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The Chilean Model of Water Management in the Context of Water Stress: Sociocultural Conditions and Vulnerability to Climate Change

From the so-called Dublin Principles onwards, the economic value of water has been recognized. In this context, the Chilean Model has been considered to have achieved technical and economic efficiency in its use of water, from the regulation of water resources to the market. However, many problems associated with the management of water resources have also been identified in this model. At the same time, Chile has been characterized as a country highly vulnerable to the effects of climate change. One of the main vulnerabilities is associated with increased water stress in some regions of the country. The present investigation is framed in these two topics: the Chilean Model of water management and the context of climate change.

This research empirically addresses the problem of water stress for farmers in the context of climate change, analyzing the real capacities of the Chilean Model to face situations of water stress, and problematizing both its regulations for access to water through the market and its institutional conditions. I will also discuss the vulnerabilities to water stress present in different types of farming located at the watershed of Limarí. This watershed is an innovative model of water management with active market rights, the highest volumes of water at a national level, and an electronic water market. I propose to investigate, through descriptions and assessments of the different actors involved, the vulnerabilities of this area in drought situations and identify economic, social, institutional, organizational and cultural conditions for dealing with water stress problems.

My central research question is: what conditions are present in the Chilean Model of water management that address water stress situations? To answer this question, I will study the Limarí Basin, where the market is active and a present situation of water stress can be identified. This will allow my research to reflect on the Chilean Model, evaluating the conditions laid down to increase or decrease the vulnerability of farmers and their adaptation capabilities. This research will use a qualitative approach, which through ethnographic work will observe and describe the operation of the water market. It will observe different actors' perspectives on the water market using the Limarí Basin as a case study. With the aim of having appropriate conceptual tools for the analysis of the conditions of the Chilean Model in addressing water stress situations, I will focus on two key concepts: vulnerability and property. At the same time, I will adapt the "grid-group cultural theory of risk" model to address the problem from a socio-cultural perspective.

It must be emphasized that Chile is one of the main examples in respect to the application of neoliberal policies in water management. Other countries in the region have been inspired by the Chilean Model and are already making changes in their legislation to replicate this model. There are also important international organizations that have highlighted the Chilean Model as a reference for water management. Thus, it becomes especially important to observe the performance of this model in the Limarí basin where it is fully operational. Finally, it must be considered that water markets are most active when water is scarce, so if climate change increases water stress situations, the performance of water markets will become increasingly relevant. Therefore, it is essential to study the performance of currently active markets. Hence, Limarí Basin becomes a privileged space to research the management of water resources in the context of potential water shortages as a result of climate change.