

This project was organized in 2011 Kepez Municipality Culture and Congress Centre National Architectural Design Competition has been awarded **honorable mention**.

Area: 13.000 m<sup>2</sup>

Credits:

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### **Antalya- Kepez Congress and Cultural Center**

***“God has cared for these trees, saved them from drought, disease, avalanches, and a thousand tempests and floods. But he cannot save them from fools.”***

**John Muir**

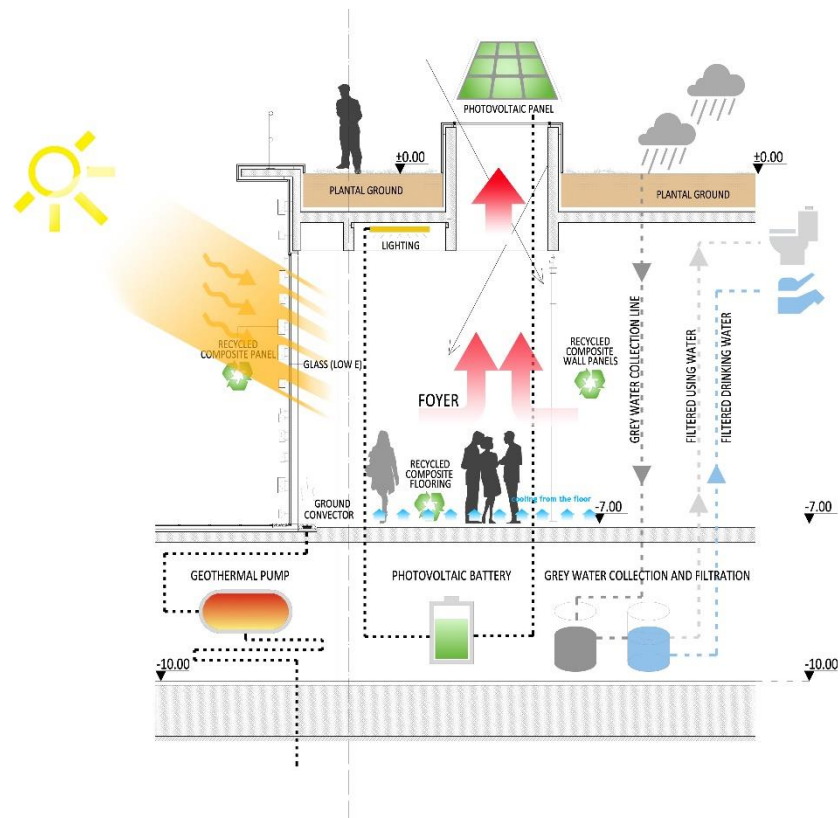
Valley...

The Project offers a built environment which hugs the green instead of keeping left over spaces for it. The site which houses many trees In the current situation must have been kept and left as a recreational area for the public . The center which becomes a part of the city is reached from all directions and internalizes an ecological design approach.

Almost in the middle of the site where the tree density is lower, a crack is opened. Under the ground level, a platform (valley) which is specialized for congress center is constituted. Congress hall, foyer and administration are located on the North part of the crack, while small hall and wedding hall are on the West and restaurant is on the South. Hence, all the entrances and restaurant- cafe units become in relation with each other.

Capillary ramps which start from three different corners of the site take the visitors to the valley. After short trips on the ramps going down, visitors are surprised with the spatial facilities of the valley which hence has natural shadowing. Although three directional approach, the fact that reaching to the center is provided by capillary aisles, brings about security when needed and a specialized space for the valley.

The building which stands under the ground and has natural shadow is very appropriate for hot climate of Antalya in terms of energy efficiency. The modules symbolizing the division of the urban solid are located on top of the building. While these modules provide natural ventilation and light by the transparent openable photovoltaic panels, they act as chimneys used to unload the fire smoke and gain electricity.



## SUSTAINABILITY PRINCIPLES

It is a congress centre structure in Kepez, Antalya. It is a 'valley' created in a dense grove with minimal touch on the trees. Roof upholstery is left as green area to keep the balance of urban and nature. The cooling load is tried to be minimized for the area with harsh summer climate in line with the climatic inputs. Most parts of the structure designed in line with the criteria of sustainability are in the pursuit of a model aiming at the urban and nature balance. While the artificially created valley floor meets the high-density collections, the parking floor creates an interface with the city. This is the most basic approach for the multi-layered use.

- **Material:**

The structure must take some other responsibilities other than to exist. Recycled products have an important role to keep the balance on the planet.

For most parts of the structure, composite plates produced from recycled materials are used. The structure is composed of resine-based excelsior plates produced as composite on the valley façade. This composit combination is a light fabric that is highly applicable and high-performance material with a low thermal conductivity. In addition to that, another member of the same material family with a stronger acoustic is chosen for the ceiling and wall plating. The glass elements used on the building are used along the facade to maximize sunlight benefits. On the other hand, not to complicate the cooling and to minimize the heat loss, it is designed as in the form of a thin, 3-layered material, containing argon gas in it.

On the valley terrain, a strengthened and composit material is used considering the outside space usage. It is believed that the roof of the building is covered with the best material in terms of heat conservation:

the soil of the area. Soil that is the most primitive state of ecological materials and an organic green cover the whole roof.

- Energy:

In the park space, air and light chimneys that offers the users chances for various activities are placed. The most important rule of sustainability is to be in touch with the society.

It is believed that the construction will meet a part of its needs from the roof surfaces of the chimneys that are covered with photovoltaic panels. The energy being produced during the non-working hours of the building will be used by the city people. In addition to that these cubes will be lightened after the dawn. In order to evacuate the hot air from the upper layer, these cubes will be used as a natural ventilation. Besides, for the lighter winter days, the energy produced by the geological heat pumps will be used in the building. All the cooling elements will be supported with reclamation devices in order to generate the natural ventilation to freshen the whole spaces and ease the cooling. For this reason, it is suggested that the carbon emission will be minimized.

- Water:

Lately released products such as smart taps, smart reservoirs and urinals without water reducing the water consumption will be used. A smart building operating system which fulfills this job is suggested. The canals which drains the excessive water of the soil forming the roof will give this grey water back in to the system to reuse it by transferring it to the storage they will transform. Waste water used in the reservoirs will be sent to storage to be reused by distilling.

- Operation:

It is imagined that the construction will work as a whole and all the selected products are made of recycled or recyclable materials. It is important to use the energy effectively as well as generating it. All the products will be energy saving. Recycling parts are organized in various parts of the structure. In these parts, the first distilling will be done. Thus, the raw materials will be reused.