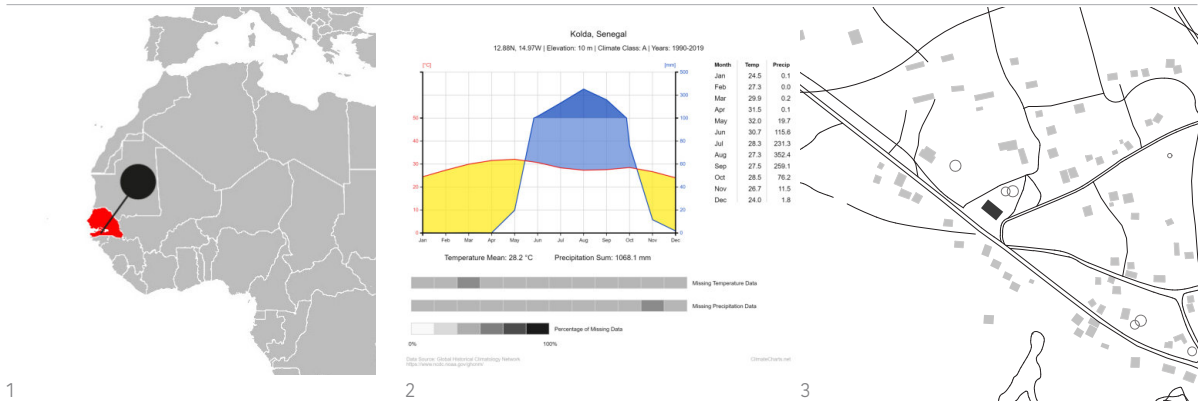


Bamboo Pavilion

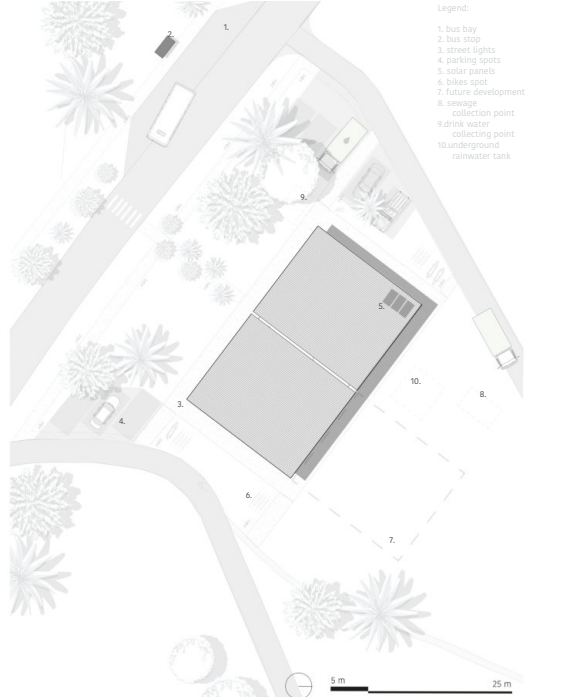
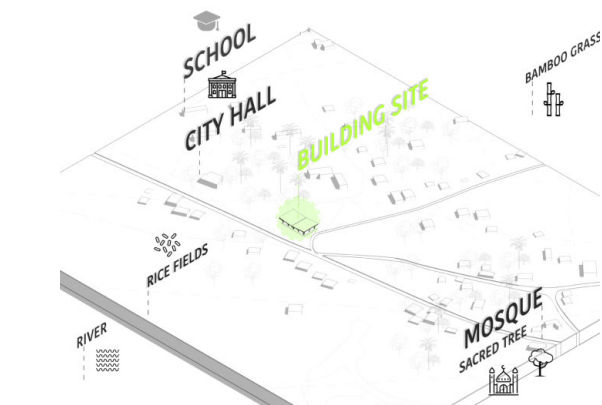
Baghere | Senegal
Kornelia Mierzwa



