

Pantanal Environmental Education Center

Corumbá, Mato Grosso do Sul - Brazil



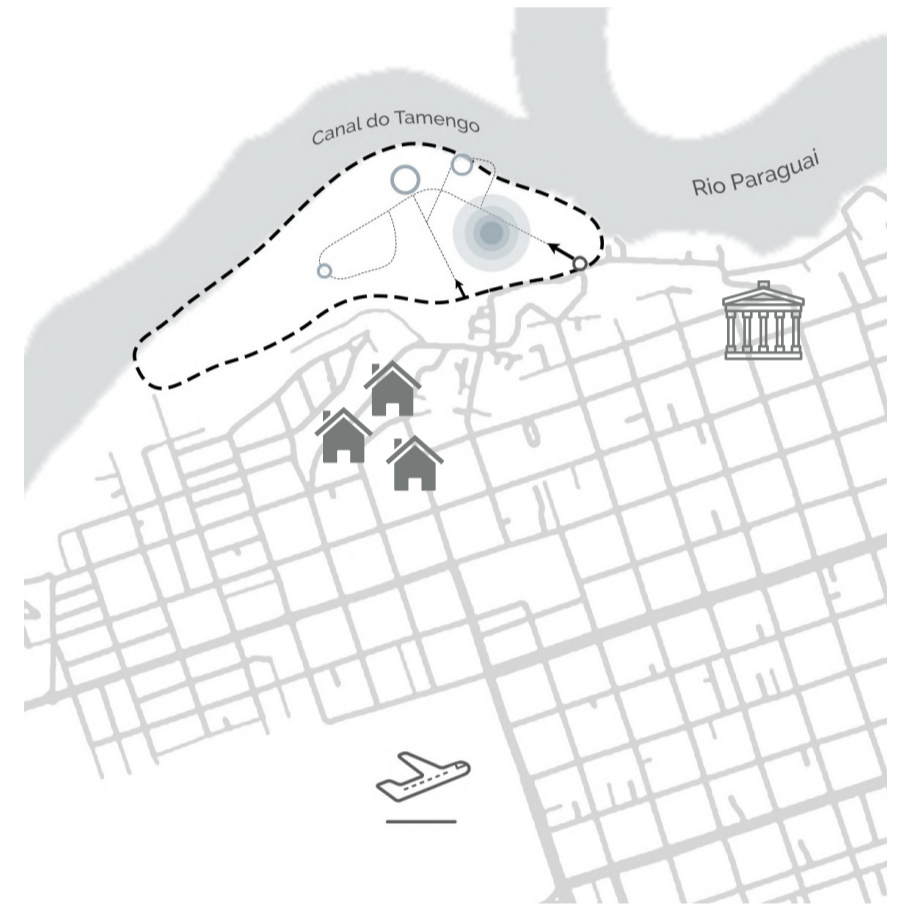
In view of an increasingly accentuated environmental crisis all over the world, the Pantanal biome - the largest floodplain on the planet - has become a source of great concern due to constant human interference, which results in intensified negative impacts, exacerbated further by the lack of environmental management that ensures the ecological development of the biome's natural resources.

Considering the importance of raising awareness among all sectors of society, historically, there has been minimal investment in environmental education in Brazil, including initiatives related to Environmental Education Centers (EECs).

Taking this scenario into account, the final graduation work aims to contribute positively to the environmental struggle through a vernacular building project (in order to take advantage of sustainable and bioclimatic construction methods), which promotes the inclusion of the population in debates and in the introduction of sustainable practices, through support to communities, environmental education and research for the formation of ecological subjects.

Between this, the project's general objective is to contribute to greater involvement and participation of the population in environmental issues. Thus, contemplating all activities attributed to Environmental Education, together with research programs. For this, it is important that the built environments are committed to socio-environmental issues, and that they act as a reference of respect for the place in which they are inserted.

