Landscape governance through ecosystem-based management approach

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Structure of presentation

1. Introduction: governance of landscapes
2. Ecosystem Management (EM): a valid path for landscape governance?
3. Principles of EM
4. A demanding approach: key elements and challenges
5. Implementation of EM
6. Discussion

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1. Introduction: governance of landscapes

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Because there are as many landscape as observers....
There is not agreement about what a particular landscape must be and look like:

- Each owner and visitor has its **own interests and priorities** independently of other

- There is no much concern about belonging to a system that, itself, belongs to bigger interrelated units: **my actions affect other parts of the system**

- Any normative solution is perceived as a restriction for owners that feel that have to pay a big fee for the general interest to be achieved

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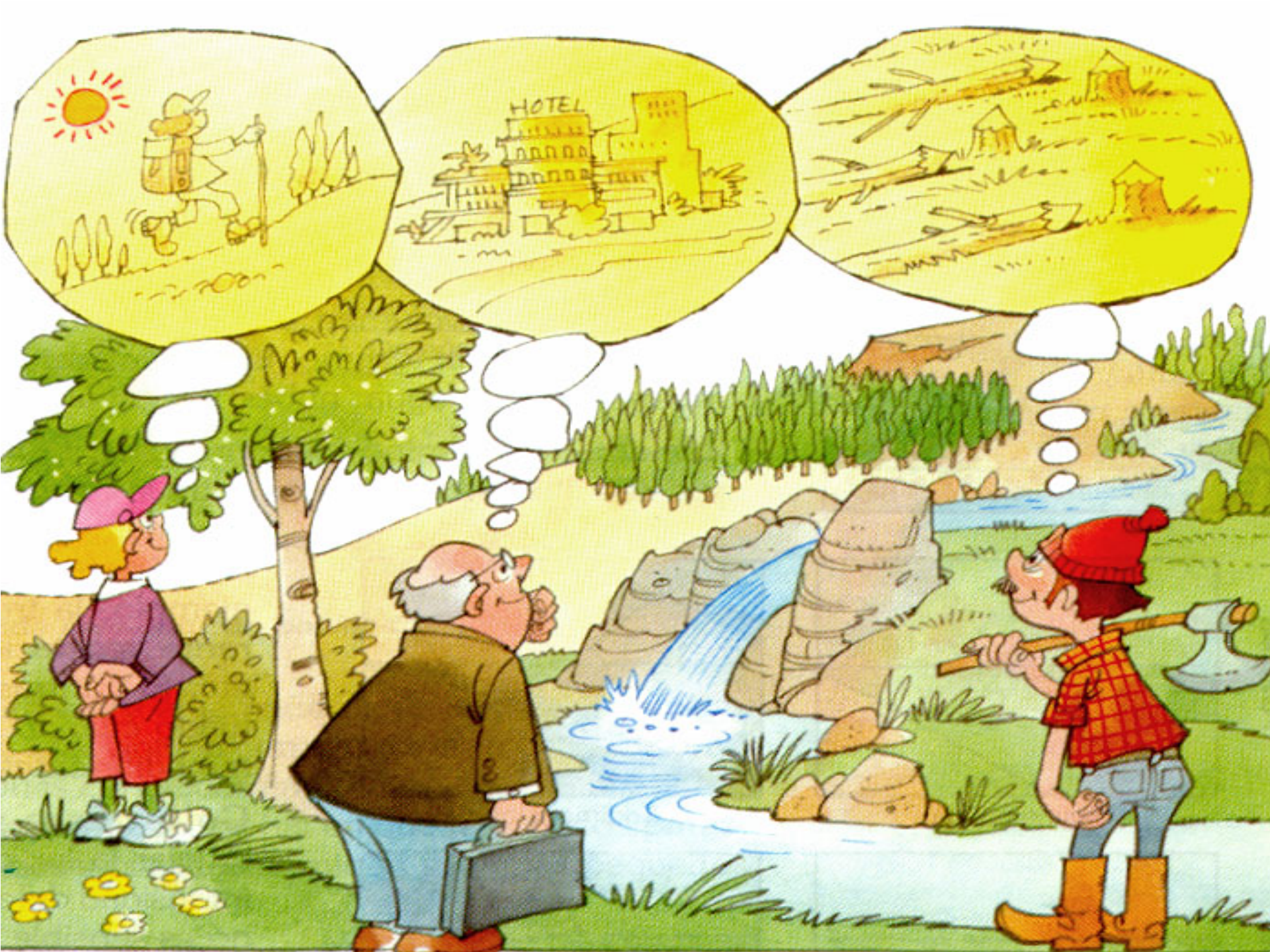
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Who, then, “pays” the invoice for more sustainable territories and landscapes?:

- The goals of landscape management and governance, whatever they are (conservation, transformation), must be established as a result of a **territorial planning process**. A future **model for landscape** is needed as a part of these planning processes.

