interpretation of waste codes.
- Need for an EU Sustainable Food Act.
- Circularity is a core objective of Organic Farming. Accelerate inclusion of recycled nutrient products into the list of fertilisers accepted as inputs in Certified Organic Farming ([EU 2021/1165](#))
- Standards are needed for declaration of recycled content.

## Workshop on nutrients in the EU Common Agricultural Policy (CAP)

Around 30 participants joined this meeting in Brussels, plus 50 online.

Consolidated CAP Regulation (EU) 2021/2115 “establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans)” [HERE](#)



**Stephanos Kirkagaslis, European Commission, DG Agriculture and Rural Development**, presented the context in which the next CAP (post-2027) is being prepared, how nutrient stewardship is taken into account in the current CAP (2023-2027), and provided information on the Farm Sustainability Tool for Nutrients (FaST).

The next CAP will be founded on the objectives fixed for the new European Commission in Ursula von der Leyen’s [mission letters](#) to the new Commissioners, and on the new “[Vision for Agriculture Food](#)” developed in consideration of the report on the [Strategic Dialogue for the Future of Agriculture \(September 2024\)](#) and in consultation with the new EBAF ([European Board for Agriculture and Food](#)<sup>(1)</sup>). The mission letters confirm commitment to the [EU Green Deal](#), and emphasise competitiveness (the latter being the subject of the Draghi Report [September 2024](#)) and regulatory simplification. They refer to supporting farmers in decarbonisation and preserving biodiversity, introducing an EU-wide benchmarking system in the agri-food sector, supporting organic farming and contributing to Water Resilience Strategy.

(1) NOTE: Fertilizers Europe (an ESPP member) is amongst the organisations nominated to EBAF:

<https://www.worldfertilizer.com/project-news/30012025/fertilizers-europe-joins-the-ebaf/>

### Regulatory and market context

The revision of the CAP takes place in the context of climate change, and of the fertiliser market turmoil resulting from Russia’s war against Ukraine with consequent impacts on fertiliser prices. The EU is highly dependent on imports of fertilisers. The European Commission’s communication on the availability and affordability of fertilisers (Nov. 2022, see [ESPP eNews n°72](#)) underlined the importance of organic fertilisers and recycled nutrients and of the efficient use of nutrients for ensuring the EU’s food security.

Other policy developments relevant to the CAP are underway including: evaluation of the Nitrates Directive (expected end 2025), proposed amendment of the Nitrates Directive on certain recycled nutrients from manures (consultation is ongoing with Member States following the public consultation in 2024, see [ESPP eNews n°86](#)), the Soil Health Directive (underway), the Water Resilience Strategy (expected summer 2025) and the new EU Circular Economy Act (expected 2026).

The 3<sup>rd</sup> River Basin Management Plans from Member States, under the Water Framework Directive (see [Implementation Reports](#)), highlight pressures from diffuse pollution from nutrients on water quality.

The current CAP budget for 2023-2027 is 386 billion €. The CAP revision process for the next five-year cycle will start after summer 2025 following the definition of the overall EU budget under the Multiannual Financial Framework for 2028-2034 (see [consultation](#) open to 6<sup>th</sup> May 2025).

It is important to note that under the current CAP, each Member State, after evaluating its needs and priorities, is free to include the environmental interventions it chooses in its CAP Strategic Plans (CSPs)<sup>(2)</sup>, which must align with the objectives of the CAP. CSPs are submitted to the Commission for assessment and final approval. For interventions proposed for the voluntary uptake by farmers (e.g. EcoSchemes, AECCs), which must align with the objectives of the CAP.

(2) CSPs should contribute to the objectives of, and be consistent with, the Union legislative Acts listed in Annex XIII of the CAP Regulation (EU) 2021/2115

### Nutrient management in the current CAP: “conditionality”

The principle of “Conditionality” is that the agricultural practices receiving a CAP payment should respect minimum EU environmental, health and animal welfare laws and standards.

These laws and standards are specified in the CAP Regulation [2021/2115](#) as Statutory Management Requirements (SMRs – identifying requirements under various other pieces of EU legislation) and as standards of Good Agricultural and Environmental Conditions of land (GAEC standards). The SMRs and GAECs are listed in Annex III of the CAP Regulation [2021/2115](#)

SMRs and GAECs form the “green architecture” of the current CAP and are mandatory for all farmers receiving any CAP payment. They effectively replace the “cross-compliance” of the previous CAPs.