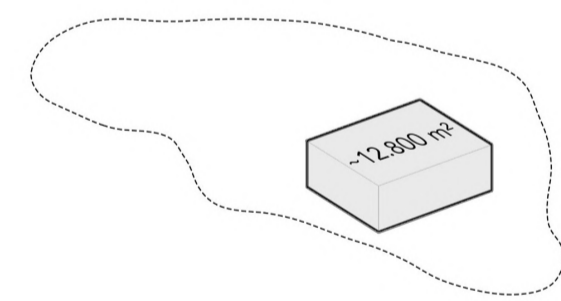
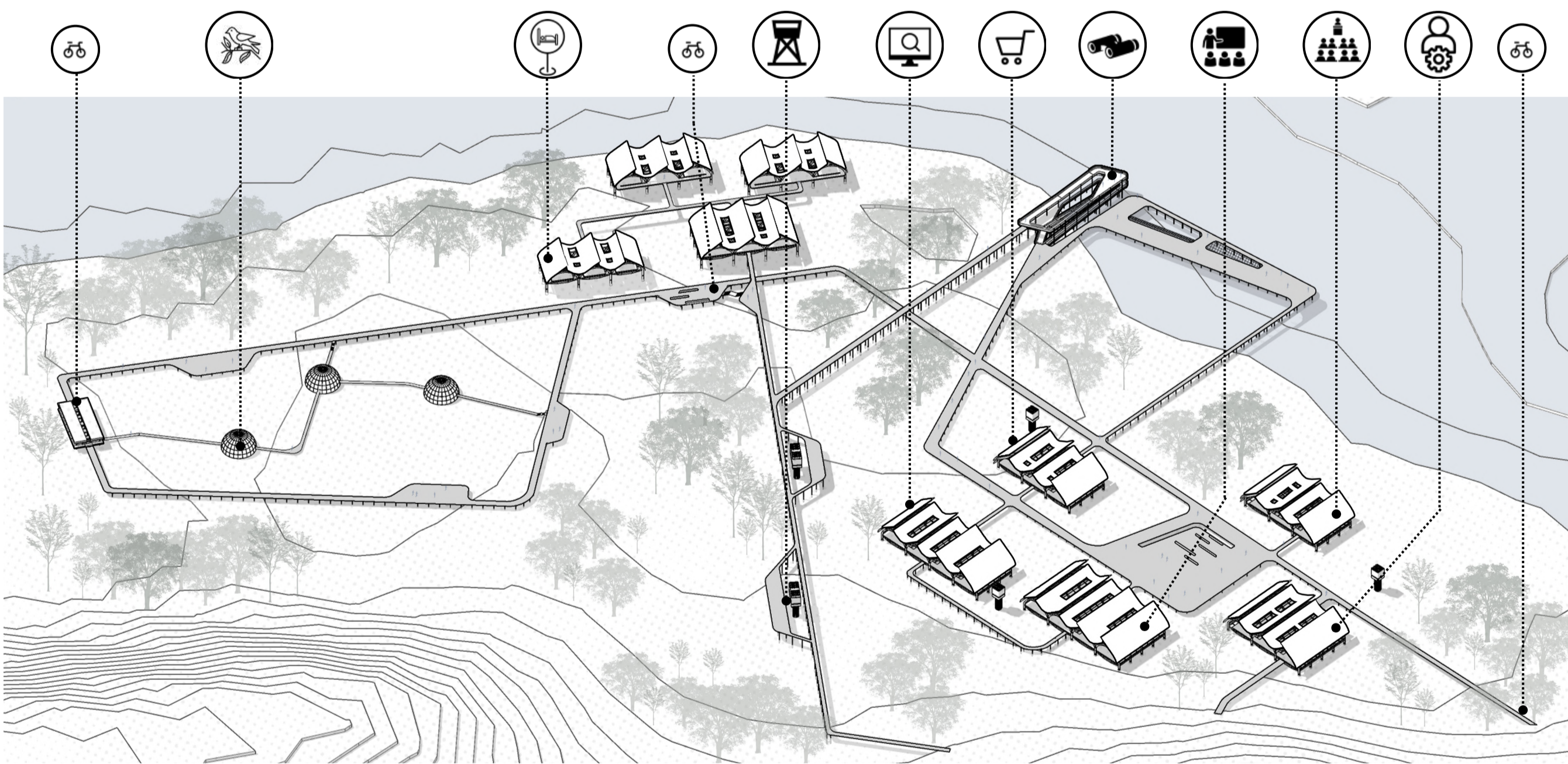
These objectives are stimulated through a public space that seeks to rescue contact with nature through an immersive, sustainable, modular, flexible and environmentally respectful architecture. This approach seeks to honor the natural conditions imposed by the local landscape.



