

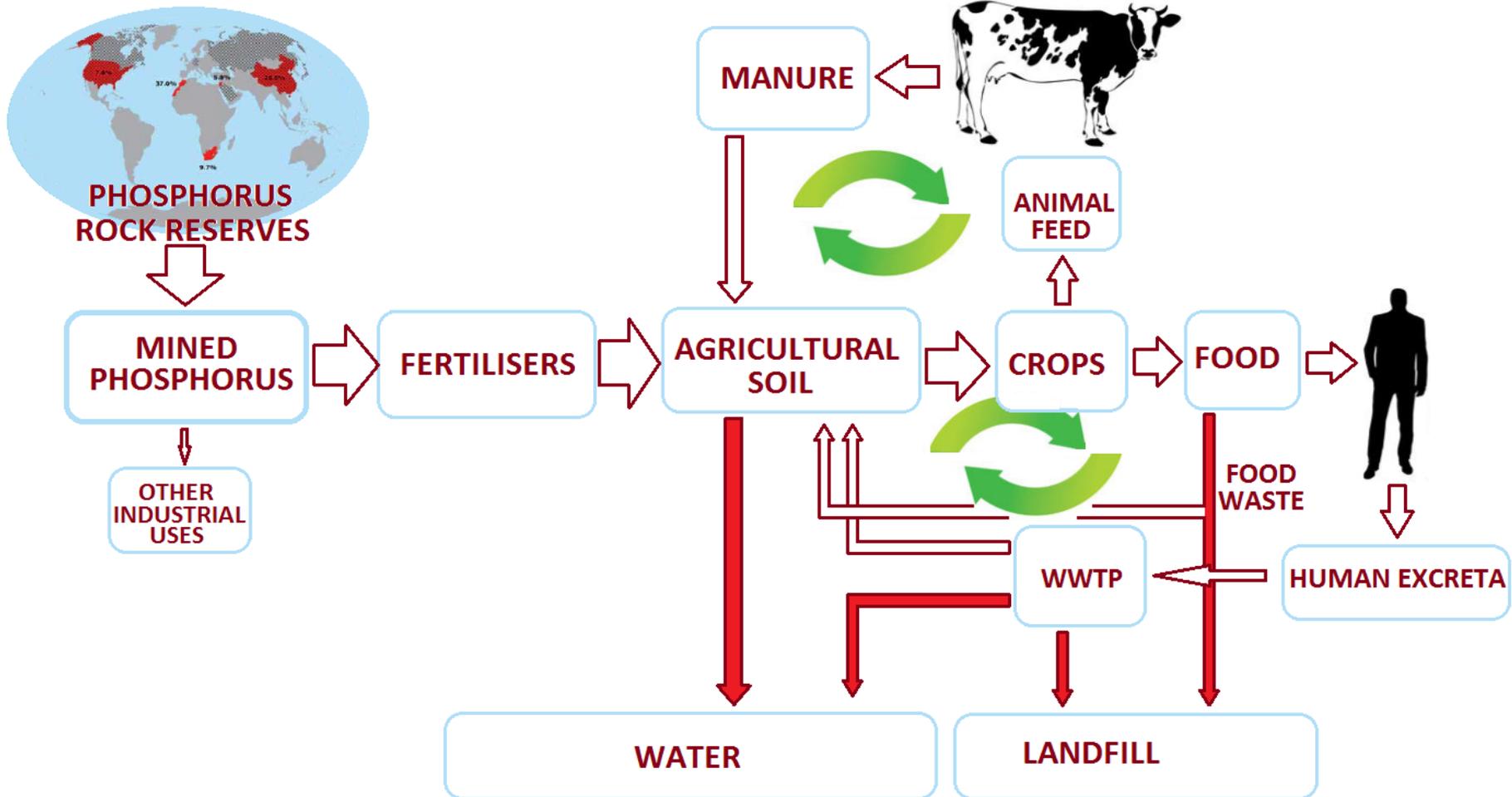


Sustainable use of phosphorus

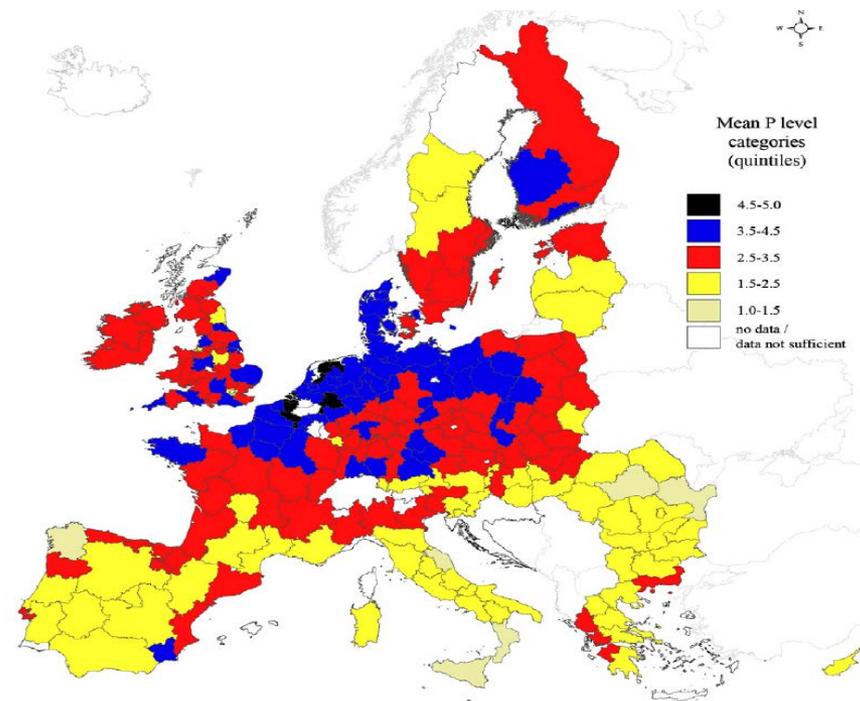
