

**KompetensCentrum för Kemiska Bekämpningsmedel vid SLU bjuder in till en
SLU:s Centre for Chemical Pesticides invites you to an**

Expert workshop – Current status and development of methods for detecting field-level effects of pesticides in aquatic ecosystems

Time: 19–20 November

Place: Room A241 at BioCenter (19 Nov) and room H in the education building (20 Nov) at SLU-Campus Ultuna in Uppsala (see map)

Moderator: Jenny Kreuger

This workshop brings together national and international experts on biological effects of pesticides from academia and from national authorities. During the first day the workshop offers keynote lectures by international experts and a forum for discussions with these experts. During the second day of the workshop national experts will confer with representatives for key-authorities about the current state of knowledge and the bridging of identified knowledge gaps. Particular attention will be given to the improvement of monitoring and assessment methods of pesticide effects on different levels of biological organization in aquatic ecosystems and the ecosystem functions that these they provide.

Workshop objectives:

- (1) To bring together researchers and stake holders for specific discussions about the assessment methods that currently are available for the detection of pesticide effects on aquatic organisms, populations, communities, and ecosystem function,
- (2) To identify the strengths, weaknesses, opportunities and threats of these various methods, and judge to which degree they meet the requirements set by stakeholders
- (3) To discuss and conclude how the various methods function in a scenario where multiple stressors rule (e.g. eutrophication, hydromorphological modification, other contaminants)
- (4) To produce a summary document where these issues are stipulated and where recommendations for stakeholders are outlined.

Specific questions addressed:

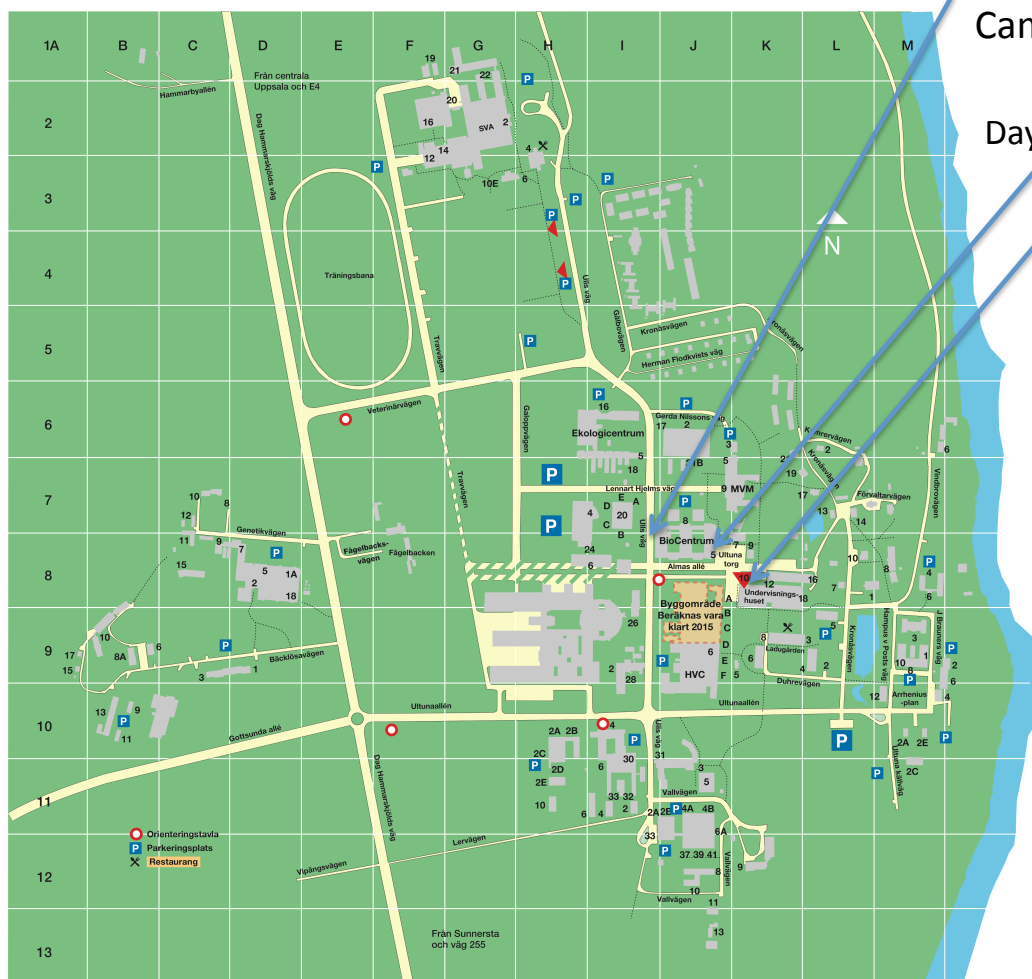
- (1) What are the most important direct and indirect effects of pesticides on aquatic ecosystems? i.e. what direct and indirect effects to stream biota are caused by pesticide exposures?
- (2) Can/should we address tackle multiple stressor scenarios?
- (3) How do extrapolations (i.e. *in vitro* to *in situ*, one compounds to multiple compounds, biomarkers to organism fitness) affect the reliability of the assessments?
- (4) Do we need to protect all waters?
- (5) Do we have faith that the current registration process protects aquatic organisms and ecosystem processes?
- (6) How can we improve on current monitoring efforts?

