

A photograph of a forest stream with a rocky bed. The water is clear and flows over the stones. The surrounding forest is lush with green trees and foliage. A semi-transparent grey rectangular box is overlaid on the upper half of the image, containing the title and team information.

Riparian Ecosystem Monitoring Network

Ecological Team

Brittany Lancellotti

Riparian ecosystems are important landscape features

- Improve water quality of adjacent waterbodies
 - Reduce nutrient and suspended sediment loading from subsurface runoff
- Flood control
 - Reduce force, height, and volume of floodwaters

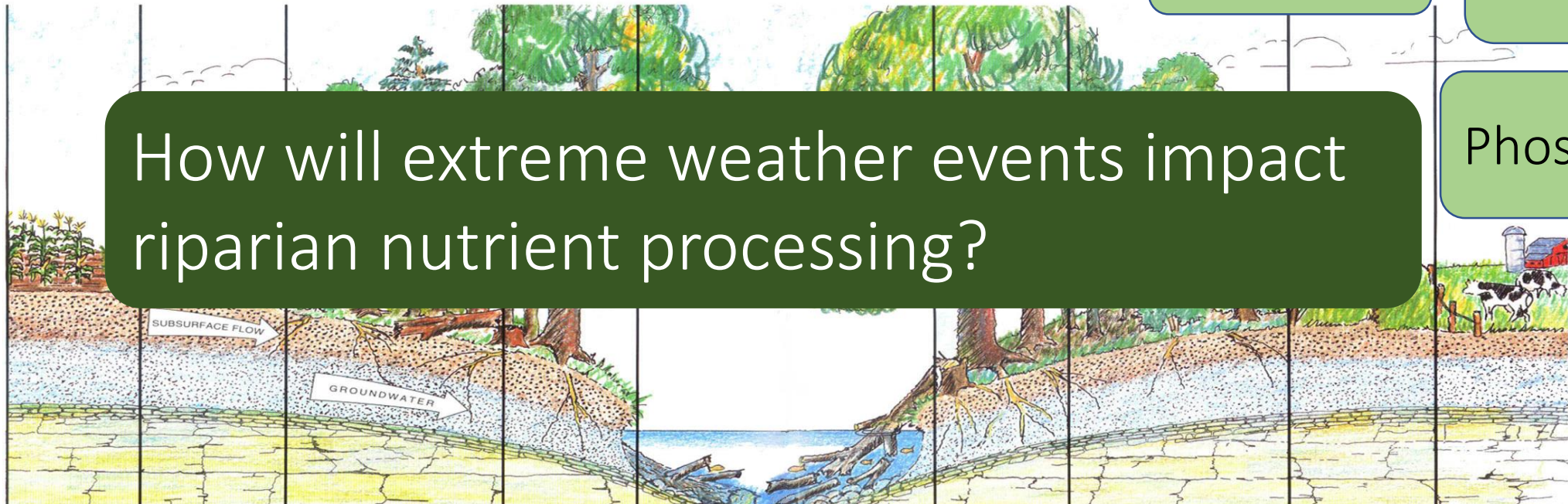


Nitrogen

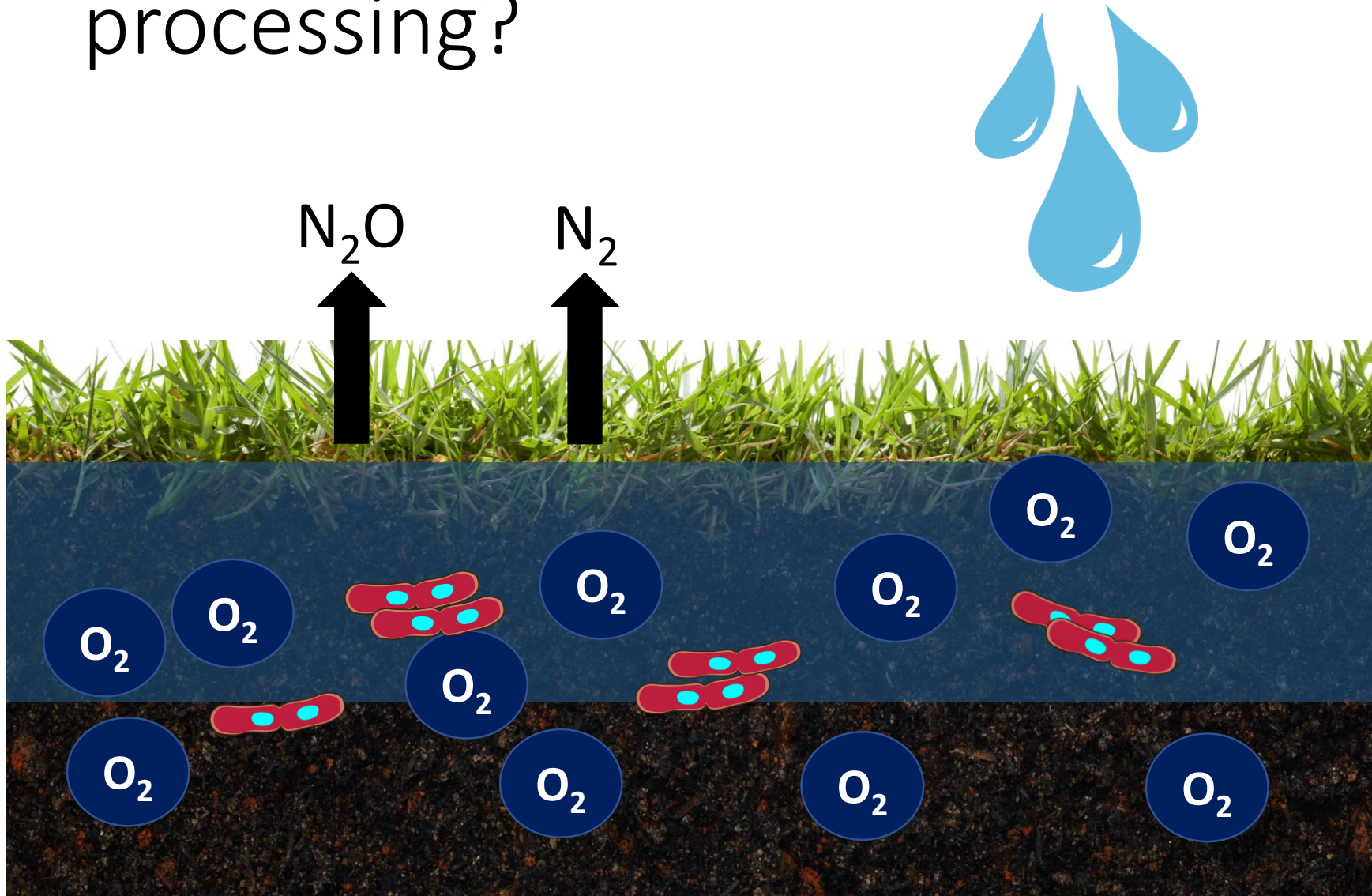
Carbon

Phosphorus

How will extreme weather events impact riparian nutrient processing?



How could flooding impact riparian nutrient processing?