1

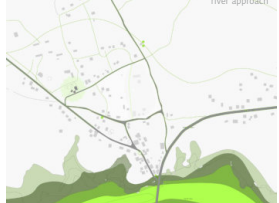
2

3

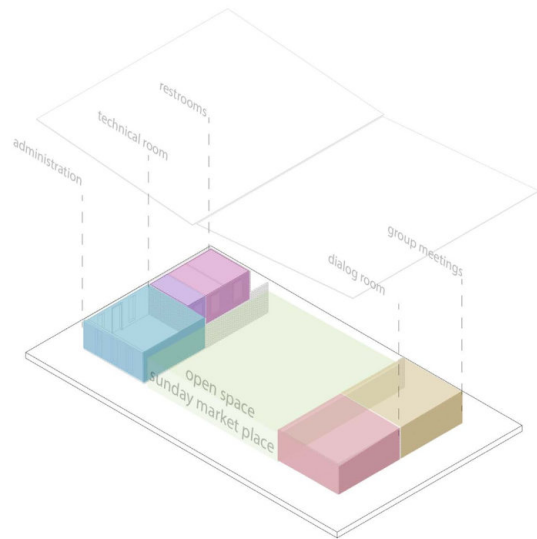
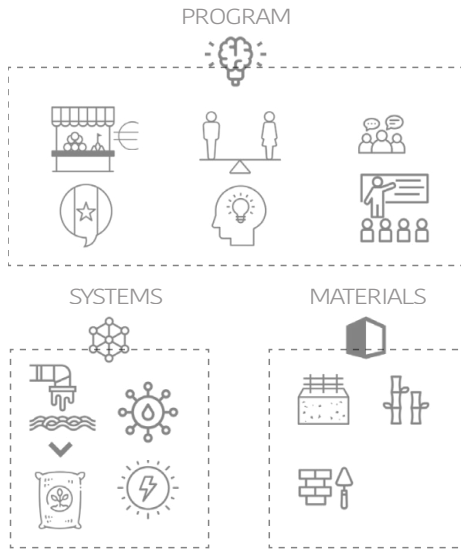


provide a place for this type of activity. The object in its form places special emphasis on a universal, easy-to-assemble structure, which will allow for flexible reworking of space. The main idea was to create a protective cover with a bamboo structure, under which modular rooms would then be installed. It is worth mentioning that the whole is

designed exclusively from local resources, emphasizing the essence of the development of local craftsmen as well as the reduction of transport of materials from outside the area. In addition, the project, thanks to its universal structure, apart from offering a place for the local community, may in the future (with appropriate financial resources) be expanded with new segments. One-size-fits-all solutions seem to be necessary to easily and quickly



5 m 25 m

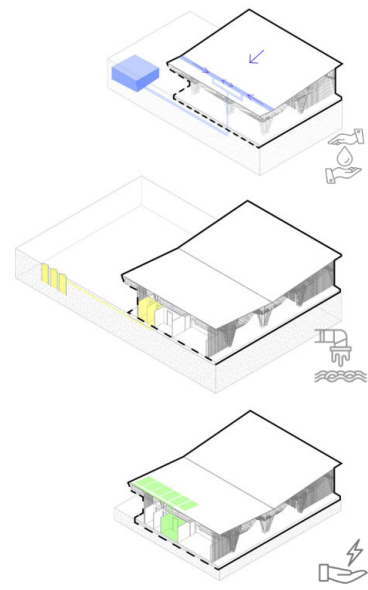


Geography | Topography | Vegetation

The project is located in the south of Senegal, a country in the northwest of Africa, just off the Atlantic coast. The valley covers an area of 480 km² and lies on the Casamance River basin. The project plot is located on the main road from Baghere to the small port of Sandinieri, from which you can reach the capital Sedhiou via the Casamance River. Due to its location, the Tanaff Valley is exposed to desertification in the future. All of this is due to climate change. There is a fairly rare case of salinity - verbal water intrusion into small towns and villages. Which resulted in significant losses in the arable lands of local communities

Additional text

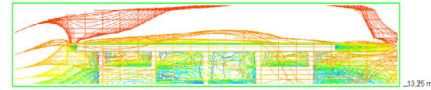
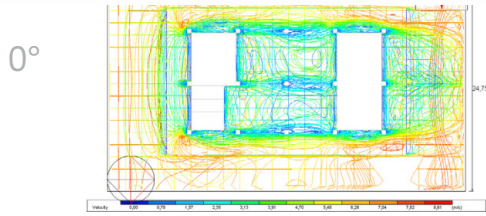
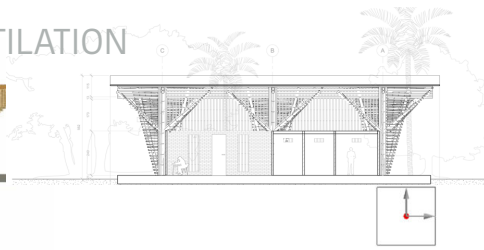
Casamance is divided into three regions - Ziguinchor, Sedhiou and Kolda. In total, 1.5 million people live there. The center of this region is Sedhiou. This region was established in 2008, and is the least developed region in the whole country with 10% urbanization and poverty amounting to as much as 92% of the local population. The region is largely based on agriculture and has a population of around 200,000.