All SMRs and GAECs listed in Annex III of the CAP Regulation 2021/2115 are mandatory for all Member States. In addition, Member States may set obligatory standards additional to the GAECs listed in Annex III of the CAP Regulation 2021/2115. If an additional GAEC is included in a MS’ CAP Strategic Plan, it is obligatory for all farmers receiving CAP subsidies in that country.



For example, in its CAP Strategic Plan (CSP), [Spain](#) introduced GAEC 10, supported by the Spanish [Royal Decree 1051/2022](#), on mandatory requirements for sustainable fertilisation.

### Beyond Conditionality

Beyond Conditionality, Member States (MSs) can offer Environmental, climate-related and other management commitments (AECCs = Agri-Environment-Climate Commitments, CAP Regulation 2021/2115 art. 70) and EcoSchemes (EcoS) (art.31), to which farmers can voluntarily choose to sign up, to engage various environmental objectives aligned with the CAP objectives. AECCs and EcoS must go beyond SMRs and GAECs and existing EU and national legal standards.

MSs can also fund relevant investments through the CAP, such as for fertiliser management, manure storage and spreading equipment and digital applications for nutrients.

Mr Kirkagalis provided an overview of interventions under EcoS and AECCs related to sustainable nutrients management. MSs already provide incentives for balanced fertilisation and practices reducing nutrient losses and offer support for planting nitrogen-fixing crops and cover crops and for reduced use of mineral fertilisers or limiting their application (e.g. shorter application periods), including support for digital precision farming. Comparably fewer EcoS and AECCs relate to the use of bio-based circular fertilisers.

As an example, Portugal has an EcoScheme requiring replacement of at least 25% of mineral by organic fertilisers based on a nutrients management plan. Bulgaria, Croatia, Cyprus, Greece and Slovenia also have actions to incite use of organic fertilisers.

Results Indicators, based on the MSs' CSPs suggest that interventions supporting the improvement of nutrients management (R.22) are expected to cover 15.5% of EU Utilised Agricultural Area (UAA) by 2027, for improving soil health (R.19) 47.7% UAA and for protecting water quality (R.21) 21.8% UAA.

### FaST (Farm Sustainability Tool for Nutrients)

The current CAP includes the obligation, for all Member States, to put in place (by 2024), as part of farm advisory services, a FaST, which is a dedicated digital fertilisation and nutrient management tool for voluntary use by farmers. This tool must provide at least: a farm-level balance for the main nutrients, the legal requirements applicable for nutrients, soil data and data from the integrated administration and control system (IACS).

A questionnaire and further discussion with Member States in 2024 concluded that MSs and their regions already have such tools in place, with design variations between them, some based on the FaST provided by the European Commission, while others are completely re-designed.

Questions raised include farmer concerns on the use of data stored on public serves (e.g possible links with their CAP payments) and user (farmer)-friendliness. In-house tools are preferred to those developed by external contractors. Further discussion with MSs will continue.

### ESPP comments:

SMRs relevant to nutrients include:

- *SMR1: Article 11(3), points (e) and (h) of the Water Framework Directive 2000/60.*

*The cited Water Framework Directive (WFD) articles concern 11(3)(e) water abstraction and 11(3)(h) diffuse pollution. The "Indicative list of the main pollutants" in Annex VIII of Water Framework Directive includes phosphates, nitrates and plant protection products.*

*SMR1 indicates "as regards mandatory requirements to control diffuse sources of pollution by phosphates". This is because Nitrates are covered by SMR2 (Nitrates Directive), while pesticides are covered by SMR7 - compliance with R1107/2009 on plant protection products and SMR 8 - compliance with Directive 2009/128/EC on the Sustainable use of pesticides. The combination of those 4 SMRs are deemed to control diffuse pollution from nitrates, phosphates, pesticides*

- *SMR2: Articles 4 and 5 of the Nitrates Directive. Art. 4 = voluntary codes of good agricultural practice, Art. 5 = Action Programmes (in Nitrate Vulnerable Zones).*

GAECs relevant to nutrients include the following

- *GAEC4: buffer strips along water courses*
- *GAECs 5 – 6 – 7: tillage, cover crops, crop rotation/diversification.*



### Evaluation of CAP impacts on nutrients

**Adrien De Pierrepoint and Laura Nocentini, Oréade-Brèche**, presented evaluations of the CAP: impact on soils (evaluation carried out in 2020), impact on nutrient balances (underway).



