

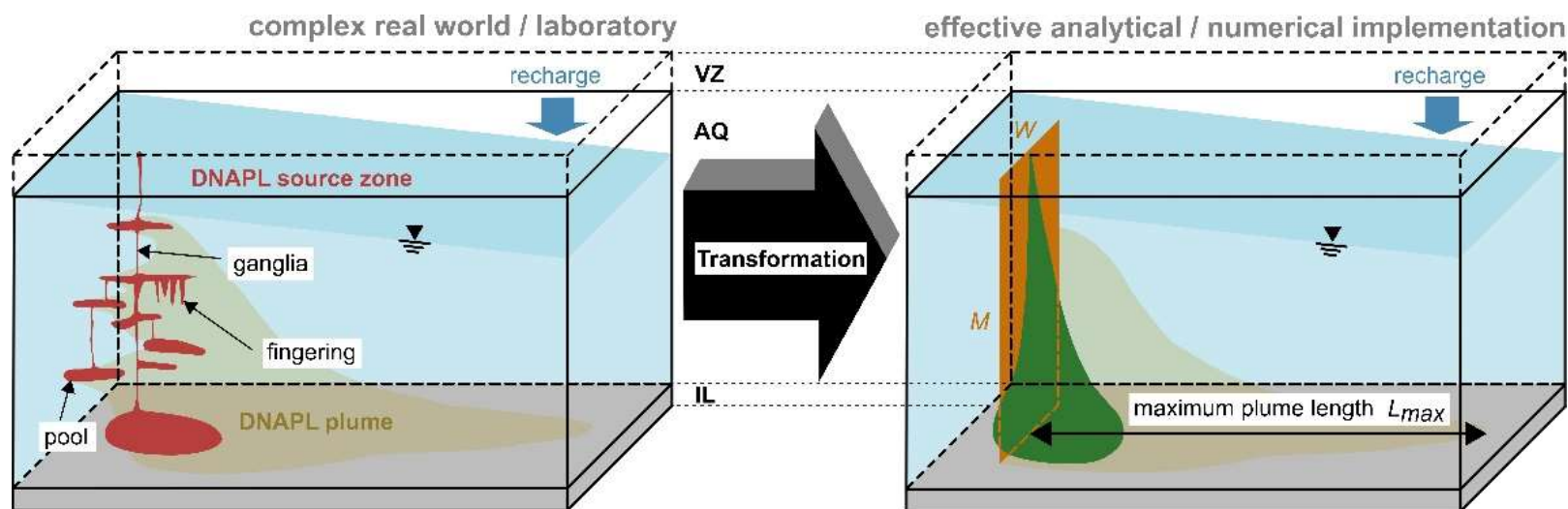
DFG funded CAWR-Project (TUD-IGW, UFZ-MET) to understand influence of internal and external stressors on contaminant source zone formation and their implications for final plume extension

*Rationale:*

- DNAPL source zone formation largely unknown in detail, usually approximated as point or line source in numerical models
- Compensation of uncertainty through calibration in plume length

*Aims:*

- Understand influences of temporal dynamics (e.g. recharge) and spatial heterogeneity (deterministic, e.g. layering) during source zone formation
- Derive effective source zone geometries based on major site specifics



Real world source zone, transformation to effective source zone



*Methods:*

- Laboratory scale tank experiments to derive ensemble of source zones
- Numerical modelling of lab setups and transfer to field scale

*CAWR-Synthesis:*

- MET expertise in (hydro-)geological exploration & contaminant monitoring
- IGW expertise in laboratory and field scale experiments, numerical modelling & analytical and numerical model development

*Partners:*

- Prof. Valocchi (University Illinois Urbana-Campaign, IL)
- Prof. Werth (University of Texas at Austin, TX)
- Prof. Chahar (Indian Institute of Technology Delhi)
- Prof. Kolditz (UFZ Environmental Informatics)