

El Río



CASAS ITER
BIOCLIMÁTICAS

HOW DOES THE IDEA COME ABOUT?

The project of **El Río** is oriented to the control of two natural elements as the sun (opening the house to the South) and the wind (to protect the house from the dominating winds by burying it in the hill). The name of the dwelling (river in Spanish) hints on its main characteristic, a small water stream that crosses the house from the garden, across the living room and ends in a pool that borders the wooden solarium. From here we see the sea, the volcano and enjoy the sunrise and sunset. The night space is located at the back, in the semi-buried area of the house to guarantee a low temperature and immense peace. When opening the huge mobile walls, the garden, the living room and the terrace unify creating a unique and magical space.

This house has been designed to achieve optimal indoor climatic conditions of temperature and relative humidity with the help of the user. Comfort conditions for temperature are assumed between 21oC and 26oC and between 20% and 80% for relative humidity. All the strategies proposed will be aimed to maintain the house within these parameters,

especially thermal, without using energy consuming appliances, only through bioclimatic techniques. The climatic data of the house can be accessed through a screen in the interior.

BIOCLIMATIC STRATEGIES

The main bioclimatic strategies used in **El Río** house are:

- Semi underground construction allows softer temperature fluctuations and acoustically protects the house from the incident wind.
- Courtyards that allow natural light and air renewal in the different rooms.
- Water course that softens high temperatures due to solar radiation.
- Louvers that open completely to allow sunrise and cross ventilation.

HOW IS THIS BIOCLIMATIC HOUSE USED?

If it's warm

- Opens doors for cross ventilation
- Shut louvers
- Overnight stays (bedrooms) should have a more pleasant temperature

If it's cold

- Close the doors so that the accumulated heat doesn't escape
- Open the louvers
- The living room of the house will be the most pleasant place of the house

