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Evaluation and prognosis of resilient landscapes to wildfires. The urban-rural interfaces of the Metropolitan Area of Concepción as Socio Ecological Systems (SES).

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Abstract

Due to anthropogenic and global climatic pressures, landscapes are losing more and more elements that make them resilient to disturbances; however, what makes a landscape effectively resilient is currently not so well defined. Therefore, for this work, a resilient landscape will be understood as one that can preserve its various components (biogeophysical and/or human) by relying on lessons learned and the ability to self-organize after repeated disruptive events. The general objective is to evaluate the landscapes of urban-rural interface areas in the Metropolitan Area of Concepción (MCA) in Chile from the perspective of SES studies with the purpose of moving towards the construction of physical-human landscapes more resilient to fire. As methodologies, an analysis in consecutive stages is used: 1) reconstruction of the socio-ecological/environmental history and the disruptive event of the MCA through a literature review, field trips, and analysis of fire points of a decade (2007-2017) that seeks to identify the interface zones to be studied; 2) apply an online DELPHI-type questionnaire to experts to validate these areas and obtain elements that compose the SES; 3) analyze resilience and SES factors obtained from literature, field trips and DELPHI; 4) generate a set of resilience indicators; and 5) a prognosis using a qualitative multi-criteria analysis. In this congress, the first findings will be presented an evaluation of the state of the SES landscapes to obtain indicators of resilience to forest fires (stages 1-3).

Keywords: resilient landscapes, wildfires, urban-rural interfaces, Metropolitan Area of Concepción, Socio Ecological Systems (SES).

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