The evaluation of the impacts on soils analysed the choice of tools set by the CAP at EU and at Member States' levels (EU total plus case studies for ten countries or regions across Europe) and the degree of farmer uptake of relevant tools, then tried to predict impacts on land use and agricultural practices in order to link policies to expected soil effects. Also, stakeholders and experts were interviewed and literature examined. Conclusions were that the CAP is positively impacting agricultural practices,

resulting in limited reductions in soil erosion, improvements in soil fertility, but not improving nitrogen balances. Recommendations included establishing a shared EU definition of soil health status and binding soil objectives in Member States. These recommendations are partly taken up in the proposed EU Soil Health Monitoring Directive (currently pending decision by Parliament and Council, see [ESPP eNews n°77](#)).

*“Evaluation support study on the impact of the CAP on sustainable management of the soil”, published by European Commission DG Agriculture, study by Oréade-Brèche and IEEP (Institute for European Environment Policy), 2020 [LINK](#).*

A further study makes an approximate quantification of the potential contribution of certain CAP instruments to climate emissions ([first draft](#) released in 2024 covering 18 Member States only, final study on the 27 Member States to be published in 2025). This estimates that the CAP (2023-2027) potentially could result in 35 million tonnes of CO<sub>2</sub>e per year emissions mitigation (compared to ‘conventional’ agricultural practices on all agricultural land), of which 80% by soil carbon storage.

The rough estimates of the potential contribution of Member States’ CAP Strategic Plans (CSPs) to soil health, underway, will link CSP interventions and GAECs in 13 of these Plans (GAEC = standard of good agricultural and environmental conditions of land) with the JRC’s [IMAP](#) (Integrated Modelling platform for Agro-economic and resource Policy analysis). CSP interventions and GAECs are linked to farming practices, then the estimated area concerned by the CSP interventions and GAEC is multiplied by the expected impact coefficient associated with each farming practice they cover. This will focus mainly on nitrogen, as the IMAP data concerns mainly topsoil nitrogen (20 cm), but includes also some data on P and K. Another limitation is that coefficients are available only for some farming practices (e.g. 56 practices with a coefficient for nutrient losses, out of a total catalogue of over 300 practices). Coefficients are EU-level, but local land use data is available at the NUTS2 grid level in the EU LUISA, LUCAS and CORINE data bases.

In discussion, one participant suggested that it could be useful to spatially correlate nutrient relevant CAP GAEC and EcoScheme uptake against land use and against Water Framework Directive Catchment Management Plans (water bodies identified as needing phosphorus input reductions to achieve Quality Status targets).



**Elisabet Nadeu, Institute for European Environmental Policies (IEEP)**, presented an assessment of the impact on the environment and on climate of the CAP Strategic Plans of four large Member States (France, Spain, Germany, Poland). This included identifying relevant interventions, qualitative assessment of expected impacts, surface concerned, allocated budget. The analysis covered the two SRDs relevant to nutrients (SMR1 Water Framework and SMR2 Nitrates Directive). Three GAECs (GAEC4 buffer strips, GAEC6 soil cover and in Spain (additional) GAEC10 \* farm nutrient balance data) relevant EcoSchemes, coupled income support for leguminous crops and EAFRD (Rural Development Interventions) for agri-environment-climate measures, relevant investments and knowledge sharing and cooperation measures.

\* *Spanish Royal Decree 1049/2022 (“BCAM 10”)*

Interventions directly targeting nutrients include: reduce / limit mineral fertiliser use, incorporate leguminous crops into rotations, promote organic fertilisation, improve manure management, fertilisation plans to improve nutrient use efficiency, precision farming, as well as soil and landscape measures which indirectly impact nutrients.

Conclusions are that most EcoSchemes focus on crop diversification and soil conservation, not specifically nutrients and rarely go significantly beyond “conditionality”. These are also a very low percentage of CAP budgets. Low levels of payments to farmers result in low uptake.

Recommendations include to increase the budgets allocated to climate and environment EcoSchemes, with increased payments and more demanding requirements. CAP interventions should be introduced to support decreasing livestock density and for mixed crop – livestock systems.

### Examples from Member States

**Andrea Spanischberger, Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management**, outlined actions targeting nutrients in the Austria CAP Strategic Plan.

Nearly half of Austria’s land is forestry and most farms are small (average 24 ha). The number of farmers is declining (- 11% over ten years). The area under Certified Organic Farming is increasing, reaching today nearly 25% of agricultural land.

