

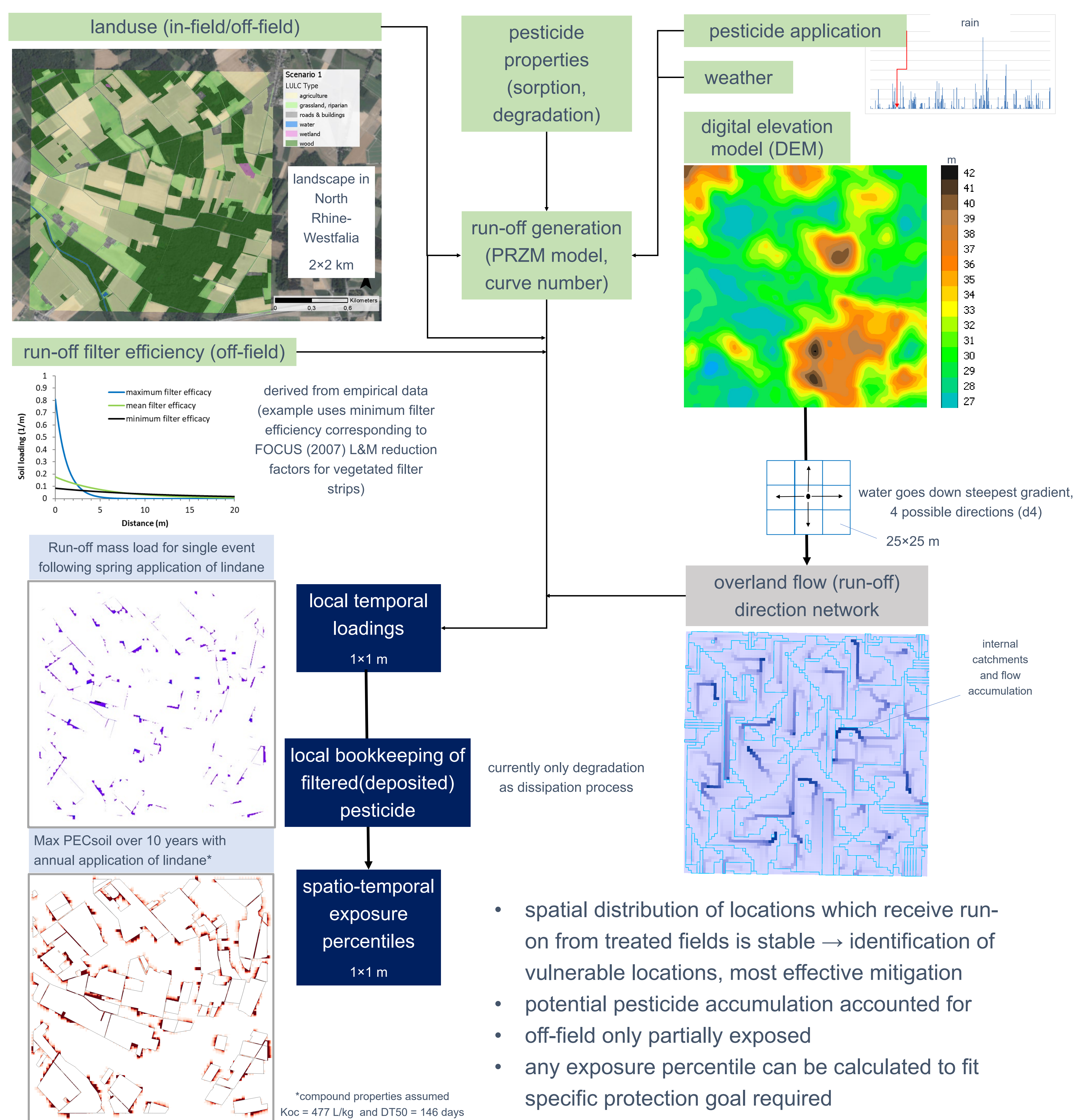
# Spatio-temporally variable exposure of pesticides in agricultural landscapes can be assessed by a flexible modelling framework - application to off-field areas

Landscape level simulation of off-field exposure by run-off – Hydrology, run-off generation and filtering

## INTRO

- EFSA (2017) scientific opinion on risk assessment for in-soil organisms specific protection goals (SPG) discusses **risk assessment** for **off-field** areas in landscapes
- application of SPG to off-field requires
  - exposure explicitly in **space and time**
  - exposure assessment at **landscape** level
- therefore we developed a landscape model to assess off-field exposure of pesticides via drift and run-off entries from treated fields (Wang et al. 2018, Ernst et al. 2019)
- here we focus on hydrologic aspects and pesticide run-off

## MODEL DESCRIPTION AND EXAMPLE SIMULATION



## Outlook

- implementation of mechanistic approach for run-off mitigation via filter strips (VFSSMOD)
- development of metamodel for PRZM to improve internal data handling and computational performance
- consider fate of deposited pesticide in off-field areas in more detail, e.g. potential leaching
- application to more landscapes
- coupling with effect models

## REFERENCES

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