- What is allowed and forbidden in specific types of landscapes is also determined by the **existing regulation** and the **planning and governance processe**s.

- For this to be sustainable the **efforts and benefits must be evenly distributed among stakeholders** (owners, government, visitors, tourist, entrepreneurs, etc.).

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Why landscape governance is important?

- **Increasing demands** for landscape and ecosystem goods.
- Landscapes **contain elements that may turn out to be essential** for economic activity, health, new materials, leisure, etc. if bio-diversity is maintained.
- However, **many practices in rural landscapes are non-sustainable**. Forestry, intensive agriculture, mining, water exploitation, etc., may endanger the survival of resources, values and even cultures.
- The **lack of a large-scale planning and governance** of rural landscapes and ecosystems induces higher environmental, social and economic costs, and conflicts of interest.
- **Important long-term benefits** would arise from sustainable practices as ecosystem management (EM) both in economic and environmental terms.

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Diferential features of governance in Landscapes

Landscapes do not fit into property, administrative and political boundaries

The landscape is the “visible part” of a system that needs to be governed comprehensively

Landscape governance cannot come either from a sectoral or thematic approach (ie. primary industries, environmental regulations, industry, etc.) but from a more integrated, comprehensive and systemic approach.

The concept of “ecosystem” is as close as one can be to the needs for an effective landscape governance

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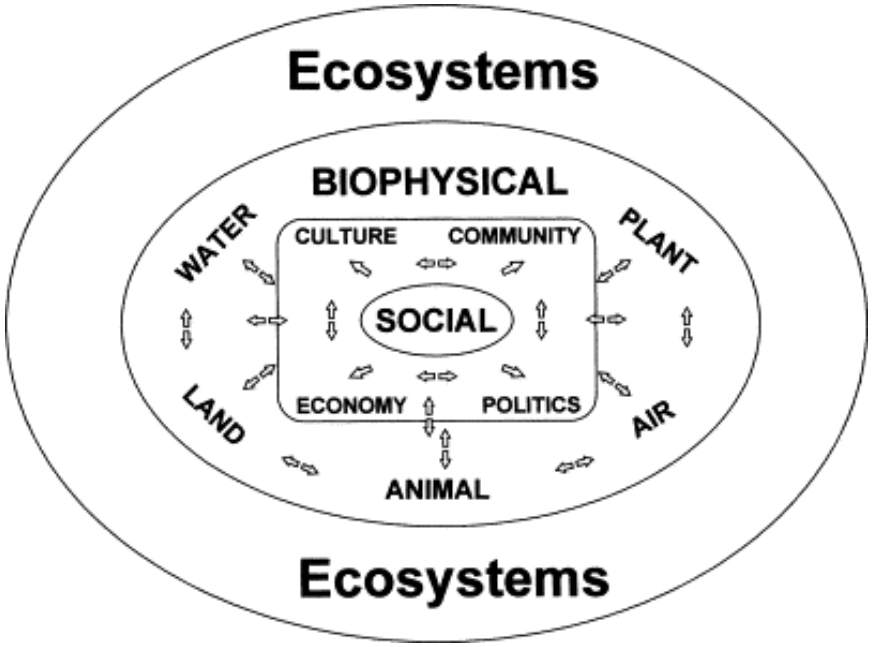
2. Ecosystem Management (EM): a valid path for landscape governance?



Ecosystem Management:

- **Primary objective of EM**: sustain the integrity of ecosystems and landscapes (i.e. their function, composition and structure) for future generations while providing immediate goods and services to an increasingly diverse public.
- **Mechanisms**: integrated land evaluation, optimal land-use planning, and creation of landscape structure and process that meet society's expectation but also consider the constraints of the land's ecology.

EM means a balance between demands for resources, maintenance of ecosystem integrity, and the conservation of options for future generations.