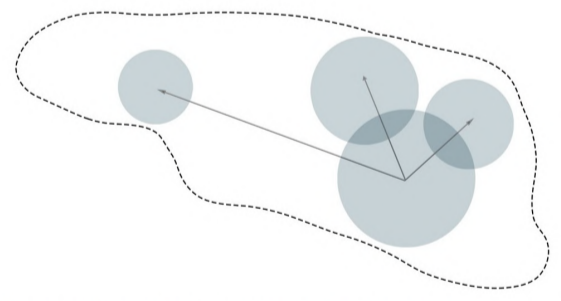
The project is situated in the urban area of the city of Corumbá (MS), one of the cities most affected by negative environmental impacts in recent times. The Environmental Education Center is located on a plot along the Paraguai River, facilitating a closer connection with nature and local river resources. Additionally, it is easily accessible to tourists due to the presence of the main airport in the Pantanal.



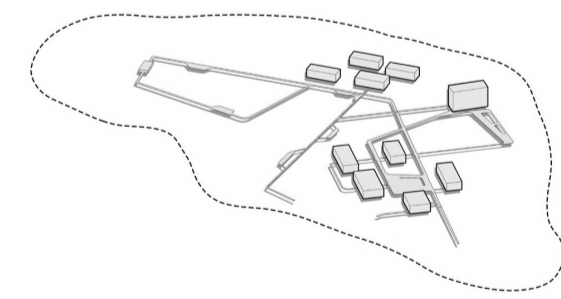
Images by João Farkas



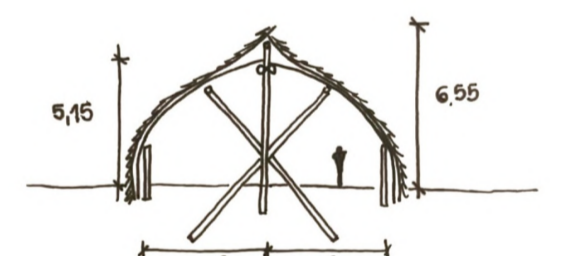
Total program area (land size) of approximately 12.800 m² (3.16 acres) represented in a single volume.



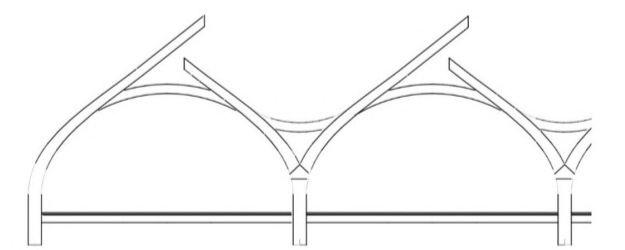
Dispersion of sectors in order to create immersive tours and to impact reduction.



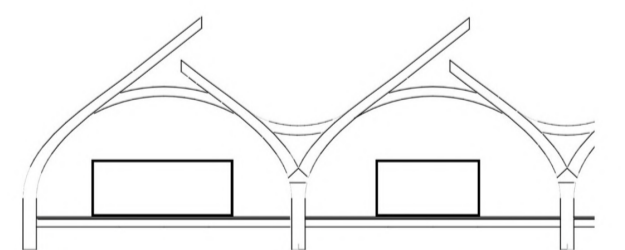
Definition of walking paths and interconnection between modules: enabling immersion in the landscape and contemplation. The modules were raised due to the occurrence of periodic floods