Nutrient management is targeted by obligatory measures, voluntary schemes and information and training. Austria’s ÖPUL 2023 (6<sup>th</sup> Agri-Environment Plan), under the current CAP, is achieving voluntary uptake covering 80% of agricultural land (uptake of at least one ÖPUL measure).

ÖPUL budget is nearly 530 M€/y, representing around 40% of Austria's total CAP budget.

Examples of ÖPUL measures include:

- Reduced fertilisation, in sensitive water basins
- Use of no external nitrogen fertilisers
- Organic Farming
- Solid/liquid separation and improved manure/digestate application to fields.

Data show that Austria's nutrient use efficiency has increased for N from 66% to 72% (2012 – 2022) and for P from 96% to 113% (today around 100%). The total amount of phosphorus input in organic materials is approximately the same as in mineral fertilisers.

A key to improving nutrient management is on-farm data on soil P and N status.



**Josep M. Virgili, Catalan Government**, explained that nutrient management is largely driven by Spanish State policies, in particular royal decrees on soil nutrition [1051/2022](#) and on Nitrates Directive implementation [47/2022](#).

Spain has implemented GAEC4 buffer strips (no fertilisation allowed within 5m of a water course), GAEC5 tillage management and GAEC10 sustainable fertilisation (the latter by the Royal Decree 1051/2022 indicated above), so that these are obligatory for all farmers.

In regard to statutory management requirements, derived from the Nitrates Directive, there is an administrative penalty if farmers infringe minimum capacity of manure storage, the upper limit on manure application rate (170 kg N/ha per year), or rules on fertilising slopes, amongst others.

As an example of agri-environmental measures, in Catalonia, farmers receive support if they follow an integrated production certification scheme with at least 20% of overall N input coming from organic fertilising materials (manure, slurry, commercial organic fertiliser, sewage sludge or other organic wastes suitable for land application).

Catalonia sees the Animal By-Products regulations as an important obstacle to nutrient circularity, because of difficulties to obtain End-Points for manure and separately collected organic waste / food waste (and their digestates).

Catalonia is in favour of the RENURE amendment of the Nitrates Directive proposed by the European Commission (see [ESPP eNews n°86](#)), but considers that a more ambitious approach would be desirable: a greater use of RENURE materials would reduce imports of mineral fertilisers while fostering nutrient circularity.

## Stakeholder positions

**Lucile Sever, European Biogas Association (EBA)**, noted



interesting examples from Member States

- Greece: Eco-scheme 31.4 "Circular economy applications in agriculture"
- Italy: AECC SRA04 "Supply of Organic Matter to the Soil"
- Austria: AECC 70-08 "Ground-level application of liquid manure and liquid manure separation".

EBA's proposals for the CAP revision, to improve nutrient management are:

- Introduce a new Good Agricultural and Environmental Condition (GAEC) standard on nutrient recycling.
- Expand support use of digestate and other organic fertilisers through eco-schemes and agri-environment-climate commitments (AECCs).
- Fund equipment to reduce nutrient losses in digestate application (injectors with a trailing shoe system, with umbilical cords, closed storage, precision farming tools, etc.).
- Provide technical training and advisory services to farmers about on efficient use of digestate.



**Ana Rocha, European Landowners' Organisation (ELO)**, noted that the Green Deal Farm-to-Fork strategy sets very high ambitions for nutrient loss reductions and for developing Organic Farming. Landowners are concerned about cost implications.

The revised CAP should integrate the objectives of the (proposed) EU Soil Health Directive and carbon capture.

The FaST tool can maybe be extended to achieve this. Support is needed for precision farming and for application of biostimulants, as these can reduce nutrient losses and also farmer input costs. Better information is needed on nutrient efficiency of organic fertilisers, to enable better use and wider uptake.





**Irmgard Leifert, ECN** (European Compost Network), underlined the benefits of compost for soil health, nutrient supply and soil carbon storage.