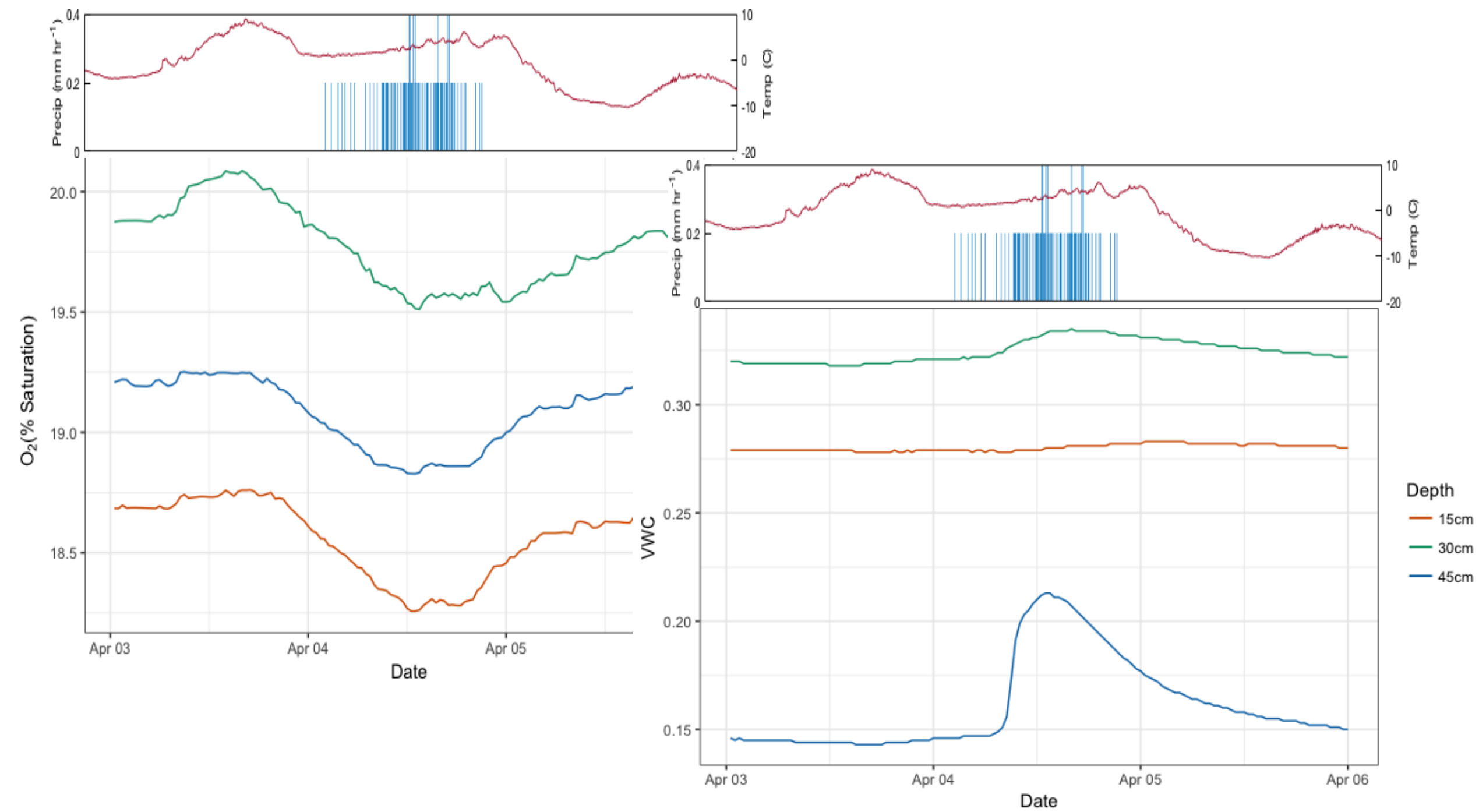


Heavy rains
and
subsequent
flooding

Increased
moisture

Decreased
oxygen
availability

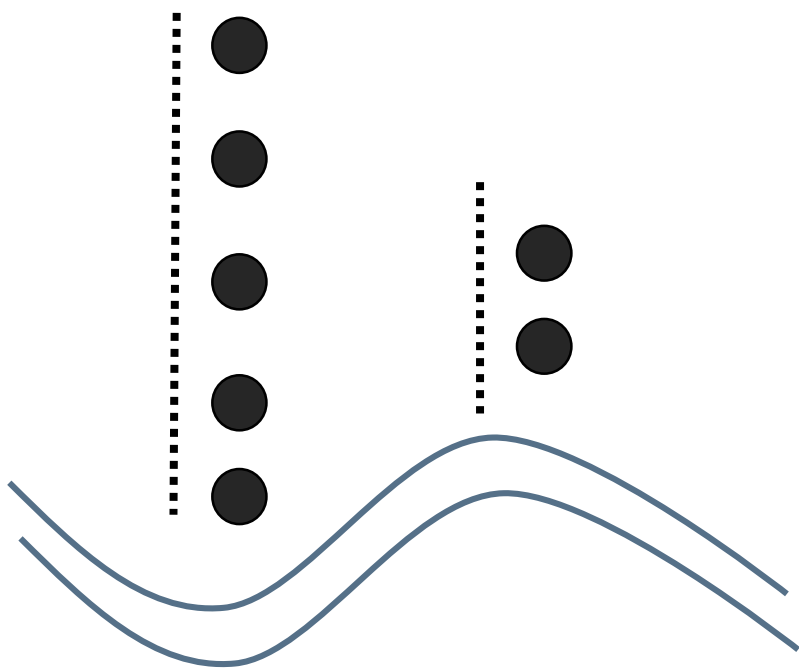
Increased
denitrification