Map of Ultuna Campus Uppsala and Workshop program on next pages

Workshop venue at SLU Campus Ultuna in Uppsala.



Campus Ultuna



Bus stop
Campus Ultuna

Day 1: BioCenter A241

Day 2: Sal H U-huset

2014-08

City buses (green buses) lines 1 (to Ultuna), 12 (to Gottsunda), 20 (to Graneberg)

Or
Regional buss 804 (Ultuna) – Yellow buses.

Day 1: 19 November (In English) – Room A241 at the BioCentre, SLU-campus

- 9.30–10.00 Coffee/tea
- 10.00 Welcome address (Jenny Kreuger, Director of SLU:s Centre for Chemical Pesticides, CKB, and moderator of the workshop)
- 10.15 Workshop objectives (Willem Goedkoop, SLU)
- 10.30 Theo Brock (Wageningen University and Research) – Aquatic effects and risk assessment of pesticides: Dutch approaches to meet the requirements of the European Water Framework Directive.
- 11.00 Markus Klar (Swedish Chemicals' Agency) – Shortcomings in current risk assessment – Are we on the right track?
- 11.30 Thomas Backhaus (Gothenburg University) – Using mixture toxicity approaches to identify vulnerable species, drivers of mixture toxicity and priority pesticide mixtures.
- 12.00 LUNCH
- 13.00 Annika Jahnke (UFZ) – Bioanalytical tools for detecting pesticide effects in the aquatic environment.
- 13.30 Matthias Liess (UFZ) – The use of species traits and the SPEAR metric to specifically assess pesticide impact on streams in Germany.
- 14.00 Coffee/tea/fruit break
- 14.30 Jes Rasmussen (Århus University) – Pesticide exposure and effects on stream invertebrate communities and ecosystem function – Danish experiences.
- 15.00 Lars Förlin (Gothenburg University) – Contaminant effects on fish: Responses at the individual- and population-levels.
- 15.30–17.30 Discussion in groups on specific questions outlined above (each group should have a Swedish-speaking rapporteur). Group questions/tasks (1) What are the strengths and weaknesses of various assessment methods (2) Judge to which degree these methods meet (or mismatch) the requirements set by stake holders, (3) the possibilities of extrapolations, i.e. lab to field, in vitro–in situ, single–multiple substances, from a few test species to many species, from effects on mechanisms to organism performance/fitness, (4) The use of multiple lines of evidence, i.e. can different assessment methods be combined?
- 19.00 - Workshop dinner at SLU:s Soil-Water-Environment Centre