VENTILATION

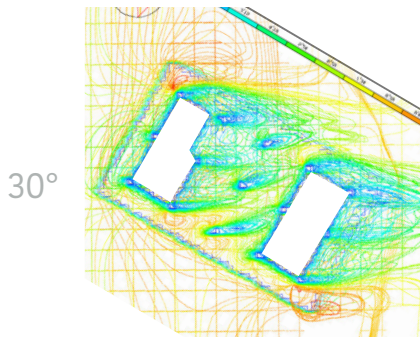


newly designed building

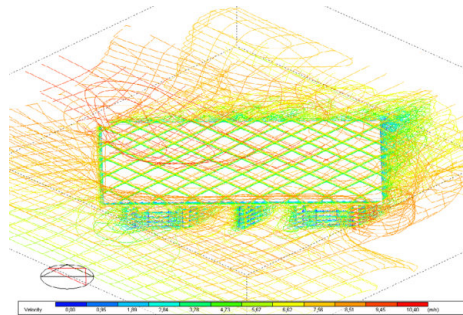
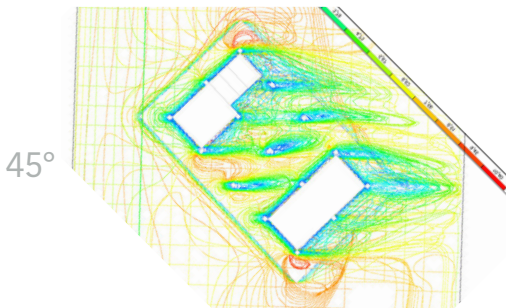


The designed building is oriented on the west-east axis. The wind blowing from the west (typical at the end of the summer season) shows the way the air blows around the building and the rooms.

Conclusion - no ventilation in the second module, open space - covered is poorly ventilated

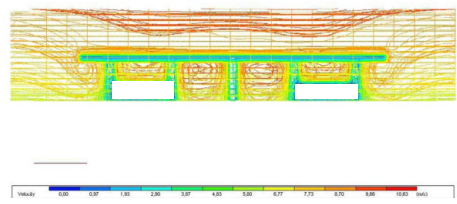
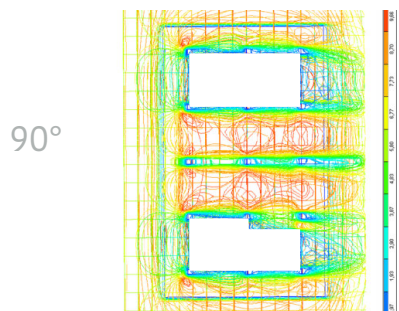


even a slight change in the angle of the alignment of the building has a good effect on the ventilation. (turn 30 degrees)



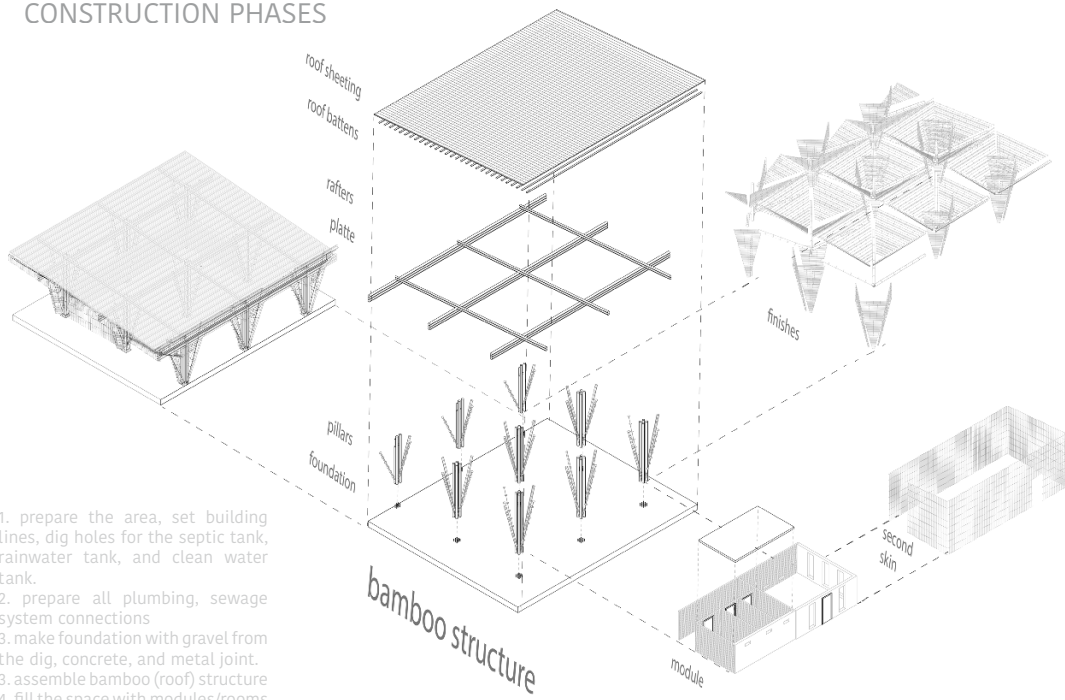
if we rotate the building in relation to the directions of the world by 45 degrees, we get better ventilation of the modules, but also the courtyard in the central part. The analyzes show in which direction

