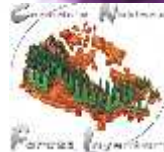


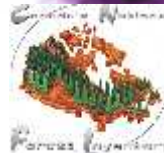
Case Study 3: Mississippi Alluvial Valley Afforestation

Ralph Alig, Moderator
USDA Forest Service
Corvallis, Oregon



Presentations

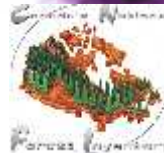
- Biophysical Opportunities: Jim Smith
- Economics and Policy Issues: Brent Sohngen
- Implementation Experiences: Randy Williams and Sandra Brown





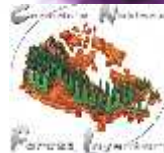
Case Study Sideboards

- **Proposed program size of afforestation as primary activity in the MAV region is 5 million tonnes carbon (18 MMTCO₂), using a 2015 target (emissions mitigated in 2015, not cumulative mitigation by 2015).**
- **Identify and evaluate the technical, economic, and implementation mitigation potential in the MAV region**



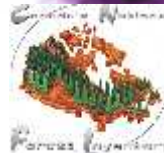
Case 3 (con't)

- **Identify current analytic alternatives and limitations for characterizing the afforestation activity in the MAV region**
- **Identify research and data gaps and opportunities for improving our understanding and project and program implementation**



Background Information: MAV Land Use

- **Bottomland hardwood restoration project has sequestered 2,995 metric tons of carbon dioxide in 2002**
- **Multi-year project located on various U.S. Fish and Wildlife Service National Wildlife Refuges in Mississippi and Louisiana and U.S. Army Corps of Engineers recreation areas in Arkansas**



Background Information (Con't)

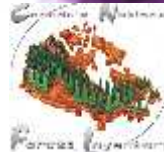
More than 66 million acres of wetlands in the Mississippi basin were lost from the 1780s to the 1980s (Dahl , DOI, 1990)

More than one-half of the 1930s MAV bottomland hardwood forest has disappeared (FIA estimates more than 5 million acres across AR, LA, and MS)

Majority was converted to agriculture

Currently have been about 5 million acres in bottomland hardwoods

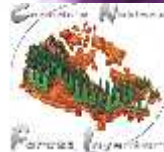
Fragmentation has increased



Programs

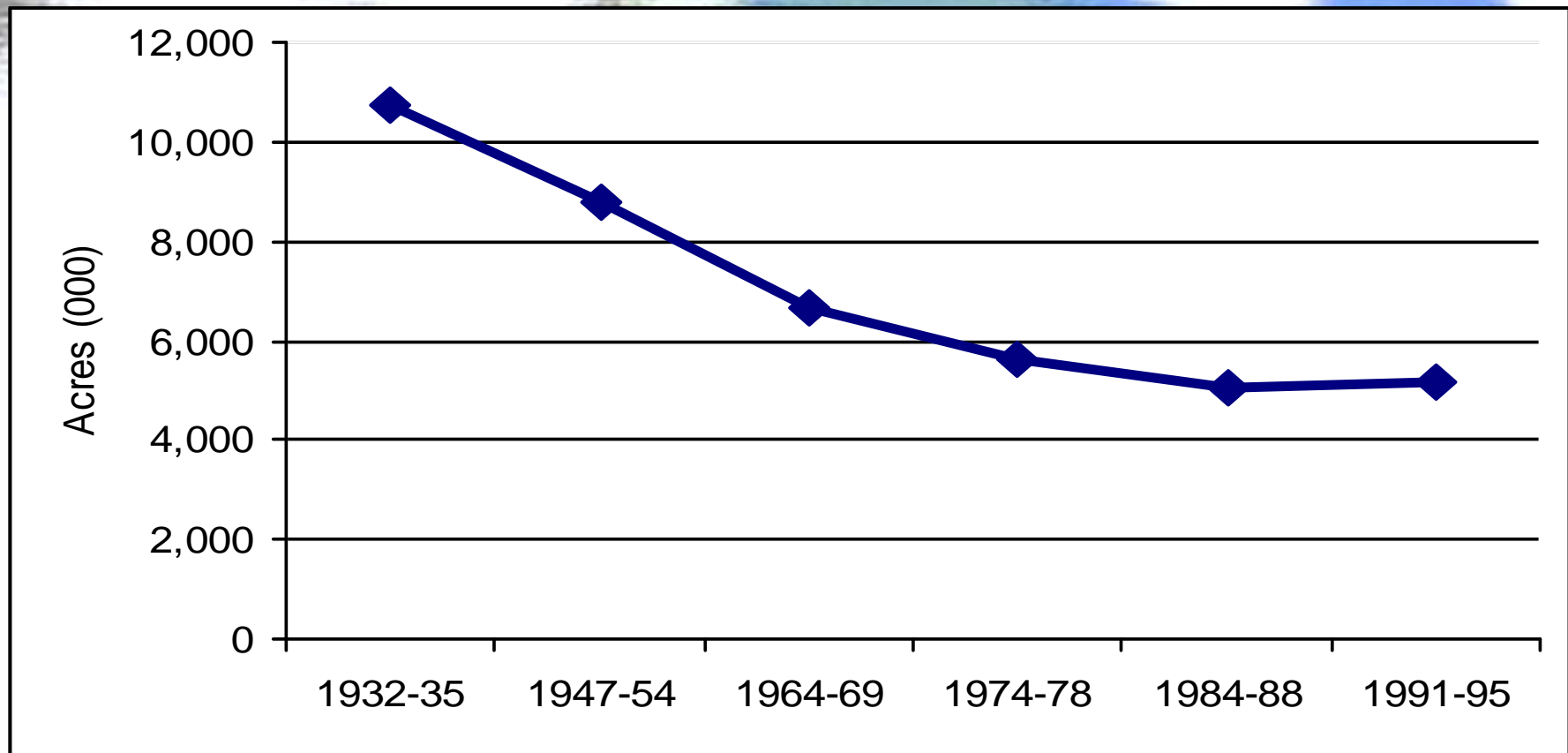
NRCS Wetlands Reserve Program

- **Bottomland hardwood restoration project—Fish and Wildlife Service**
- **Forested Wetland Restoration (nitrogen reduction, hypoxia reduction)**
- **CRP**

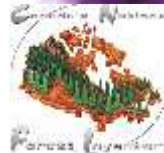


Historic Bottomland Hardwood Area

Arkansas Louisiana Mississippi



Source: Hamel and Foti 2001



Discussion: Examples

- Retention of tree plantings on former agricultural land past contract period
- Challenges of relatively short-term targets for trees with long maturation periods
- What happens during and after first rotation of trees; are intermediate investments likely and is active regeneration needed, e.g., timber harvest
- Socio-cultural factors affecting likelihood of tree planting

