

# Sustainable P Transition Management



**Sustainable  
Phosphorus  
Alliance**

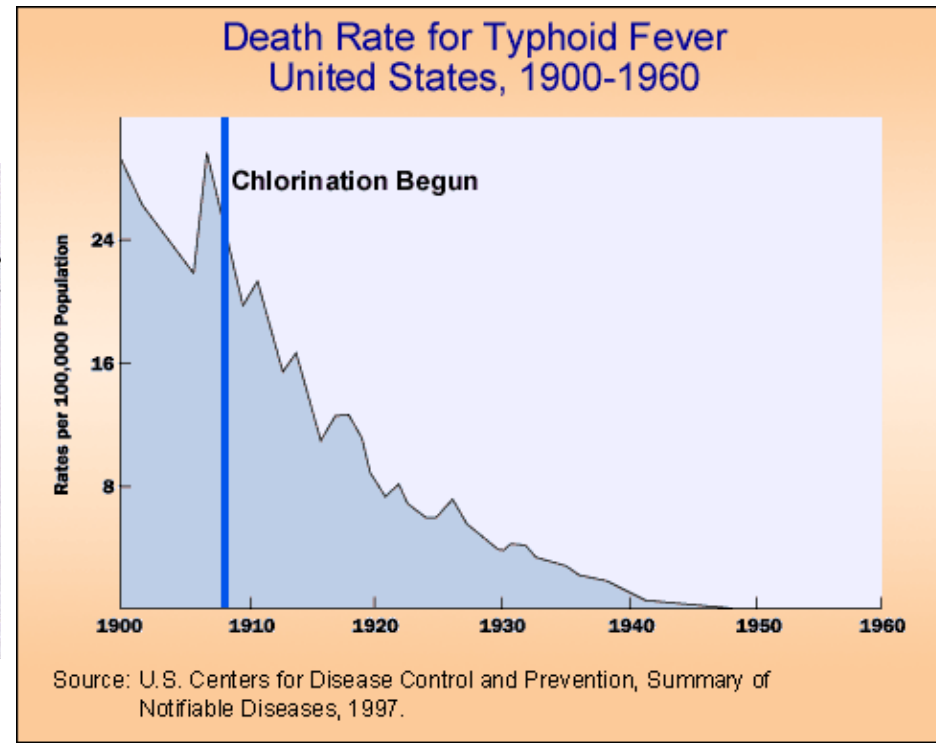


@sustainP

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Neng long Chan – Arizona State University

# Framing

- Can we learn from past events to manage for a sustainable P future?





