Brief Highlights of Workshop Discussion
Themes

- P mgt. in a changing world
- Pathways of P transport
- Monitoring, models, & risk
- Integrating manure in arable systems
- Identifying appropriate mitigation
- Implementing mitigation measures
Use Accuracy of soil P tests? Are they adequate for current crops and environmental needs?

Subsoil P?

Need plant genetic / breeding to adapt plants

General thought is that climate will increase production in Northern Europe and decrease it in Southern Europe
Transport pathways

✓ Past experiences may have biases

✓ Still difficult to measure subsurface processes and pathways of transport

✓ GIS-based classification of the ‘Hydrology of Soil Types’ will be useful spatial assessment tool

✓ Relevancy of batch experiment to catchments
Transport pathways

✓ What are the main pathways in your country
✓ Can we make a priori assessment of processes from the literature
✓ Given complexity, how can we generalize from single catchment studies
Long-term monitoring is essential

New developments within sensors and tracers can improve monitoring

Model uncertainty needs to be communicated

Modeling at different scales needed

Transparency and engagement with stakeholders is expected
How do we design monitoring programs for the purpose of monitoring?

How do we design cost-effective monitoring?

What intensity of monitoring is needed?
What is the value of high data requiring models without the data?

Can we model the impacts of measures at a catchment scale?

What are the uncertainties in P loss predictions?
How do we create common ground between model limitations and stakeholder expectations?

Use/misuse of model results and feedback from users to modelers
Manure and cropping systems

- Developing cost-beneficial manure by-products
- Algal harvesting
- No more flushing toilets
- Manure is not just P
- Meat tax
- Drivers may need to be regulatory (e.g. tax)
- Farmers would need improved guidance
Many chemical amendments for manure - cost effectiveness and end-product P availability

Treating the soil may be an excuse to avoid dealing with the basic problem

Research on types of plants for buffer zones

How should buffer zones be best managed
More comparative studies on policies in different countries and how it works

A certification system of conservation measures is needed - US has practice standards

Simple P mass balancing might be useful

Some pollution can’t be avoided; i.e., storm event?

Is it fair to treat farmers differently from each other? Is it fair for taxpayers to subsidize farmers?