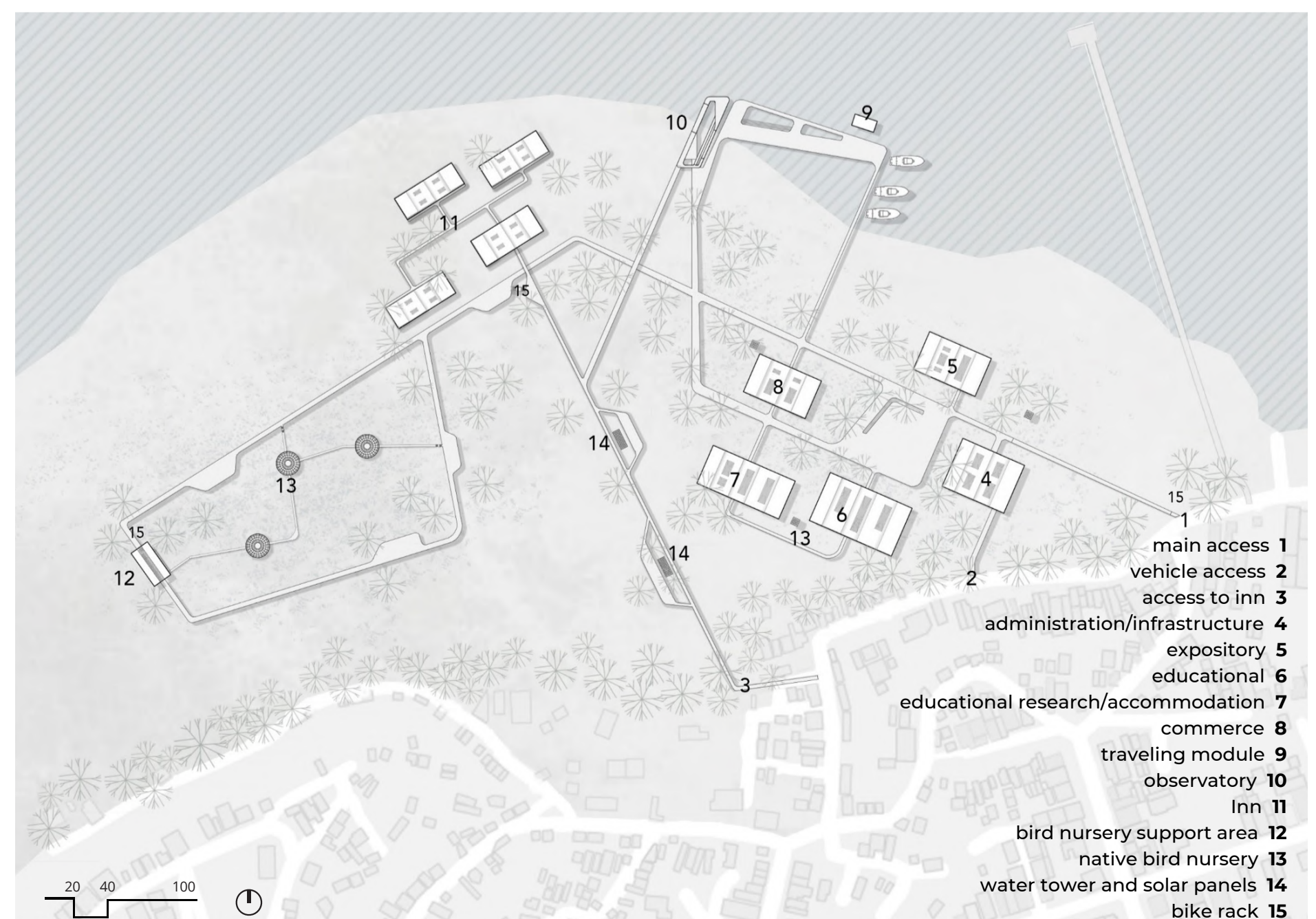
Vernacular design at the Yawalapiti Indian community in Mato Grosso do Sul state.



Creation of a roof inspired by the vernacular design to create a better use of ventilation through its shape. Front openings also allow for visual permeability.



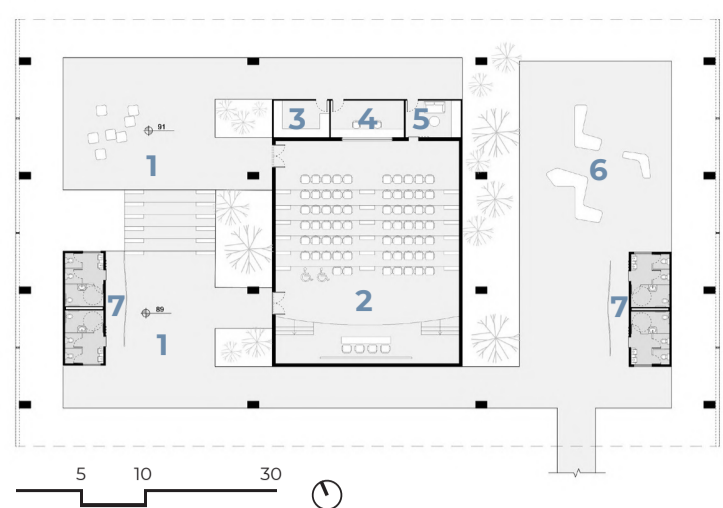
Spaces with enclosures that are independent of the main cover, with a light and flexible structure.