**External Pressures**

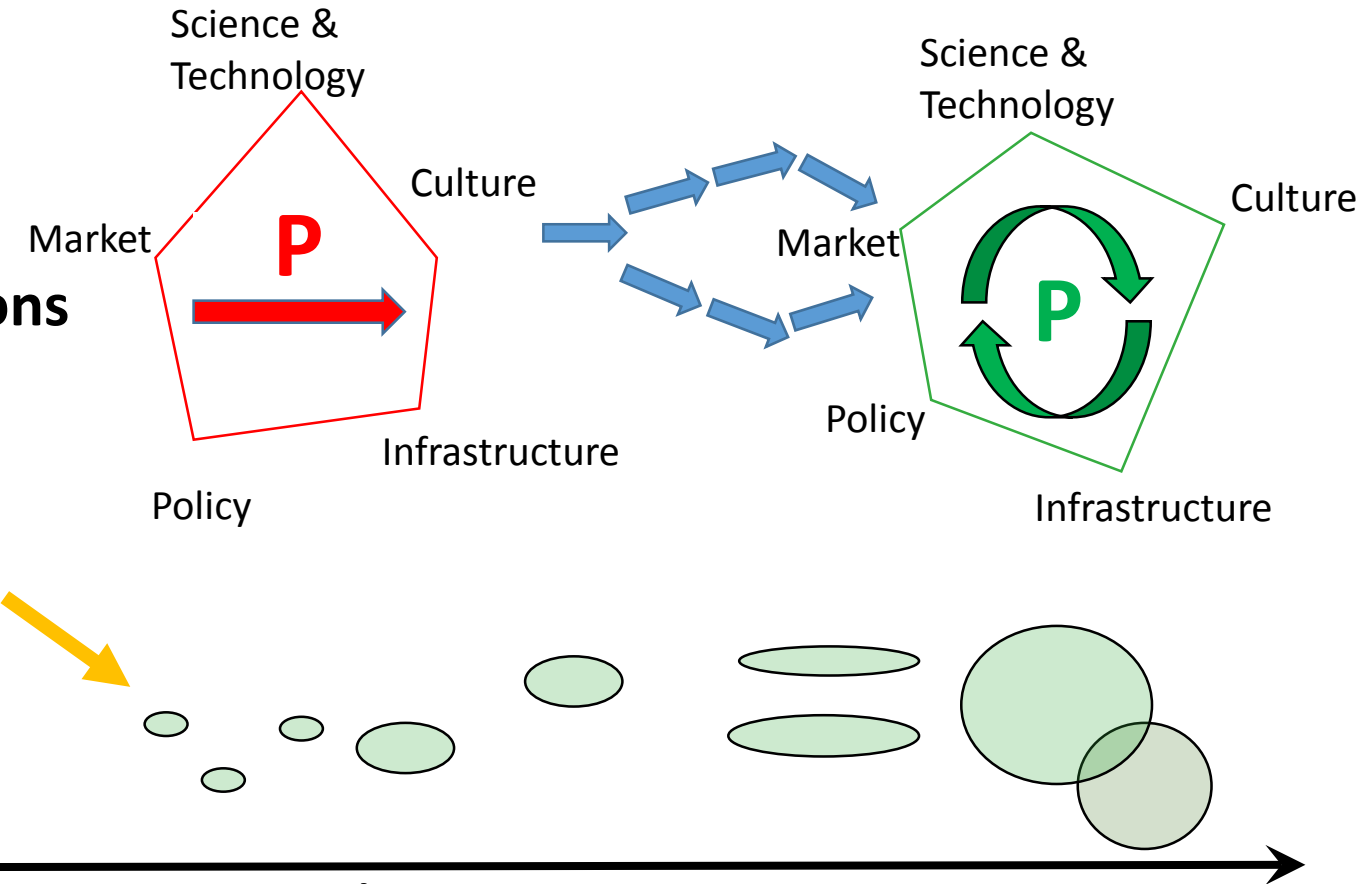
**Regional Dimensions**

**Niche Innovation**

You are here

Time

# Transition Management Framework



