THE MOUNTAIN FOREST TERRITORY IN TEXCOCO WITH THE COMPLEX ADAPTATIVE SYSTEMS APPROACH.

Luis Angel Figueroa Campos[1]

[1]Departamento de Suelos, Ingeniería en Recursos Naturales Renovables. Universidad Autónoma Chapingo. Campus Central Km. 38.5 Carretera México – Texcoco Chapingo, Texcoco, Estado de México CP 56230, México.

angel.figueroacampos@wur.nl - +52 7714171207

Abstract

The following work responds to the need to generate conceptual frameworks that allow an abstraction of reality that is more functional, objective and attached to the nature of events. It refers to an approach that allows a glimpse of the situation of the different actors related to the management of natural resources and ecosystems in an integral way. The objective of the work is to use the conceptual framework of socio-ecosystems as complex adaptive systems to carry out the description of the institutional structure that has the function of forest management, concepts such as *socio-ecosystems, complex adaptive systems, adaptive cycles, panarchy* and *evolutionary resilience* are treated as conceptual tools to generate inputs supporting strategic planning and decision making. The method used seeks to simplify a complex system as much as possible, first with a bibliographical review to identify the actors corresponding to each level of organization, then determining the type of interaction based on concepts of "power" and generating diagrams using the agent modelling software Vensim to visualize the system, the results allow us to describe from a first perspective the importance of an approach for the planning of natural resources that contemplates multiple levels of organization, functions of the agents that compose them, feedback mechanisms within and between these organizational levels and particularly the justification for the application of monitoring and learning processes by the actors that make up the SES structure.

Keywords: *Socio-ecosystems, Feedback Mechanisms, Power Interactions, Complex Adaptative Systems, Governance*