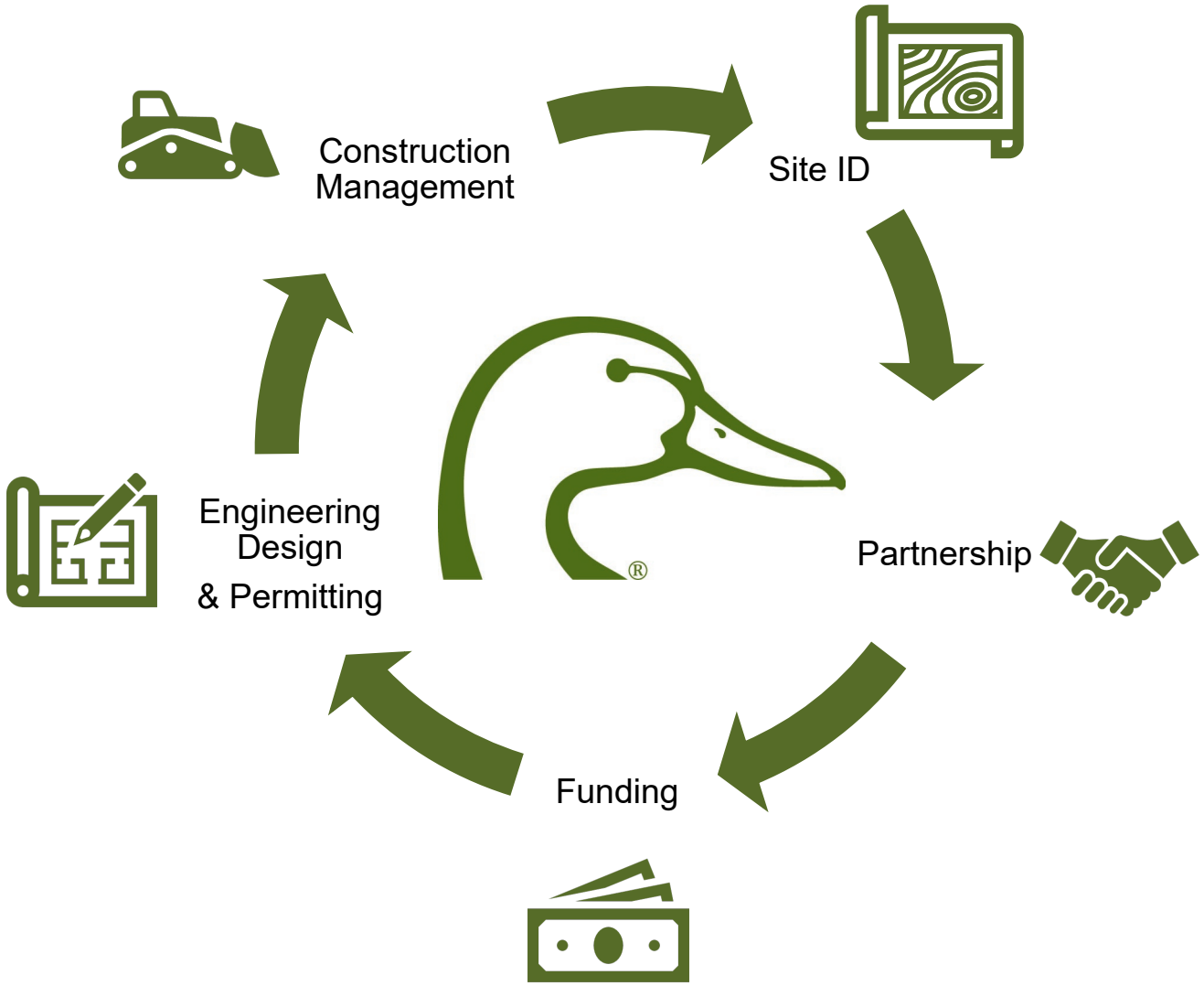
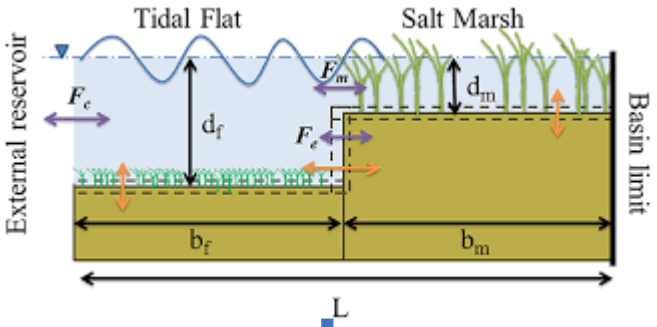