# Netherland Waste Transition

## Cess Pool



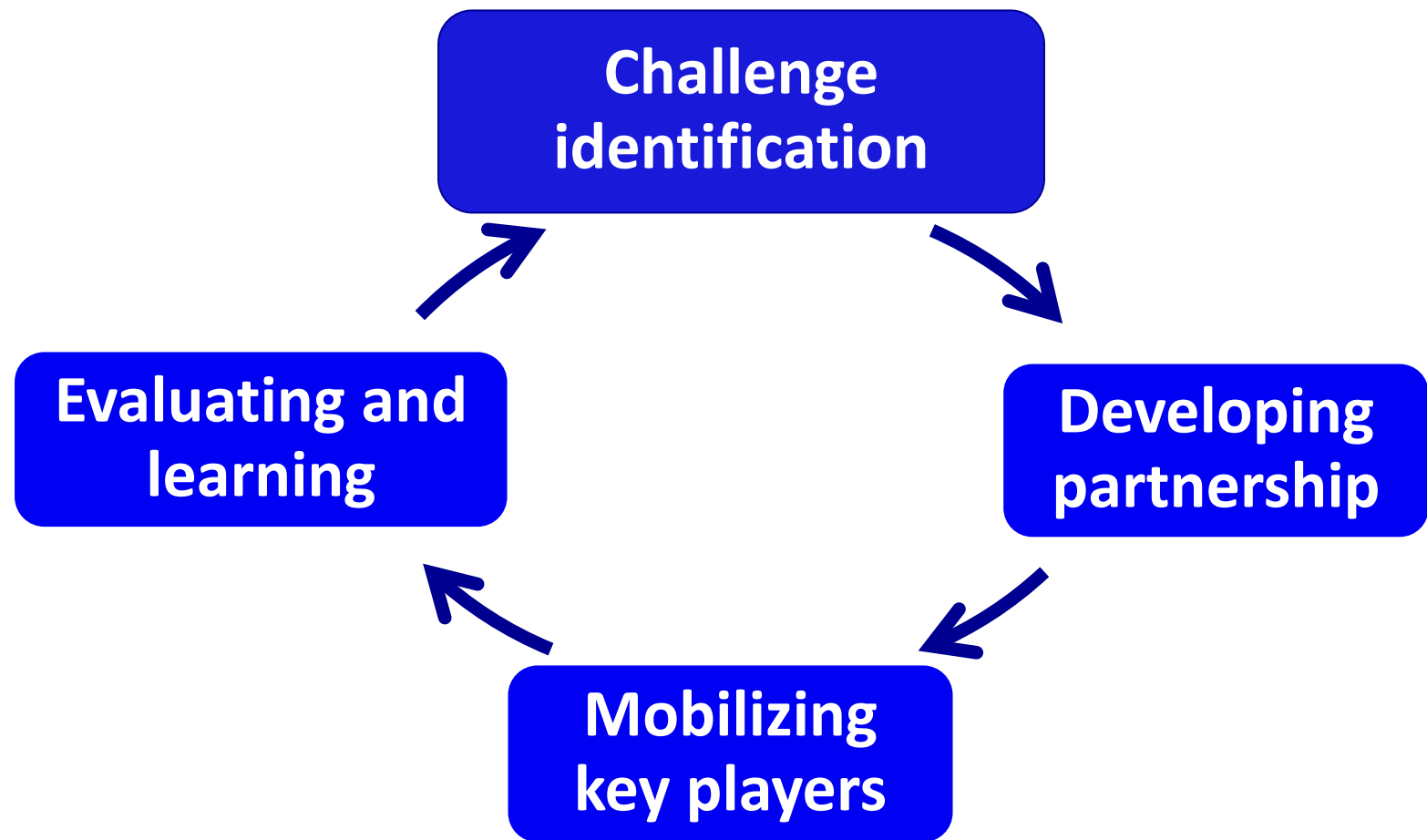
underground holding tank (sealed at the bottom) or a soak pit (not sealed at the bottom).



