**Socio-ecological vulnerability and adaptive capacity of small-scale agriculture to Global
Environmental Change in Important Agricultural Heritage Systems in southern Chile.
Encouraging local knowledge as a tool for better adaptation strategies.**

In this research, we analyze the socio-ecological vulnerability and the adaptive capacity of small-scale agriculture to current variability and future climate change in southern Chile, especially in territories of high importance for agrobiodiversity and food production, such as the Nationally Important Agricultural Heritage Systems. For this, we use the Global Environmental Change perspective that, under a relational approach, understands that climate change and variability transcends the biophysical dimensions, affecting the livelihoods and well-being of indigenous and local communities. To understand these relationships, we use a mixed methodological approach to present and future socio-ecological vulnerability of small-scale agriculture and explore the contribution of local knowledge as a tool that may allow feasible and efficient adaptation strategies to the impacts of these phenomena.

This proposal focuses its attention on socio-ecological vulnerability guided by the integrated approach, since it considers elements of social and physical systems, their interrelationships and dynamism at the same level. This is understood as the vulnerability of the social and ecological systems integrated into one, coming from the concept of Berkes & Folke (1998) that contemplates the “human being-in-nature” without the adoption of arbitrary limits between them. This approach incorporates the idea of adaptation, learning, innovation, novelty and self-organization of systems, in addition to the ability to learn from disturbances. Likewise, it is recognized that socio-ecological systems, while complex and adaptive, are framed in political and management structures that can influence or facilitate the generation of conditions that promote vulnerability (Balvanera et al., 2017). For this reason, it is fundamental understanding the internal components of these systems, their interrelationships and the structures in which they are inserted and co-evolve. Rathe (2017) adds that the SEV approach requires focusing attention on the relationships and interactions between the social and ecological dimensions and not on their components individually. Under the socio-ecological approach, adaptive capacity (AC) is the key element capable of reducing SEV in the face of climate variability and climate change. According to Smit & Wandel (2006) adaptive capacity refers to the process, action, or result in a system (home, community, group, sector, region, country) in order for it to face, manage, or adjust to some changing condition, stress, threat, risk, or opportunity. In the process of rural communities’ adaptation to
CV and CC, the development of strategies requires a participatory and bottom-up approach that incorporates LocalKnowledge**,** not only as just some other variable, but as a fundamental input.