Chapter 12: Integrating Ecological and Social Science to Inform Land Management in the Area of the NWFP

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A Social-Ecological System
2012 Planning Rule Sets New Context for Management in NWFP Area

- Emphasis on Ecosystem Scale
  - A few focal species
  - Means different approaches for moist and dry forests
- Ecosystem Services
- Collaboration
Conserving species is challenging in the face of threats that transcend ownership boundaries

- Temper expectations for federal plans
- Cross-boundary conservation

Federal and non-federal Forest
Managing for Resilience Requires Active Management

- Reserves critical but active management may be needed
- Can’t return ecosystems to past
- Manage for resilience to fire, climate change etc.

- Moist Forests
  - Variable density thinning
  - Riparian restoration for heterogeneity
  - Fire suppression to protect old forest remnants

- Dry Forests
  - Use landscape approach—open and dense forest mosaic
  - Thinning, prescribed fire, wildfire for ecological objectives
Using Reserves in Dynamic Systems

- Literature supports possible need for active management in reserves
- Moving/adjusting reserve boundaries—small reserves
- Dynamic-ecosystem reserves better fit for larger NWFP LSRs
- NWFP good basis for dealing with climate change but this hypothesis needs to be tested and design may need update
Forest Restoration can be a Win-Win

- Infrastructure and business capacity has declined
- Restoration activity can help maintain jobs and capacity
- Focus on existing plantations in moist forests
- Broader focus in dry forests but less economic return
- Tradeoffs: ecological, socio-economic
Ecosystem Services Beyond Timber Benefit Communities

- Federal timber remains important in some communities
- Recreation, tourism, non-timber forest products benefit communities
- Water, carbon promoted by older forests
- Work still needed to quantify and apply ES framework
Collaborative Processes Engage Stakeholders to Achieve Social and Ecological Objectives

• Social license for forest management can be difficult to find
• Collaboration can enhance trust
• Public support for active management that does not involve cutting old growth
• Important to understand cultural meanings of places
Monitoring and Adaptive Management to Address Uncertainty

- Monitoring program essential to understanding change
- Formal adaptive management areas (AMA) discontinued
- AM especially at landscape scales most effective way to conduct science-based management and address uncertainty