



### Overall conclusions ESPC2013

6-7 March 2013, Brussels

- Awareness of the “Phosphorus Challenge” in Europe is growing rapidly. ESPC2013 was attended by over 330 professionals and stakeholders from 26 countries, representing 90 businesses, 80 knowledge institutes, 80 governmental and 75 non-governmental organizations and associations.
- All attendees underlined the importance and urgency of the Phosphorus Challenge (insecurity of supply, environmental problems, geopolitical developments). **Seven key messages for action were identified, as annexed.**
- We should and can take action today by being more efficient in our use, by wasting less, recycling more, reducing environmental losses, and by smart cooperation. The idea of creating a European market for recycled phosphorus with a value chain approach received strong support.
- European Commissioner for Environment Potočník was impressed by the strong network presence at the conference. He heard answers to questions he had not yet posed in the draft EU Green Paper on Phosphorus and he stressed his personal support and commitment to help member states, businesses and knowledge organisations to improve phosphorus resource efficiency within Europe. He also promised the EU Green Paper on Phosphorus would soon be published.
- Cooperation is needed throughout the value chain, within the triple helix, between the agro/food, water and waste management and chemistry sectors and between all member states of the European Union and within the European Commission (coherence Raw Materials Initiative, EIPs, Roadmap Resource Efficient Europe, water protection, soil and fertilisers policies). Only then, sustainable innovations can develop and mature. Companies have to innovate, but they will have the support from governments and the European Commission to create an enabling (regulatory) environment. They can count on the financial and research sectors to develop environmental protection, process and waste treatment technologies, market potential for recycled phosphorus and the sound business cases along the entire value chain.
- The markets for primary phosphorus rock and secondary phosphorus can coexist and develop sustainably together, because global demand for fertilizers will continue to rise substantially, with the growing world population, growing demand for food, feed and (bio)fuels and the degradation of soils. Close cooperation between the EU and phosphorus rock-producing countries is strongly recommended.
- At the end of the conference the European Sustainable Phosphorus Platform (ESPP) was launched. Already more than 150 organisations had signed up to the Joint Declaration (the declaration can be downloaded and sign up by email). The purpose of the platform is to continue the work that was started with the organisation of ESPC2013: i.e. to bring together knowledge and experience necessary to strengthen innovation for better stewardship of phosphorus, to increase the recycling of phosphorus, reduce losses and improve efficiency of phosphorus use, and to create related green jobs within the framework of a circular economy. The first meeting of the organization committee of the ESPP took place on the 15<sup>th</sup> of April 2013 in Brussels.
- The next ESP Conference will be held in Berlin in 2015 to show the results of the ongoing collective actions and innovations and to talk about further steps to be taken along the lines of sustainable phosphorus use.

Brussels, April 15, 2013

[www.phosphorusplatform.org/espc2013.html](http://www.phosphorusplatform.org/espc2013.html)



### Conclusions from the interactive table sessions ESPC2013

*At the European Sustainable Phosphorus Conference 40 interactive table sessions were held to discuss various topics, such as efficient use of phosphorus in agriculture, recycling technologies in manure, biowaste and water treatment, market development, finance, international relations and development cooperation.*

*Below are the main conclusions from all the sessions: 7 key messages.*

*The notes from each round table are published in full on the ESPC website [www.phosphorusplatform.org/espc2013.html](http://www.phosphorusplatform.org/espc2013.html)*

#### **Business development**

- **pilot projects**
- **sound financial engineering: eg. innovation loans, guaranteed funds, venture capital, bank financing**
- **integrating P management into other value created, eg. cost reduction**

The development of sound business cases is essential to tackle the Phosphorus Challenge. Many potential opportunities are available in the areas of efficient use of and recycling of phosphorus (eg. eg. valorisation of nutrients, water and energy in biowastes, food and animal wastes). To develop these business cases from paper to full-scale projects, it is crucial to increase the number of pilot and demonstration projects and to establish a more supportive legal framework. At the same time sound financial engineering is required in the form of innovation loans, guarantee funds, venture capital and bank financing. The integration of the financial sector in existing and newly created consortia will ease start-ups and improve their durability. In order to achieve economic profitability, phosphorus should often be approached not as a core activity, but should be integrated into other value creating or cost-saving business cases as well, such as bio energy or waste reduction. Finally, to support business development we need a more strategic communication about the concept of "waste=resource". Knowledge centres, NGOs and regulators have an important role in developing technologies and cooperation at the pre-competitive stage, and in identifying and addressing the economic obstacles to phosphorus stewardship.

