

# *Revenues from Forest Based Environmental Services*

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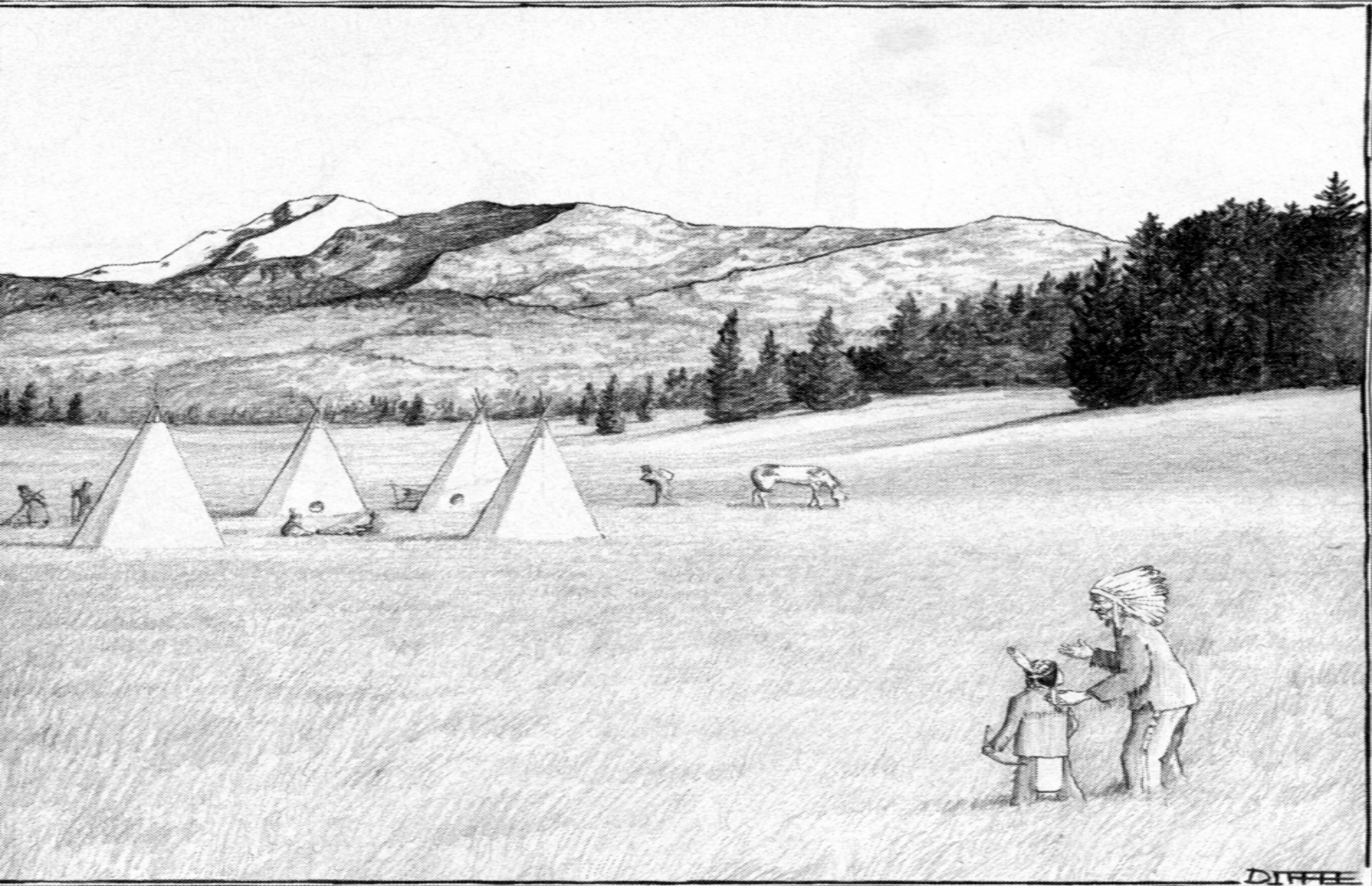
USFS Southern Research Station

Roundtable on Sustainable Forests

National Meeting and Workshop

Manhattan, KS

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*"I remember when all this was completely undeveloped."*

# Goals for Workshop

- Obtain information, opinions, insights on how to evaluate this new indicator.
- Which services should we focus on?
  - Which are currently producing revenues?
  - Which ones are likely to in the future?
- Is data available; how can it be accessed?
- How best to transmit/display the data?

