MF013 MANEJO FORESTAL II

NIVEL	**:**	**PREGRADO**
CARRERA	**:**	**INGENIERÍA FORESTAL**
CARÁCTER	**:**	**OBLIGATORIO**
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MF013 MANEJO FORESTAL II
CLASE 2

1. Definiciones
2. Cambio de Paradigmas
3. Elementos clave
4. Certificación y sustentabilidad

EXAMPLE DEFINITIONS OF FOREST RESOURCE/ECOSYSTEM MANAGEMENT

Ecosystem Management

The use of an ecological approach to resource management at the landscape level that blends social, physical, economic, and biological processes to ensure the sustainability of healthy ecosystems while providing desired values, goods, and services.

Source: Society of American Foresters

Forest Resource Management

Art and Science of making decisions with regard to the organization, use and conservation of forests and related resources.

Forests may be actively managed for timber, water, wildlife, recreation or a combination thereof.

Decisions may deal with very complex forest systems or with simple parts

Source: Buongiorno & Gilles (2001)

Sustainable Forest Management

the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems.

Food and Agriculture Organization (FAO)

Forest Management Decisions

1. Extensión y distribución de reservas de áreas silvestres
2. Partición de áreas para manejo intensivo de caza, biomasa y belleza escénica
3. Tipos de actividades permitidas (e.g. fuego x)
4. Niveles de cosecha en el tiempo
5. Sistemas silviculturales
6. Tamaño y forma de rodales
7. Patrones espaciales de unidades de tratamientos
8. Estrategias de protección e.g. fuego, plagas
9. Patrones de diversidad biológica
10. Rotaciones, ciclos de corta
11. Métodos de regeneración

Source: Davis et al. (2001)

	Forest Management	Ecosystem Management
Objectives	Sustain flows of specific products	Maintain ecological and desired forest condition, within which the sustained yield of products to meet human needs are achieved
Strategy	Resembles agricultural model	Reflects patterns of natural disturbance
System character	Emphasizes production efficiency with environmental constraints	Retains complexity and processes
Unit of management	Stands and aggregation of stands within an ownership	Landscapes and aggregation of landscapes across ownerships
Rotation	Rotation determined by landowner objectives	Rotation reflecting natural disturbances

Source: Davis et al. (2001)

Key elements in Ecosystem Management

1. Adaptive management as a guiding principle

   - Managenment prescriptions are at best working hypothesis whose outcomes are uncertain
   - Call for permanent monitoring and revision of management decisions

Source: Davis et al. (2001)

Key elements in Ecosystem Management

2. Simultaneously recognizing multiple spatial scales such as patches , stands and groups of stands within watersheds or forests

   - In the past, timber production was the primary focus. No connection for spatial scales, except to see if there was enough timber to sustain harvest at desired rates
   - Greater attention is being paid to higher levels e.g. watershed as compared to ownerships

Source: Davis et al. (2001)

Key elements in Ecosystem Management

3. Considering actions in the light of the cumulative effects of actions by all owners over large planning areas

   - En Chile, por ejemplo, podría significar que el Servicio Forestal debiera considerar todas las acciones en una provincia y región, para retroalimentar sobre decisiones a propietarios individuales

Source: Davis et al. (2001)

Key elements in Ecosystem Management

4. Quantifying and projecting all ecosystem services and not only timber
5. Recognizing the formative power of major disturbances such as fire and floods (wind also) to shape landscapes (forests are dynamic)
6. Recognizing spatial patterns and relationships among land forms and vegetation (e.g. relationships streams and stands)
7. Improving public understanding and participation through collaborative learning

Source: Davis et al. (2001)

The Future of Ecosystem Management

1. Areas allocated to intensive wood and fiber production

2. Areas for joint commodity and habitat production

3. Areas primarily for the protection and restoration of ecosystem processes

   Ecosystem management at its highest level will involve coordinating the contribution of mixed ownerships in all three zones to sustain regional, national and global ecosystems

Source: Davis et al. (2001)

Certification and Sustainability

1. Certification was born on the need of European consumers to know that their consumption of wood furniture was not depleting tropical rain forests
2. Starting in the 1990s, forest certification has grown dramatically
3. Forest Stewardship Council (FSC) well known in US
4. Pan European Certification in Europe
5. In Chile FSC, CERTFOR and ISOS

Source: Davis et al. (2001)

FINAL REMARKS

- Maintaining environmental, economic and social values at the core of sustainability
- Change in paradigms from timber oriented to ecosystem oriented
- Adaptive management as a guiding principle
- Certification born as a need of society to warrant sustainable use of forest ecosystems

Reading

Chapter 1. Introduction to Forest Management, pages 3-21. Source: Davis et al. (2001)