#### **Smart cooperation**

- **dissemination of knowledge and experience**
- **connecting demand and supply, different waste streams, markets, logistics**
- **creating trust**
- **local value chains**
- **national nutrient platforms**
- **European Phosphorus Platform**

A fundamental requirement for business case development is involving and bringing together parties throughout the phosphorus value chain, across different sectors and member states. In that way knowledge and experience can be effectively disseminated, supply and demand can be connected, different waste streams can be integrated and markets and logistics can be combined. To achieve cooperation between these differing types of organizations and industries, parties must trust each other. For that purpose it is advised bringing together and closing local value chains, and setting up national and/or regional nutrient platforms. In that way the entire value chain can be smartly governed and used to attain the necessary changes in policies and regulations. The creation of a European phosphorus platform would facilitate achieving these goals on a European level.



### Knowledge, benchmarking, dissemination

- **monitoring P flows, P reserves**
- **risk assessments, LCAs, decision support systems,**
- **contaminants**
- **agronomy, soil P status, plant breeding**

From a perspective of knowledge creation and dissemination, there are several important steps to be taken. First the European Union should set up its own monitoring system that provides insight into phosphorus flows and global phosphorus rock reserves. This will enhance our capacity to identify which measures should be taken by which player and a P-footprint could be developed. Secondly the creation of business cases should be strengthened by the use of risk assessments, LCAs and decision support systems. Thirdly the information on contaminants should be expanded. Finally, information on agronomy, soil P status and plant breeding should be intensified.

### Research

More demand-driven research is needed to develop technologies/best practices in phosphorus use efficiency and recycling which are tailored to the requirements of the end user and so which are more likely to be effectively implemented (going from market push to market pull research) New technologies could make the process of phosphorus recovery out of waste streams more efficient, but also new technologies can help to separate the different resources out of the waste streams better and thus improving the quality of the recycled phosphorus (eg. P-release, higher P-concentrations). Horizon 2020 can help member states and their knowledge institutions to focus research more on the topic of phosphorus efficiency & recycling. The European Sustainable Phosphorus Platform (ESPP) can develop a common knowledge agenda for that purpose.

### Incentives for efficient use and for recycling

- **identifying recycling targets**
- **landfill P targets**
- **certification**

Parallel to business case engineering it is highly important to create an enabling environment in which these developments are stimulated. Regulatory or financial incentives should be developed to promote efficient use and more recycling of phosphorus. For example, suggestions were put at the table to set targets for phosphorus recycling, to restrict the concentration of contaminants in fertilizers, to give consumers of fertilizers like crop farmers an incentive to use fertilizers which contain a certain amount of recycled phosphorus and to set rules to prohibit or tax the waste or loss of phosphorus (landfill, cement industry or mixed incineration with other waste). Separate biowaste collection standards could be set. Animal bone char phosphorus should be recycled. Better and workable End-of-Waste criteria for biowaste, compost should be developed. Also recycled products should be able to be certified (green labels) as an incentive for producers and customers.



### Harmonisation of existing legislation

- **Waste Framework Directive (End of Wastes status)**
- **REACH**
- **Fertiliser Regulation**
- **Nitrates Directive**
- ...

To facilitate the creation of a European market for recycled phosphorus, existing legislations should be harmonized, creating a clear level playing field among member states. Specifically there is a broad need for the standardization of quality standards for recycled phosphorus products. Since legislation on phosphorus is dispersed amongst several different European directives and regulations, current efforts to harmonize these must be continued. This involves integration into the Waste Framework Directive, REACH, Fertiliser Regulation and Nitrates Directive, agriculture and food policies, waste regulations ....

### Developing EU policies

- **EU as a front runner, competitive advantage**
- **inclusion of P in the list of strategic raw materials,**
- **EIPs (European Innovation Partnerships): eg. water, raw materials, agriculture**
- **integrating P recovery into overseas development aid policies**

Apart from approaching the Phosphorus Challenge on the value chain level, the national level and the European level, it is at the same time crucial to approach it from an international perspective. The European Union has the chance and must take the opportunity to act as a frontrunner on phosphorus efficiency and recycling to create a competitive advantage on a global level. For that purpose phosphorus should be included in the list of strategic raw materials and connection should be sought with EIPs (European Innovation Partnerships) on water, agriculture and raw materials and the CAP innovation policies. Furthermore, phosphorus recovery must be integrated into overseas development aid and trade policies by connecting the policies of phosphorus rock producing countries and EU policies (mutual gains approach) and by helping to connect the sanitation-, water treatment and agricultural sectors within developing countries to prevent soil degradation and promote sustainable agriculture.

### Awareness raising

- **at public, political and professional levels**

To increase Europe-wide support for sustainable phosphorus management, awareness of the Phosphorus Challenge should be considerably increased at the public, political and professional level. Not only professionals should be driven to take action, but also policymakers should be motivated to implement the right strategies, public society may also contribute to a broader European support.