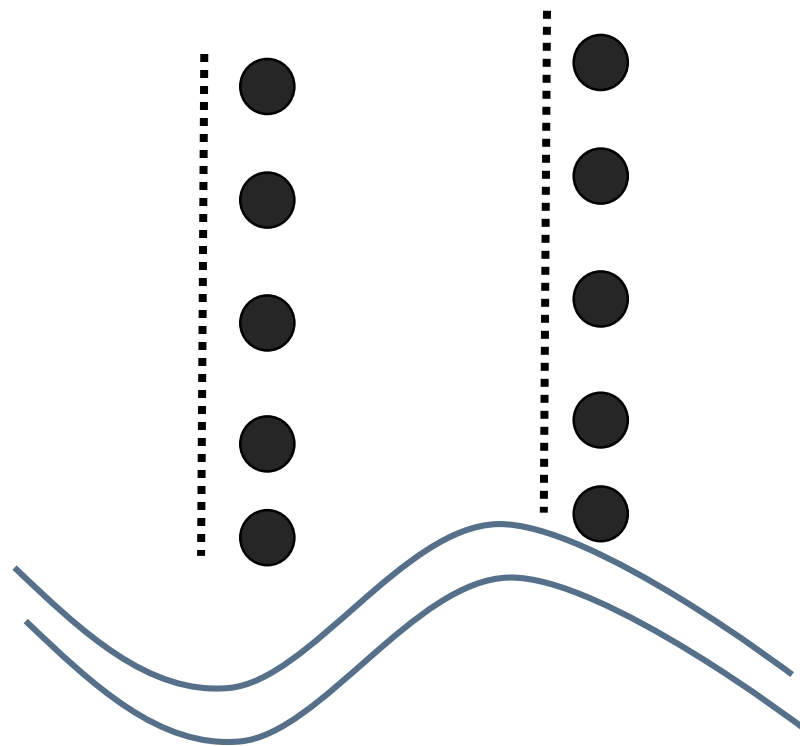
Wet

Dry

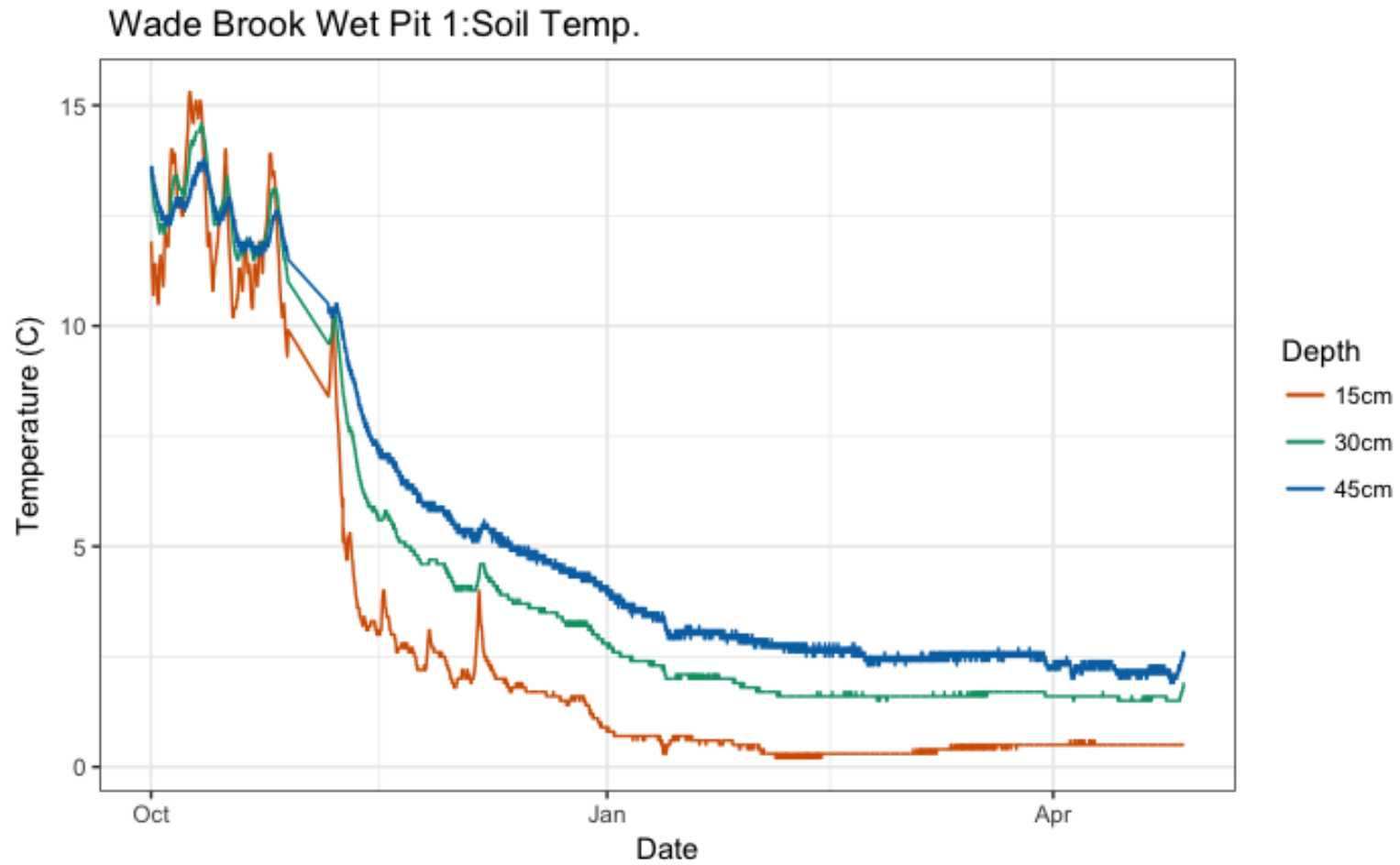


Wet

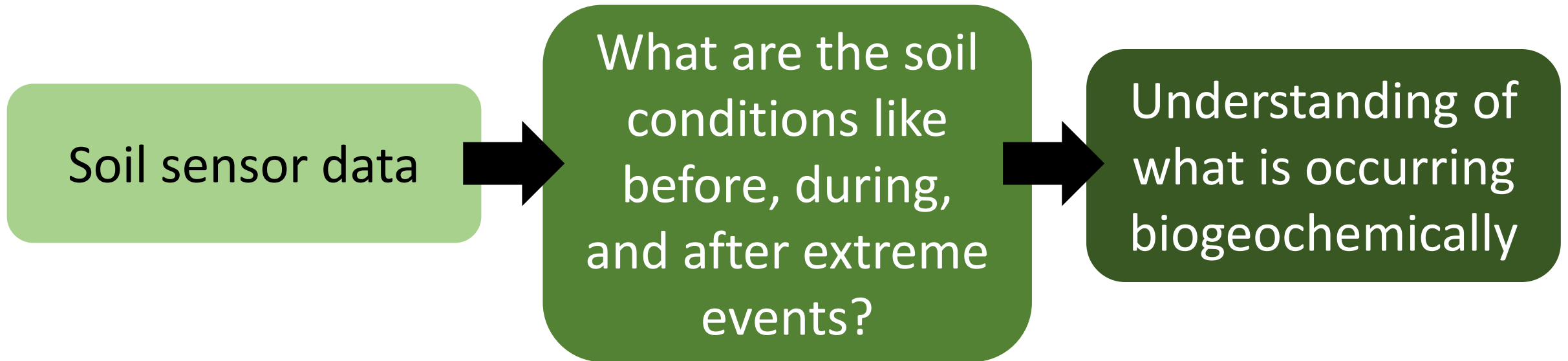
Dry



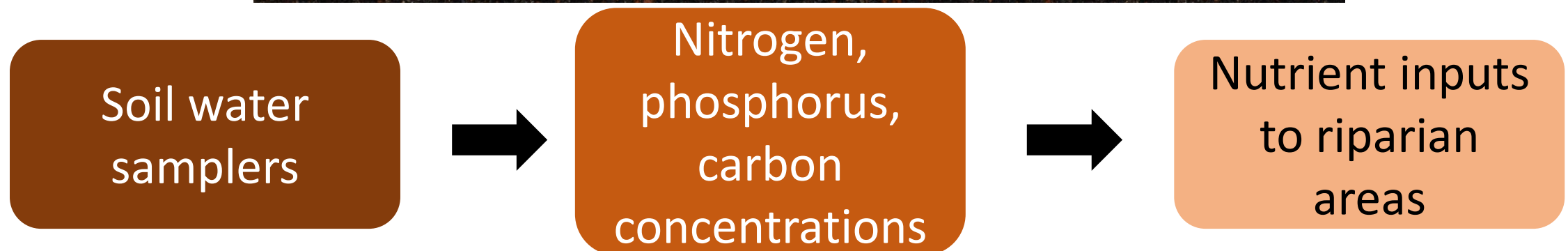
