

Monday 3rd September

Theatre

10.00	12.00	Registration
12.00	13.00	Lunch
13.00	14.00	Opening and welcome
14.00	14.40	1 Keynote 1: <i>S. Rekolainen</i> How important are phosphorus in surface waters for complying with the EU Water Framework Directive.
14.40	15.20	2 Keynote 2: <i>L.M. Condrón</i> Phosphorus mobilisation – importance of agricultural practice and soil properties.
15.20	16.00	Coffee Break
16.00	16.40	3 Keynote 3: <i>L. Heathwaite</i> Understanding spatial risk and uncertainties in the delivery of phosphorus from land to water.
16.40	17.20	4 Keynote 4: <i>A.N. Sharpley</i> Demonstrating phosphorus mitigation strategies can work at field and catchment scales.
17.20	18.00	Discussion
19.00	22.00	Reception and get-together

Tuesday 4th September

Room A

Room B

Session 1: Water Quality and Ecology

Session 2: P Cycling

08.30	08.50	5 <i>E.J. Sutton, H.P. Jarvie and R.J. Williams</i> Continuous monitoring to assess phosphorus dynamics and ecological status in the River Kennet, UK.	6 <i>K. Isermann</i> Phosphorus balances in Europe and implications for diffuse pollution policy.
08.50	09.10	7 <i>M.J. Bowes, J.T. Smith, J. Hilton, M.M. Sturt and P.D. Armitage</i> Periphyton biomass response to changing phosphorus concentrations in a nutrient-impacted river: a new methodology for P target setting.	8 <i>C. Swensson</i> Phosphorus balances in Swedish dairy farms.
09.10	09.30	9 <i>P.A. Chambers, C. Vis, R.B. Brua, M. Guy, J.M. Culp and G. Benoy</i> Defining phosphorus concentrations for maintenance of good ecological condition of agricultural streams.	10 <i>H. Soinne, K. Saarijärvi, M. Karppinen and H. Hartikainen</i> Extraction tests for predicting potential phosphorus load from pasture soil.
09.30	09.50	11 <i>L. May, L. Carvalho, I.D.M. Gunn and A. Kirika</i> The impact of trophic interactions on the recovery of Loch Leven after reduction in phosphorus loads.	12 <i>Z. Dou, C. Ramberg, J. Toth and J. Ferguson, R. Munson, Z. Wu, R. Kohn, K. Knowlton and L. Chase</i> A fecal P test for evaluating P status of dairy cows.
09.50	10.10	Discussion	Discussion
10.10	10.40	Coffee Break	Coffee Break

Tuesday 4th September

Room A

Room B

Session 3: Water Quality and Ecology

Session 4: P Cycling and Mobilization

10.40 11.00 13 *B. Haggard and B. Matlock*
Nutrient Limitation of Phytoplankton and
Periphytic Algae at Lake Eucha, Oklahoma,
USA.

11.00 11.20 15 *B. Ulén and J. Fölster*
Reduced nutrient losses to rivers from
changes in Swedish agriculture.

11.20 11.40 17 *H.P. Jarvie, E.J. Sutton, P.J.A. Withers,
D.M. Harper, C. Stoate and R.H. Foy*
Impacts of agricultural land-use practices on
stream-water and sediment P concentrations:
implications for P-cycling in UK lowland rivers.

11.40 12.00 19 *H. de Jonge*
New sampling method for monitoring of N and
P in surface water.

14 *C.J. Watson, D.I. Matthews, T. Kelly and
R.J. Laughlin*
Curtailling fertilizer P inputs on the P status
of soils and P losses.

16 *P. Muukkonen, H. Hartikainen and L.
Alakukku*
Effect of tillage and liming on the water-
soluble phosphorus in the clay soil fields.

18 *H. Tunney, I. Kurz, D. Bourke, R. Foy
and D. Kilpatrick*
Diffuse phosphorus concentration in
overland flow from grassland and potential
for mitigation.

20 *C. van der Salm, W. Chardon and G.
Koopmans*
Mining soil phosphorous by zero P
application: an effective method to reduce
the risk of P loading to surface water.

