

## **Review of the state of the biocultural heritage of southcalifornian rancher community (La Paz, BCS)**

Biocultural heritage is a complex system of interconnected tangible and intangible resources resulting from the relationship between Indigenous People and their natural environment during generations. It includes biological resources from the genetic level to the landscape level and cultural values from spiritual perceptions to socio-ecological system and customary laws (IIED, 2019).

The traditional ecological knowledge (TEK) and their related long-lived social-ecological systems are proved to be more resilient to extreme natural events and global environment change. Traditional Ecological Knowledge is defined as knowledge, innovations, and practices of indigenous and local communities; it is gained over centuries of adaptation of people to the local culture and environment. TEK is developed from experience and transmitted orally from generation to generation.

In Baja California Sur, Traditional farming system and the traditional ecological knowledge have been insuring food security and sustainable use of biodiversity for centuries, in arid and extreme environmental conditions. Currently several environmental, socio-economical and cultural factors are threatening the southcalifornian traditional farming system and the related biocultural heritage to disappear. Even if Ethnobotany of Mexico has been widely studied by several researchers and institutions, these studies have been focused in the Central-southern region of Mexico and indigenous populations, while the northwest and the Rancher community has been under-considered. Despite the values of the southcalifornian TEK, as sustainable practices of natural resources in arid lands, there is a lack of studies documenting this important source of knowledge.

Southcalifornian rancher communities constitute a tremendous reservoir of biocultural heritage, because of their isolation, their particular environment and history. However, they currently live a dramatic process of acculturation due to different factors.

This research aims to study, document and assess the state of the Traditional Ecological Knowledge of the native populations of Baja California Sur (Mexico), i.e. the southcalifornian rancher community, in order to highlight valuable insights that could be revitalized to promote food security, resiliency to climate change and sustainable economies with cultural and environmental significance.

The goal is to conduct an exhaustive review of the TEK by the means of a comparative analysis of a bibliographic and fieldwork research with the rancher community of La Paz municipality.

The method adapted was composed by three main phases: 1) bibliographic review of existing bibliography containing ethnobotanical informations since the earlier Jesuit colonization period to the latest researches regarding the traditional uses of plants by native populations; 2) fieldwork by means of structured interviews to the rancher community of the municipality of La Paz related to the boarding school located in Todos Santos, 3) transcription of the fieldwork and bibliographic ethnobotanical data collected in two analogous databases that are previously designed with the same structure, with the purpose to be able to compare them. In the fieldwork phase, we have assessed by specific questions and specific columns and lines, if the rancher community is still practicing the traditional farming system.

The ethnobotanical data collected and classified in the databases are in process of being analyzed and discussed qualitative and quantitatively in order to identify the plants that are more popular, more versatile and the more culturally significant for the rancher community of BCS as well as the degree of loss or maintenance of TEK in these native populations. The results, and discussion of this research is being capitalized in a scientific paper that will be published soon in collaboration with local and international research centers as Universidad Baja California Sur.

The data collected showed very interesting biocultural sources to be further exploited in strategies of sustainable economic growth and in natural resources management programs.

As a matter of fact, we believed that it was worthy to prepare a proposal to apply for funds to the Stanley Smith Horticultural Trust. The goal of this application was to seek funds to create a Cultural Garden in CSU for the Research and for the Community. The Cultural Garden has the purpose to revitalize the collected data in this research through the display of the most interesting plants with agriculture and economic applications, in order to valorize the TEK and the biocultural heritage as a source of insights for development and conservation.