

# SLU Centre for Pesticides in the Environment (CKB)

A partnership forum mainly focusing on the fate of pesticides used within agriculture and their effects in the environment.

## Collaboration and education

Compiling knowledge of pesticides and making it more available to stakeholders via CKB web page, publications, presentations and training courses. Providing expert support to authorities and other organisations.



CKB web page

## Environmental monitoring

Aiming to support the national environmental monitoring with strategic development to increase the understanding and usability of the collected data, as well as to carry out complementary sampling projects.



Surface water sampling site



Collecting pollen for pesticide analysis

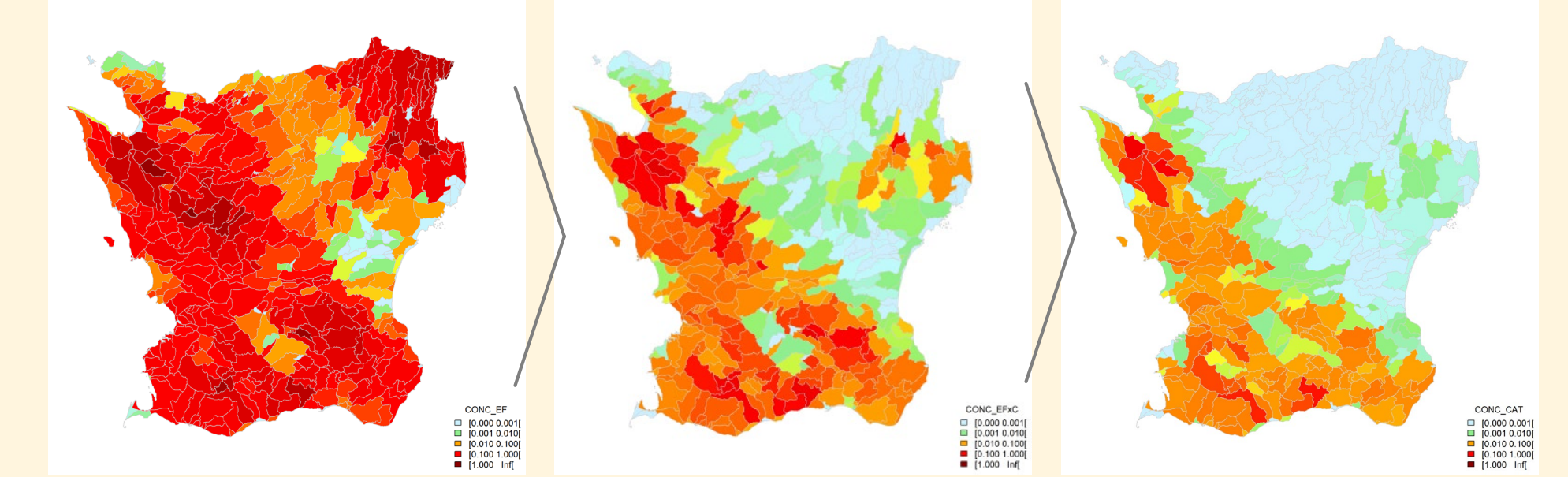
(Jonson et al 2022. Pollinatörers exponering för växtskyddsmedel via pollen, nektar och luft i jordbrukslandskapet. CKB-rapport 2022:2)

## Risk assessment tools

Developing models and risk assessment tools used by national and European authorities and other stakeholders.