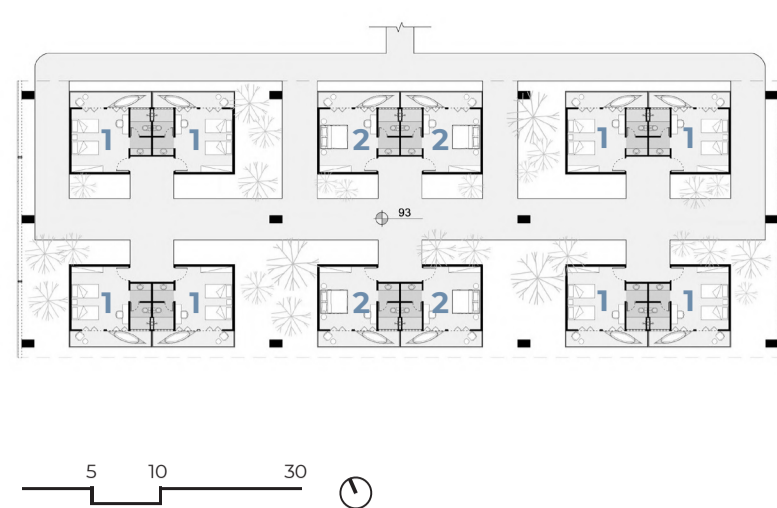
educational area plan

- 1 study area
- 2 library
- 3 ecotoy library
- 4 video library
- 5 reading area
- 6 classroom
- 7 multipurpose room
- 8 computer room
- 9 restrooms
- 10 art workshop



