

POLICY WORKSHOP

CLOSING NUTRIENT CYCLES: RESHAPING EU AGRI-FOOD SYSTEM FOR GREATER AUTONOMY AND SUSTAINABILITY

**HOW CAN THE INTEGRATED NUTRIENT
MANAGEMENT ACTION PLAN ACHIEVE THIS?**



HOSTED BY:

MEP Margrete Auken (Greens/EFA)

MEP Thomas Waitz (Greens/EFA)

ORGANISED BY:



INTRODUCTION

As announced in the EU Biodiversity and Farm to Fork strategies and in the Zero Pollution Action Plan, the European Commission is developing an Integrated Nutrient Management Action Plan¹ (INMAP) to tackle the currently unsustainable nutrient flows in the EU. The INMAP will aim to deliver on the European Green Deal's targets to **reduce nutrient losses by at least 50% and fertilizer use by at least 20% by 2030 in Europe and will complement the Zero Pollution Action Plan.**

Current nutrient flows in the EU surpass the safe planetary boundaries² with dire consequences for the environment and human health, including eutrophication, nitrate pollution of surface and groundwater including sources of drinking water, harmful air pollution, greenhouse gas emissions, deteriorating soil quality, and biodiversity loss. Russia's war has exposed how dependent the EU agricultural system is on imports of feed, fossil gas and fertilizers, which are also the main drivers of the current negative environmental effects of excessive nutrient flows.

Thus, the upcoming Integrated Nutrient Management Action Plan is a crucial opportunity to take a holistic approach to nutrient flows and losses and stir the search for systemic solutions for an self-sufficient agricultural system that fosters long-term productivity.

The objectives of this workshop are to reflect on how existing legislations already deliver or not on reducing nutrient flows and losses, as well as on how the INMAP can integrate an holistic and long-term approach on food system transformation based on solutions already used in farming practices such as in organic agriculture and agroecology.

The workshop gathered 40 people in-person and 40 people online. Participants including among others journalists, political advisors, MEP's assistants, DG ENVI's staff, NGOs representatives, and scientists.

[1] [Nutrients – action plan for better management \(europa.eu\)](https://europa.eu)

[2] [EEA Report No 1/2020](#), Is Europe living within the limits of our planet? An assessment of Europe's environmental footprints in relation to planetary boundaries, ISSN 1977-8449

In his opening statement, **the Member of the European Parliament (MEP) Thomas Waitz (Greens/EFA)** said ‘the workshop happens very timely, since the discussions in the EU and also in the European Parliament’s Committee on Agriculture are hijacked by the EPP with the fake narrative on EU food security. These MEPs push against the reduction targets for artificial fertilizers & pesticides.

Agroecology is the only sustainable long-term solution to the INMAP. The MEP Thomas Waitz also suggested the EU should limit the application of raw animal manure, and differentiate between fermented manure and raw manure to set amounts limits. He also said that the manure needs to be applied directly on the soil or worked into the soil. He supported the use of manure from sewage sludges, however these need to be treated by the industry to decrease health risks and heavy metal contamination.

In his presentation, **Andrea Vettori, Deputy Head of Unit “Land Use & Management” at DG ENVI** explained the intention of the Commission, and in particular DG ENVI, with regards to the INMAP, and affirmed it will be published in March 2023. He explained that the situation is very different at national and even local level. According to him, the European Commission tries to make organic fertilizers available on the market without making disadvantages with chemical fertilizers. He said the EU should assess what are the consequences of ammonia emissions. He added the need to have stricter rules to be sure the products on the market are safe to ensure food security while avoiding contamination with antibiotics to contribute to the EU target of 50% reduction of antimicrobial resistance by 2030 for instance.



MEP Thomas Waitz (Greens/EFA)



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In Europe, surplus nitrogen and phosphorus in the environment are already exceeding safe planetary boundaries. This represents a severe threat to nature and to the Earth’s climate.

More than ever, we need better management of nutrients throughout their cycle and a more efficient use of fertilisers.

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Andrea Vettori
Deputy Head of Unit
“Land Use & Management”
(DG ENVI)

Andrea Vettori's
Presentation



Kevin Hicks, European Director of the European Nitrogen Initiative stated that increasing the efficiency of nutrient use in agriculture can bring benefits to the farmer but also tremendous benefits for human health and the environment. The acknowledgement that the nature of the problem requires an integrated approach in the Farm to Fork Strategy is a major step forward.