Modelling pesticides with MACRO-SE

Edge of the field With crop area With dilution



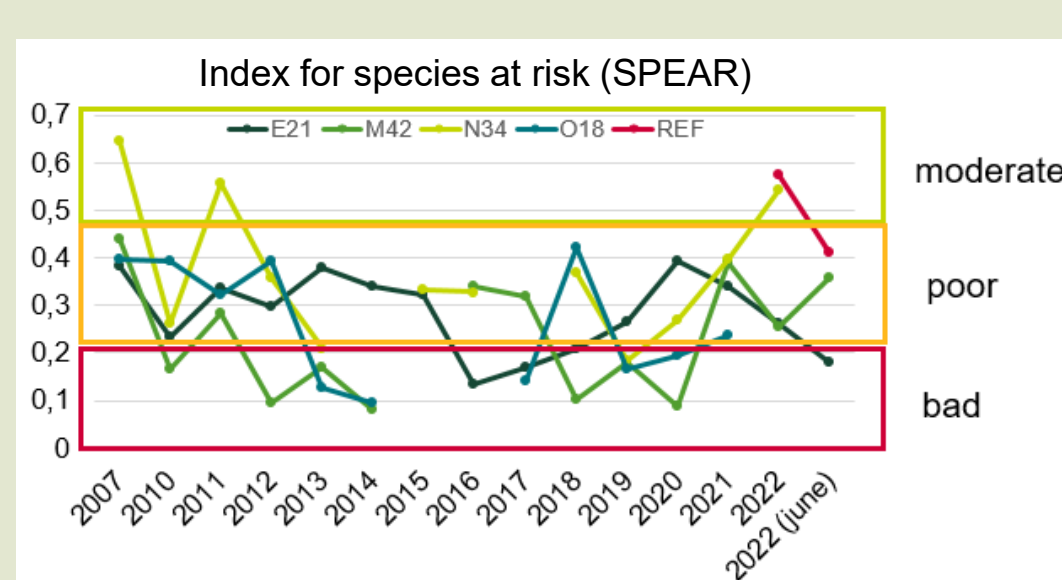
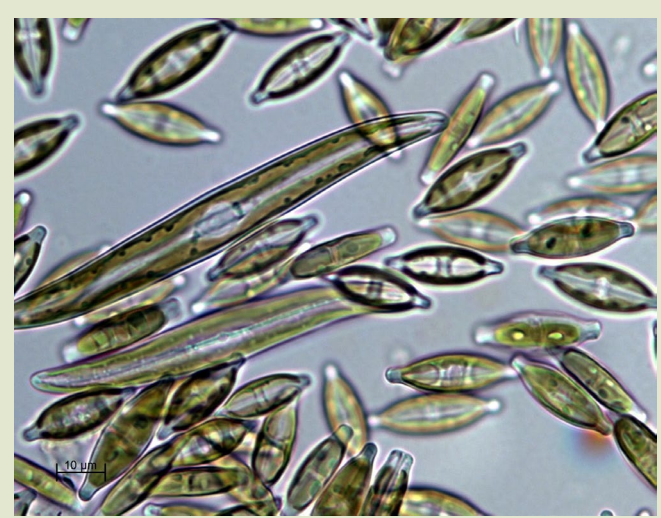
(Boström 2013 "Riskkartering av bekämpnings-medel i skånska ytvatten", Länsstyrelsen i Skåne län.)

## Biological effects

Studying the effects from pesticides on aquatic and terrestrial ecosystems in Swedish agricultural areas and developing biological indicators that can be used for environmental risk assessment.

