



9.11.2020

## NOTICE TO MEMBERS

**Subject: Petition No 0250/2020 by Daniela Peters (German) on the impact of using phosphorus as a fertiliser**

### 1. Summary of petition

The petitioner reports on the situation and significance of global phosphorus deposits. She states that France and Germany do not have their own reserves of phosphorus and have to import it for agriculture, as it is needed to fertilise arable land. She asks several questions on statistical data related to the use of phosphorus in agriculture. She is also interested in what plans the European Union might have to combat a shortage of phosphorus which might occur within a decade. As a possible solution she suggests collecting urine, which also contains phosphorus.

### 2. Admissibility

Declared admissible on 9 June 2020. Information requested from Commission under Rule 227(6).

### 3. Commission reply, received on 9 November 2020

Phosphorus is an essential component of fertilisers and feed for animals for the agriculture production. Its substitution is impossible.

Resources of phosphate are estimated at global level to be relatively abundant. The United States Geological Survey calculated in 2019<sup>1</sup> the world availability of phosphate rock reserves at more than 300 billion tonnes. The main deposits are in Morocco, China, Algeria, Syria, South Africa, United States of America, Russia. No imminent shortage of phosphate rock is expected.

The annual consumption of mineral phosphorus is calculated by Eurostat in the EU-27 slightly

---

<sup>1</sup> <https://pubs.usgs.gov/periodicals/mcs2020/mcs2020-phosphate.pdf>

higher than one million tonnes, showing a reduction of 1.2%<sup>2</sup> over the period 2008-2018.

The phosphate fertiliser price after the isolate peak in 2008 progressively decreased. That peak was due to multiple factors, among which the application of taxes to export of phosphate by China.

The Commission considers mineral phosphate as a critical raw material for the EU security supply<sup>3</sup>. In fact, the deposits of phosphate rock in the EU are limited to Finland with a small amount of extraction. In this situation, the EU needs access to the phosphate rock reserves of third countries taking strategic actions on access to resources and securing international sourcing partnerships. An additional concern is the contamination by heavy metals of part of the World phosphate deposits. The most problematic is cadmium, but could be also chromium, mercury, nickel, lead, arsenic and uranium.

In order to promote a transition to a more circular economy, where the value of products, materials and resources is maintained in the economy for as long as possible, including improving security in the supply of mineral phosphate, the Commission launched in 2015 the first Action Plan for the Circular Economy. The revision of the Fertiliser Regulation of 2003 was part of the first Action Plan. The new Fertilising Products Regulation, Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019<sup>4</sup>, establishes rules and safety standards for inorganic fertilisers and for the first time for organic and organo-mineral fertilisers to promote their commercialisation on the EU market of fertilisers. The intention is to promote the use and recycling of abundant organic material substituting as much as possible the mined inorganic/mineral fertilisers.

Phosphorus is contained in animal slurry and manure, composted biowaste, digestate and urban sewage sludge. The main source of phosphorus in organic fertilisers or fertilisers made of recycled/recovered materials is the animal slurry and manure. These organic materials represent approximately 2/3 of the total if we consider also the sewage sludge. Furthermore, a roadmap for the review of the Sewage Sludge Directive<sup>5</sup> has recently been published with the aim, among other aspects, of contributing to resource efficiency through the recovery of useful nutrients such as phosphorus.

The new Fertilising Products Regulation provides rules and standards for digestate and compost, and three proposals of Regulation are in preparation by the Commission to add materials like precipitated phosphate salts (e.g. struvite), incineration ashes, and pyrolysis and gasification materials (e.g. biochar) under the scope of the same Regulation. Materials like struvite and ashes contain significant quantities of recovered phosphorus.

The Common Agricultural Policy (CAP) proposal for the period post-2020<sup>6</sup> for its part, will contribute to reduce the excess of use for phosphorus and nitrogen fertilisation making compulsory to farmers the implementation of a nutrient management plan, compliant with the existing legislation, adapted to the crop requirements and the characteristics of their farms,

---

<sup>2</sup> [https://ec.europa.eu/eurostat/statistics-explained/index.php/Agri-environmental\\_indicator\\_-\\_mineral\\_fertiliser\\_consumption](https://ec.europa.eu/eurostat/statistics-explained/index.php/Agri-environmental_indicator_-_mineral_fertiliser_consumption)

<sup>3</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0490&from=EN>

<sup>4</sup> OJ L 170 of 25.6.2019, page 1.

<sup>5</sup> <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12328-Evaluation-of-the-Sewage-Sludge-Directive-86-278-EEC>

<sup>6</sup> COM(2018) 392 final and ANNEXES 1 to 12

when the annual claim for CAP payments will be presented to the national authorities. This tool of the CAP has been proposed under the Good Agricultural and Environmental Conditions, standard 5, which would be part of the future conditionality mechanism.

In addition, the Commission has adopted the Farm to Fork Strategy<sup>7</sup> on 20 May of this year, where it is indicated a target reduction for nutrient losses in agriculture: “The Commission will act to reduce nutrient losses by at least 50%, while ensuring that there is no deterioration in soil fertility. This will reduce the use of fertilisers by at least 20% by 2030.”

## Conclusion

The EU is highly dependent on mineral phosphate import, a limited and strategic resource.

The objective of the Commission presenting the first Action Plan for the Circular Economy was the increase of recycling and reuse of materials in the economy. Phosphorus as explained above can be recycled from a number of organic wastes. The ambition is to move from 12% of the total phosphorus recycled (excluding manure) as fertiliser in 2015 to 28% in 2025 reducing the dependence on imported mineral phosphate. The new Fertilising Products Regulation shall apply from 16 July 2022 giving time to the industries and market operators to prepare products for the new market conditions.

---

<sup>7</sup> COM(2020) 381 final