Forest Landscapes and Global Change

New Frontiers in Management, Conservation and Restoration

Abstracts

Edited by
João Carlos Azevedo
Manuel Feliciano
José Castro
Maria Alice Pinto

IUFRO
CIMO
ipb INSTITUTO POLITÉCNICO DE BRAGANÇA

IUFRO Landscape Ecology Working Group
International Conference

Bragança · Portugal
September 21 to 27, 2010

Tools of landscape assessment and management

Sep 24 18:00-19:00

Abst. #	Authors	Title
PT1	ANA M.GERALDES	LANDSCAPE RUNOFF, PRECIPITATION VARIATION AND RESERVOIR LIMNOLOGY
PT2	ANA M.GERALDES & MARIA JOSÉ BOAVIDA	RESERVOIRS: MIRRORS OF THE SURROUNDING LANDSCAPE?
PT3	ANA MARIA CARVALHO, MARGARIDA RAMOS & AMÉLIA FRAZÃO-MOREIRA	CONNECTING LANDSCAPE CONSERVATION AND MANAGEMENT WITH TRADITIONAL ECOLOGICAL KNOWLEDGE: DOES IT MATTER HOW PEOPLE PERCEIVE LANDSCAPE AND NATURE?
PT4	ANTÓNIO CASTRO RIBEIRO	EVALUATION OF PEDOTRANSFER FUNCTIONS FOR PREDICTING SOIL WATER RETENTION IN PORTUGUESE SOILS
PT5	CELIA GARCÍA-FECED, SANTIAGO SAURA & RAMÓN ELENA-ROSSELLÓ	LANDSCAPE CONNECTIVITY ASSESSMENT FOR MEDITERRANEAN FOREST DISTRICT PLANNING
PT6	CLAUDIA M.C.S. LISTOPAD, JASON B. DRAKE, JOHN F. WEISHAMPEL & RON E. MASTERS	THE USE OF A PORTABLE LiDAR SYSTEM IN EVALUATING CANOPY STRUCTURE IN OLD-GROWTH AND SECONDARY-GROWTH MANAGED SOUTHEASTERN PINE FOREST
PT7	EUFRASIA-PILAR AGUIRRE YEVES, SILVIA MERINO DE MIGUEL & MIGUEL MARCHAMALO SACRISTÁN	STUDY OF RIPARIAN LANDSCAPE CHANGES USING AERIAL PHOTOGRAPHS AND GIS. THE CASE OF GUADARRAMA RIVER (CENTRAL SPAIN)
PT8	FERNANDO CASTILLO, MANOLO GARCÍA, RAQUEL LEONARDO, LIZA GARCÍA & IVONNE GÓMEZ	IMPORTANCE OF HABITAT PATCHES FOR THE MAINTENANCE OF LANDSCAPE CONNECTIVITY IN BAIRD´S TAPIR HABITAT IN GUATEMALA
PT9	J. ANASTASIO FERNÁNDEZ YUSTE, MANUEL VALLANO FLORIT, LETICIA CARRERO DÍEZ, CAROLINA MARTÍNEZ SANTAMARÍA & SILVIA MERINO DE MIGUEL	A PROTOCOL FOR ASSESSING RIPARIAN VEGETATION PATCHES AS ECOLOGICAL CORRIDORS. THE CASE OF THE GUADARRAMA RIVER IN CENTRAL SPAIN.
PT10	JEAN-FRANÇOIS MAS & AZUCENA PEREZ VEJA	ASSESSING "SPATIALLY EXPLICIT" LAND USE/COVER CHANGE MODELS
PT11	JOÃO C. AZEVEDO, VALENTIM COELHO, JOÃO PAULO CASTRO, DIOGO SPÍNOLA & EUGÉNIA GOUVEIA	SPATIAL DYNAMICS OF CHESTNUT BLIGHT DISEASE AT THE PLOT LEVEL USING THE RIPLEY'S K FUNCTION
PT12	LIDÓN RUBIO & SANTIAGO SAURA	WHEN IS THE ROLE OF HABITAT PATCHES AS CONNECTING ELEMENTS REALLY IMPORTANT? AN ASSESSMENT THROUGH THE ANALYSIS OF SIMULATED AND REAL-WORLD HABITAT PATTERNS
PT13	MANOLO GARCÍA, FERNANDO CASTILLO, RAQUEL LEONARDO, LIZA GARCÍA & IVONNE GÓMEZ.	ASSESSMENT OF CONNECTIVITY ELEMENTS IN BAIRD´S TAPIR HABITAT IN GUATEMALA.
PT14	MANUEL GOMES	FIRE - CRIME OR "AGRICULTURAL IMPLEMENT"
PT15	NAZI AVANI, HAMID JALILVAND & VAHID ETEMAD	INVESTIGATION ON MOUNTAIN LANDSCAPE PARAMETERS ON JUNIPER SPECIES GROWTH. CASE STUDY: FIROZKOOH REGION, TEHRAN
PT16	SERGIO GONZÁLEZ-ÁVILA & RAMÓN ELENA-ROSSELLÓ	ASSESSING MANAGEMENT SCENARIOS USING WILDFIRE SIMULATIONS AND LANDSCAPE INDICES
PT17	VLADIMIR CABOUN	NEW CLASSIFICATION AND UTILITATION OF FOREST FUNCTIONS IN LANDSCAPE

