

Forest Landscapes and Global Change

New Frontiers
in Management,
Conservation
and Restoration

Abstracts

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thus favoring zones with higher contiguity and connectivity of resources possibly translatable into more mobility for the animals' foraging raids. These analyses strongly impact landscape management actions and might help to develop fruitful conservation strategies for chimpanzees in Guinea-Bissau.

Poster Session Monitoring landscape change PMo 13

SPATIAL DYNAMICS OF SWEET CHESTNUT ORCHARDS IN A DISEASE-AFFECTED REGION

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Along with agriculture abandonment, sweet chestnut (*Castanea sativa*) diseases are important drivers of landscape dynamics in the northern regions of Portugal. Ink disease (*Phytophthora cinnamomi* Rands) has affected orchards historically but chestnut blight (*Cryphonectria parasitica* (Murrill) Barr) became a major cause of tree mortality after its establishment in 1989. We analysed the spatial structure of sweet chestnut plantations in the Curopos parish (Vinhais, Portugal) over the 1985-2006 period in order to understand the role of diseases in landscape dynamics. We mapped chestnut plantations in 1985, 1995 and 2005 from aerial photography and determined total chestnut orchard area, number of orchards, average orchard area, area of disease-caused mortality, and area and number of new plantations. Mortality was very high in both 1985-1995 and 1995-2005 decades, above 40% in area. New plantations represented more than 100% of the chestnut area in the first decade and near 50% in the second. New plantations were established in diseased-affected orchards (53%) and in marginal agriculture land recently abandoned (47%). The balance between mortality and new plantations resulted in a 75% net increment in area over the period of study. Number of plantations and average area also increased. We concluded that in spite of high incidence and tree mortality in Curopos over the last 20 years, there was relevant investment in new chestnut plantations which was responsible for relevant landscape dynamics.

Poster Session Biodiversity conservation and planning PB 12

ECOLOGICAL RESTORATION OF "CHICO MENDES" PARK ECOSYSTEM IN RIO DE JANEIRO

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The "Chico Mendes Municipal Natural Park" located on a sandbank area of "Jacarepagua Baixada" in the Rio de Janeiro City, Brazil, was created in 1989 with the aim of preserving species of flora and fauna from Atlantic Forest. With an area of 43 hectares, the park has the following forest types: Riparian (20 to 25 meters of height) and Gallery forest, Flooded and non-flooding (20 to 30 meters of height). In the arboreal stratum are found the "Pau Brazil" (*Caesalpinia echinata* Lam.), "Aroeira" (*Schinus* sp.), "Figueiras" (*Ficus tomentosa*, *Ficus insipida* Willd.), among others trees species. To restore this ecosystem, the exotic species improperly planted allied with invader species were eradicated. Flora and fauna native species were reintroduced, as the Broad-snouted caiman (*Caiman latirostris*). In the ecological restoration methodology, a mosaic was used in a process of Forest Enrichment. Restoration mosaics had different shapes and four groups of diverse species were used. Due to fragility and richness of this ecosystem, the seedlings were distributed in esteemed spaces for each group without alignment. After 90 days, 35% of species were replanted. The results were satisfactory and the original environment was recomposed by the city of Rio de Janeiro.