air masses move and how they penetrate space. in the second simulation, you can see how the air is breaking in.



when the building is located on the north-south axis, we get quite excessive exposure to wind and, additionally, exposure of long facades to overheating of the interior

CONSTRUCTION PHASES










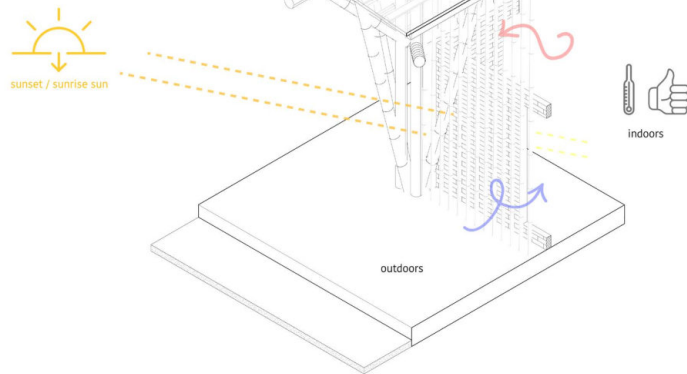
1. prepare the area, set building lines, dig holes for the septic tank, rainwater tank, and clean water tank.
2. prepare all plumbing, sewage system connections
3. make foundation with gravel from the dig, concrete, and metal joint.
3. assemble bamboo (roof) structure
4. fill the space with modules/rooms - brick and concrete
5. make last finishes with bamboo facade for modules and bamboo structure for posts and ceiling.
6. assemble doors and shutters, apply PV panels, electricity system, and toilet equipment.

Building done!

WOMEN OF SENEGAL

Women's Empowerment principles

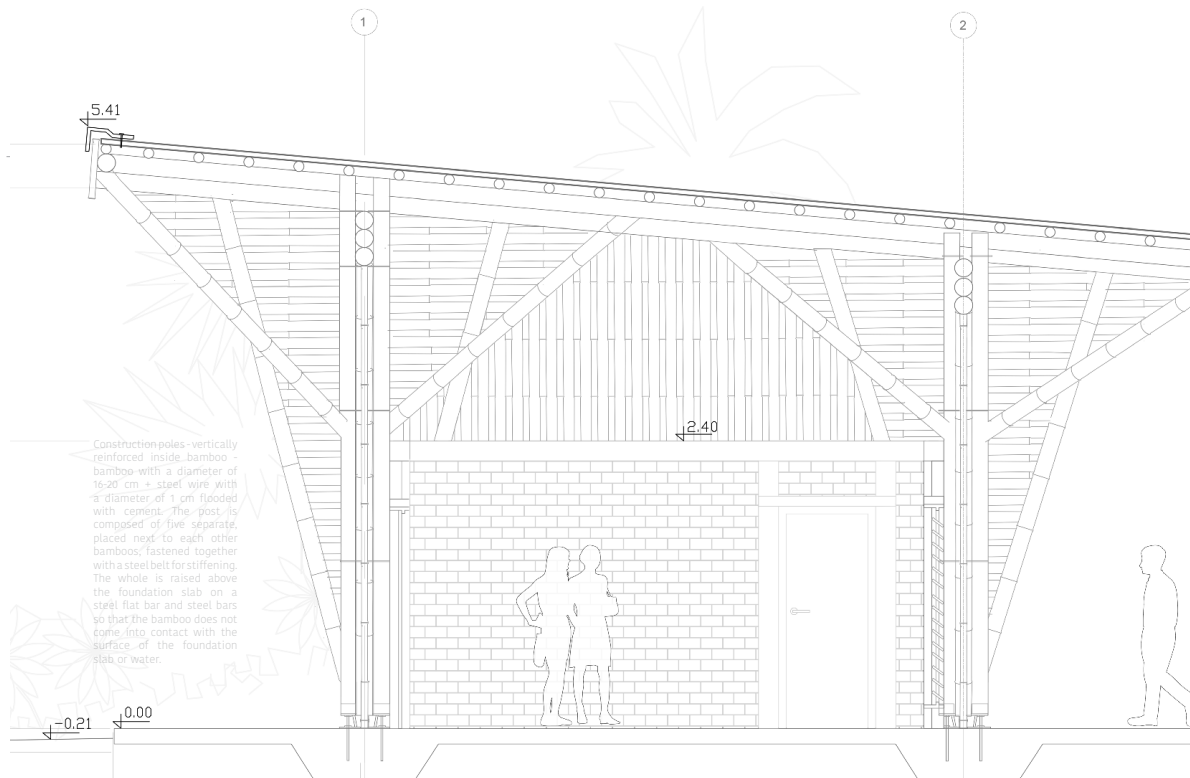
-  Establish high-level corporate leadership for gender equality
-  Treat all women and men fairly at work - respect and support human rights and nondiscrimination.
-  Ensure the health, safety and well-being of all women and men workers.
-  Promote education, training and professional development for women.
-  Implement enterprise development, supply chain and marketing practices that empower women.
-  Promote equality through community initiatives and advocacy.
-  Measure and publicly report on progress to achieve gender equity.