EM has the potential to provide healthy, productive, and diverse landscapes made up of ecosystems that supply sustainable resource uses of high value to individuals, communities and nations better than previous approaches.

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3. Principles of Ecosystem Management

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1. Multiple-use, sustained-yield management of lands and resources depends on **sustaining the diversity and productivity** of ecosystems at many geographic scales

2. The natural dynamics and complexity of ecosystems means that **conditions are not perfectly predictable** and that any ecosystem offers many options for uses, values, products, and services, which can change over time

3. Descriptions of desired conditions for ecosystems at various geographic scales should **integrate ecological, economic and social considerations into practical statements** that can guide management activities

5. Integrate ecological classifications, inventories, data management and analysis tools to support integrated management of lands and resources

4. Ecosystem connections at various scales and across ownerships make **coordination of goals and plans** for certain resources essential to success

6. Monitoring and research should be integrated with management to continually improve the scientific basis of ecosystem management.

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4. A demanding approach: key elements and challenges

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Key elements (adapted from Christensen et al. 1997)

- **Sustainability** for future generations
- **Explicitly stated goals**, measurable and monitored, in terms of specific "desired future trajectories" and "desired future behaviors" for the ecosystem components and processes necessary for sustainability
- **Based on sound ecological principles** and emphasising the role of processes and interconnections
- Awareness of **complexity and interconnectedness** of ecosystems
- Recognition of the **dynamic character** of ecosystems that make change and evolution inherent characteristics
- **Interrelated and interacting processes** that operate over a wide range of spatial and temporal scales
- **Humans are integral ecosystem components** who must be engaged to achieve sustainable management goals
- Management goals must be viewed as **hypotheses** to be tested by research and monitoring programs that compare specific expectations against objective measures of results

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Main challenges (adapted from Bormann et al. 1994)

- Characterising the **main landscape governance forms** in practice
- Studying the problem of **public acceptability and participation** in EM initiatives in highly fragmented rural landscapes
- Exploring possibilities of **regulatory versus non-regulatory measures** to promote owner's acceptation and participation in EM programs —education, technical assistance, cooperation and associative initiatives, community leadership, risk management, etc.
- **Building a model** for participatory ecosystem management in fragmented rural landscapes considering both regulatory and non-regulatory incentives

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5. Implementation of E.M.

- Leak et al. (1998) propose a method for the implementation of EM.

- Their focus is forest and forest management.

- Taking as starting point this method proposal, we have scaled up the area of reference to consider **landscape level management**

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A method to implement Landscape Level E.M.

Phase 1. Inventory of physical, biological, cultural, social and economic attributes / main issues at both the ecosystem and property level

Phase 2. Analysis of the ecosystem and property inventories and determine the needs or opportunities at these two levels (property and ecosystem/landscape)

Phase 3. Planning through the establishment of specific goals at both the ecosystem/landscape, and landowner levels in order to meet the opportunities and minimise the risks detected in the analysis and evaluation of the inventories

Phase 4. Follow up whose primary goal is to implement the next series of operations outlined in the planning schedule, to assess the success of past operations and to reassess landscape/ecosystem and property conditions