ECN suggests that:

- Use of quality-controlled organic-based fertilisers (including certified composts and digestates) should be supported under CAP as sustainable agricultural practice (climate, water, soil) based on the use of recycled nutrients and supply of stabilised organic carbon to soil from organic resources (especially biowaste).
- This support can be by EcoSchemes under “nutrient management”. Such funding should have middle-long-term commitments, not for a few years only.
- Propose a “weighting and scoring” of organic-based fertilisers within EcoSchemes based on their benefits for soil carbon, biodiversity, water retention, and on the % of total crop nutrient supply. Support should be variable depending on the nutrient form and stable organic carbon content of different organic-based fertilising products.
- Nitrates Directive application and FaST should better assess organic-based fertiliser inputs in nutrient balance calculations. ECN considers that increased nitrogen application to land is necessary to build up stable soil organic matter in soils and that an N-surplus does not necessarily result in losses if it is with stable organic carbon.
- Quality assurance of compost and digestates ensures reliable nutrient content information and instructions for N- / P-application in crop production.
- Support Organic Farming and the use of compost/digestates in Organic Farming. Propose combinations of EcoScheme measures with the Organic Farming commitment.



**Cédric Benoist, Copa-Cogeca** (EU federation of farmers’ associations and farmers’ cooperatives, chairman of the Working Party on Cereals), underlined the need to focus on appropriate and adequate fertilisation (right place, right quantity, right time, right fertiliser). Because phosphorus is poorly soluble in calcareous soils, this can limit crop productivity. At the same time phosphorus fertiliser prices have increased relative to cereal prices, posing economic challenges for farmers.

- In many regions, organic fertilising materials are not sufficient for crop phosphorus needs.
- The CAP should support soil analysis across fields and digital tools to use this data to optimise fertilisation.

- Investment support is needed, for example for equipment to inject organic fertilising materials (e.g. digestate) into soil and so deliver nutrients to crop roots where they are needed.
- **EIP-AGRI** (European Innovation Partnership for agricultural productivity and sustainability) plays a valuable role in driving bottom-up innovation.



**Leon Fock, EUROFEMA** (European Organic Fertilisers Manufacturers Association), gave examples showing that recycled nutrient organic fertilisers cost 5 to 7 time more per kg nitrogen than urea. Farmers recognise the benefits of organic fertilisers (low environmental footprint, soil health and soil carbon ...), but often cannot pay this price difference. As a result, markets for recycled organic fertilisers are often limited to Organic Farming, high-value specialist applications (e.g. sports fields) or export. Asia, Africa and the Middle East buy European organic fertilisers because of their value for soil health.

To make organic fertilisers more competitive in Europe, industry consolidation can enable higher volumes and so reduce costs. The EU Fertilising Products Regulation (FPR) is important for this, by opening the European market. The first CE-Mark recycled nutrient fertilisers are now coming onto the market, but a major obstacle is that some animal by-products are still not integrated into the FPR.

Other actions needed are:

- Inform of benefits of organic fertilisers
- Include relevant aspects into the FaST tool (e.g. organic carbon)
- Fund farmers for carbon footprint benefits, recycling (in particular of phosphorus, an EU Critical Raw Material)
- Incite nutrient circularity and organic fertiliser use by tools such agriculture ETS, Carbon Credits, fiscal incentives, CAP support.



**Nicolas Willaume, ICL Group and ECOFI** (European Consortium of the Organic-Based Fertilizers Industry), underlined the multiple environmental, agronomic and social benefits of organic based fertilisers, in particular when organic secondary materials (such as manure, digestates ...) are processed into performant organic based or organo-mineral fertiliser products. Recycling nutrients into fertilisers is key to EU farming’s autonomy and resilience,

and to food security. In addition to direct benefits (nutrient recycling, organic carbon and soil health), processing can enable transport of nutrients from intensive livestock regions (with nutrient overloads) to regions needing nutrients for crops and organic carbon for soil health.

ECOFI's proposals for the CAP revision and EU policy are:

- Incentivise the use of organic-based and recycled fertilisers, across all Member States, to reward farmers for the use of these circular nutrients combined with sustainable nutrient management practices.
- Farm nutrient management plans and nutrient data collection should trigger CAP support funding.
- Training and support for farmers on organic-based fertiliser use.
- Promote the benefits of organic-based fertilisers to the agri-food chain, to incite their inclusion in e.g. food industry purchasing criteria.
- Facilitate and accelerate the inclusion of organic-based fertilisers and recycled nutrient products into the EU Fertilising Products Regulation (FPR) and move to quality-based criteria, instead of the current case-by-case lists of authorised inputs (slow, cumbersome, complex and always incomplete). Resolve the current exclusion of many animal by-products from the FPR.
- Ensure coherence between EU policies: Circular Economy, Critical Raw Materials, Waste Framework Directive, Animal By-Products regulations, CAP.