Construction Management
Site ID
Partnership
Funding
Engineering Design & Permitting

Performance-Based vs. Prescriptive Standards

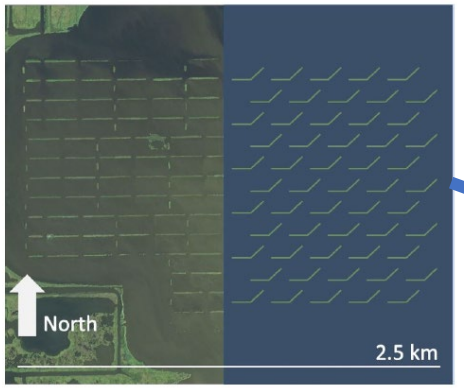
- Learning by doing
  - Leveraging networks
  - Investing in monitoring
- Developing frameworks and process-based standards
  - Convening stakeholders
  - Process-based standard development
  - Common tools and framework
  - Sharing project-based learning

Learning by Doing

Theory

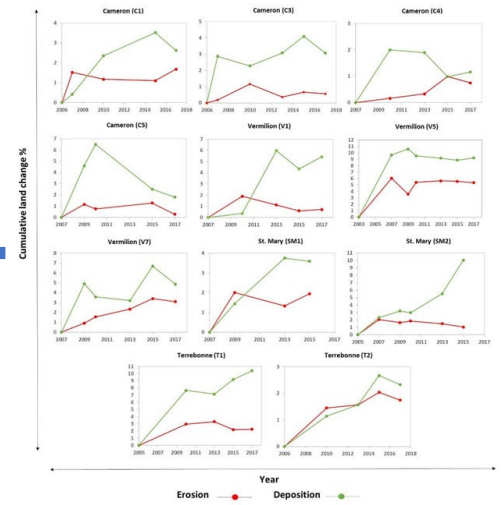


Refine Design Criteria

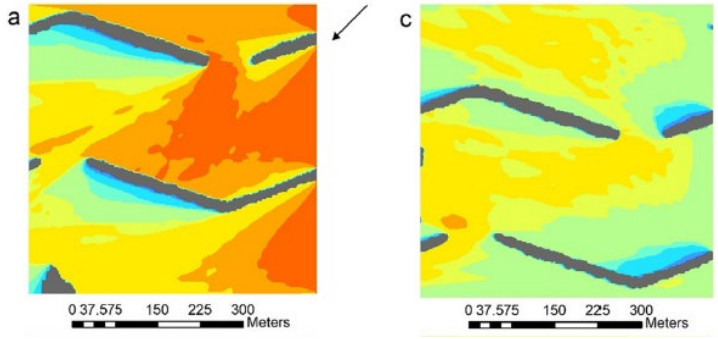


Implementation

Observation



Modeling



Optimization

cold front →threshold for →optimal marsh terrace orientation for disrupting fetch in the directions of frontal winds are 235°/55° and 270°/90°