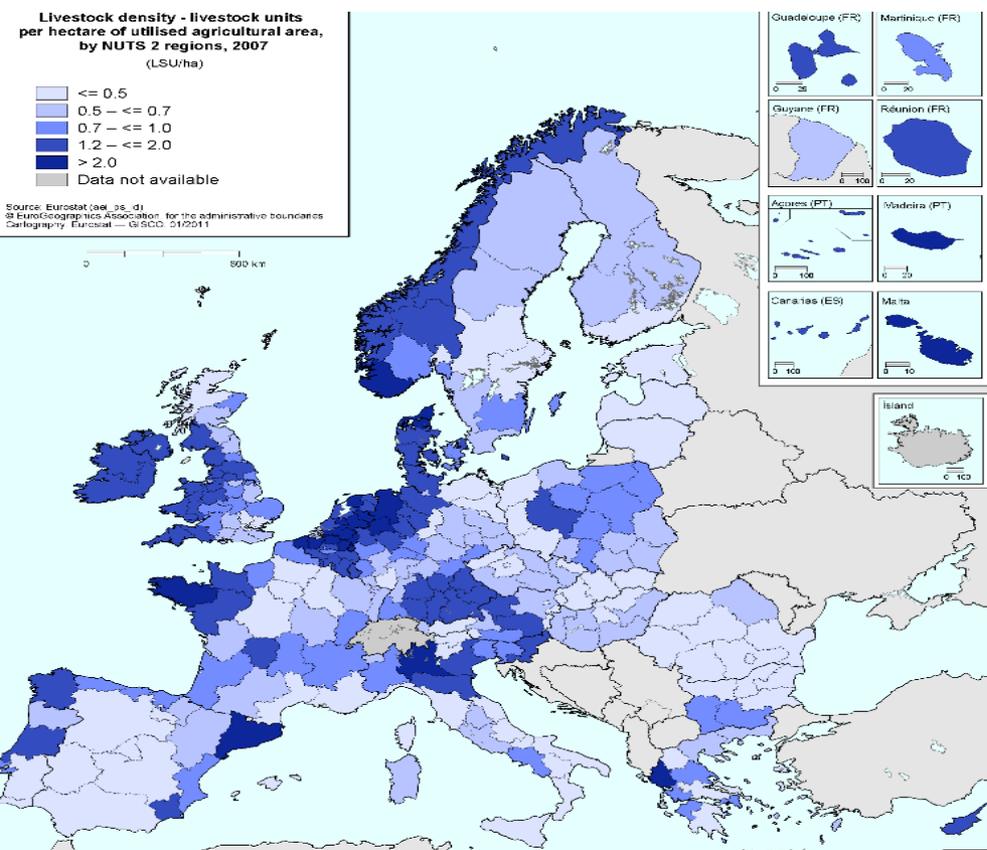
kongress "Phosphor: ein kritischer rohstoff mit zukunft"
Stuttgart, 26 October 2016

