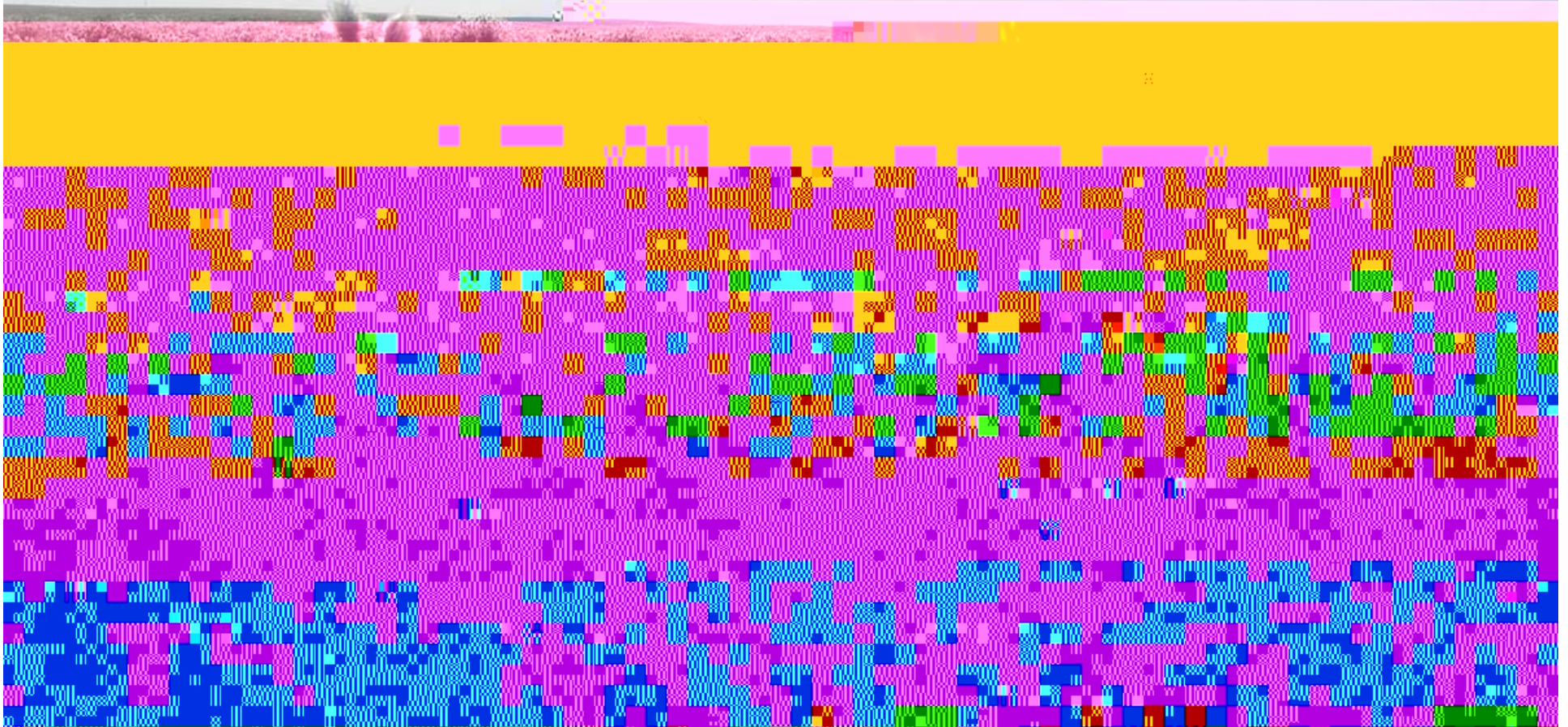


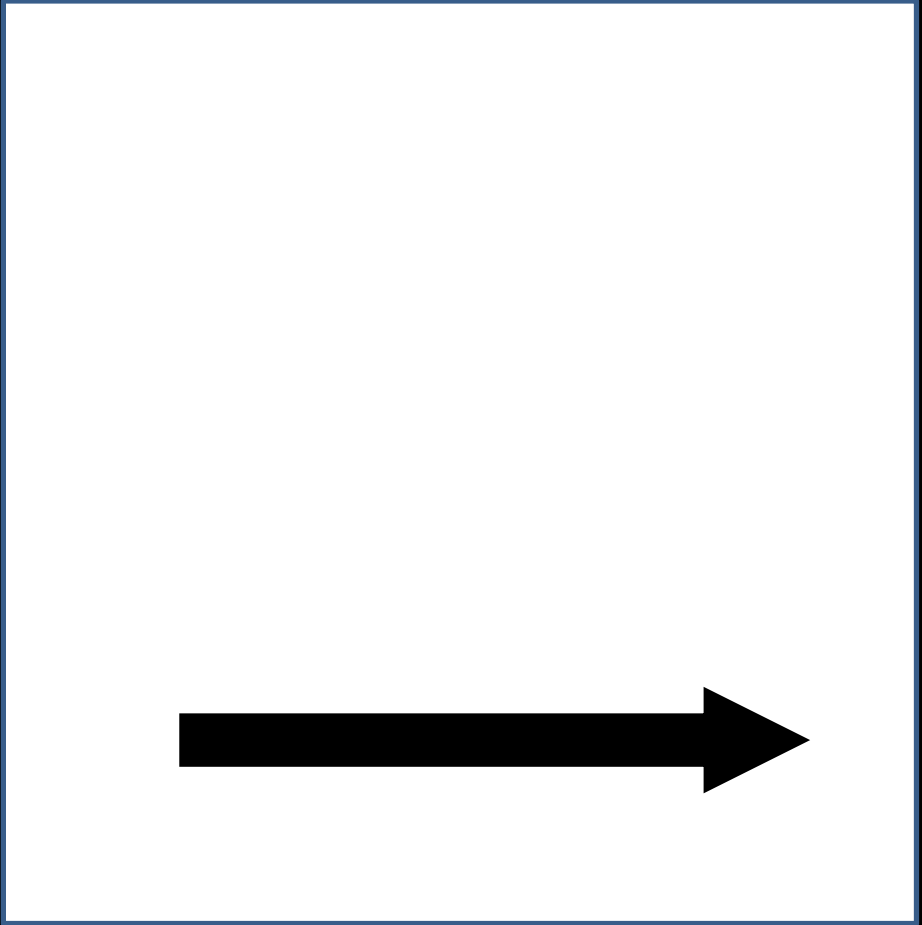
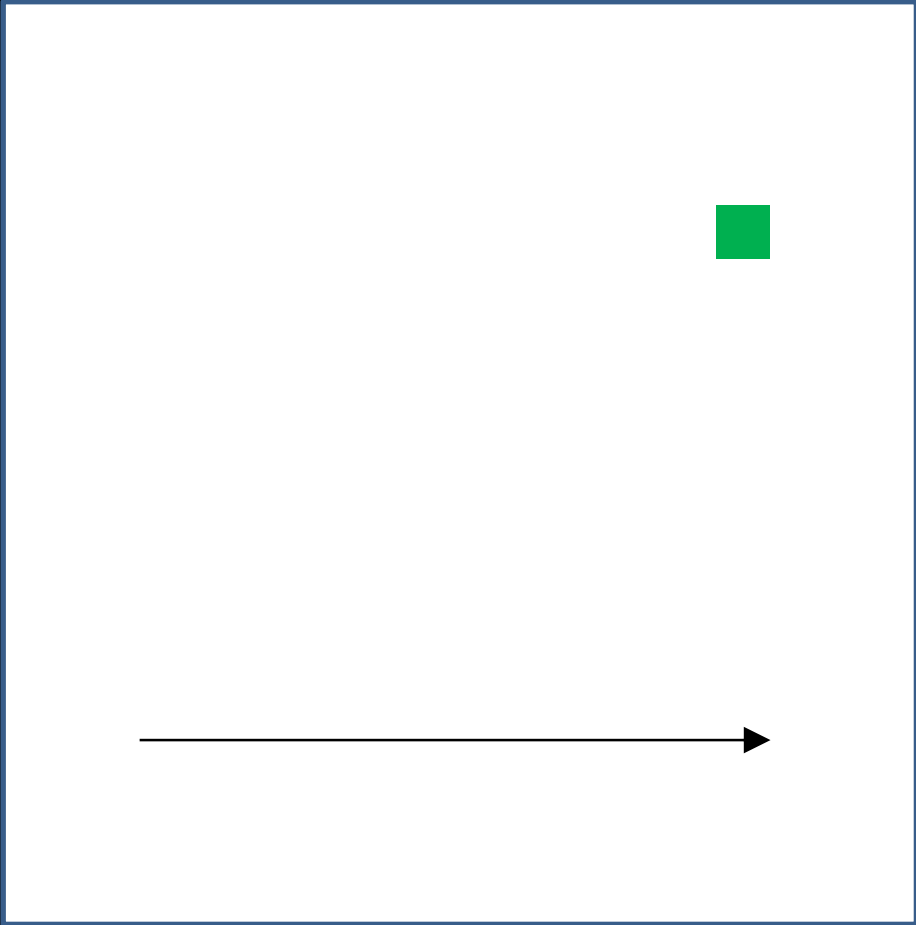
**Arctic LTER 2017 2023:
The Role of Biogeochemical and Community Openness
in Governing Arctic Ecosystem Response to
Climate Change and Disturbance (NSF 1637459)**

