

## SchilderScholte architects

The Dutch foundation Pani commissioned our office to design an educational building in the north of Bangladesh. We as architects embraced this pro bono assignment coming from ideological motives and knowledge sharing. By making use of only local materials, craftsmanship, and skills, an environmentally friendly building has been realized that contributes to the community in a significant way.

*"The goal is to train the poor and landless in this Muslim community, improve the hygiene and work on education, reduce child mortality, and ensure economic independence, eventually making the financial support of the foundation superfluous!"* – Foundation's goal.

The starting point was to combine and optimize local techniques and skills with materials to be found within a 25km radius from the site. Together with the Bengal contractor and carpenter we looked at what products were available. During the design process attention was mainly focused on local available materials and weather conditions. The drive was to encourage locals to become aware of the basic principles of sustainability and durable building concepts. In effect close to zero electricity or fossil fuels were used during construction.

This strategy was to participate in the evolution and modernization of the local construction processes without a rupture in the "know how" of the artisans. This began with learning the local construction workers' necessary skills required for long-term planning and develop confidence to bring into practice new knowledge and skills. We, for instance, introduced a locally unknown brickwork bond that does not require whole-brick walls for stability, thus minimizing the costs and maintaining the main advantage, the use of local materials and craftsmanship. All the building techniques used for this project are very easy to learn and diffused by the main contractor, which has already contributed to the local construction modernization.

Although bamboo is seen as an inferior material in the region, we chose to make the whole roof construction out of it, even the walls and French doors of the workshop are clad with it! This acts as a reference to the bamboo bicycle frames that are made here.

From a bioclimatic point of view the orientation of the building, together with the tropical roof, ensures natural cross ventilation. Also, the use of nearby ponds for natural draft to cool the classrooms was taken into account in the design. The U-shaped roof is suspended to the sides providing shade, protecting the biggest openings against rain, and collecting rainwater into the courtyard. Some biomimicry elements are put to the test here! The interior walls are coloured in light blue, a hue that flies shun. The splay of the classroom windows are painted yellow, a hue that specific insects dislike. These low-tech features have proven to reduce the use of insecticides and electric fans to a minimum.

The community centre has become the pride of the town and a favourite *selfie* spot.

Build by the people, used by the people, and maintained by the people.