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The Phosphorus cycle



Livestock density and phosphorus in soils



Water legislation relevant to nutrients

Water Framework Directive (2000/60/EC)

- **Aim:** Achieve good status of EU waters by means of integrated River Basin Management
- **Instrument:** River Basin Management Plans (RBMP) and Programme of Measures → integrated approach based on identified pressures



Urban Waste Water Treatment Directive (91/271/EEC)

- **Aim:** Protect environment from the adverse effects of waste water discharges
- **Instrument:** Establishment of proper collection systems for waste water; Ensure appropriate treatment of collected waste water; Ensure reinforced treatment in areas sensitive to eutrophication



Marine Strategy Framework Directive (2008/56/EC)

- **Aim:** Achieve Good Environmental Status for marine waters by means of coherent approaches across sea basins
- **Instrument:** Marine strategies and programmes of measures based on identified pressures



Nitrates Directive (91/676/EEC)

- **Aim:** Reduce water pollution caused by nitrates from agricultural sources and prevent further such pollution
- **Instrument:** Codes of Good Agricultural Practices, designation of vulnerable areas, Action Programmes



Other policies and initiatives

Critical raw materials

Soil quality

Agriculture and Food

Research and
Innovation

Fertiliser regulation

Circular economy

Waste

Consultative Communication on the Sustainable Use of
Phosphorus



Consultative Communication on the Sustainable Use of Phosphorus (COM(2013)517)

- Objective : launch and EU wide debate on the sustainability of the phosphorus cycle
- 11 questions on different aspects relating to phosphorus sustainability
- 125 replies (national governments, governmental agencies, local authorities, NGOs, industry associations, research/academia, private sector, private individuals from different sectors (industry, water, agriculture, food, energy, waste, etc.)

Results of the Consultation (1)

- **Security of supply** is an issue for most respondents.
 - Seek more independency regardless of debate on available resources
 - Work on cooperative agreements, transfer of technologies
 - Ensure access to high quality mineral
- Need to improve **knowledge base** on worldwide supply and demand and phosphorus use efficiency
 - The picture presented by the Commission is fairly accurate...
 - ...but more knowledge base is needed, from different sources, on more geographical areas
 - The information needs to be more transparent and reliable
 - Harmonizing definitions, adopt a common language

Results of the Consultation (2)

- Most respondents agree on EU action to face the **risk of soil contamination**
 - Cadmium is the most addressed contaminant
 - Clarity of standards, based on scientific evidence
 - Recycled P avoids new Cadmium to enter the environment...
 - ...but attention should be paid to other contaminants

- Encourage **Research and Innovation**
 - Instruments: Horizon 2020, Innovation Partnerships
 - Topics: P use efficiency, P recovery and recycling, environmental impacts...

- Need to improve management in **areas of P surplus**
 - Monitor P flows
 - Balanced fertilisation
 - Manure processing
 - In areas of over-supply, pollution reduction at source is necessary (redistribution of livestock, decrease in livestock density, etc.)

Results of the Consultation (3)

- Prevent and reduce P losses from **food waste** and other **bio-degradable waste**
 - Various P recovery opportunity exist
 - Prevention is also key
 - Drivers / Incentives are needed
 - Ensure quality of the recycled product (and consequent acceptance)
- **Encourage phosphorus recycling**
 - Mixed feelings on mandatory approaches, but recycling should be encouraged/supported
 - Some success stories exist (e.g. struvite production)
 - Suggestion to work on P recovery and stewardship standards
 - Environmental legislation is an important driver
 - Direct application of sludge on land vs. processing...
 - ...in any case, quality and information on what is applied on land is key

Conclusions

- Phosphorus is a key resource for agriculture and life that cannot be substituted
- There are currently several inefficiencies and wastes in the P cycle, which raise concerns over P availability and environmental impacts
- Best practices exist on possible efficiency gains in production and consumption, as well as recycling opportunities. Research and technological developments are bringing results
- Important role of the EU in this context, encouraging further research and development and setting the right regulatory conditions



Thank you for your attention