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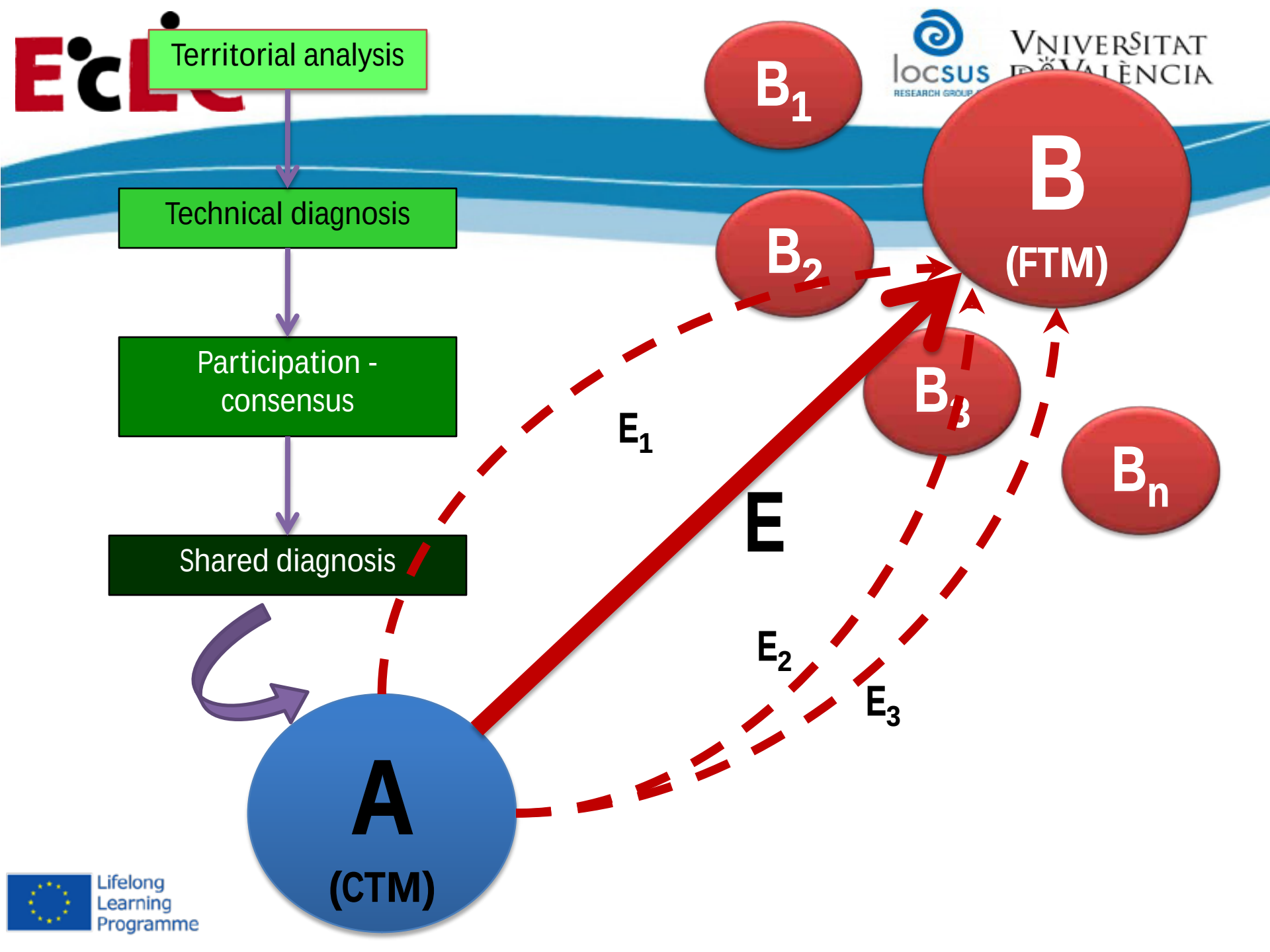
Territorial analysis
Technical diagnosis
Participation - consensus
Shared diagnosis
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6. Discussion

- Governance of landscapes is **complex**.
- Most governing is linked to **human-oriented administrative boundaries**.
- **Little tradition** in managing and governing landscapes as systems where human action happens in a context of conditioning environmental processes.
- Individual and collective human action on landscapes lacks, in most cases, a **planning reference**, it is **not coordinated** and tends to obviate the own existence of landscapes as complex systems that need comprehensive analysis and action.

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Key dilemmas to be resolved

- How can citizens' participation be routinely incorporated into the complex landscape-level planning? Given difficulties in obtaining public involvement at smaller scales, how can we expect to do it effectively at a larger scale?
- Where does EM fit in the shifting "landscape" of political affiliations?
- How do aesthetic preferences affect the acceptability of EM? Research is needed that compares a wide range of EM conditions to an equally wide range of traditional conditions.
- What are the safety impacts of different stages of primary economic activities under alternative models or systems?
- What are the broad economic effects of EM, not only on primary activities but also on other market resources from recreation to understory products?
- How can we develop reliable (and reliably funded) monitoring strategies for EM?

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Thank you!

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Questions for debate

- Which are in your opinion the main problems to achieve an effective governance of landscape? Please explain
- Illustrate with examples cases of good and bad practices of landscape governance. Which were the key issues in each example?
- Which are the roles of citizens in improving landscape governance? What people can do and how?
- Which are in your opinion the most effective means to get the attention, interest and involvement of people in landscape governance?
- How should landscape be introduced in the education of citizens?

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