organic matter and nutrients in Serra Serrada Reservoir. Water level fluctuations caused by intensive human water use, grazing and frequent land fires in the surrounding landscape can explain the unexpected high values of the mentioned parameters. In Azibo Reservoir the factors with greatest influence on water parameters seem to be allochthonous sources of nutrients originated from agriculture and grazing in the catchment area and recreational activities. However, in this particular case the potential sources of nutrients could have been minimized by the patchy structure of the surrounding landscape, which is composed by numerous buffer areas such as woodlands, meadows and riparian vegetation. Further long term research is being conducted in Azibo in order to modeling how this reservoir mirrors the surrounding landscape changes.

Poster Session **Tools of landscape assessment and management PT 3**

CONNECTING LANDSCAPE CONSERVATION AND MANAGEMENT WITH TRADITIONAL ECOLOGICAL KNOWLEDGE: DOES IT MATTER HOW PEOPLE PERCEIVE LANDSCAPE AND NATURE?

ANA MARIA CARVALHO[1], MARGARIDA RAMOS[2] & AMÉLIA FRAZÃO-MOREIRA[3]

1-CIMO/Instituto Politécnico de Bragança, Portugal; 2-Projecto Cultibos, yierbas i saberes/Associação FRAUGA, Picote, Portugal; 3-CRIA/FCSH-Universidade Nova de Lisboa, Portugal

Ethnobotanical surveys conducted in Trás-os-Montes highlighted a renewed interest in cultural and heritage values of landscapes. Landscape diversity is mostly based on traditional ecological knowledge (TEK) and practices that, since a long time ago, interacted with natural processes. Rural contexts face social and economical constraints and landscapes are change accordingly. This poster aims to describe recent landscape changes at a local scale and people' perceptions. Moreover, to discuss local conceptions as important tools for landscape conservation and management. Landscape changes have emerged from consented semi structured interviews, as well as participant observation, carried out during all seasons of the year. Examples are the use of perennial rather than seasonal crops, imposed strict production conditions disabling some traditional activities, and the introduction of many herbaceous and woody ornamental plants. The analysis of the data shows that different farming practices, abandonment of farming activities, mobility and residential housing are the driving forces in landscape changing. Young and some middle aged people value some of these changes, which they consider less hard-working and a symbol of modernity. Others regret actual landscape transformations because they are regarded as a waste of resources, abandonment, and landscape is perceived as unproductive, which is considered reprehensible. Nevertheless, most of the informants are aware of a dynamic process that is taking place and conscious that landscape, like themselves, must adapt to changing times.

Poster Session **Biodiversity conservation and planning PB 2**

THE LOMBADA NATIONAL GAME ZONE: FOREST MANAGEMENT PLANS FOR THE BALDIOS (COMMONS) AREAS

ANA TERESA PINTO[1], JOÃO PAULO CASTRO[2], FREDERICO FERNANDES[1] & GRAÇA BARREIRA[1]

1-Núcleo Florestal do Nordeste da Direcção-Geral dos Recursos Florestais, Portugal; 2-Escola Superior Agrária do Instituto Politécnico de Bragança, Portugal

Landscape conservation is directly linked to forest management. Fourteen forest management plans were produced for the independent baldios units (commons) at the Lombada National Game Zone (ZCNL), located in the east of Montesinho Natural Park (Bragança, Portugal). It involved the characterization of several parameters as well as the preparation of forest management proposals. Planning considered the forest areas characteristics, their multifunctionality, and the environmental, biodiversity and local populations constrains and requirements. Eight of the commons comprise 96.2% of the study area, and the remaining six represent

Connecting landscape conservation and management with traditional ecological knowledge: Does it matter how people perceive landscape and nature?