Day 2: 20 November (In Swedish) – Sal H i undervisningshuset på SLU campus

- 9.00–10.00 Plenar – Rapportörerna redogör för gårdagens diskussioner och slutsatser.
- 10.00–10.20 Fikapaus
- 10.20–10.40 Havs- och vattenmyndigheten (Bengt Fjällborg) – Vilka verktyg behöver HaV för att kvantifiera bekämpningsmedelseffekter i vattenmiljön?
- 10.40–11.00 Naturvårdsverket – Naturvårdsverkets syn på behov av verktyg för bedömning av miljögifters effekter (Karl Lilja)
- 11.00–12.00 Diskussion om hur myndigheters behov av förbättrade metoder för övervakning och förbättrade bedömningsverktyg kan mötas av dagens kunskap, samt identifiering av väsentliga kunskapsluckor/utvecklingsbehov.
- 12.00–13.00 LUNCH
- 13.00–14.00 Fortsatt diskussion
- 14.00–15.00 Sammanställning av workshopen slutsatser i punktform.
- 15.00 Avslutning



List of participants (in alphabetical order by surname):

1. Jeanette Asp, Swedish Chemicals' Agency.
2. Johan Axelman, Swedish Chemicals' Agency.
3. Thomas Backhaus, Dept. of Plant and Environmental Sciences, Gothenburg University.
4. Peter Bergkvist, Swedish Chemicals' Agency. (Day 1 only)
5. Theo Brock, Wageningen University and Research, Netherlands. (Day 1 only)
6. Mirco Bundschuh, SLU, Dept. of Aquatic Sciences and Assessment. (Day 1 only)
7. Elisabeth Dryselius, Swedish Chemicals' Agency.
8. Bengt Fjällborg, Swedish Agency for Marine and Water Management (HaV).
9. Alex Feckler, SLU, Dept. of Aquatic Sciences and Assessment. (Day 1 only)
10. Lars Förlin, Gothenburg University.
11. Willem Goedkoop, SLU, Dept. of Aquatic Sciences and Assessment, Centre for Chemical Pesticides
12. Mikaela Gönczi, SLU, Centre for Chemical Pesticides CKB.
13. Sunita Hallgren, Federation of Swedish Farmers. (Day 2 only)
14. Anna Hellström, Swedish Environmental Protection Agency.
15. Annika Jancke, Centre for Environmental Research UFZ, Leipzig.
16. Nick Jarvis, SLU, Dept of Soil and Environment and Centre for Chemical Pesticides CKB. (Day 1 only)
17. Ove Jonsson, SLU, Centre for Chemical Pesticides CKB.
18. Maria Kahlert, SLU, Aquatic Sciences and Assessment.
19. Maja Karlsson, Swedish Chemicals' Agency.
20. Jenny Kreuger, SLU, Centre for Chemical Pesticides CKB.
21. Markus Klar, Swedish Chemicals' Agency.
22. Matthias Liess, Centre for Environmental Research UFZ, Leipzig. (Day 1 only)
23. Karl Lilja, Swedish Environmental Protection Agency.
24. Cecilia Ljunggren, Svenskt Växtskydd (Swedish Plant Protection). (Day 2 only)
25. Johan Lundqvist, SLU, Dept of Biomedical Sciences and Veterinary Public Health.
26. Hannes Löfgren, Regional Water Authority "Norra Östersjön".
27. Leif Norrgen, SLU, Dept of Biomedical Sciences and Veterinary Public Health.
28. Agneta Oscarsson, SLU. Dept of Biomedical Sciences and Veterinary Public Health.
29. Jes Rasmussen, Århus University, Denmark.
30. Åsa Skytt, Swedish Chemicals' Agency.
31. Henrik Sundberg, Swedish Chemicals' Agency.
32. Lina Wendt-Rasch, Swedish Chemicals' Agency.
33. Ann-Sofie Wernersson, Swedish Agency for Marine and Water Management (HaV). (by e-link)
34. Nina Åkerblom, Swedish Chemicals' Agency.