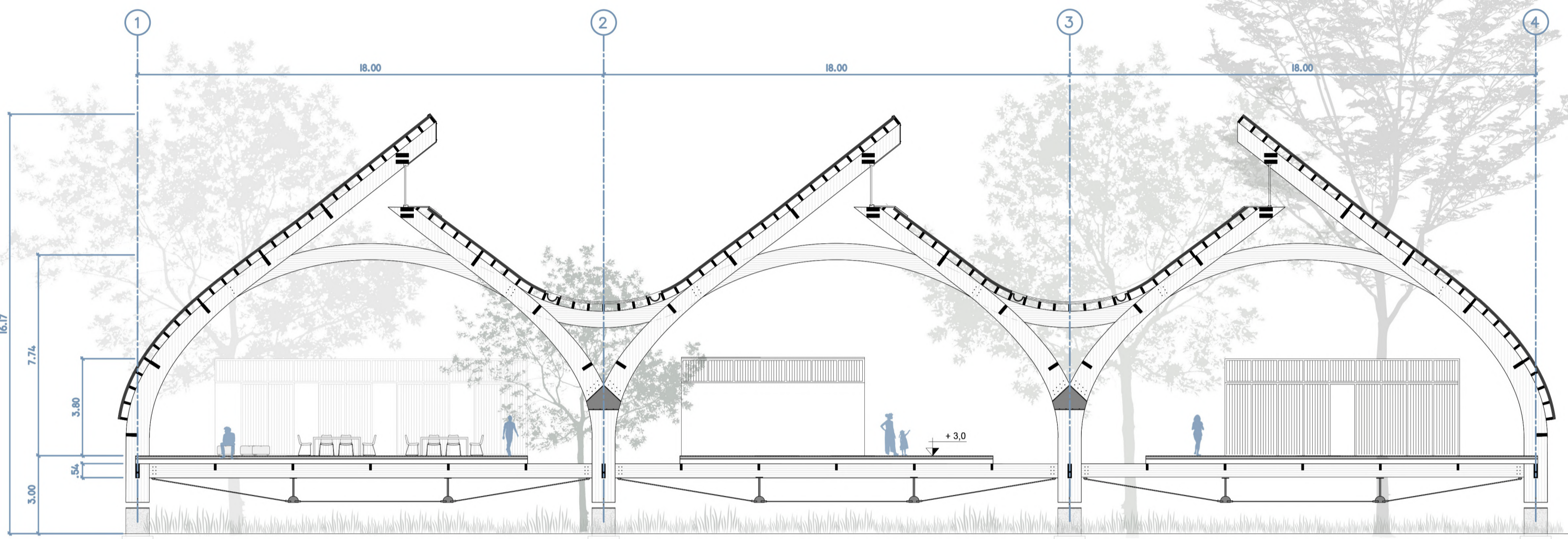
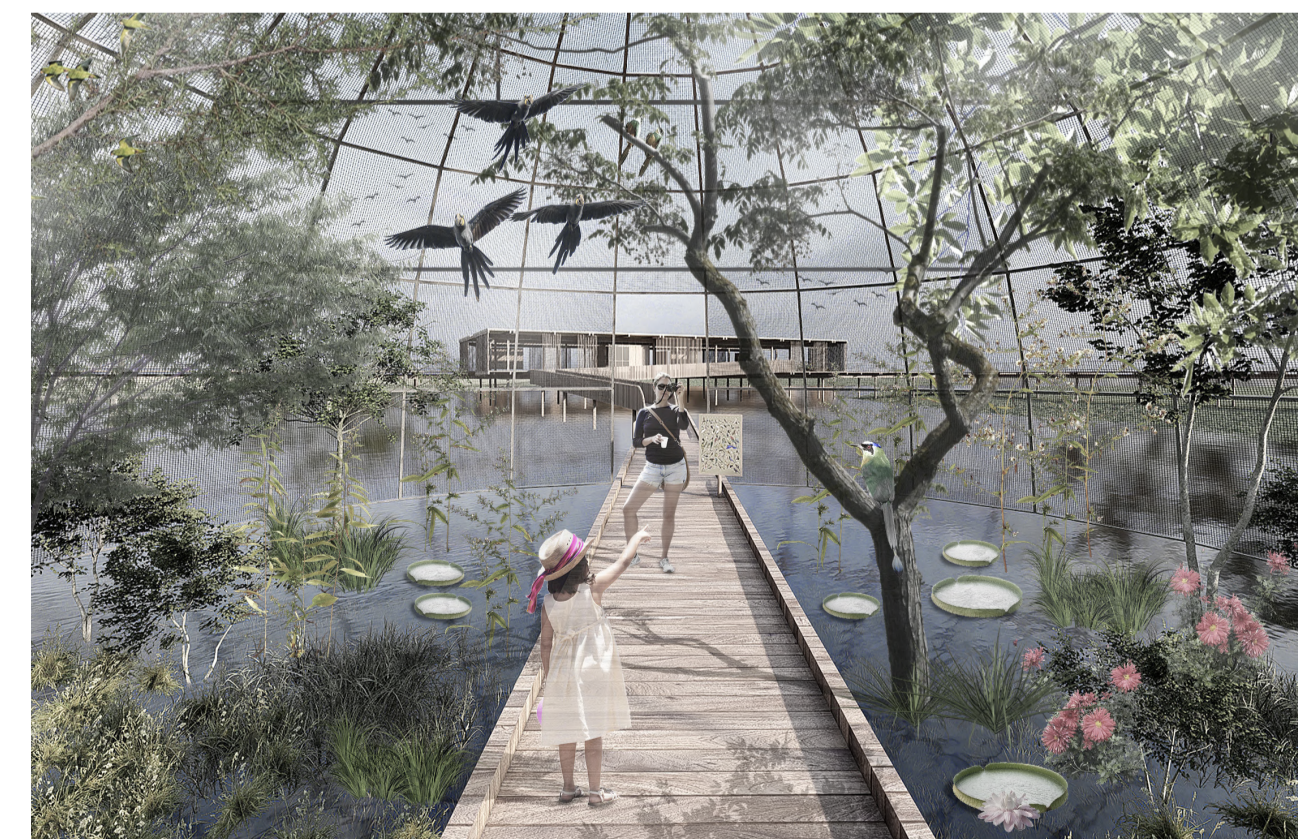
