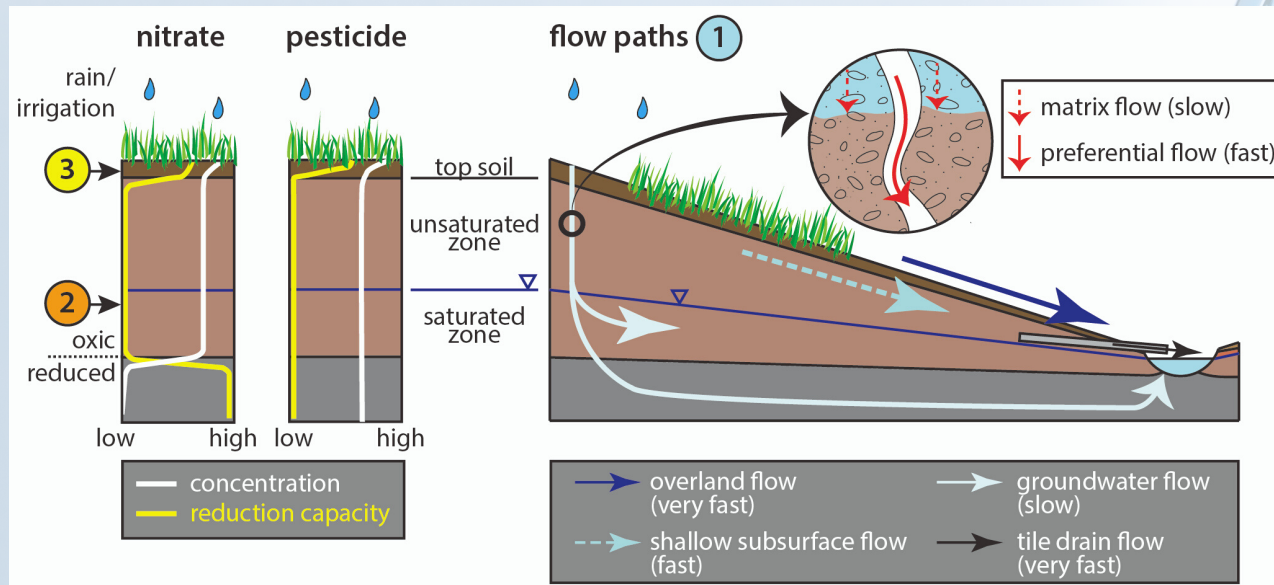


## Take home messages



## Linking agricultural impact and drinking water quality response

Examples of drinking water protection in Denmark and France

**Q: How long time does it take before we can see an effect of drinking water protection?**

**A: That depends on the local hydrogeological conditions and flow paths which might vary from several years for shallow groundwater to several decades for deeper groundwater. (1)**

**Q: How should a monitoring program be designed?**

**A: The monitoring period should vary depending on the lag time from root zone leaching to drinking water abstraction points. (1)**

**Q: How do we measure the effects of the N-mitigation measures at the catchment scale?**

**A: By nitrate concentrations in oxic groundwater, and pesticides concentrations in the saturated zone. (2)**

**Q: How can the short-term effects of mitigation measures be evaluated?**

**A: By direct measurements of nitrate or pesticide leaching from the root zone. (3)**



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## BACKGROUND

Safe drinking water is vital for human health and economy.

Throughout the EU, diffuse pollution of nitrogen and pesticides from agriculture is one of the main obstacles to meeting the drinking water quality targets.

Policies to protect drinking water resources are not achieving a consistent level of implementation and effectiveness across all member states.

Better understanding of the relationships between the mitigation measures and drinking water quality is necessary to meet the drinking water quality targets.

## CASE STUDIES

Implementation of drinking water protections has been analyzed in 3 study areas: two in Denmark and one in France.

The three study areas represent important drinking abstraction areas with intensive farming.

The study sites vary regarding climate, abstraction volume, size of protected area, farming type, geology and flow pathways.

## MAIN FINDINGS

The time lag between agricultural impact and drinking water quality response may be the most important information for a successful protection strategy.

The time lag indicator is important in both regarding communication of results to stakeholders and design of monitoring programs.