12.00 12.30 Discussion

Discussion

Sail trip and lunch on board

13.00 18.00 **Field Excursion**

Field Excursion

19.00 21.00 **IPW5 Board Meeting**

Wednesday 5th September

Room A

Room B

Session 5: Monitoring P Loss

Session 6: P Cycling and Wetlands

08.30	09.10	21 <i>B. Dudley, L. Defew, L. May</i> Elevated phosphorus inputs to Loch Leven during storm events - implications for load estimation and catchment management.	22 <i>C. Kjaergaard, C.C. Hoffmann and M.H. Greve</i> Phosphorus retention and release in agricultural organic lowland soils.
09.10	09.30	23 <i>F. Recanatesi, M. Garnier, M. N. Ripa and A. Leone</i> Monitoring of nutrient export into the lake Vico, Central Italy.	24 <i>H. Gordon, P.M. Haygarth and R.D. Bardgett</i> Soil drying and re-wetting effects on phosphorus retention in soils of differing microbial community composition
09.30	09.50	25 <i>J. Arnscheidt, P. Jordan, H. McGrogan, S. McCormick and C. Ward</i> High resolution monitoring to characterise phosphorus transfers in complex catchments.	26 <i>K. Snars, P.C. Brookes, A. Swain, M.S.A. Blackwell, J. Williams, P.J. Murray and P. Haygarth</i> The impacts of organic matter incorporation and hydrological stress on microbial biomass phosphorus dynamics.
09.50	10.10	27 <i>O. Barron, M. Donn, D. Pollock, W. Dawes and A. Barr</i> Variation in phosphorus export resulted from urbanisation of former agricultural catchment (Southern River, Western Australia).	28 <i>M.I. Litaor, R. Sade and M. Shenker</i> The influence of eco- and agro-practices on the fate and transport of phosphorus from altered wetland soils to waterways.
10.10	10.30	29 <i>L. Hejduk and K. Banasik</i> Phosphorus output from a lowland agricultural watershed.	<i>Discussion.</i>
10.30	10.50	Discussion	
10.50	11.10	Coffee Break	Coffee Break

Wednesday 5th September

Room A

Room B

Session 7: Monitoring P Loss

Session 8: GrasP

11.10	11.30	31 <i>M.R. Hart and P.S. Cornish</i> Relationships between available soil P and runoff P in the Sydney Catchment Area.	32 <i>C. Macleod., G. Bilotta, R. Bol, R. Brazier, P. Butler, J. Freer, L. Gimbert, S. Granger, J. Hawkins, T. Krueger, P. Naden, G. Old, J. Quinton, P. Worsfold and P. Haygarth</i> Grasslands, sediment, colloids and phosphorus: an interdisciplinary team approach with the 'GrasP' project.
11.30	11.50	33 <i>P. Fiener and K. Auerswald</i> Influence of hydrodynamically rough grassed waterways on the runoff load with dissolved reactive phosphorus.	34 <i>G.S. Bilotta, R.E. Brazier, P. Butler, S. Granger and P.M. Haygarth</i> The influence of subsurface drainage on sediment and phosphorus export from intensively managed grasslands.
11.50	12.10	35 <i>J. Uusi-Kämpä</i> Effects of freezing and thawing on DRP losses from buffer zones.	36 <i>G. H. Old, P.S. Naden, S.J. Granger, R. Bol, P. Butler, J. Marsh, P.N. Owens, B.P.G. Smith, C. Macleod, G. Bilotta, R. Brazier and P. M. Haygarth</i> Understanding the pathways and dynamics of agricultural diffuse pollution from intensively farmed grassland: the application of natural and artificial tracing techniques.
12.10	12.30	37 <i>H.A. Sinclair, A.L. Heatwaite and A.J. Saul</i> Colloid facilitated phosphorus loss from diffuse agricultural sources via subsurface pathways.	38 <i>T. Krueger, J.N. Quinton, J. Freer, C. Macleod, G. Bilotta, R.E. Brazier, P. Butler, S. Granger, P.M. Haygarth</i> Inferring processes of sediment and phosphorus transfer from replicated, intensive grassland plots.
12.30	12.50	Discussion	Discussion
12.50	14.10	Lunch Break	Lunch Break

Wednesday 5th September

Room A

Room B

14.10

14.50

39 Keynote 5:
R. McDowell
Quantifying diffuse phosphorus (P) losses to the farm/sub-catchment scale: targeting methods and uncertainties for P loss mitigation.