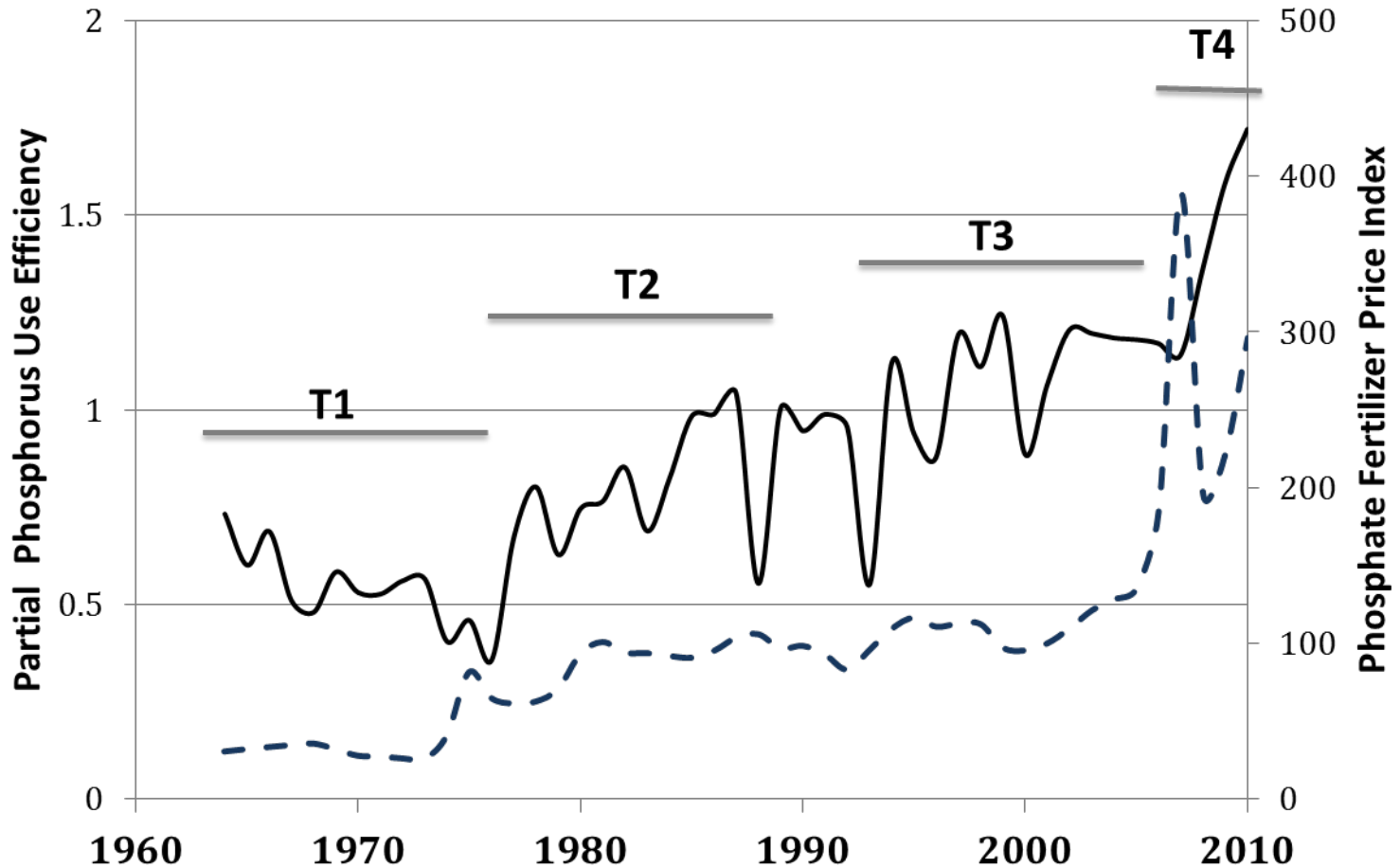
Underground sewer system



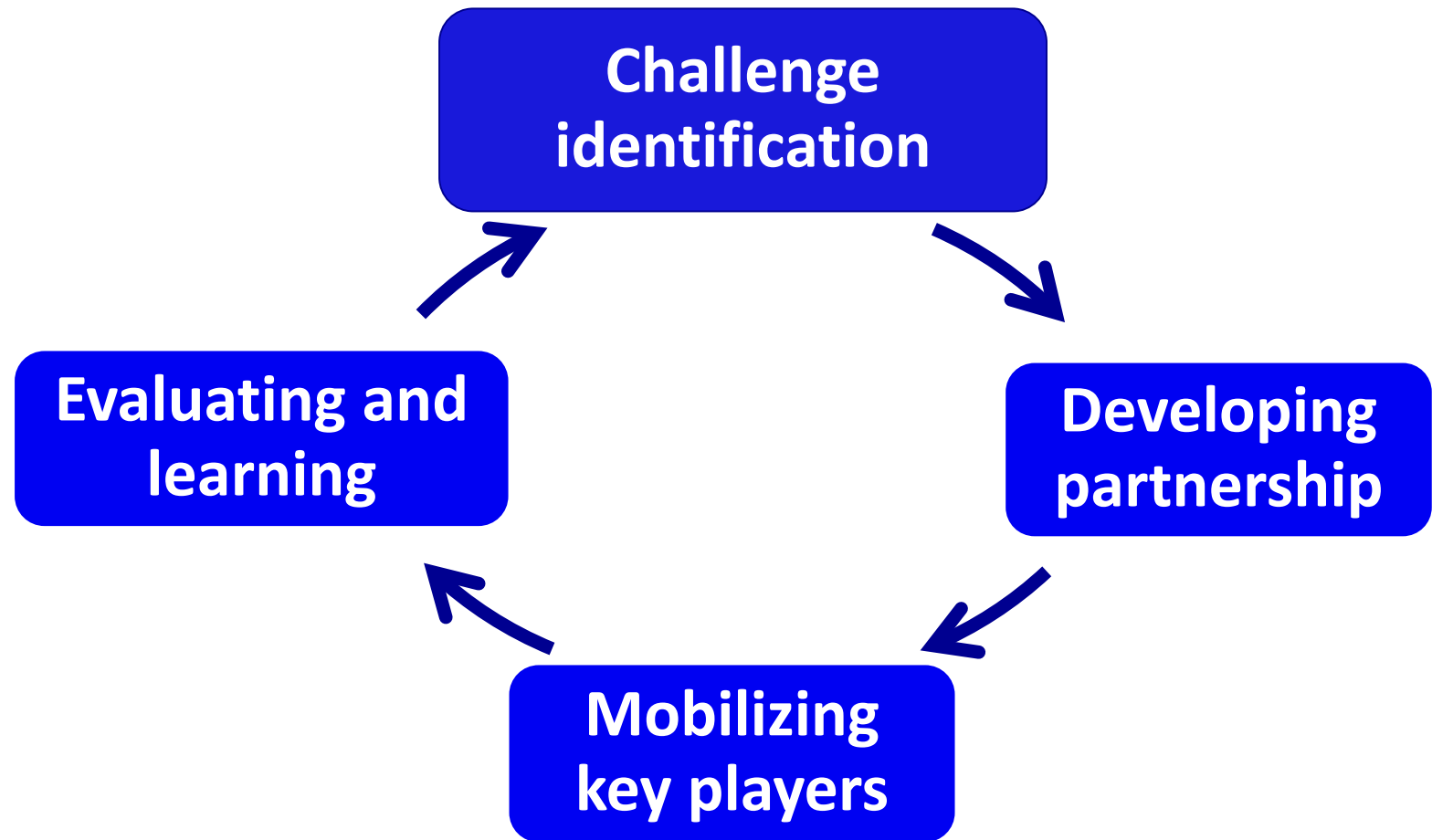
# Transition Management



# Case Study: Transitions in Ag P Use Efficiency (Minnesota Data)

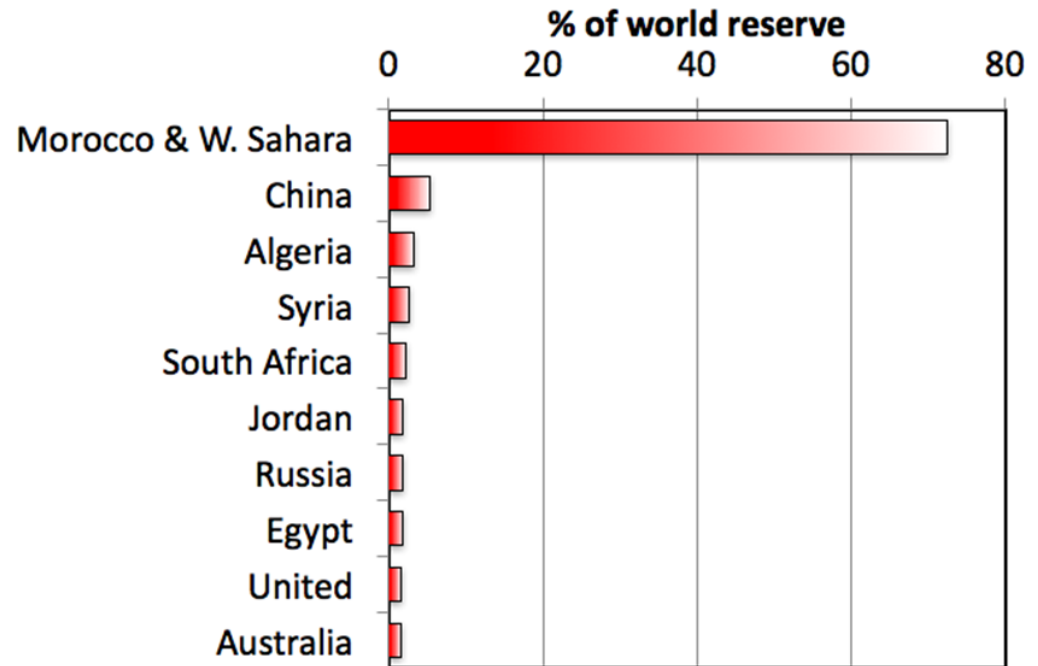
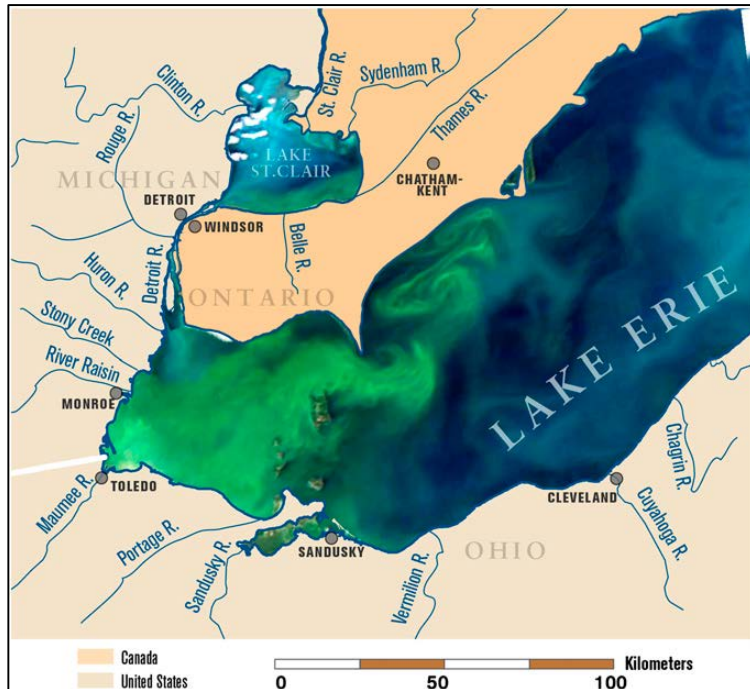


# Transition Management



# Challenge Identification

- Eutrophication of water bodies
- Finite and disproportionate P reserves





# Developing Partnership and Mobilizing Key Players

- Identify key players and common interests
- Funding to discover innovative solutions



# Evaluating and Learning

- Monitoring P fluxes, e.g. water quality, food waste, biosolid applications
- Evaluating policy effectiveness
- Quantifying innovation adoptions



# In Summary

- Potential disruptions on the horizon may require urgent action.....  
we should be prepared.
- Transition management may be a way to plan for it in an integrated, collaborative way.

