BSc thesis offered at the Chair of Hydrogeology

Pesticide plant uptake, leaching to groundwater & risks for pollinating insects

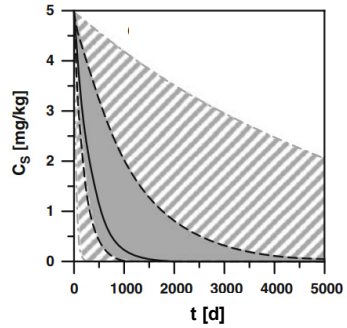
Motivation:

The release of agrochemicals leads to environmental impacts and threats. Insects like bees are known to be impacted by pesticides in many regions around the globe, endangering important ecological functions and ecosystem services like pollination. Data analysis and modeling is carried out for investigating chemical fate in soil and plants, as well as for assessing impacts and risks. Aims are to improve process understanding and to support decision making aimed at minimizing risks for human health, ecosystems and groundwater.

1-2 theses will be offered, embedded within a project with an **industrial partner**. Large data sets on pesticide residues in the environment are evaluated and interpreted with help of statistics. In this work, you will carry out a literature review on currently existing data on pesticide residues in the environment. Furthermore, data will be interpretated with respect to environmental fate. Baseline questions include:

How are pesticides distributed in the environment?

Can we estimate environmental concentrations from statistical/empirical relations to pesticide properties and environmental conditions?



Description:

- Data collection and evaluation of data on pesticide concentrations in plant and soil
- Optionally: model application for simulating pesticide fate in the environment

Requirements:

- Interest in the evaluation of data and statistical interpretation
- Basic knowledge in hydrogeology and biogeochemistry

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