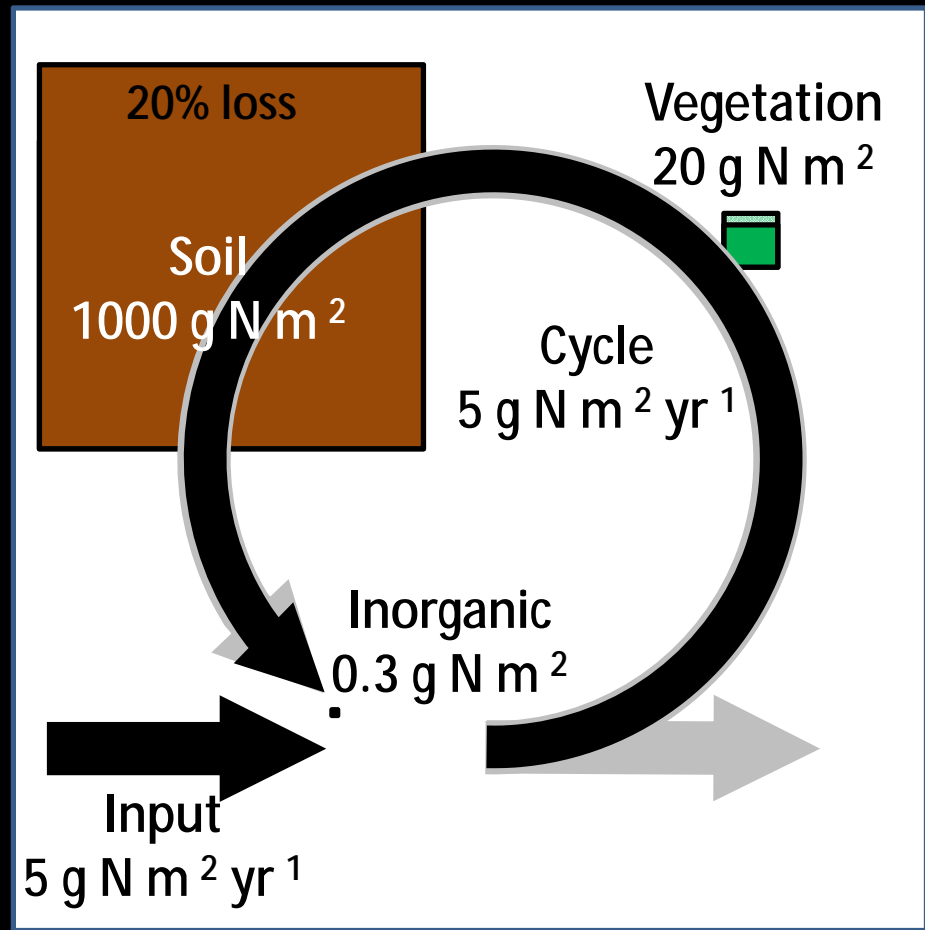