40 Keynote 6:
C.C. Hoffmann
Phosphorus dynamics in wetlands and riparian areas.

15.00

17.30

Poster Session

19.00

01.00

Workshop Dinner

Thursday 6th September

Room A

Room B

Session 9: Monitoring and Scale

Session 10: Mitigation

09.00

09.20

41 *P.A. Scholefield, A.L. Heathwaite, R Hodgkinson, P Withers, R.E. Brazier, K.J. Beven, D. Walling, P.M. Haygarth*
Spatial distribution of P mobilisation in agriculture headwater catchments.

42 Keynote 7:

R. Maguire
Critical evaluation of mitigation options for phosphorus at field to catchment scale.

9.20

9.40

43 *D.R. Smith*
Phosphorus transport from row crop agriculture in the Midwestern US: problems with scaling up from small plot to watersheds

09.40

10.00

45 *N.L. Bohl, C.A. Baxter, T.W. Andraski and L.G. Bundy*
Scale of measurement effects on phosphorus in runoff from cropland.

46 *R. Väänänen*

Possibilities to reduce diffuse phosphorus load from managed forest areas by buffer zones.

10.00

10.20

47 *C. Deasy, R. Brazier, L. Heathwaite and R. Hodgkinson*
Quantifying agricultural phosphorus transfers at hillslope to catchment scales.

48 *J. de Klein, B. Brinkman, R. Portielje, T. Prins*

Effect of hydromorphological interventions on nutrient concentrations in surface waters.

10.20

10.30

Discussion

Discussion

10.30

11.10

Coffee Break

Coffee Break

Thursday 6th September

Room A

Room B

Session 11: Modelling

Session 12: Mitigation

11.10	11.30	<i>49 O.F. Schoumans, C. van der Salm, D.J.J. Walvoort and P. Groenendijk</i> Approaches to estimate phosphorus (P) losses to surface waters at different scales in The Netherlands.
11.30	11.50	<i>51 I. Huttunen, M. Huttunen, B. Vehviläinen and S. Tattari</i> Large scale phosphorus transport model.
11.50	12.10	<i>53 P.S. Davison, S.G. Anthony, A.L. Collins and J. Stromqvist</i> Predicting phosphorus transfers within agricultural catchments across England and Wales using the PSYCHIC model.
12.10	12.30	<i>55 A.J. Wade, D. Butterfield, D.S. Lawrence, I. Bärlund, P. Durand, A. Lazar and Ø. Kaste</i> The Integrated Catchment Model of Phosphorus (INCA-P): a new structure to simulate particulate and soluble phosphorus transport in European catchments.
12.30	12.50	Discussion
12.50	14.10	Lunch break

<i>50 R. A .Hodgkinson , P. J. A. Withers, B. J. Chambers., J.R. Williams, R. Cross and G. Bailey</i> Risk and mitigation of incidental P losses following organic manure applications.
<i>52 J.R. Williams, L. Sagoo, B.J. Chambers, R. Cross, J. Short and R.A. Hodgkinson</i> The impact of slurry management practices to reduce nitrate leaching on phosphorus losses from a drained clay soil.
<i>54 P. Moore, A. Sharpley, D. Parker, H.L. Goodwin, P. Klineman, R. Young and R. Williams</i> Mitigation options for reducing phosphorus runoff from biosolids.
<i>56 J.T Sims and W.R. Rohrer</i> Ten years of progress in improving agricultural phosphorus management: a case study of the State of Delaware, USA.