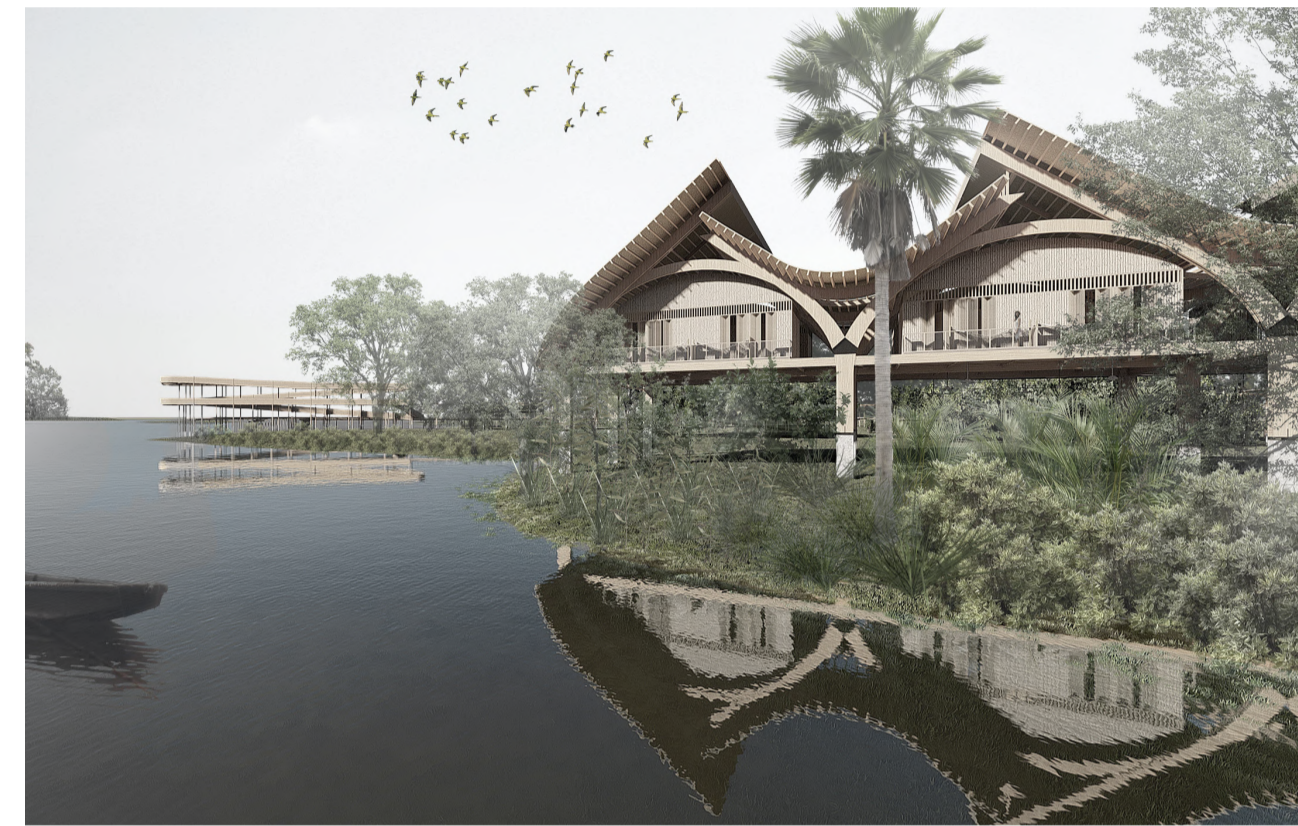
exhibition area plan