Sufficient knowledge exists to make significant progress towards the 2030 targets of reduced fertilizer use and nutrient waste. But this will require a more systemic approach to nitrogen policy that focuses on all major actors in the agri-food system that influence farm-level nitrogen management. Healthier diets, healthier animals and the recycling of available nutrients all have their part to play in reducing nutrient waste.



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We need to shift Nitrogen policy balance towards environmental protection while still guaranteeing food security and profitability for farmers.

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Kevin Hicks
European Director of the
International Nitrogen Initiative

Kevin Hicks
Presentation



STEP UP THE IMPLEMENTATION OF EXISTING LEGISLATIONS TO ACHIEVE EU ENVIRONMENTAL PROTECTION OBJECTIVES

Sergiy Moroz, Policy Manager for Water and Biodiversity at EEB, highlighted the fact that nutrient pollution remains an issue across the EU, even though various pieces of EU legislation have addressed the issue since the 1990s. According to the EEA, over the last decade, nutrient concentrations have levelled off or even shown signs of increasing. The cost of inaction exceeds the costs of proper implementation and enforcement, but there is a need for more political will, resources and transparency and the European Commission needs to take its role as Guardian of the Treaties seriously.

However, full implementation of existing legislation needs to be accompanied by an integrated and long-term approach towards sustainable nutrient flows in the upcoming Action Plan for Nutrients, which needs to propose additional measures, for example reduced livestock numbers and dietary shifts.

Finally, he stressed that it is a mistake that the Commission's Fertilizers Communication published on 9 November proposed to gift public money to fertiliser industry and subsidise fertilisers for farmers without any clear strings attached. This is a misguided quick fix which will not solve the fundamental problem of our reliance on fossil fuels and fertilisers; nor any of the environmental issues linked to fertiliser overuse in Europe.

More specific recommendations can be found in [EEB/Birdlife briefing](#) on the need to step up enforcement for better compliance with EU's environmental legislation.



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Significantly more efforts are needed to tackle nutrient pollution of air and water, but EU laws are only strong if they are properly implemented and enforced.

We need an integrated approach to nutrient flows and much better implementation and enforcement of existing rules if we are to bring surplus nitrogen and phosphorus within planetary boundaries.

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Sergiy Moroz

Policy Manager for Water and Biodiversity at EEB

Sergiy Moroz's Presentation



REDUCING THE DEPENDENCY OF FERTILIZERS IMPORTS WHILE SECURING FOOD SECURITY: WHAT ARE THE FARMING SOLUTIONS?

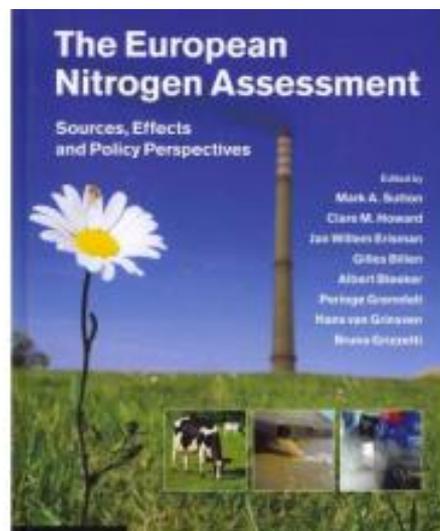
Josette Garnier, Research Director at the **CNRS** started her presentation by highlighting that nitrogen has been at heart of the debate, since the European Nitrogen Assessment in 2011. Her team of researchers has showcased in a report sent to the Commission two modeled future scenarios and compared them to current emission levels.

Firstly, a European agroecological scenario (AE), based on three main levers:

- **organic crop rotation using legumes** (no chemical fertilizers) is generalized;
- **crop and livestock are reconnected** (no feed import);
- **the share of animal protein in the human diet is reduced to 30%** (against 60% in current diets)

Secondly, the EU Farm-to-Fork (F2F) scenario promoting 25% of organic agriculture, 10% of land set aside for biodiversity, and a reduction of 20% of synthetic nitrogen fertilizers. While both scenarios would feed the population of the EU, the AE would reduce nitrogen environmental losses by 55% as N₂O, 49% as NH₃ and 72% as N net surplus from cropland, a proxy for leaching, while the F2F scenario would reduce these losses by 20%, 25% and 30% respectively.

Finally, she affirmed that if we combine fertilizer use reduction with a change of diet (ie. less meat consumption and more legumes consumption), the gap in terms of food production can be solved.



