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## Social-ecological Systems Analysis of a Bolivian Artisanal Fishery: Community-based Governance and Rural Economies Towards Agrobiodiversity

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## Abstract

Studying the organisational ways on how agrobiodiversity is created in different socialecological systems could provide insights to develop initiatives based on an adequate understanding of rural economics ways of life. In this regard, the present paper elaborates on the governance of a rural space in the Gran Chaco region in Bolivia. The main goal of the research was to study which mechanisms of governance are developed by the Weenhayek riverine population, as people highly dependent on the riverine system of the Pilcomayo stream for their livelihood. In a regional context of major changes with respect to their economies and their ways of life, given the threats to agrobiodiversity in the life zones of the Pilcomayo river.

The study is build based on a qualitative case study, through an in-depth exploration from multiple perspectives of the social – ecological system. The research developed a triangulation of methods as a strategy to combine various practices of research, linking participant observation and interviews developed in exploratory field work, with document analysis and media analysis. The categorisation of data into defined concepts and its systematisation was developed with support of the NVivo 12 software. In total, thirty-seven third-tier variables were unpacked for the study, using the Socio-Ecological Systems (SES) analytical framework developed by Ostrom and colleagues (2020) and the Agrobiodiversity Knowledge Framework developed by Zimmerer et al. (2019).

As results, it is proposed that Weenhayek community-based governance organisations are dependent on socioeconomic and ecological factors. Regarding social variables, their greater or lesser integration into the modern market economy plays an important role. Considering ecological factors, the ecological characteristics of the river determine the form of organisation for fishing. The flows affecting the SES generate social and ecological distributive conflicts that determine the effectiveness of community governance. The emergence of community-based institutions to overcome social - distributive issues and "social dilemmas" is observed as a main feature. The understanding that people have of their SES determines their societal representations, as exemplified in their cultural norms and traditional ecological knowledge, based on which they manage the agrobiodiversity of their life zones.

Keywords: Agrobiodiversity, Governance, Rural Economies, social Ecological Systems

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