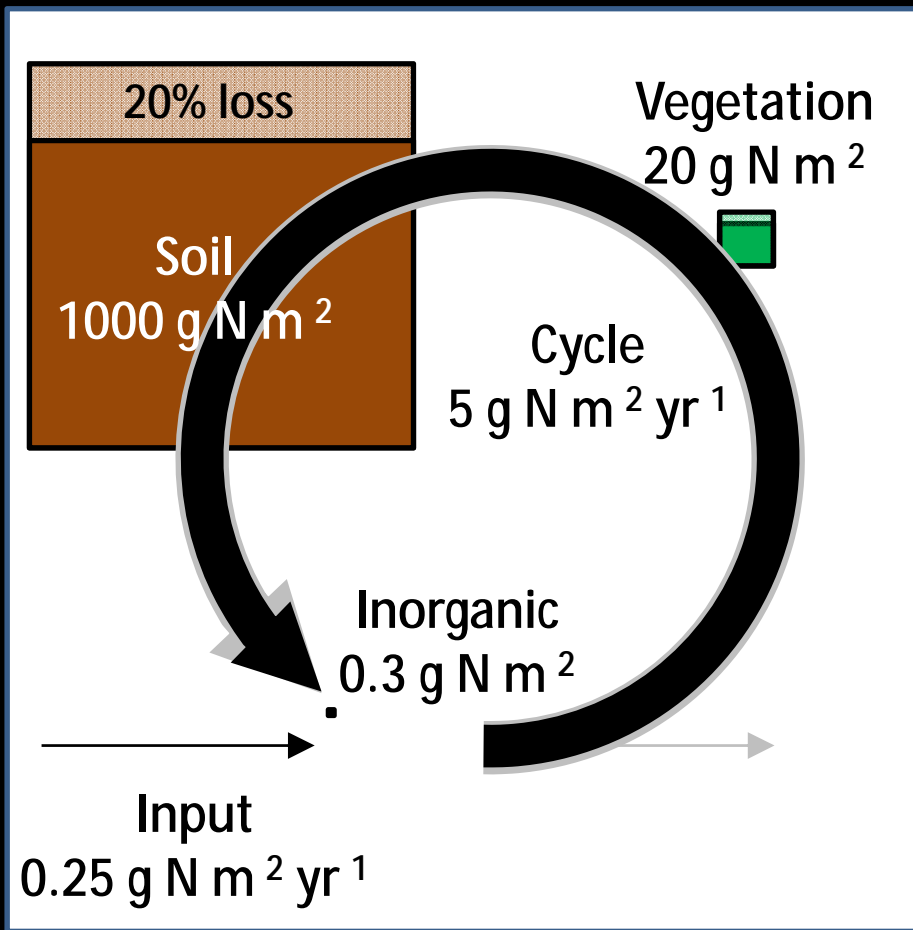
<http://arc.lter.ecosystems.mbl.edu>

