Forestry in Changing Social Landscapes

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Forest ecosystems in a broader and complex socio-cultural landscape

- Forest ecosystems are embedded in socio-cultural landscape that ultimately determines what people want from forests, and the institutions and practices they create to meet their demands.
- People and societies are components of a larger whole, rather than existing outside or alongside nature and having impacts on it.
- Maintaining the long-term sustainability of the nested social-ecological systems calls for considering a wide range of potential drivers and linkages:
  - both between and among the components.
A multi-tier framework for analysing a social-ecological system

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Forests and Society – Responding to Global Drivers of Change
Social-economic-political context in ecosystems

- The activities of users produce outcomes in forests, and these outcomes may influence the lives and well-being of many people.
- People form diverse social structures and institutions of power and decision-making in order to match the expectations of users and the capacity of forests to meet these expectations.
- Formation and evolution of governance systems is a social process, and policies are also socially determined.
  → It is not only question of how extensively forests are being used, equally important are the social changes and changes in population distribution in the larger setting.
Maintaining the systems in a productive state for long-term sustainability

• Resilience :
  – a quality of the complexity of social-ecological systems
  – the capacity of the system to remain in the same state after a shock or to return to that state

• Given sufficient time, social and ecological systems can co-evolve, maintaining resilience in all components from within and outside the system
  – social changes, including demographic changes, can bring about changes in power and decision-making
  – learning takes place and new linkages and feedback mechanisms are created

• The present rapid changes tend to push social and ecological systems towards conditions where resilience is lost
Population dynamics impacting on forests

- More than 2 billion new people by 2050, mostly in the developing countries
  - yet, a slowdown in global population growth
- Global demand for food and feed will nearly double
  - 2/3 of Africa’s arable land is now degraded
  - without improved agricultural productivity, food demand alone will cause further deforestation
  - changing consumption patterns will impact land requirements
- Water availability may be threatened by land use changes
  - almost 90% of an individual's water requirement is needed for food production
Growing demand for forest tree products

- Several countries at the phase of increasing forest cover
- Fibre supply from planted forests is set to eliminate any wood shortage globally, but not always locally
  - plantations are estimated to supply up to 64% of industrial timber supply in 2050
  - an increasing share of national and local timber supply is being met by small scale and farm forestry
- Continued dependency on biomass and woodfuels for energy
  - much of the future growth in energy demand is expected to occur in the less developed regions driven by the increased number of people and, more importantly, by rising incomes
People are unevenly distributed on land

- About half of the world’s population today lives on urban areas that cover 3% of the planet’s terrestrial surface
  - most future population growth in urban areas, and in developing countries
  - Africa is the world’s fastest urbanising region and current trends show that 90% of new developments in cities occur in slums
- Use of materials and energy concentrates in urban areas
  - new demands for diverse ecosystem services including fighting pollution, reducing noise and areas for recreation
- Urban growth implies further fragmentation of existing landscapes and forests, with intermediate land uses and continuous changes
- The world rural population is projected to start decreasing in about a decade, especially rural working-age population
Perceptions of forest

• The concept of “forest” is culturally formed
  – may differ by local conditions and between individuals and groups

• Many traditional cultivation systems are multiple use
  – changing agricultural mosaics contain trees for many purposes: food crops, pastures (wooded or not) and often interchangable land uses

• Trees are an integral part of the agricultural landscape in most parts of the world
  – almost all of Central American agricultural land has over 10% tree cover, also in the Alps and Mediterranean regions combined uses continue to exist
Changing forestry paradigm

- Science-based forest management, the forestry paradigm established by Hartig (1795), is changing from sustainable yield towards more comprehensive sustainability, including environmental and social values.
- The post-industrial paradigm in forestry is based on the notion that there is public interest in forests.
- The paradigm change involves a wider scope of forests and forestry:
  - most often only the needs and demands for forest goods and services are measured and evaluated.
  - however, consideration of attitudes and perceptions is equally important for public support and social acceptance, and for success in the implementation of activities.
New perceptions and attitudes (1/3)

- The values, beliefs or practices of human groups determine the success of forests and forestry, together with good governance, which is also based on culture and worldviews of the community.
- People's views strongly depend on the forestry foundation of the local society.
- Berninger at el. 2009:
  - in regions where industrial forestry is of great importance forest values tend to be more economically oriented.
  - in regions with less prominence of industrial forestry, forest values tend to be more uniform among the socio-cultural interest groups.
New perceptions and attitudes (2/3)