Ana M. Carvalho [1], Margarida T. Ramos [2], Amélia Frazão-Moreira [3]

[1] CIMO/Escola Superior Agrária, Instituto Politécnico de Bragança, Campus de Santa Apolónia, Apartado 1172, 5301-855 Bragança, Portugal. anacarv@ipb.pt
[2] Projecto Cultibos, yerbas i saberes. FRAUGA-Museu Terra Mater, Picote, Miranda do Douro, Portugal.
[3] CRIA/Faculdade Ciências Sociais e Humanas da Universidade Nova de Lisboa, Av. Berna, 26-C, 1069-061 Lisboa, Portugal.

1. Abstract

Ethnobotanical surveys conducted in Trás-os-Montes (TM), Portugal, for almost ten years (2000-2010), highlighted a renewed interest in cultural values of landscapes. Long term interactions between traditional ecological knowledge (TEK) and natural processes provided local landscapes culturally relevant characterized by high diversity and relative stability. Nowadays, rural contexts face sudden and faster social and economical transformations and landscapes are rapidly changing accordingly.

On a basis of ethnographic methodologies (consented interviews and participant observation), recent landscape changes at a local level and people' perceptions are briefly described and discussed as important tools for landscape conservation and management.

The studied area corresponds to the most northeastern part of TM region, included in two natural protected areas (the Natural Park of Montesinho and the Natural Park of Douro International). Key-informants (18 women and 12 men, nearly all over 60 years old) that have lived most of their lives in the selected villages provide the reported information.

Along the interviews, new farming practices, abandonment of farming and husbandry activities, a better mobility and a new concept of residential housing were the most mentioned causes for landscape changing. Homegardens have become areas of in-situ and ex-situ conservation for both nostalgic and pragmatic reasons.

Some people value changes, which they consider less hard-working and a symbol of modernity. Others regret actual transformations, signals of abandonment, waste of resources, reprehensibly unproductive. Nevertheless, most of them are aware of a dynamic process that is taking place and conscious that landscape, like themselves, must adapt to changing times.

2. Main signs of landscape structural changing mentioned

Emergence of a road system since the 1990s: physical communication between some villages and nearest towns, as it was very inefficient or nonexistent in many of the cases;

Village planning since 1975: sewage system, water distribution network, paving, small medical centers, scattered secondary housing, formal meeting places;

Rebuilding and preservation of old collective facilities (e.g. water mill, forge, press, communitarian stable) with no current use or considered obsolete;

Stagnation, abandonment and aging, more relevant after 2005: building increased but houses are closed; small medical centers, schools, local services for farmers were disabled; relative recent infrastructures are closed and abandoned. A great majority of the inhabitants is older than 60 and there is serious lack of children and young.

2.1 Cultural heritage and aesthetical values of TM landscapes

Over decades people's adaptive management of natural resources has built a multifunctional, productive and diverse landscape, which is considered part of their cultural heritage and has embedded intangible values such as dwelling and aesthetical values, local tradition, neighborly and inter-generational relations.

2.2 Disabling traditional agricultural activities

Cereal production, crop rotation and animal husbandry are locally considered as linked practices and skills that may not last alone because they are meaningless without each other. Traditional agricultural farming systems have been affected by a succession of CAP (Common Agricultural Policy) reforms and 'flanking' measures, beginning in 1992 and continuing for twelve years.

Perceived main indicators of landscaping changing due to non prevailing agricultural practices are abandoned arable lands and meadows that progressively exhibit a different floristic composition and scrubland represented by a tallest stratum with increased risk of wildfires.

2.3 Perennial rather than seasonal crops and more diverse gardens

In general, afforestation of farmland is regarded by some as a good alternative to seasonal crops and abandonment because it allows absenteeism, provides income and represents a patrimony for future generations.

Afforestation changes the traditional lanscape mosaic, as there are scattered afforested patches, combined with annual crops, meadows and scrubland.

Floral composition of homegardens and new green spaces inside the settlements are also signals of transformation in land use and traditional landscape. More diverse homegardens, new food and ornamental species are also perceived as new structural components of landscapes.

Acknowledgements:
The authors are grateful to all the informants who kindly shared their knowledge and expertise.
Project Cultibos, yerbas i saberes supported by ON2-03-0230 - QREN - FEDER-000066