

Dear .....,

It is my great pleasure to welcome you to this phosphorus conference on behalf of the German Ministry for the Environment and with warm greetings from our Federal Environment Minister Peter Altmaier. He and the state secretary unfortunately could not come to the conference but they are very interested to hear about the outcome.

Phosphorus is a worldwide issue. It is one of the crucial ingredients of life and cannot be replaced by any other element or substance. Given the predicted rise in global population to 9 billion people in 2050 along with the rising aspirations of more affluent societies, the demand for phosphorus worldwide is set to grow significantly.

Therefore I really appreciate that so many professionals of more than 20 European countries, from Japan, from Morocco, from the European Parliament, the FAO and from different directorates of the European Commission are attending this phosphorus conference to discuss a subject that affects the elementary principles of our every day lives.

Phosphate fertiliser is vital to ensure a protected agricultural production. A secured phosphate supply is thus an important contribution to the global food security.

Phosphorus is not directly an issue of depletion in the short and medium term. Every now and then companies find new deposits. Nevertheless experts are sure that it will lead to phosphorus shortages sooner or later. But the shortage issue is one that has other dimensions: security of supply, geopolitical dependency and a scarcity of time to adjust our economies to more efficiency in using phosphorus.

On the one hand the phosphate supply can be affected by political developments considering that the phosphate export is increasingly limited to just a few countries of politically troubled regions. Europe itself has hardly any phosphorous deposits and depends therefore so far on the import of phosphate from these particular countries. On the other hand many significant import volumes could soon not be available any

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more due to aspiring countries like China which stop the export of their own phosphate and furthermore satisfy their big appetite for this resource on the world market.

Also it is evident that the prices for phosphate fertiliser will soon be distinctly more expensive concerning the increasing demand and the additional treatment cost. Already in 2008 there was a sudden rise of prices by a factor of seven to eight.

Phosphorus is also an issue of waste and waste-water. We waste a lot of food and thus we waste a lot of nutrients which gets thrown away. We dispose it on dumping sites, we burn it with other waste and we dilute it into the rivers, lakes and oceans.

Because of the importance of phosphorus for the global food security it is advisable to think of a long term guaranteed supply of this resource at an early stage. But besides the mentioned scarcity the phosphorus reserves currently being mined industrially contain increasingly high levels of contaminants. The processes of extraction in phosphorus producing countries and subsequent processing into mineral fertilisers entail considerable adverse environmental effects and consume large amounts of energy. As the direct consequence recycled phosphate is becoming more and more the focus of attention. It will become necessary in the future to recover more phosphorus from waste, waste water, sewage sludge, sewage sludge ash and animal by-products so that mineral phosphorus fertilisers – especially those manufactured from primary resources – can be substituted by recycled products. A further aim should therefore be to make efficient use of the secondary sources of phosphorus. Establishing suitable processes for phosphorus recovery will make it possible to minimise future dependencies, secure food for the population and reduce the environmental impacts associated with phosphorus extraction.

At present numerous phosphorus recovery processes are under development. However up to now, large-scale implementation has only proven successful and economically viable in a few cases. So further work is necessary to solve the technical problems that still exist and to improve economic viability.

In February 2012 the particular importance of phosphate for the food security was emphasized through the German Resource Efficiency Programme (ProgRes). It has

spoken out in favour for intensified efforts of the utilisation of secondary phosphate sources. In Germany this involves especially sewage sludge which is currently still for over 50% incinerated and deposited in landfills, used as rock fillings or at road works. The amount of phosphate in the ashes becomes neither way unexploited. This has to change!

Suggestions for a comprehensive phosphate utilization concept were worked out in the Resource Efficiency Programme. Besides the direct usage of the phosphate through the conventional agricultural application the technical recovery of phosphate from sewage sludge or sewage sludge ashes shall be enforced.

In order to speed up the development towards an intensified phosphate recovery the German Ministry for the Environment is putting up for discussion a draft for an individual ordinance that obliges the phosphate recovery from sewage sludge if it is not directly used on agricultural crop land. Therewith it shall be ensured that in cases of co-incineration of sewage sludge the phosphate becomes separated before hand and is transferred to fertilisation.

Certainly there exists also a broad agreement that the expansion of the phosphate recovery from sewage sludge or other phosphate-containing materials is at present still related with diverse problems, so that the broad initiation of such techniques makes an adequate interim period necessary.

It has to be especially assured that the fertilisers produced through recovery methods are low in pollutants and the phosphate is plant available, preventing at the same time that the recovery process does not lead to an unreasonable increase of the sewer charge.

It is good to see that networks throughout Europe are becoming very effective in addressing the issue and are able to fasten innovation processes by cooperating smartly

together, sharing knowledge and experiences and even organizing a conference like this together!

I would like to thank our Dutch colleagues who have initiated and organized this conference and have made it possible to discuss the subject for the first time on such a professional and international level.

I see this conference as a starting point where the European community seeks for smart solutions, where innovations can flourish, where knowledge is shared and deepened in order to create mechanisms to use less phosphorus and recycle it more, so that the next generations do not have to worry about their food supply and the nutrients they need to survive. I am also especially interested to hear about the Japanese solutions to solve the phosphorous problem.

I hope you all will enjoy the exchange of views, thoughts and ideas today and tomorrow and proceed on the path of smart collaboration throughout Europe to tackle the phosphorus challenge. Hopefully a foundation stone for a common phosphate strategy of the European States will be laid and that there will be further intensive communication maybe in form of a European Phosphorus Platform. A lot will also depend on the announced green book of phosphate from the European Commission.

I would like to thank you for your attention and wish you an interesting and successful conference.