Raul Osario & Joseph French

Example from Another Sector: Field to Market

Field to Market

Civil Society
Growers
Agribusiness
Brand & Retail
Affiliate

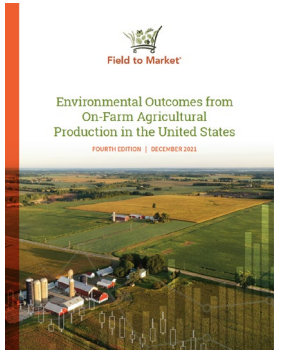
Metrics Committee

Verification/Standards

Education/Outreach

Awards

Baselines & Trends



Common Tools

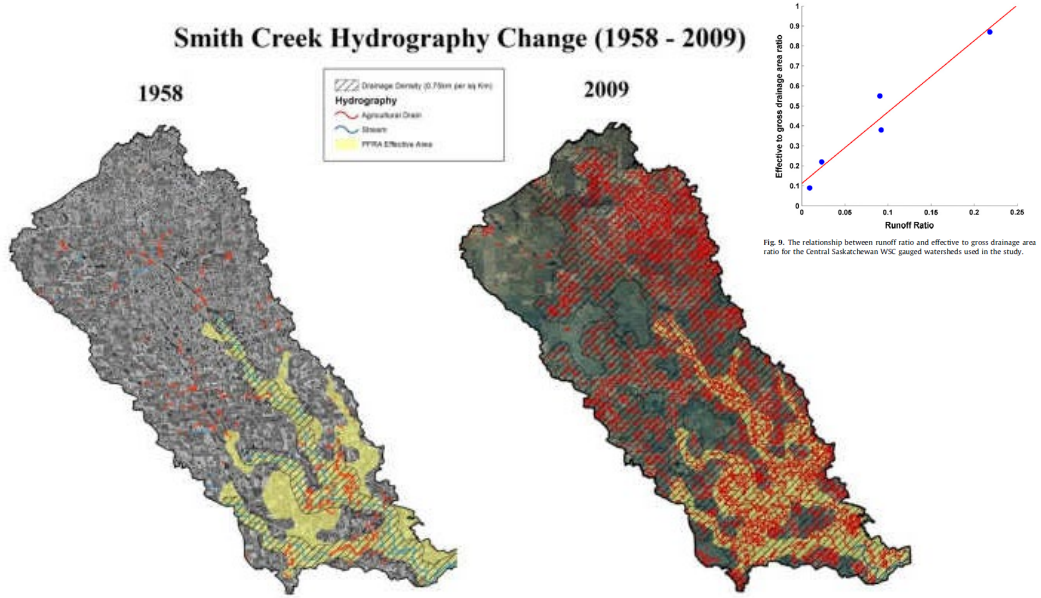
FIELDPRINT PLATFORM

Project Forum