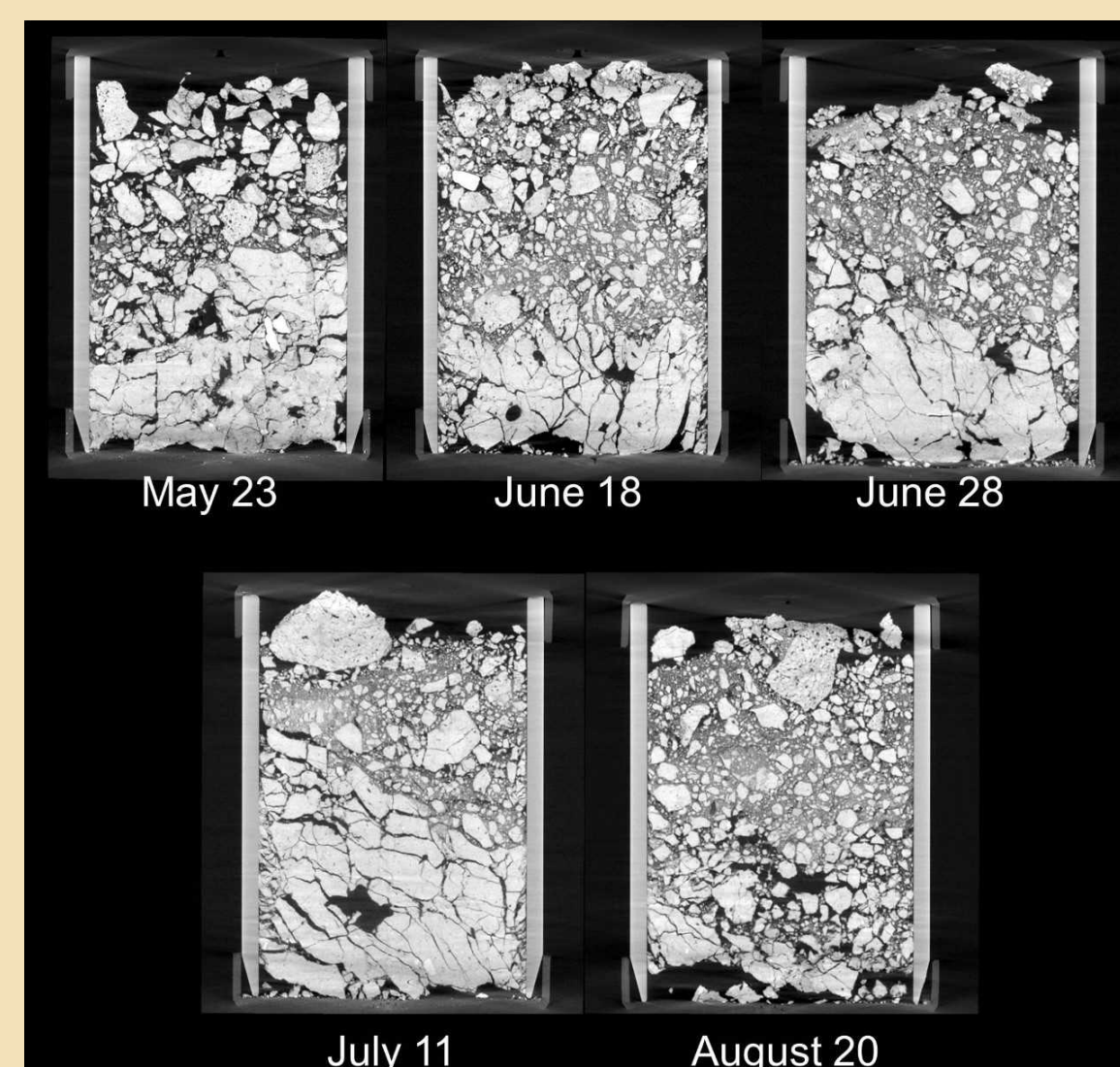


Benthic fauna sample



## Environmental fate

Conducting field studies and experiments to improve understanding of the key transport pathways of pesticides to the aquatic environment.