look under "About"

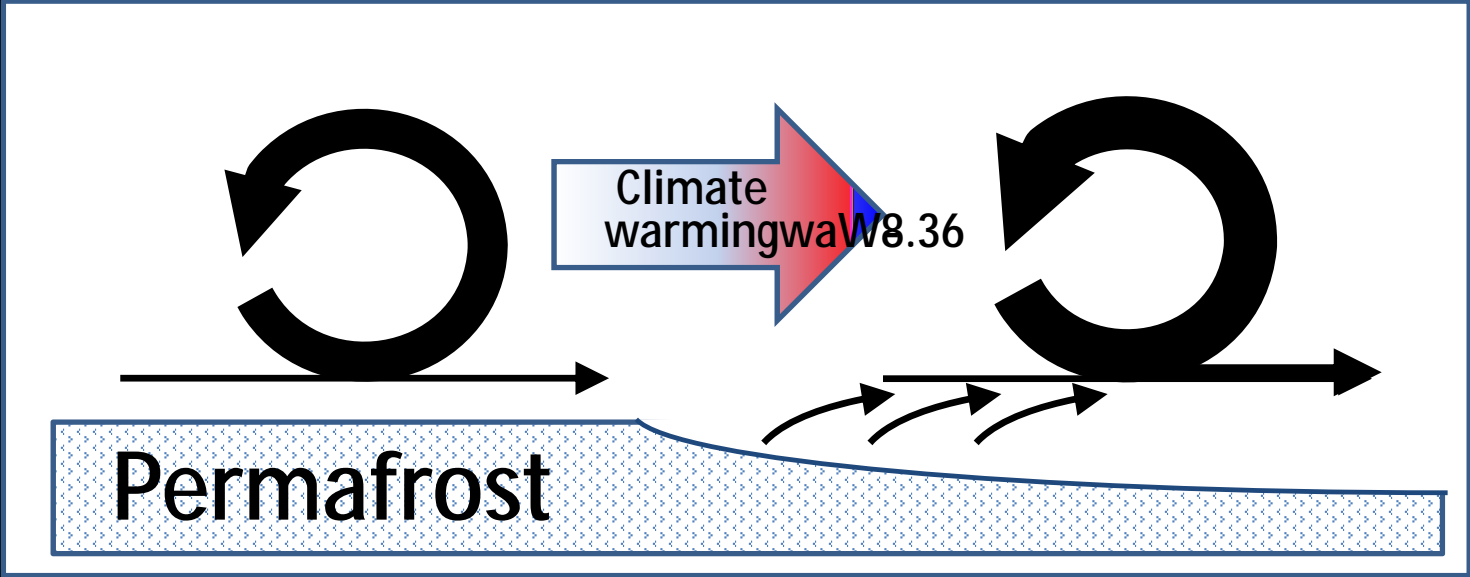


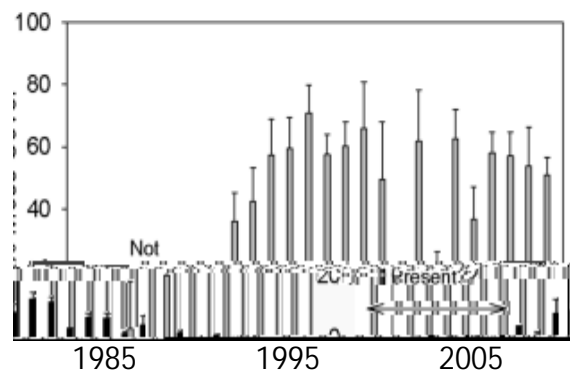
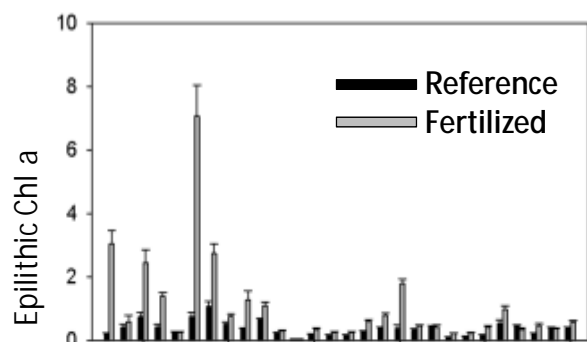
“Biogeochemical openness” is the degree to which the ecosystem depends on external supplies of nutrients and organic C (allochthonous C) versus internally recycled nutrients and locally fixed organic C (autochthonous







