

## Abstract

This study focuses on a sustainable system that makes it possible for the villages of more than two thousand years old in Rincón de Ademuz to have remained in the same place adapted to their natural environment. In order to analyze the sustainable system, this study focuses on the wind factor. Due to the dry weather and the wind-path it is possible to create a comfortable living environment in the villages. Moreover, the wind helps to eliminate the smoke from the fireplace. In order to make clear the relation between wind and villages, this study analyzed the direction of fireplace and building-unit.

For instance there are two ways of orienting the fireplace. One of them is the fireplace “catching the wind”, when the fireplace is facing the north-south direction. Blowing the wind in the north-south direction in the Rincón de Ademuz, this position of the fireplace allows “catching the wind”, and helps the smoke out more smoothly. The other position is the fireplace “dodging the wind”, when the fireplace is facing the east-west direction. In this case the fireplace does not face the wind direction, but the living room shows good wind-path conditions. Therefore, in this case the priority is set to the passage of wind through the living room.

Both cases are ideas to adapt to different locations. Building-units also work in a similar way to the fireplace. Compositions of building-units create streets and courtyards favoring the inputs and outputs of the wind. Each element, such as the fireplace and building-unit, changes the direction in order to adapt to locations and to create the wind-path in the dwellings and the village. It is a system to control the wind and create a micro-climate in the village. In order to create a comfortable living environment, over many years the inhabitants gradually built up this system of micro-climate to overcome the nature of mountainous terrain.

Besides, this study makes clear that the micro-climate also makes a great influence on the lifestyle of inhabitants. They change flexibly spaces to stay in the dwellings and villages depending on the season and time. Therefore, the control system of wind not only creates a micro-climate in the village, but also works as a system for inhabitants to gather in certain places. Depending on the micro-climate, a place is comfortable or not depending on the length of time involved. The repetitive cycles of outgoing behavior give opportunities to communicate with family and neighbors and protect from disintegration of the local community. This is the sustainable system to protect the village from natural disasters and create a micro-climate. Moreover, internally, it protects from the destruction of the local community in Rincón de Ademuz.