

Mayan ecological hostel & healing center

# ICH-KI



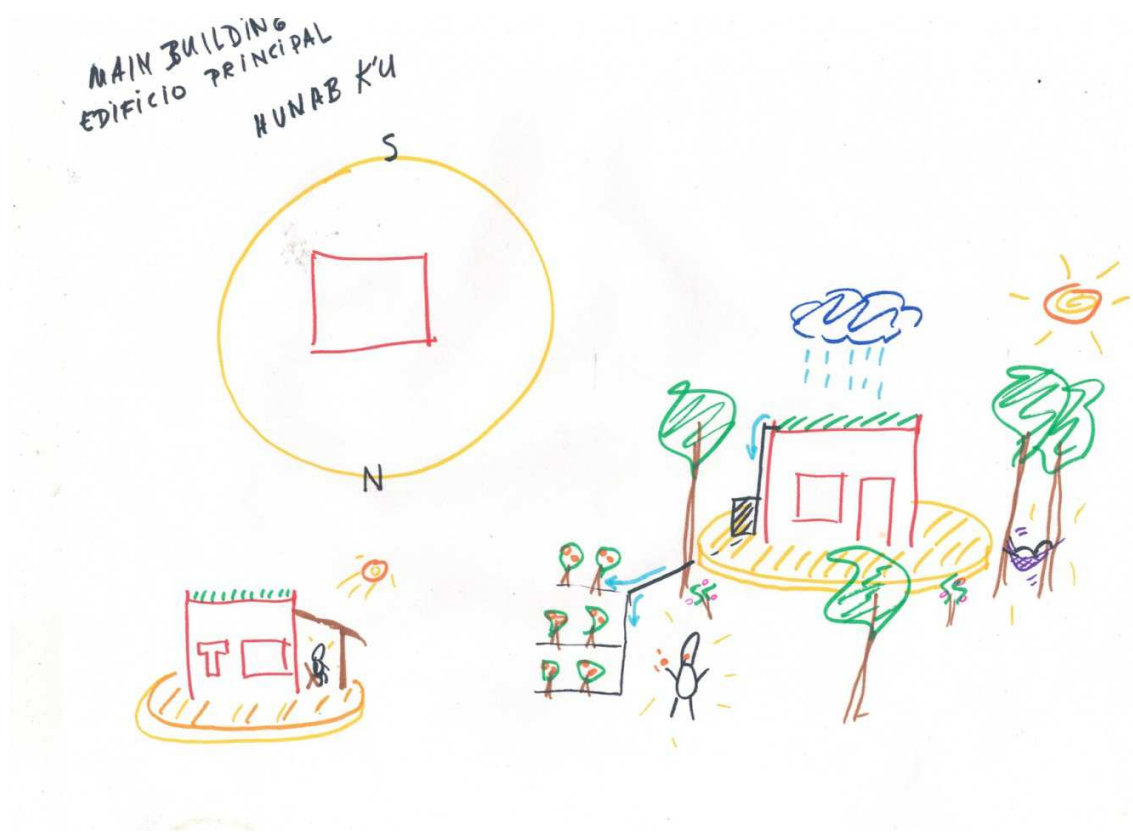
Esoteric and ecological directions for the Main Building

Grey Water System: Maintains the subsoil waters clear and clean

Self-sufficient tap water system

## Esoteric and ecological directions for the Main Building

ICH-KI's main building is designed following the esoteric principles of Hunab K'u: the Circle and the Square, representing both feminine and masculine energy in the universe. It is aligned with the 4 cardinal points, which will be indicated by the sacred names and colors the ancient Mayan used, for example: North = Xaman. Other adornments that they used are included as well, such as the widely spread symbol we nowadays know as the letter "T". It can be found at many ancient temple sites and to know its mystic meaning, can bring deeper understanding to the Mayan culture and the relation of the human species with creation.