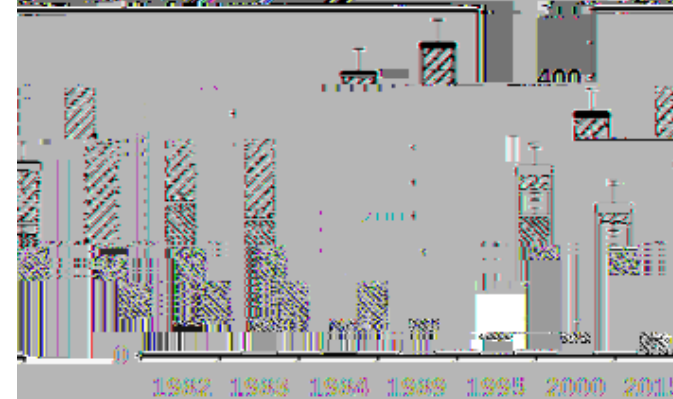




A. Control plots



B. Fertilized plots

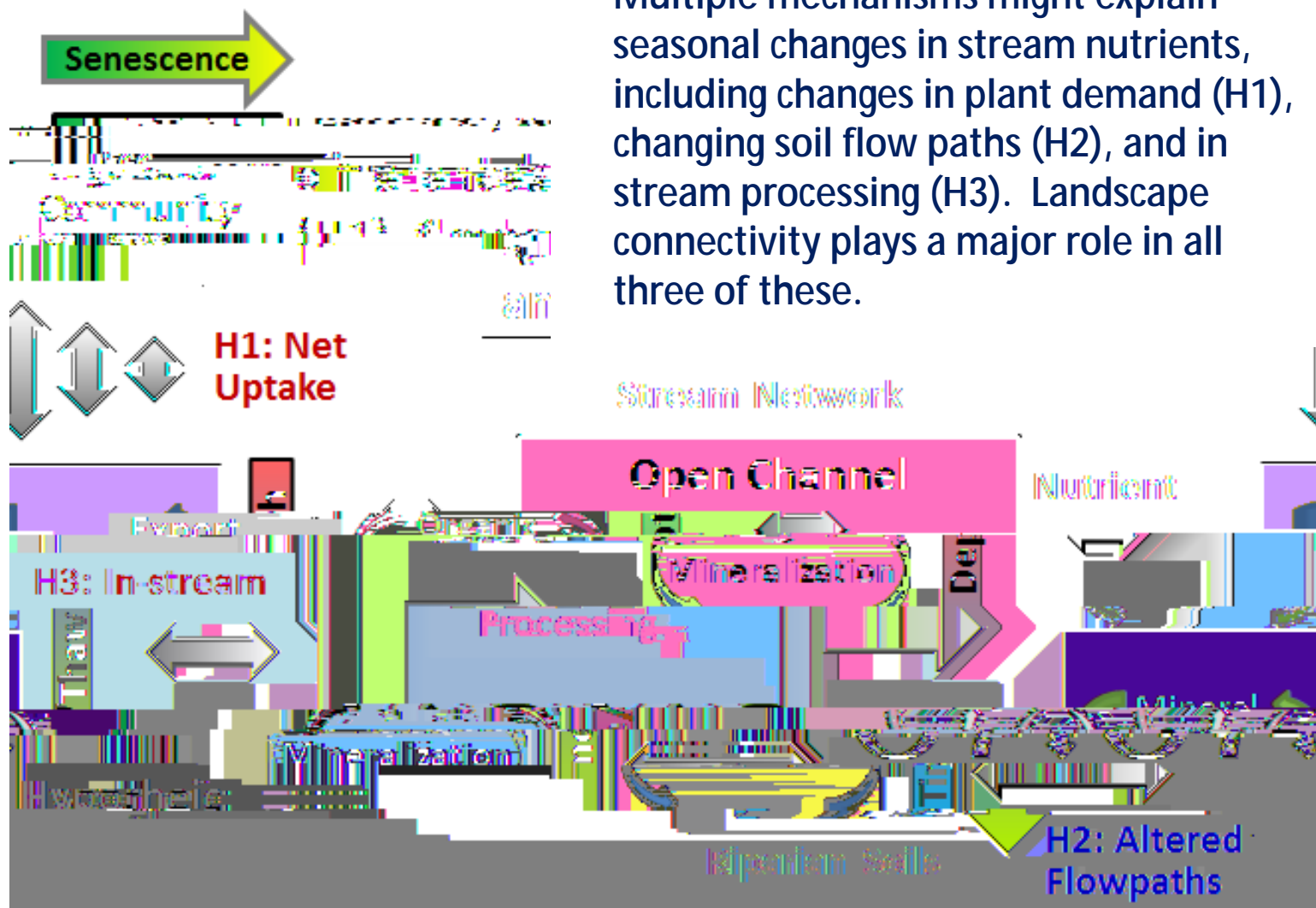


1982 1983 1984 1989 1995 2000 2015



The nearly closed ecosystems on hill slopes are poorly connected and therefore delay and attenuate signals moving down slope (e.g., nutrient)





Multiple mechanisms might explain seasonal changes in stream nutrients, including changes in plant demand (H1), changing soil flow paths (H2), and in stream processing (H3). Landscape connectivity plays a major role in all three of these.