**Théo Paquet, European Environmental Bureau** (EEB, European confederation of environmental NGOs), noted that the EU is failing to achieve water policy objectives. Legislation is in place, but implementation is inadequate: despite the Nitrates Directive (1991) nitrate problems in ground water are deteriorating, Water Framework

Directive quality status objectives are widely not being achieved. Agricultural pollution is today the main contributor to water quality failures and the CAP is not, in most regions, delivering significant improvements.

The SMRs 2 and 3 in the CAP, which are supposed to ensure implementation of the Nitrates Directive and of the Water Framework Directive are ineffective or are not being implemented by Member States. Clear application criteria and verification reporting should be added.

Environmental GAECs are largely not taken up by Member States, or are being deleted in updates of Strategic Plans, or are defined very vaguely and flexibly resulting in little impact.

EcoSchemes, because they are voluntary for farmers, result in a piecemeal approach. They are often defined with low

ambition by Member States, or with low funding resulting in low levels of farmer uptake.

The CAP provides public subsidies to farmers, so should fix requirements beyond legal obligations.

Revision of the CAP should address food sovereignty, in particular by supporting measures to address livestock density, which results in nutrient hotspots, and in EU dependency on imported animal feed. This should be approached by adopting a territorial approach, which would also lead to better circularity in nutrient management.



**Kaj Granholm, Baltic Sea Action Group**, suggested that the CAP should support circular food systems covering nutrients, soil health and organic carbon. These contribute to EU food system strategic resilience, to rendering agriculture socially attractive to the next generation of farmers and to increasing climate change adaptability. Dialogue

between farmers, stakeholders, consumers and the agri-food chain is essential. BSAG invites to join their [#CAPInitiative](#) to discuss policies and the potential of multifunctional agriculture.

## Research projects



**Sergio Ponsá Salas, BETA Technological Center**, outlined the [Nutri-Know](#) project (Horizon Europe) which aims to bring together and make available information on nutrient management from research and field experience, including EU [Farm-Book](#), [CAP Network](#) and [Operational Groups](#).



**Lorenzo Proia, BETA Technological Center**, presented the [Seacure](#) project (Horizon Europe) which aims to demonstrate approaches to address nutrient pollution in the Mediterranean basin, including sustainable agricultural practices (precision agriculture, cover crops, tailor-made biobased fertilisers, biostimulants) and innovative solutions (nature-based and

technological) for wastewater treatment and in-situ remediation.





**Erik Sindhøj, RISE Sweden**, presented the [Cinurgi](#) project (Circular Nutrients for a Sustainable Baltic Sea Region, Interreg Baltic Sea Region). The project supports the implementation of the [Baltic Sea Regional Nutrient Recycling Strategy](#). The challenges identified are:

- Lack of agreed industry standards for recycled nutrient products: standards for analysing quality and agronomic value.
- Nutrient recycling from intensive livestock regions (nutrient hotspots) to regions where farmers need nutrient inputs.
- Market access for recycled nutrient products, including farmer acceptance, availability and policy obstacles.

## Discussion

- Food system resilience and nutrient loss reductions should be key objectives of the CAP.
- EcoSchemes should consider the whole local food system, including recycling of manures and agricultural by-products, as well as imported feed use.
- Processing of organic secondary materials to technical organic or organo-mineral fertiliser products is key to improving nutrient use efficiency, storage and transport of secondary nutrients, precision farming. Most manure is today returned to land, but not efficiently.

- Considerable agronomic data shows the effectiveness of organic fertilisers, including from successful export. However, farmers are risk-averse. Information and training is needed.
- Clear and agreed definitions of “bio-based”, “circular” and “recycled” fertiliser are needed to enable communication to users, coherent regulation and targeted support in the CAP.
- Farmers may need mineral fertilisers in addition to organic products, to supply readily crop-available nutrients at key growth periods. This should be recognised in agronomic recommendations.
- Agronomic specifications prevent or limit organic fertiliser use on some crops: this should be resolved.
- The EU Fertilising Products Regulation specifies contaminant limits. These should be the basis of farmer confidence.
- Measures to redress livestock concentration need to be country-specific because of different farming systems and land structures. These measures can be supported by EU Structural Funds and also national funds, rather than by the CAP. The CAP can however support livestock extensification.
- In other regions, introduction of livestock can contribute to local nutrient recycling, wildfire prevention, biodiversity habitat maintenance.
- Need to include nutrient recycling and EU nutrient autonomy into dialogue with the food industry and into the Strategic Dialogue.

## ESPP members