- 1 foyer
- 2 auditorium
- 3 deposit
- 4 translation/sound room
- 5 preparation room
- 6 exhibition area
- 7 restrooms



plan of the inn

- 1 double rooms: single bed
- 2 double rooms: double bed



section AA

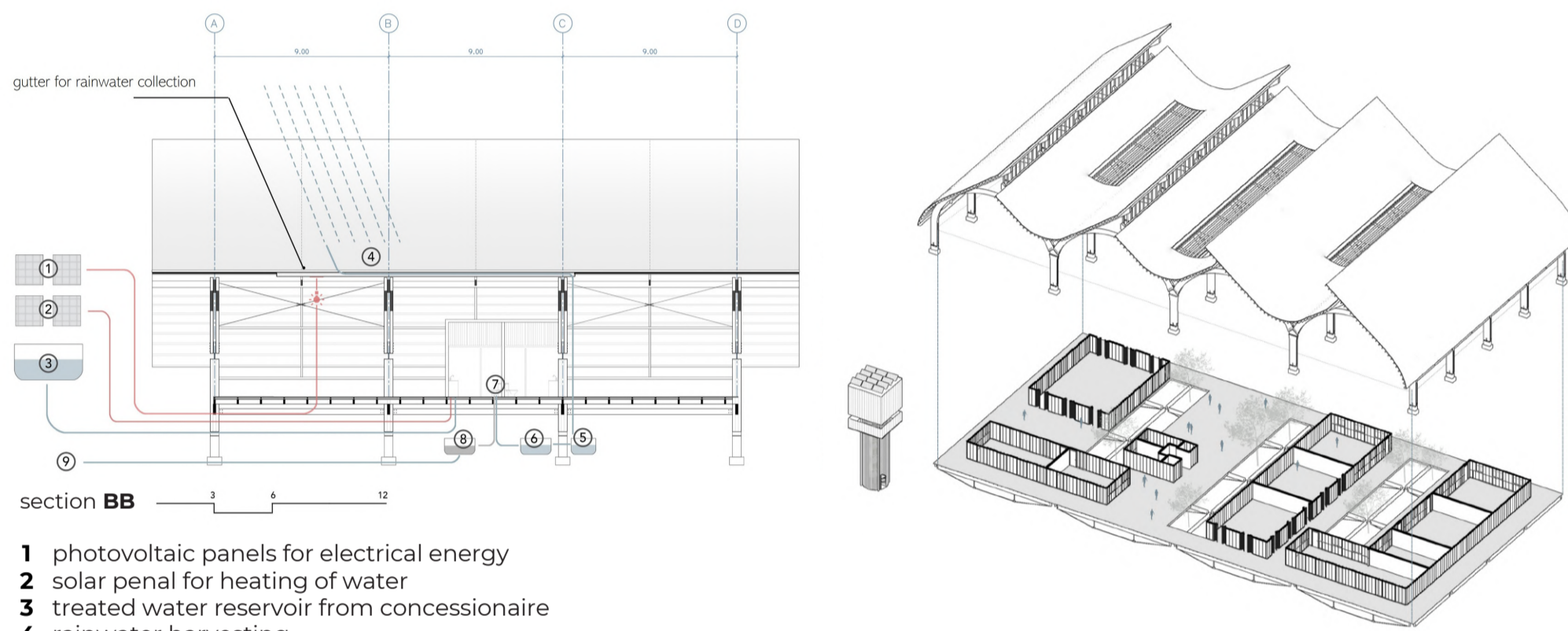
THE MODULE

Conceived from the vernacular design, it seeks to establish respect for the tradition of local peoples, adapting the form to a contemporary design but taking advantage of the knowledge of the region to promote energy efficiency. Curves also strive to arouse curiosity and creativity.

With the premise of generating insertion and communication with nature and landscape, the large arches create a visual permeability that makes the building coexist in harmony with the landscape.

The constructive standards are the same in all modules. Environments with lightweight wood frame closures can be covered or not, depending on the need. This construction technique allows the creation of flexible and easily changeable environments.

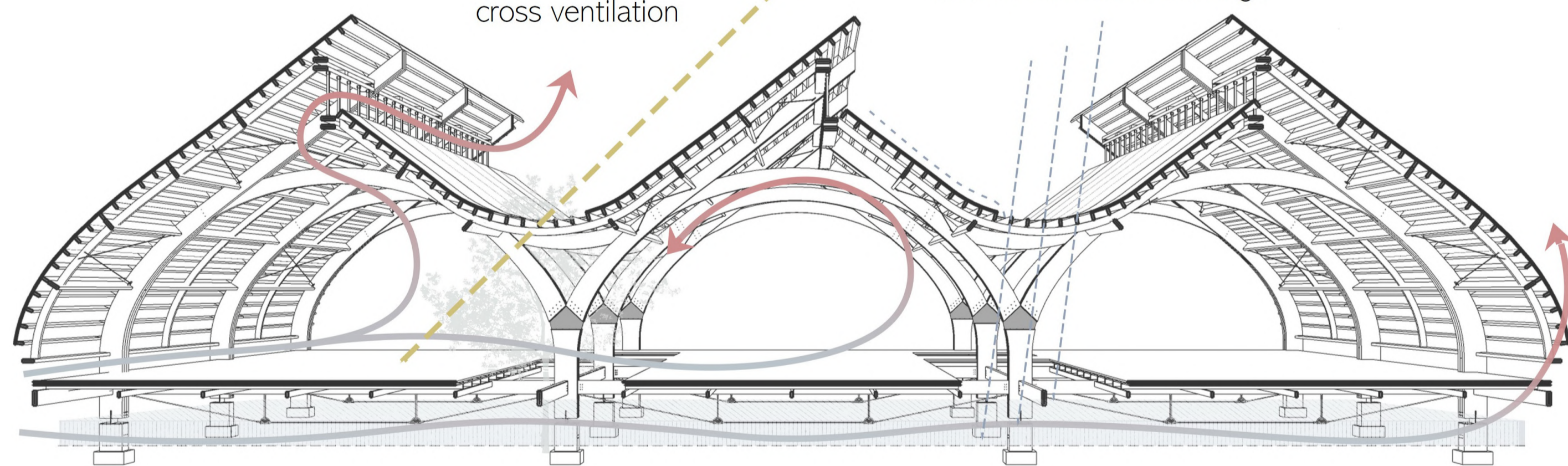
The slope of the shape created by the roof was used to allow the collection of rainwater by means of capture gutters. Each module is accompanied by a water tower that stores treated water from the concessionaire, in addition to solar panels.



- 1 photovoltaic panels for electrical energy
- 2 solar panel for heating of water
- 3 treated water reservoir from concessionaire
- 4 rainwater harvesting
- 5 rainwater treatment
- 6 rainwater storage
- 7 use of water for toilets
- 8 sewage treatment
- 9 return of treated water to the river

cross ventilation

opening for natural lighting and for rainwater drainage



thermal comfort

STRUCTURE