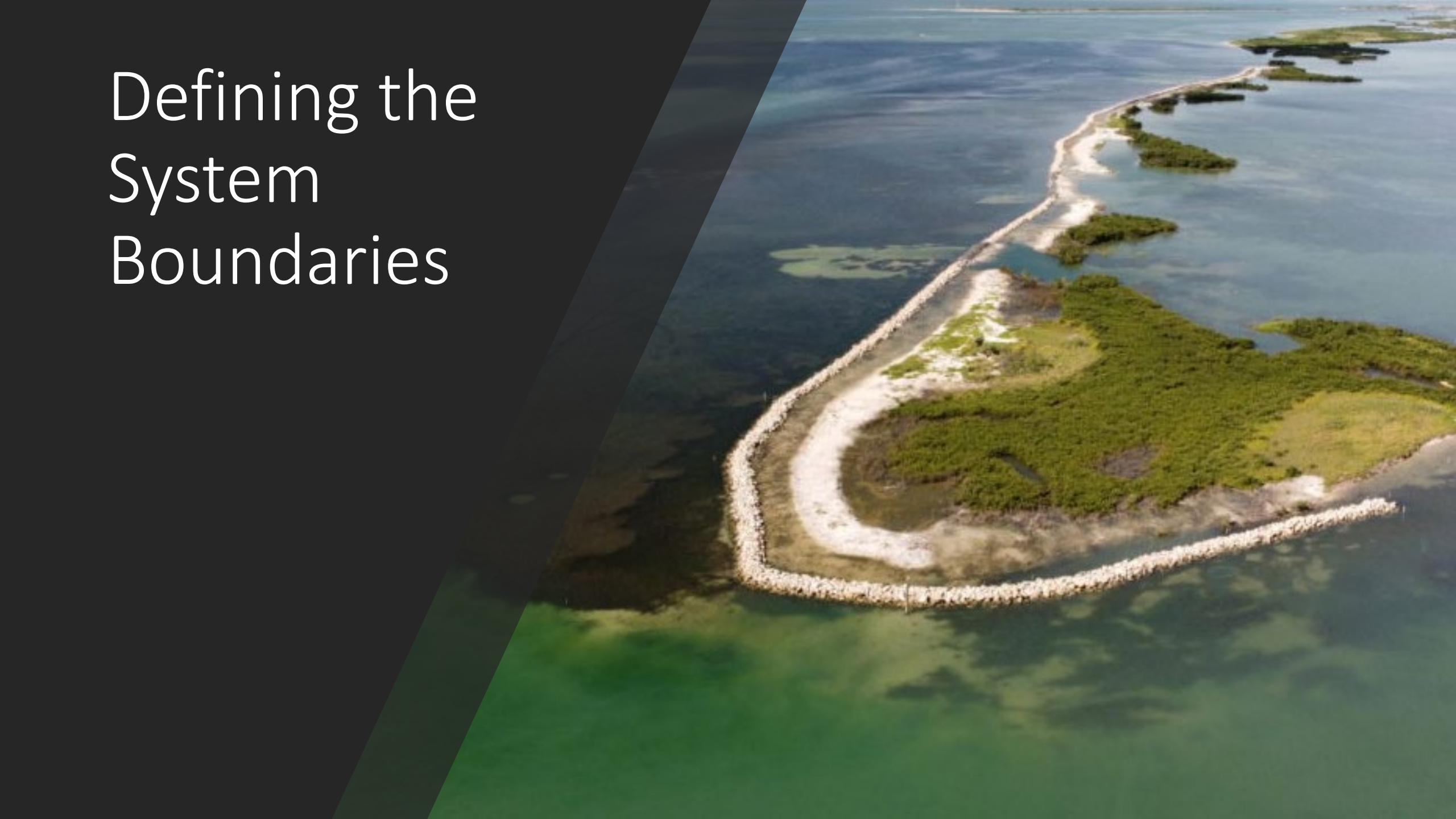
Field to Market
CONTINUOUS IMPROVEMENT
ACCELERATOR

What We Need for a Process Based Standard

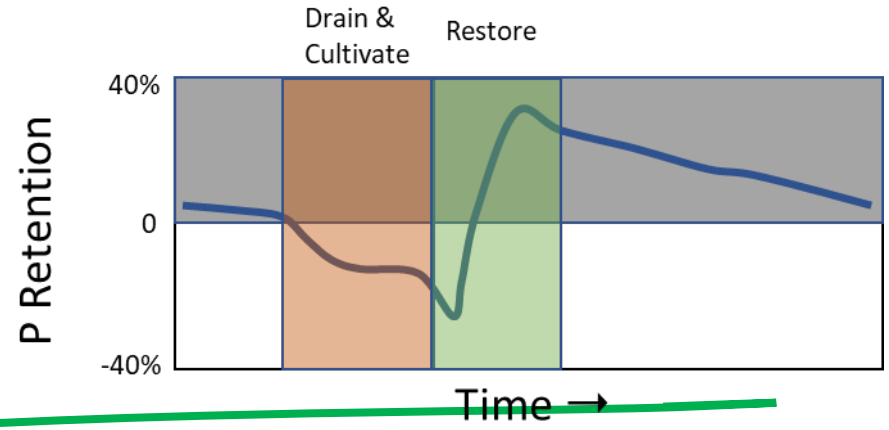
- Goals determine design and scale
- Define system boundaries
  - Enhance
  - Restore
  - Protect
- Trajectories of function
  - Resistance & Resilience
- Management interventions
- Climate informed design