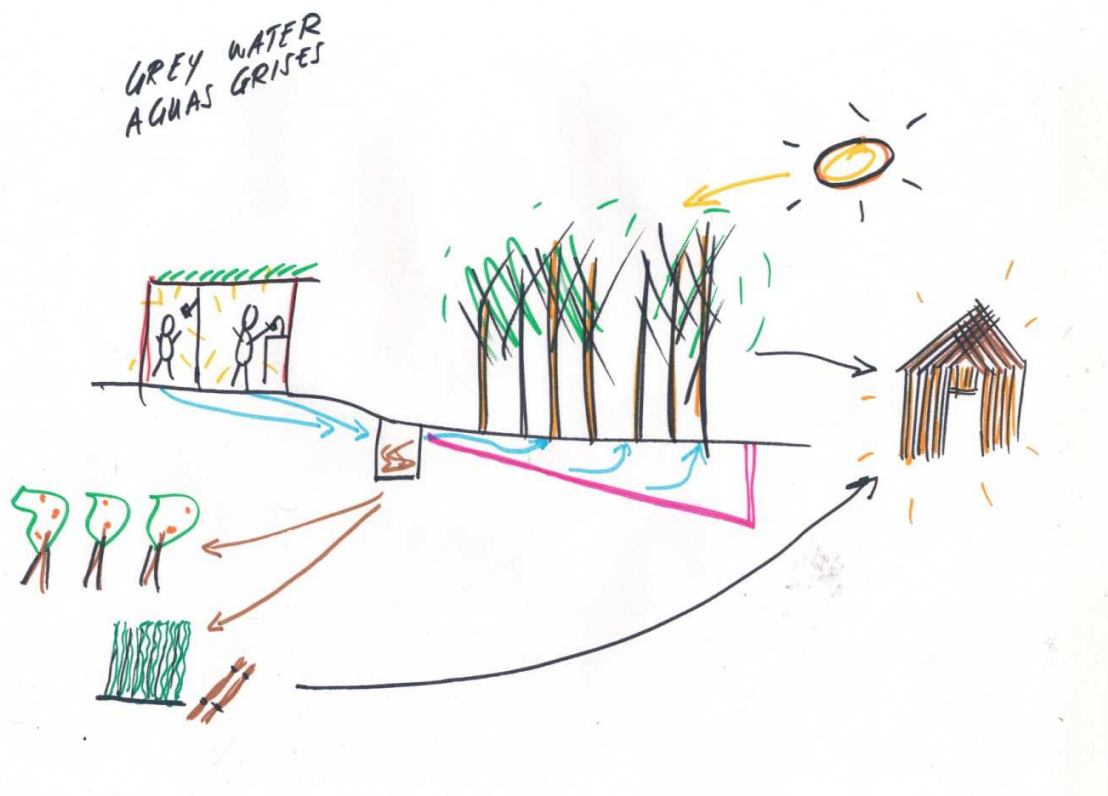


Just as the ancient one's built their houses, ICH-KI's first edifice is created based on natural anti-heat, pro-earth principles, such as:

- Roof covered with earth and lawn + gravity based watering system to cool down the house and terrace if needed;
  - High ceiling at 3,5 meter (almost 12 feet);
- The north/south positioning on top of a small elevated landmass secures an optimized natural ventilation and drainage of water;
  - Authentic Mayan made dried grass sunscreens, to enjoy your breakfast outside in the shade. Prevents terrace and building from heating up too much;
  - Limestone terrace floor against heat absorption. Only a small amount of cement is added to ensure its firmness;
  - Strategically placed vegetation all around to provide shadow. "Bamboo wall" (see image: Grey Water System).
- Dry toilets to avoid contaminated water from mixing with the soil water. After being processed the contents can be used as fertilizer;
  - Gravity based rain water storage for agricultural use;
  - Grey Water System: An ecological solution for slightly contaminated water. (See image: Grey Water System);
  - "Bamboo wall" and a certain kind of grass will be homegrown building material for future cabins;
- Solar energy to be self-sufficient and to ensure ICH-KI's electricity is not dependant on sources that exploit Mother Earth.

## Grey Water System: Maintains the subsoil waters clear and clean

Grey water is the soapy water from the shower or whatever goes through your kitchen sink. It is not very contaminated, but it is best to avoid it from entering the subsoil water.



The basic principles are:

- A sloped ditch is dug and an impermeable tarpaulin material is placed inside. Then it is filled up with earth again and bamboo is planted;
- The grey water first enters a receptacle such as a barrel, where organic residue sinks to the bottom to avoid the tubes from getting clogged. The grey water enters the ditch and will not enter the

subsoil water. The water-loving bamboo absorbs the water with great liking so the ditch will never overflow;

- This so called soon to be "bamboo wall" is placed on the western side of the main building so it will provide shade against the afternoon sun;
- The bamboo's growth span is about 8 months. So each winter, when the sun is at its loveliest, the bamboo is harvested and will be used as building material;
- The organic material in the barrel can be used as fertilizer for the orchard and the grass that is used for roofing.

## Self-sufficient tap water system

ICH-KI is blessed with a beautiful rocky hill of about 5 meters high (16 feet) dotted with a large variety of local tree species. Due to Yucatan's specific geological characteristics, water can be found anywhere. So after retrieving the water to the top of the hill, we let gravity have its way with the water. The water supply at ICH-KI comes from under our own feet. That's fair, isn't it?! Also, in this way one can make sure no harmful substances are added to the tap water.



- A solar energy based submersible water pump is injected in subsoil water reservoir and a large tank is placed on top of the hill. Whenever the tank's water level get too low, the pump is activated automatically to ensure the availability of water at all times.

- From this receptacle, 1 tube leads to a small (maybe 1500-2000 liters) swimming pool and another 1 to the showers and directly to the main house.
- No chemicals will be used for the maintenance of the swimming pool, so either an ecological pebble based water filter is installed or the swimming pool is simply emptied after a day of use. Do not worry that the water will be wasted, because it isn't! The high location and the high amount (=high pressure) of water in the swimming pool make it possible to water plants and (fruit)trees all over ICH-KI.
- With the hill's receptacle being positioned higher than the main building's roof, also here we can make use of gravity's effect to water the grass on the roof and cooling down the house at the same time!