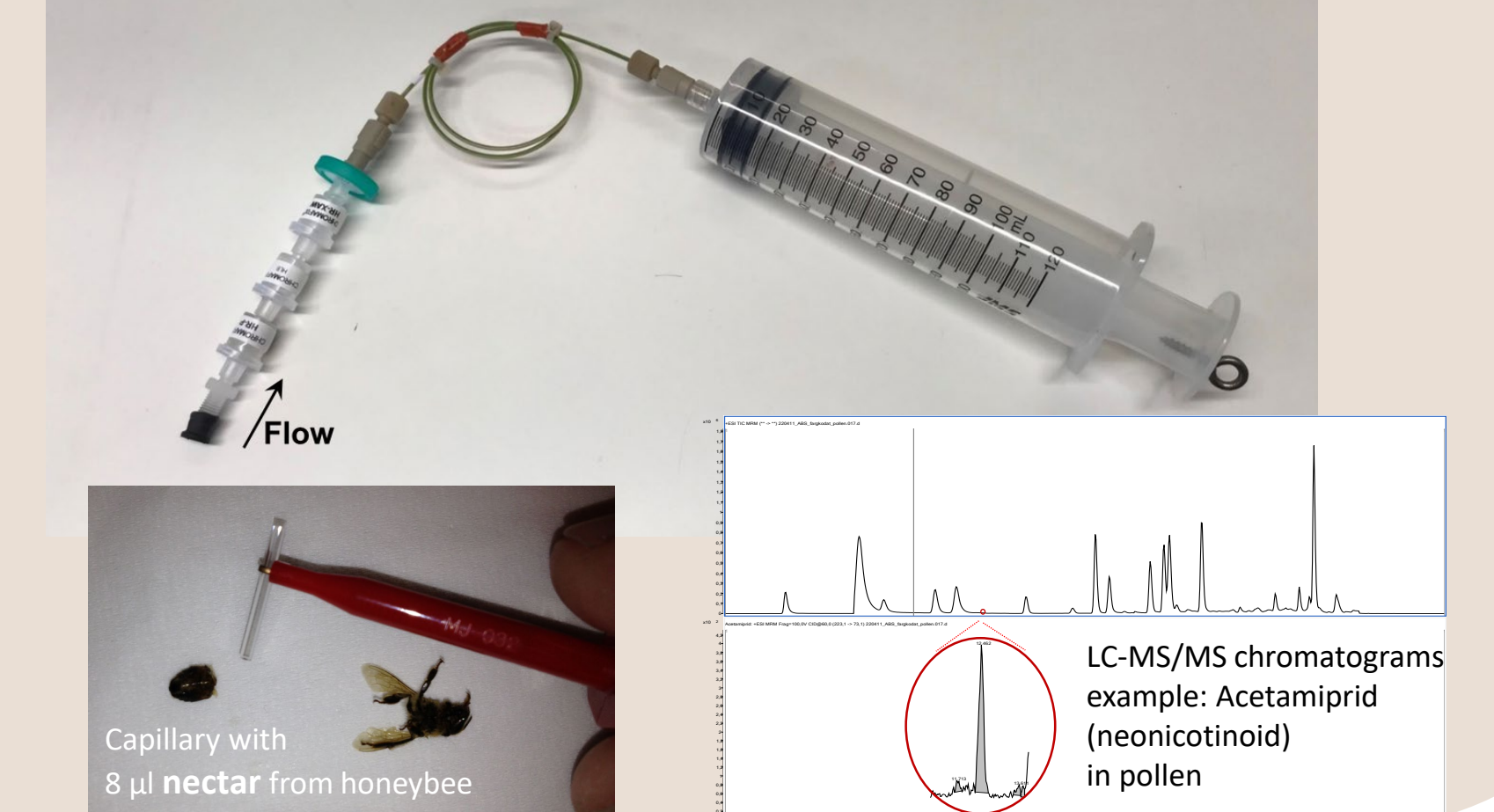


Soil profile study using X-ray tomography

## Analytical chemistry expertise

Developing sampling techniques and analytical methods to support pesticide measurements in matrices like water, sediment, air, bees, pollen, nectar, blood and more. Quality control of monitoring data. Analytical techniques: LC-MS/MS and GC-MS

TIMFIE: Time integrated water sampling with *in situ* extraction



Capillary with 8 µl nectar from honeybee

LC-MS/MS chromatograms example: Acetamiprid (neonicotinoid) in pollen



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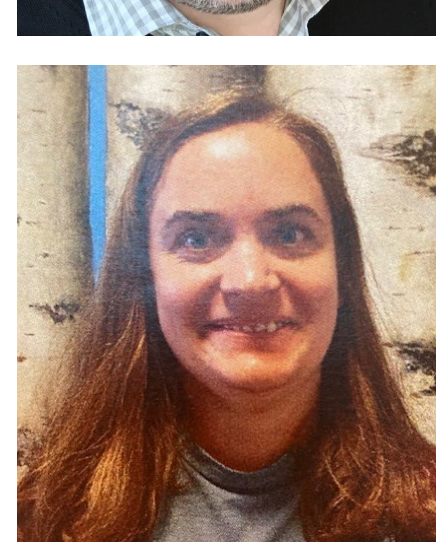
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