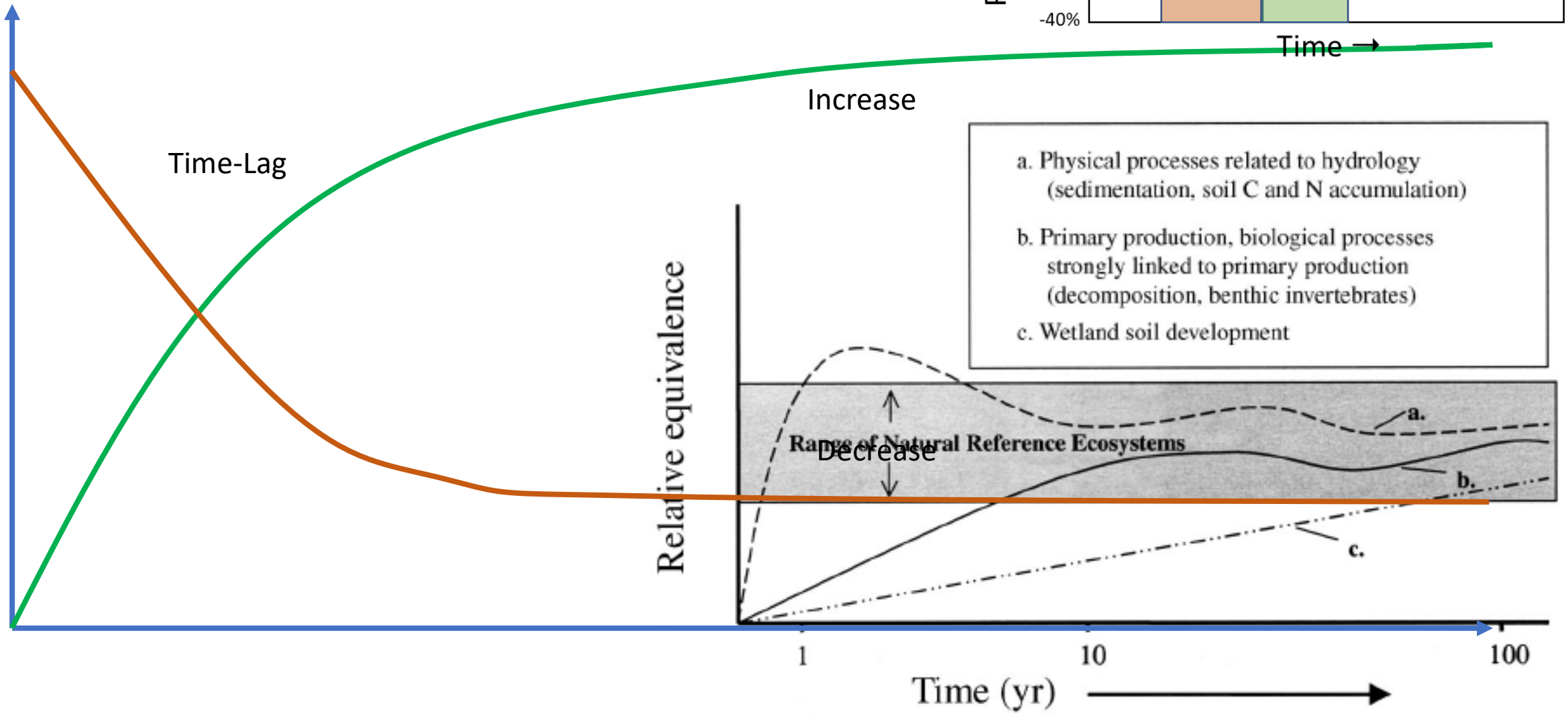


Defining the System Boundaries



Trajectory of Function