double facade detail

The outer shell (second facade) of bamboo is designed to capture some solar radiation so as to reduce the overheating of the brick walls and thus overheating of the interior of the building





Building volume | Zoning

The object in its form places special emphasis on a universal, easy-to-assemble structure, which will allow for flexible maneuvering of space. The form of the object is a kind of landmark, which aims to attract attention and encourage to enter and learn about the idea it carries.

Building shell | Shadow | Ventilation

The main idea was to create a protective cover with a bamboo structure, under which modular rooms would then be installed.

Material | Construction | Building techniques

It is worth mentioning that the whole is designed exclusively from local materials, emphasizing the essence of the development of local craftsmen as well as the reduction of transport of materials from outside the area. In addition, the project, thanks to its universal structure, apart from offering a place for the local community, may in the future (with appropriate financial resources) be expanded with new segments. One-size-fits-all solutions seem to be necessary to easily and quickly expand towns and villages, thus eliminating economic inequalities.

Sustainability | Energy | Ecology

The Bamboo Pavilion facility places particular emphasis on its technologically self-sufficient form. The building does not have a negative impact on environmental pollution, on the contrary, it promotes sustainable and local technical and architectural solutions.

Utilities

Women's house- the place to encourage discussion about gender equality along with a variety of activities such as lectures, exhibitions, meetings e.t.c.

Additional text

The most common religion is Islam, but you can also find followers of Christianity. The people of the Tanaff Valley lead one of the lowest living standards in the country. Mainly due to the lack of basic public services - running water, sewage, electricity.

Discrimination against women in Muslim countries is one of the most severe. From the economic point of view, the current weak position of women - who constitute 58% of the local community - significantly reduces the potential for a quick improvement in living and economic conditions. That is why it is so important to strengthen their position, make the community aware and provide a place for this type of activity.

- [1] „Geografia Senegalu”, w Wikipedia, wolna encyklopedia, 24 sierpień 2021, https://pl.wikipedia.org/w/index.php?title=Geografia_Senegalu&oldid=64368181.
- [2] „Casamance”, w Wikipedia, wolna encyklopedia, 21 marzec 2021, <https://pl.wikipedia.org/w/index.php?title=Casamance&oldid=62693973>.
- [3] „Klimat: Senegal: Klimatogram, wykres temperatury, tabela klimatu - Climate-Data.org”, dostęp 26 sierpień 2021, <https://pl.climate-data.org/afryka/senegal-187/>.
- [4] „Kaira Loro Architecture Competition”.

Picture Credits

- [1] <https://www.ticino.ch/de/commons/details/Bosco-Gurin/134235.html>
https://commons.wikimedia.org/wiki/File:Bosco_Gurin_5127a.jpg
- [2] <https://www.pxfuel.com/en/free-photo-qowan>
<https://www.pikist.com/free-photo-siphi>
https://www.freepik.com/free-photo/stone-house-alpine-switzerland-bergdorf-ticino_687341.htm
- [3] Kornelia Mierzwa/ student project