

Forest Landscape Restoration (FLR) in Chile: how far are we?Rodrigo Mujica¹, Andrés Meza², Daniel Alvarez², Constanza Troppa²¹Instituto Forestal (INFOR), Ministry of Agriculture, Valdivia, Chile; ²Corporación Nacional Forestal (CONAF), Ministry of Agriculture, Santiago, Chile;³División de Recursos Naturales y Biodiversidad, Ministry of Environment, Santiago, Chile (rmujica@infor.cl; andres.meza@conaf.cl; dalvarez@mma.gob.cl; constanza.troppa@conaf.cl)

In the last decades, Chile has made significant efforts to stop deforestation, recover soils through exotic forest plantations and conserve native forest ecosystems in protected areas. Likewise, in recent years sustainable management of native forests has been promoted through new regulations with the purpose of reversing their degradation. Although these processes are well valued by sector actors, they are increasingly criticized for their excessive centralism, which does not adequately account for the ecosystem and socio-cultural diversity of the territories in Chile. This aspect is one of the main motivations to promote the elaboration of the National Forest Landscape Restoration Plan, initiated in 2018 jointly by the Ministries of Agriculture and Environment. There is consensus in recognizing that the deterioration of ecosystems and their impact on the provision of ecosystem services diminish the current and potential future economy of the country and the well-being of the population. Likewise, it is recognized that Forest Landscape Restoration allows the search of common objectives by the different actors in the territories, which facilitates directing more effectively the public-private efforts to advance towards a socio-ecological development in balance with the local economies. In Chile, this process is considered a national strategic challenge of high relevance, which should specify and modify aspects of governance, financing, associativity, innovation, market, among others. A first version of the National Forest Landscape Restoration Plan will be presented at the next United Nations Climate Change conference, COP25, in Chile.

Systematizing experiences and analysis related to the processes of landscape degradation and restoration in Puriscal, Costa Rica / Sistematización de experiencias y análisis del proceso de degradación y restauración del paisaje en el Cantón de Puriscal, Costa RicaLizbeth Perea¹, Róger Villalobo²¹CATIE, usín Metzquitlán, Mexico; ²CATIE, Turrialba, Costa Rica (lizp.badillo@gmail.com; rvillalo@catie.ac.cr)

Puriscal es el cuarto cantón de la provincia de San José. Tiene una extensión de 55 366 ha y se encuentra ubicado en el Pacífico Central de Costa Rica, se caracteriza por poseer una gran biodiversidad, se destaca la presencia de especies endémicas, sin embargo, una gran área presenta altos niveles de degradación, por lo que en la zona se han implementado diversas acciones para detener este proceso, mejorar la productividad de las tierras, y con ello, mejorar la calidad de vida de la población. Esto ha sido posible por medio de proyectos locales, nacionales o internacionales. Los procesos de degradación y restauración en el cantón de Puriscal se han dado como respuesta de la sociedad ante las pautas establecidas por los convenios internacionales a través de financiamiento y acompañamiento técnico, las tendencias políticas, principalmente las relacionadas con el sector agropecuario y ambiental y las demandas del mercado nacional e internacional. La identificación de los factores sociales, ecológicos, económicos que impulsaron la degradación y la restauración en parte del paisaje del cantón de Puriscal, dejan ver la influencia que han tenido las políticas de desarrollo económico y las demandas de los mercados de productos agropecuarios principalmente a nivel internacional o nacional y como la suma de todos estos factores ha moldeado el paisaje de este territorio, sin dejar de señalar que existe entre la población un sentimiento de apego al territorio y una ya formada conciencia ambiental que va favoreciendo a los cambios.

THEME E: FORESTS, SOIL AND WATER INTERACTIONS**E1a: AN INTEGRATED APPROACH FOR AFRICAN FOREST LANDSCAPE MANAGEMENT: WATER, ENERGY AND FOOD (WEF) NEXUS****Tropical montane forests are a critical resource for water and food security in East Africa**Mariana Rufino¹, Paolo Cerutti², Jan Gräf³, Suzanne Jacobs⁴, Naomi Karimi Njue⁵, Christopher Martius⁶, Anne Marie Ran⁷, Joim Quinton¹,Jaqueline Stenfert-Kroese⁸, Lutz Breuer⁹¹Lancaster University, Lancaster, United Kingdom; ²CIFOR, Nairobi, Kenya; ³Justus Liebig University, Giessen, Germany; ⁴Kabianga University, Kabianga,Kenya; ⁵CIFOR, Bogor, Indonesia; ⁶GIZ, Nairobi, Kenya; ⁷Lancaster University, Lancaster, Kenya (m.rufino1@lancaster.ac.uk; p.cerutti@cgiar.org;

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Tropical forests are critical for the water cycle and for water provisioning. In East Africa, increasing human population, rising incomes and competing demands on the land have led to massive forest loss. In Kenya, the forests of the 'water towers' are the headwaters of rivers delivering drinking water to most towns in the country. These forests are hotspots for biodiversity, and important carbon sinks, facing increasing pressure of human encroachment. Since 2014, we quantify the importance for water provisioning of the Mau forest, the largest montane forest in Kenya. Water is a critical currency for most people: it can be a blessing and a curse evidenced by the impacts of drought and floods. Excess water can cause crop and infrastructure damage and soil loss leading to community conflicts. Understanding of the dynamics of water flows, water quality and land use is required to improve land management. Our research shows that the largest concerns related to forest cover loss are the large amount of sediments in rivers and streams. The loss of fertile top-soil has direct impacts on food security with consequences for future generations, reducing the amount of crop harvests and their quality. Lack of forest cover undermines water and food security and therefore supporting communities to monitor their water resources is critical to create awareness and empower local decision-making. Our research used a citizen-science approach and demonstrated that communities can monitor their resources and use this information to implement sound management plans for forests, water and landscapes.

Anthropogenic influence on the floristic composition and water quality of a watershed ecosystem in three ecological zones of Nigeria: a need for integrated watershed managementSamuel Olajuyigbe¹, Israel Asinwa², Adebola Adegeye¹¹University of Ibadan, Ibadan, Nigeria; ²Forestry Research Institute of Nigeria, Ibadan, Nigeria (lekito2001@yahoo.com; israel.asinwa@gmail.com;

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Watershed forests protect rivers that provide water for agriculture, domestic and industrial uses, while ensuring biodiversity conservation and ecosystem sustenance. Thus, understanding the influence of land use change on the floristic composition and water quality are pertinent. Ogun River meanders through a *Pesq. flor. bras., Colombo, v. 39, e201902043, Special issue, p. 1-765, 2019*