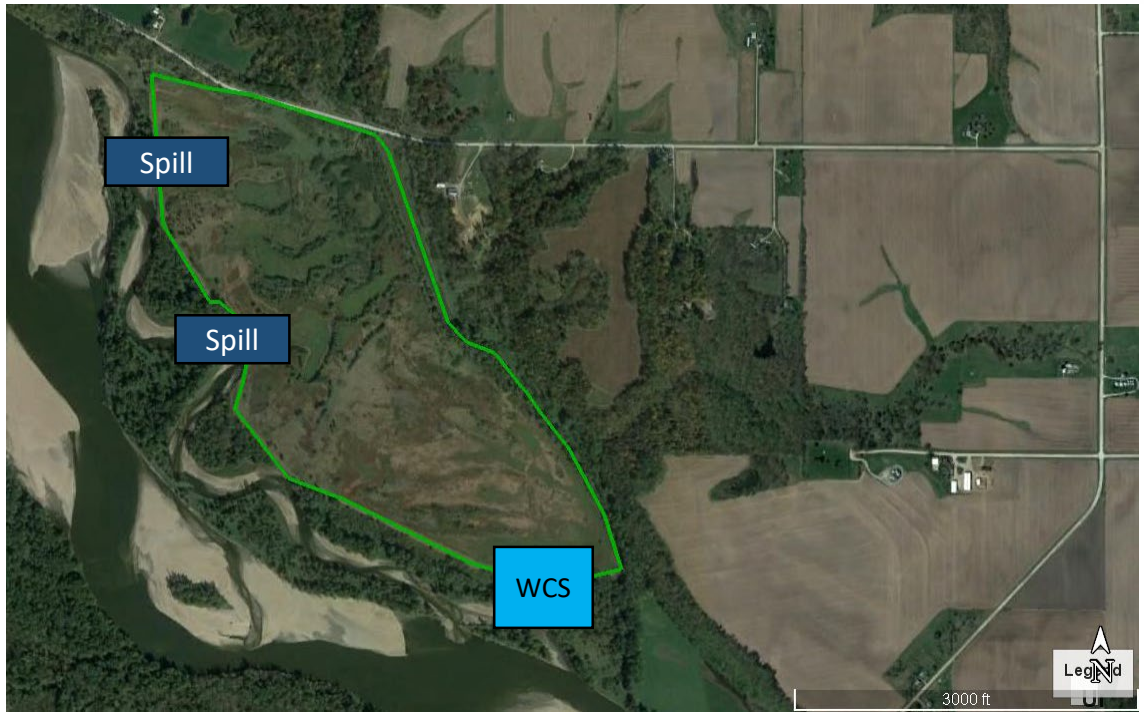




Passive vs. Active Management