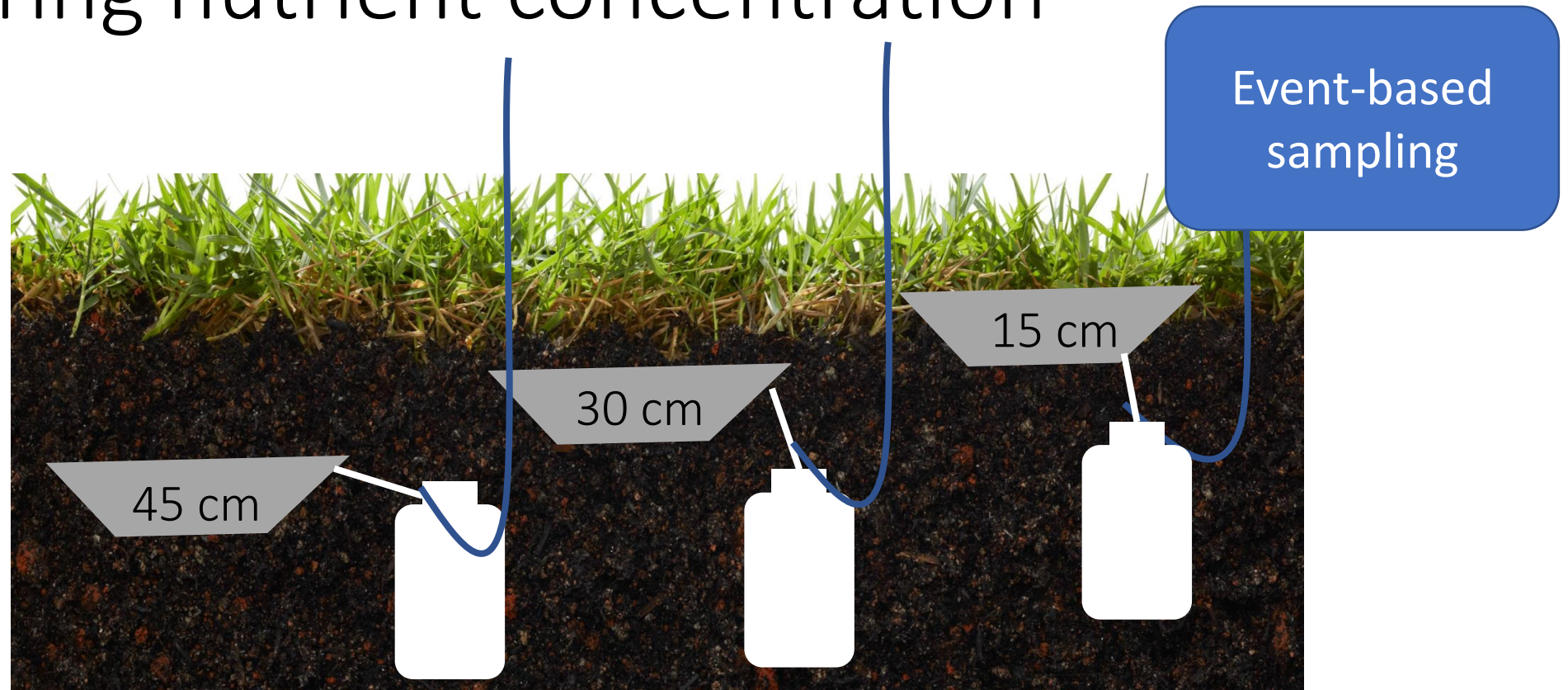
Soil sensor network



High frequency data



Measuring nutrient concentration



Summary

Riparian ecosystems
can reduce nutrient
inputs to adjacent
waterbodies



How will extreme weather events
impact riparian nutrient processing?

Physical soil
conditions

Nutrient
concentrations

Understanding of how
nutrient processing is
impacted by extreme
events

