

To the European Commission, DG GROW – Critical Raw Materials <u>GROW-</u> <u>CRM@ec.europa.eu</u> copy <u>contact@scrreen.eu</u>; <u>workshops@scrreen.eu</u>

Object: Critical Raw Materials assessment and SCRREEN2

29th September 2022

Dear DG GROW,

We have not received to date answer to our letter of July 2nd 2022, sent to DG GROW and to SCRREEN, attached. We participated in the third SCRREEN workshops of 20-23 September 2022 for Phosphorus & Phosphate Rock and for Potash and it seems that this this letter has also not been taken into account by SCRREEN.

Concerning the functioning of the SCRREEN process, we renew our comments made in this letter:

1) We have not received any summary or conclusions of the first October 2021 workshop, nor of the June 2002 workshop. This was confirmed by other participants online.

It was indicated that the Excel files circulated constitute the meeting summary. This is inadequate. An excel file some numbers modified (but no indication of what is modified from previous version) and a few included comments does not replace a short meeting summary. To enable these workshops to be transparent and constructive we request the list of participants, summary of key points discussed and conclusions or different viewpoints, list of points needing further assessment, action points and who does what.

For example, for the discussion on recycling rates for Potash and Phosphate Rock we made comments at the first and second workshops and in detail in our letter of 2nd July, whereas the excel file simply gives two values for Potash (0%, 30%) and two values for Phosphate Rock (17% as in several previous CRM assessments and based on Deloitte's calculation of 2016 for DG GROW, and 0% indicated to be based on the comment of one expert for which no justification is provided). The excel apparently then switches from using 17% to 0%.

The consequence of this is that the third workshop had again the same discussion about recycling, with no progress.

2) No information provided available to stakeholders and to workshop participants as to who are the contact persons for each CRM study.

This may account for the fact that our input seems not to reach the appropriate person nor be taken into account: we do not know who is this person and we cannot contact them.



Concerning content of the CRM assessments underway

For the CRM Phosphorus:

• As we already indicated repeatedly in our letter of 2nd July and at both previous SCRREEN workshops, the document SCOPE Newsletter n°136 was validated summer 2020 by DG GROW, JRC and by nearly every key company in the P₄ industry in Europe, contains key information. This is transparent, in that the industry participants are listed in the document and the information in this document was elaborated at a webinar co-organised with DG GROW and JRC, and then the text circulated to all participants and validated by them and by DG GROW and JRC. We do not understand why this document seems to be ignored, thus leading to questions answered in it being raised in a workshop where participants have considerably less direct knowledge of the P₄ industry.

In particular, **please note the conclusions regarding the CRM Phosphorus (P**₄**) and production of food additives and batteries**, which are clear in this SCOPE Newsletter (and validated as indicated above), and which we repeated in our letter of 2nd July. We do not understand why these points were raised again at the third workshop as if no information was available.

- Please note our comment at the workshop that **production of the CRM cobalt is entirely dependent on "Phosphorus"** (a P₄ derived catalyst is necessary for cobalt production, as indicated in the SCOPE Newsletter n°136). We note that another participant at the third workshop indicated that the semiconductor indium phosphide is also dependent on P₄ (this is to our knowledge correct).
- Please note our comment that "phosphoric acid" trade data is completely irrelevant for the CRM Phosphorus. Phosphorus (P₄) cannot be made from phosphoric acid, as clearly explained in the SCOPE Newsletter. And nearly all (probably >>95%) of traded phosphoric acid is not produced from P₄ (Phosphorus). The intermediates of P₄ which are relevant (and for which trade data should be identified, if it exists) are listed in the SCOPE Newsletter.

For the CRMs Phosphate Rock and Potash the question of the recycling rate remains open and needs to be addressed.

• Manifestly, the answer cannot be zero for one of these materials and 30% or 17% for the other. The answer is not identical, but should unquestionably be of the same order, in that the use – reuse cycles are structurally the same (K or P in biological wastes and by-products, such as wood combustion ash, manure, sewage sludge, straw and other crop by-products ...) is partially used as a "fertiliser", substituting use of mineral K or P fertiliser, or as animal feed (crop by-products, food industry by-products ...) substituting use of mineral K or P feed additives.



- To date, there seem to be three possible answers: 0% for Phosphate Rock (based on one expert comment), 17% for Phosphate Rock (Deloitte calculation for DG GROW in CRM assessment study 2016), 30% for Potash (source unknown).
- This question of recycling rate was extended during the workshop to the question of the **boundaries of what is accounted in EU (net) imports for criticality of "Phosphate Rock"**.

Previous CRM analysis have considered only trade flows of phosphate rock as such. This makes no sense, as **most P comes into Europe as phosphoric acid or phosphate mineral fertiliser or mineral animal feed**. This is shown by comparing net imports of phosphate rock into EU, c. 1.5 Mt/y P_2O_5 (previous CRM Fact Sheets, coherent with industry data, e.g. <u>AEEP</u> 6 Mt/y rock*), to c. 1.4 MtP/y = 3.2 Mt/y P_2O_5 imports going into crop production only (not including inputs of mineral animal feed to livestock production, or other food-agricultural uses) in the only existing phosphorus flows study for Europe (<u>Van Dijk et al. 2015</u>). * 15 - 41% P_2O_5 (7-18% P) in beneficiated phosphate rock

Although we fully support maintaining a P-fertiliser industry in Europe, we would suggest that **the criticality of Phosphate Rock is related to food production**, not to whether the rock is processed to phosphoric acid and to fertiliser within or outside the EU.

 We also note that the question was raised at the workshop last week as to whether or not imports of phosphorus in animal feed and food should be taken into account. We suggest that the criticality end-point for K and P is food production, in which case imported minerals used in animal feed or in fertilisers to grow forage to feed livestock can be substituted by K or P imported in soya animal feed or in imported food.

This is not negligible. Van Dijk et al. above indicate 1.39 MtP/y imported for crop production (i.e. fertilisers) and to 0.25 MtP/y import as mineral animal feeds, compared to 0.19 MtP/y imported in plant-based animal feeds and 0.28 MtP/y imported in food materials.

We are not aware of an EU potassium flows study, but in a study of K flows in Thailand, <u>Sakamornsnguan et al. 2021</u> indicate imports of 141 Mt/y K₂O in crops and food compared to 544 Mt/y K₂O in fertilisers and chemicals.

We suggest that these related questions of boundaries are recycling rates are fundamental and should be discussed with concerned stakeholders.



We propose to DG GROW to co-organise a workshop inviting representatives of farming, food and beverage industries, animal feed industries, fertilisers and chemicals industries, food security stakeholders, nutrient flow experts and SCRREEN to discuss these questions of boundaries for the criticality of food system CRMs (P and K).

If you are willing to participate in such a workshop initiative, to be further defined according to your objectives and requirements, ESPP can undertake the organisation, including producing a summary document and validating this document with DG GROW and with stakeholders.

We hope that you will take this various comments and input as a positive contribution to the CRM assessment process and look forward to your response to our workshop proposal.

Yours sincerely

Ludwig Hermann, President.