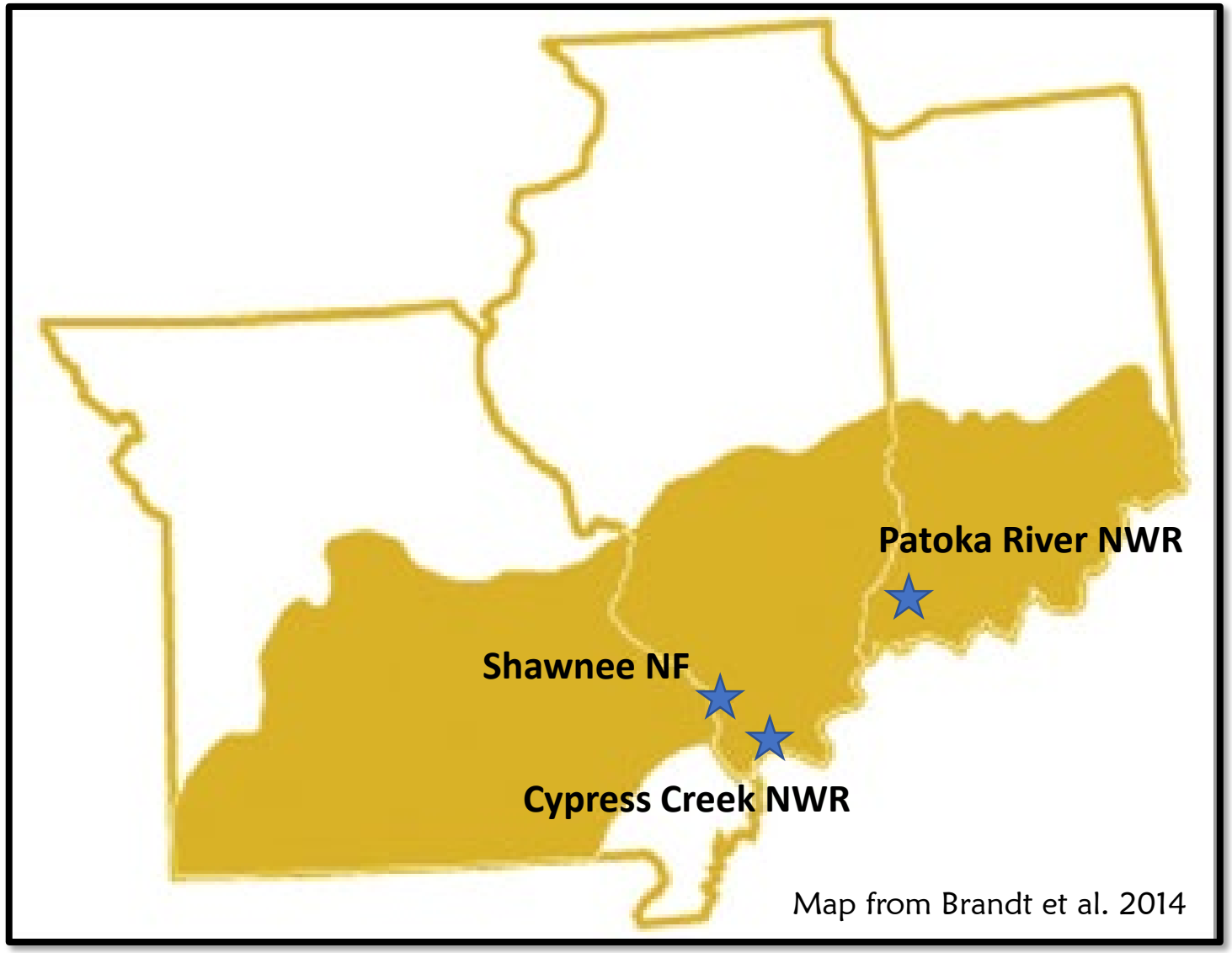
- Passive—completed project is left natural forces