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A European agroecological scenario without chemical fertilizer and feed import, with a share of animal proteins in human diet of 30% (now 60%) would reduce Nitrogen environmental losses by 55-72%.

These reductions would be 20-30 % only for the F2F EU scenario, a step in the right direction. Both scenarios would feed EU people in 2050.

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Josette Garnier

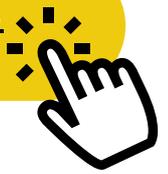
Research Director at the CNRS

Josette Garnier
Presentation



Heiner Gröschner (organic farmer member of the German farming association BIOLAND) presented his farming methods, and in particular crop rotation and diversification of crops, to better manage nutrients. During the discussion, he added the difference of yields between conventional farming and organic farming is not only linked to fertilizers use but also to pesticide use, given organic farmers refrain from using synthetic pesticides. A proper fertilization can solve this yield gap.

Heiner Gröschner's Presentation



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The crop rotation design is a key tool for nutrient management in organic farming.

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Heiner Groschner,
organic farmer Bioland



KEY AGROECOLOGICAL PRACTICES REDUCING THE DEPENDENCY ON SYNTHETIC INPUTS

- Restore soil life through **reduced or no-tillage**
- Continuous **soil cover**
- **Direct seeding** of main crops into cover crops
- The development of a **dense ecological network**
- The choice of **climate-resilient crop species**, cultivars and mixtures
- **Intercropping** (including agroforestry)
- Long and diversified **crop rotations**
- **Crop/livestock integration** that allows the inclusion of legume-based temporary grasslands in annual crop rotations
- **Rotational grazing**
- The use of **rustic livestock breeds** in grass-based systems

INCREASING RECYCLING AND BETTER SEPARATION OF WASTE AS A MEANS TO SUPPORT SELF-SUFFICIENCY

Stephanie Siebert, Executive Director at the European Compost Network talked about the potential of recycling of biowaste as a means to support self-sufficiency. A recent ECN survey found that, on average, every tonne of compost manufactured in Europe contained €41 worth of NPK fertilisers, and €4 worth of carbon sequestered in agricultural soils. The economic value almost quadrupled over 15 months due to increases in inorganic fertiliser prices on the international markets.

All European agricultural soils suffer from erosion, a situation that is partly due to the loss of organic matter as a result of unsustainable agricultural practices. Quality compost is recognised as an important soil improver, adding organic matter and helping to restore productivity.

The EU's Farm to Fork strategy, the Soil strategy for 2030 and the Green Deal all need to recognise the role of compost and anaerobic digestate in the recycling of major plant nutrients, the improvement of soils through increasing organic matter levels, and the reduction of greenhouse gas emissions through carbon sequestration in soils.

Stephanie Siebert Presentation



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Compost and digestate from recycled biowaste is a valuable resource to offset the use of inorganic fertilisers and to provide organic matter for healthy soils.

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Stefanie Siebert

Executive Director of the
European Compost Network



In her closing statement, **the MEP Margrete Auken (Greens/EFA)** highlighted: "It is absolutely important that the countries begin complying with their obligations under EU environmental law, otherwise our skewed relationship with nutrients will push our environmental and climate objectives completely out of reach. The Commission ought to do much more to ensure compliance and a real devotion to transparency, not least by the Council (!), is crucial."



POLICY RECOMMENDATIONS AND KEY MESSAGES

1. A profound transformation of the food system that fosters **long-term sustainability and self-sufficiency** and steers away from short term solutions is needed.
2. We need to **avoid false solutions and lock-ins** (e.g. EC proposed action on support for fertilizer production and use). Agricultural policies such as the CAP should be subject to compliance with reduction of nutrient excess and pesticides dependency while maintaining a good agricultural production.
3. **The biggest threat to food security is the destruction of ecosystems.** Therefore, EU agricultural and food policies should be allocated to the production of public goods, i.e. the **provision of ecosystem services** and the restoration of biodiversity and the ecological network that can biologically fix large amounts of nitrogen, can regulate weeds, pests and diseases, support recycling of nutrients, and secure pollination and other vital functions in the agroecosystem.
4. Existing policies will not be enough to achieve the Farm to Fork nutrient loss reduction target (50% by 2030). Further action that addresses inputs and take a **holistic approach to nutrient flows** is needed to reach the indicative target of halving nutrient losses.
5. The INMAP should adopt a **food system redesign approach** and include incentives for dietary changes. There is a urgent need to **rebalance protein intakes** by increasing the share of legumes in European diets and favouring grass-fed and pasture-based livestock systems.

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