Discussion
Lunch break

Thursday 6th September

Room A

Room B

Session 13: Modelling

Session 14: Mitigation

14.10	14.30	<i>57 P. Groenendijk, L.V. Renaud, D.J.J. Walvoort and R.M. Bijlsma</i> Risk assessment of P losses and uncertainties in soil and surface water systems on catchment scale.
14.30	14.50	<i>59 M.H. Larsson, A. Lindsjö, K. Persson, G. Johansson and H. Johnsson</i> Application of the ICECREAMDB model to quantify phosphorous losses from Sweden.
14.50	15.10	<i>61 I. Barlund, S. Tattari, M. Puustinen and M. Posch</i> Parameter variability affecting simulated field scale phosphorus losses.
15.10	15.30	<i>63 T. Page, L. Pope, R. Willows, L. Heathwaite and J. Freer</i> Elicitation of expert opinion regarding the primary sources of uncertainty associated with predicting the risk to surface water bodies from phosphorus.
15.30	15.50	Discussion
15.50	16.30	Coffee break

<i>58 E. Laloy and C.L. Bielders</i> Effects of destruction and burial dates of cover crops on runoff, erosion and phosphorus losses in a maize cropping system: measurements and modelling.
<i>60 M. Silgram, B. Jackson, J. Quinton, C. Stevens and A. Bailey</i> Can tramline management be an effective tool for mitigating phosphorus and sediment loss?
<i>62 M. Bechmann</i> High risk areas of phosphorus losses from agriculture: three different production systems.
<i>64 J. Quinton, C. Stevens, M. Silgram, B. Jackson and A. Bailey</i> Mitigation options for phosphorus and sediment (MOPS): tillage treatments and the use of vegetative barriers.

Discussion
Coffee break

Thursday 6th September

Room A

Room B

Session 15: Modelling

Session 16: Mitigation and Economics

16.30	16.50	<i>65 Y. Panagopoulos, N. Efthimiou and M. Mimikou</i> Phosphorus fate and transport modelling in a catchment of Western Greece and identification of critical source areas.
16.50	17.10	<i>67 P. Lazzarotto, V. Prasuhn, and C. Stamm</i> Spatial predictions of P losses from soil and manure and monitoring data in a small agricultural catchment point to soil P as the main source.
17.10	17.30	<i>69 U. Buczko and R.O. Kuchenbuch</i> Evaluation of a P Index for NE Germany for a large cattle production operation.
17.30	17.50	<i>71 H.E. Andersen, G. Heckrath</i> A phosphorus indexing concept for Denmark.
17.50	18.10	Discussion

<i>66 I.G.A.M. Noij, P.T.J van Bakel, W. Chardon, O. Clevering, W. Corré, W. van Dijk, W. de Groot, H. Massop, J. van Middelkoop, R. Smidt, H. Stevens and A. van den Toorn</i> Site specific measures to mitigate P loads in the Dutch Province of Limburg.
<i>68 B. Hasler and J. Schou</i> Cost-benefit of Different Mitigation Options.
<i>70 D. Collentine</i> Implementation of measures to reduce nonpoint source loading of phosphorus at the catchment level.
<i>72 A. Bailey, J. Quinton, M. Silgram, C. Stevens and B. Jackson</i> Mitigation of Phosphorous and Sediment: Is there a cost-effective solution?

Discussion

Friday 7th September

Theatre

08.30	09.10	73 Keynote 8: <i>D. Radcliffe:</i> Dynamic watershed-scale phosphorus models: their usages, scales, and uncertainties.
09.10	09.50	74 Keynote 9: <i>P.J. Withers</i> Farmers and mitigation options: economic and practical constraints.
09.50	10.20	Coffee Break
10.20	11.00	75 Keynote 10: <i>P. Haygarth, M. Shepherd, S. Anthony, P.J.A. Withers, A. Huhtala and P.O. Marklund</i> Prioritising mitigation options for diffuse pollution from agriculture by estimating cost and effectiveness: doing our best in the face of uncertainty.
11.00	11.40	76 Keynote 11: <i>E. Jeppesen</i> Phosphorus and ecological conditions in climate change perspective.
11.40	12.30	Discussions
		Closing of the workshop and IPW6
12.30		Lunch and departure