- Parametric—operations under certain conditions



- Active –requires intervention

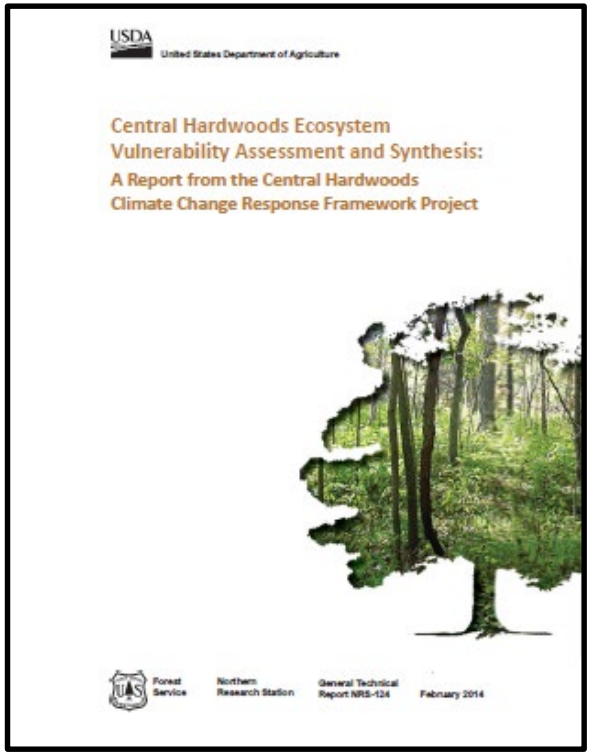
Project Areas: USFS & USFWS

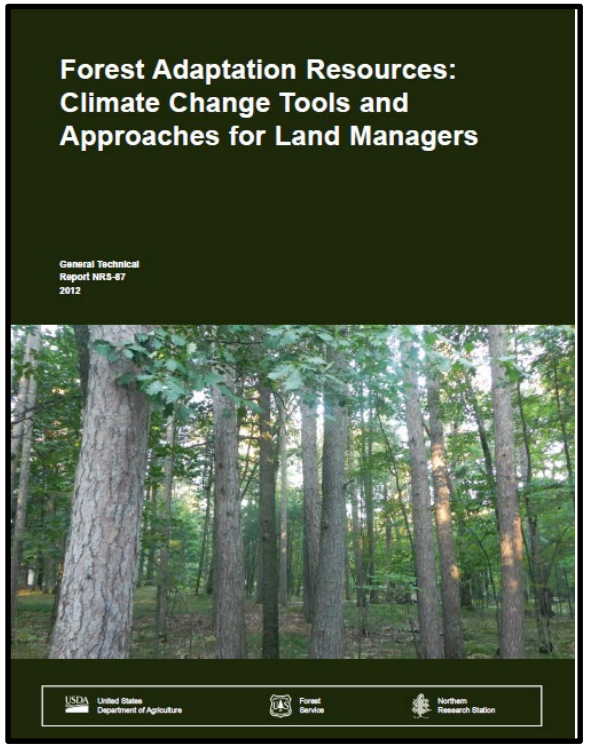


Utilizing Climate Change Science

2015 Climate Change Impacts and Adaptation Workshop

Presented by Leslie Brandt, USFS NIACS





Funding Climate Change

Wildlife Conservation Society Climate Adaptation Fund

Funded by the Doris Duke Charitable Foundation

1) New BLH stands planted on higher, less flood-prone ag. lands
2) Supplemental planting of flood-tolerant BLH species to areas of declining natural regeneration
3) Tree-stand Improvements to enhance regeneration of existing BLH
4) Conversion of low-lying, flood-prone BLH to vernal pools
5) Upgraded water management capabilities
6) New wetland habitat for shifting migration patterns

Embracing Change

Adapting Conservation Approaches to Address a Changing Climate

Wildlife Conservation Society

Altering restoration planting mixes to foster species expected to thrive under future conditions

Location: Bottomland forests in Illinois and Indiana

Business-As-Usual Approach: Standard forestry practices in bottomland forests near the confluenc of the Mississippi and Missouri Rivers have favored a mix of hardwood tree species that have historically dominated these forests. However, these historically-dominant tree species may be negatively affected by the increasingly extreme swings between wet and dry conditions as climate changes.

Climate-Adapted Approach: Ducks Unlimited and their partners are altering forest management practices along the Mississippi and Cache Rivers in southern Illinois and the Patoka River in southwestern Indiana to facilitate a shift in the composition of floodplain forests in the hopes that it will help these ecosystems persist. To do this, they are modifying their restoration planting mix to include trees with greater tolerance for future climate conditions and flood dynamics, such as tupelo, cypress, and pin and willow oak. They are also using seed stocks from areas further to the south in Kentucky and Missouri, that are adapted to warmer conditions.