- The extent to which societies or individuals see themselves as either separate from or part of the environment, determines the attitudes and perceptions to nature
  - still, the inability to understand the dynamic and variable systems of nature will make it more difficult to respond to the fast changing environment

- The relationship between people and forests, as well as between rural and urban, is not simple
  - the key characteristics of many rural areas are disappearing and also the rural areas are becoming more diverse
**New perceptions and attitudes (3/3)**

- Increased communications, extensive spread of information and the easier movement of people build people’s perceptions
  - memberships in environmental, nature and recreation organisations are growing and these organisations are increasingly active even in the developing countries
- Increasing global emphasis on the role of forests in maintaining ecological, social and aesthetics values
- Public media has an essential role in building the public view and people’s perception on forests
Will climate change alter attitudes to forests?

- Public perceptions on climate change are often built on mere images of far-away features.
- Individual perceptions on forests are based on very personal concerns, on the individual’s cultural, psychological and social values.
- Climate change is unlikely to become a high priority issue until the influences of climate change are seen on one’s own life:
  - difficult to see the climate change effects without profound understanding of nature and biodiversity in local landscapes.

Climate change policy will not receive the support needed for implementation unless cultures, perceptions and values are taken into account.
Conflicts over natural resources are common

- Parties with contradicting perceptions and values perceive a threat to their needs, interests or concerns
  - conflicts, however, may serve a positive function through mutual learning and as a driver of social change
- Conflict includes mistrust and antagonism
  - conflicts are rarely about a single issue
- Scarcity alone does not usually explain conflict
  - conflict must be understood within the web of social, historical and political contexts and their interrelationship
- Conflict may be derived also from resource abundance
  - resources such as forests, oil and diamonds motivate and often finance conflict in resource-rich countries
Potential future conflicts

- Conflicts will continue in resource management due to socio-cultural and economic complexities involved
  - multiple actors, multiple drivers and a diversity of political, cultural or demographic contexts
  - weak governance and law enforcement
  - conflict is a major issue in tenure reforms
- Intense conflicts do not materialise out of thin air, they develop gradually
- New discourses inviting debate and potentially conflicts:
  - activities in climate change adaptation and mitigation and PES involving rights to land and benefit sharing
  - reduced Emissions from Deforestation and Degradation (REDD) schemes, coordinated through national governments
Managing conflicts for positive change

• Conflict management requires
  – a deep understanding of the scope and underlying causes, the actors involved, their needs and their values and perceptions
  – collaborative identification of problems and solutions and stronger links between all the parties involved
  – due attention to equity
  – difficulties arise with outside powers and their veto rights
  – systematic monitoring of the experiment

• Conflict does not necessarily need to be avoided and suppressed
  – conflict may trigger new ideas that can improve or replace outdated patterns
  – it may bring people together around common concerns and enhance collaborative action
Managing forests in a changing social landscape (1/3)

• By the next generation, both the ecological and social systems will co-evolve at a speed not experienced before.
• The challenge is to maintain the balance between ecological and social systems and simultaneously secure the ecological resilience and avoid social disruption and insecurity.
  – The vast majority of people on the globe will live in urban environment and they need decent jobs, income, food, clean water, affordable energy and different ecosystem services.
  – All efforts must continue to alleviate poverty in the rural areas, but at the same time social resilience must be maintained with the bursting numbers of urban youth, often unemployed.
Managing forests in a changing social landscape (2/3)

- The use, users and accessibility of forests will be increasingly diversified
  - with more diverse forest products and services, their market system, including pricing and legislation, needs to be adjusted to the changes
  - diversified forests call for diversified management systems
- With concentration of people and specialisation of activities, the spatial structures need to consider the nested environmental, social and economic realities
  - ecological and social integrity must be managed for long-term viability of human well-being and equitable benefit sharing
- This can be secured only with sectoral collaboration and more careful land use planning - and at a larger scale
Managing forests in a changing social landscape (3/3)

• Positive views and perceptions of forests are needed for effective collaborative planning and for success in implementation
  – in global challenges, like climate change, building awareness and positive views of forestry is more difficult because the impacts may not be personally experienced; positive views often demand perceived short-term concrete benefits

• Diverse interests will continue to contribute to institutional conflicts over forest use and over land use in general
  – institutional structures must be flexible and socially innovative

• The challenge is to bring forests into the scene of the changing social landscape in an ever wider scale of activities and global policies