# What are Environmental Goods and Services?

- End products of nature that yield human well-being.....human benefits that flow from nature.
- Three necessary conditions:
  - Service must derive from natural environment
  - Must enhance human well-being
  - End product of nature
- Environmental Services are NOT the same as ecosystem functions or processes

# Services vs Goods

- Environmental Goods
  - tangible, material products that result from ecosystem processes, such as timber, biomass fuels, natural fiber, seafood, forage, etc.
- Environmental Services
  - Improvements in the condition or location of things of value such as purification of water, mitigation of floods, pollination of plants, biodiversity...

# Environmental Goods

- Nonrenewable
  - Rocks, minerals, fossil fuels
- Renewable
  - Wildlife, fish (foods, furs, viewing)
  - Plants (food, fiber, fuel, medicinal herbs)
  - Water
  - Air
  - Soils
  - Recreation, aesthetics (e.g. landscape beauty)

# Environmental Services

- Purification of air and water
- Control of soil erosion
- Maintenance of Biodiversity (habitats for plants and animals)
- Climate Stabilization
- Flood and drought mitigation
- Pest Control
- Maintenance and renewal of soil fertility and control of soil erosion

# Indicator 6.1c

## Revenue from forest based environmental services

- Focuses on the subset of ecosystem services for which:
  - Markets have emerged and
  - **Revenues exist**
- Services
  - Carbon storage/climate regulation
  - Water quality
  - Biodiversity conservation

# Examples

- Sale of carbon credits
- Watershed management
- Conservation banking
- Wetlands mitigation banking
- Conservation easements
- Habitat and water quality trading
- Government payments to landowners
  - Federal, State, and Local

# Measure desired

- Total revenues derived from actual market transactions between willing buyers and forest landowners
- Actual payments/revenues not values:  
Values are reported in indicator 6.5b,  
Importance of Forests to People.

# Classifying Revenues from Environmental Services

- Individual Buyers, Individual Sellers
- Individual Buyers, Government Sellers
- Government Buyers, Individual Sellers
- Government Buyers, Government Sellers

# Individual Buyers and Sellers

- Conservation easements
- Private environmental quality incentives
- Consumption based donations
- Cap-and-trade markets

# Individual Buyers/ Government Sellers

- Public goods/services financed by taxes
- Access fees paid to government agencies
- Charges to discharge pollutants or use a polluting good

# Government Buyers/ Individual Sellers

- Incentives/subsidies/cost shares to private landowners
- Land Purchase

# Government Buyers and Sellers

- Government to Government grants or subsidies for environmental protection
  - (e.g. EPA water quality protections grants to local governments)

# Data Collection Needs

- **What is the service being provided?**
- **Who provides the service and who benefits?**
- **What level of service is demanded?**
- **What level of service is supplied?**
- **Who pays and how?**
- **How much revenue is produced for landowners?**

# Today's Exercise

- Small Group Discussions led by Technical Experts
- Designate a Note Taker for each group
- Technical Experts provide brief overview of small group discussions

# Small Group Discussion I

- Which environmental services are currently producing revenues for landowners?
- Which landowners are receiving revenues for the ecosystems services produced?
- Who is paying the landowners for the ecosystem services they produce?
- Which environmental services do you expect to produce revenues for landowners in the future?

# Small Group Discussion II

- What kinds of data are available on revenues from environmental services?
- Where are the data and how can they be accessed?
- What would be the most useful scale for our data collection and analysis: national, regional, and/or local?
- What would be the most useful way(s) to display information on revenues from environmental services?

QUESTIONS?