

fragmentation was group and species-specific. Some model groups were negatively affected by forest fragmentation, reduced vegetation cover and unstable soil conditions on the ski pistes, while others were positively associated with the newly created forest edges. Integrated landscape management strategy was addressed: beneficial both for biodiversity conservation and local economy.

Symposium 8: Ecosystem services from forests at the watershed scale

BUILDING INDICATORS ON THE SOCIAL VALUES OF FORESTS – THE LANDSCAPE APPROACH

TERESA PINTO-CORREIA

Group on Mediterranean Ecosystems and Landscapes (EPM) / Institute for Mediterranean Agrarian and Environmental Sciences (ICAAM) / University of Évora, Portugal

Many Mediterranean rural landscapes are acknowledged today for their diversity and outstanding character, related to specific land use systems, in particular extensive agro-silvo pastoral systems, as the Montado in Southern Portugal. The survival of these highly valued landscapes may be related to the non-commodity functions they support and as such the public goods and services they produce. These are functions such as leisure and recreation, hunting, second housing, neo-rural settlement, and identity preservation. They may be supported both through public policies or the creation of new markets. Nevertheless, in order to create or calibrate these support mechanisms, there is a need to assess what is exactly the public is demanding in these landscapes, and what kind of land use systems can be most adapted to this emerging and growing demand. Knowledge on users preferences concerning Mediterranean landscapes is not abundant in literature. Taking in consideration the diversity in the Mediterranean open forest landscapes, and specially their high level of fussiness, both vertical (several layers of land cover, related to mix land use systems) and horizontal (unclear borders in between patches), there is a need to develop specific methodological approaches. In this paper, we present the results of a research that aims at relating preferences, as expressed by different users, to the land cover distribution, in the Montado landscape, and from there to produce an indicator of social value of different landscape types. Preference data has been collected through a survey in the region of Alentejo, to different groups of users, related to the most relevant and already acknowledged amenity functions. In order to reduce the confusing effects of landscape fuzziness, the survey considered each of the land cover classes that are part of the Alentejo landscape, and besides selecting the preferred land cover class, the enquired were also asked to create their preferred landscape composition. This data allows for assessing the distribution of preferences, and to classify land cover classes and proximity in between patches. This can in turn be related to the real or simulated land cover pattern, which can be classified according to the preference distribution, by user group. An area related indicator of value as expressed by users, for each function, can thus be defined. The effects in landscape amenity provision, of different scenarios affecting land use and land cover distribution, can also be measured and this way, and thus scenarios can be compared.

Symposium 10: Global change and transitions in forest landscapes

COMPARISON OF LOCAL-LEVEL DRIVERS OF REFORESTATION IN INDIANA (USA) AND SÃO PAULO (BRAZIL)

TOM EVANS[1], KELLY CAYLOR[2], SEAN SWEENEY[1], MATEUS BATISTELLA[3] & JULIANA FARINACI[4]

1-Indiana University, USA; 2-Princeton University, USA; 3-EMPBRAPA, Brazil; 4-University of Campinas, Brazil

Much of the Midwest United States has experienced net reforestation since the start of the 20th century after decades of net deforestation during the 19th century. Indiana has experienced a regrowth of over 40% forest cover in some parts of the state. Recent analysis of Atlantic Forest areas in the state of São Paulo, Brazil

identified areas where this same transition deforestation-reforestation transition is occurring. Yet the social and biophysical dynamics functioning in these two places are diverse. Landcover patterns in these two regions are a complex mosaic of agriculture and forest that is a result of land use decisions made by numerous actors on the landscape. This research addresses this reforestation process in these two distinct study areas. A key challenge is how to balance the complexity needed to represent household level land use decisions with the ecological dynamics needed to represent the reforestation process. We present findings documenting the varying interactions between social and biophysical forces to describe the contemporary trajectories of forest cover change in the context of historical legacies and address implications for continued reforestation in these two areas.

Symposium 3: Landscape assessment tools for adaptive management of tropical forested landscapes

SHIFTING CULTIVATION LANDSCAPES IN TRANSITION: UNDERSTANDING THE SPATIAL TRENDS OF AGRICULTURAL MOSAICS TO MAINTAIN ENVIRONMENTAL SERVICES AT TROPICAL FOREST MARGINS

VALENTINA ROBIGLIO

IITA, international Insititue of Tropical Agriculture and ASB Alternative to Slash and Burn, parnership for the tropical forest margins, Cameroon

In the humid forest zone of Southern Cameroon, at the western margin of the Central African forest, there are 2.05 million hectares of agricultural mosaics that consist of fields, fallows, agroforests, secondary forests and remnants of the original vegetation. Under the increasing pressure of urban and regional demand for food commodities, and favored by improved transport infrastructures, the complex mosaics are bound to further expand into the forest and to be converted into more intensively and homogeneous cultivated patterns. In three villages located along a South-North deforestation gradient we analyzed land cover changes and landscape structure over a period of 50 years, combining remote sensing with participatory mapping and GIS analysis. We assessed 1) the critical processes that affect secondary forest regeneration in the fallow units and 2) how drivers of land use change operate at a local scale and affect those processes. Results showed that 1) landscape level processes, in particular the extension of forest destruction coupled with the decline of the heterogeneity of the agricultural matrices, negatively impact forest and regeneration capacity in the fallows; 2) these processes are shaped by tenure and accessibility patterns within the village territory. A paradigm shift is needed to maintain the potential of complex agricultural mosaics for reconciling environmental and development concerns. There is the need for spatially explicit land use assessment and planning according to hierarchical systems (plot, household, community) to enhance the provision of environmental services at the tropical forest margin.

Symposium 9: Management and conservation of Mediterranean forest landscapes

LANDSCAPE DYNAMICS IN THE CORK OAK MONTADO: ROLE OF BIOPHYSICAL AND SOCIAL VARIABLES

VANDA ACÁCIO

CEABN, Instituto Superior de Agronomia, Lisboa, Portugal

The cork oak (*Quercus suber* L.) land use system of today is the result of long-term combined ecological and land use dynamics. Areas of degraded soil are commonly dominated by rockrose (*Cistus* spp.) shrubs, which are very persistent. It is shown that *Cistus* shrublands have been the most persistent patch-type for 45 years (1958-

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