Lecture Building at the Alioune Diop University
Bambey, Senegal

Architect
IDOM
Bilbao, Spain

Client
Socé Diop Dione (ACBEP), Urbanism Ministry and Higher Education Ministry

Commission
2012
Design
2013 – 2014
Construction
2015 – 2017
Occupancy
2017

Site
12,000 m²
Ground Floor
8,490 m²
Total Floor
8,490 m²
Costs
USD 3,300,000

Programme
This new lecture room block at the university comprises a 500-seat amphitheatre, classrooms for 50 or 100 students, laboratories and technology rooms, and offices for lecturers in the faculty of applied sciences and ICT. The building is a simple construction of concrete blocks cast on site, covered with mortar and steel latticework. It has a large double roof and a great lattice covering the south facade, which avoids direct solar radiation but remains permeable to air. To solve the lack of sewage and water supply issues, the architects incorporated infiltration rafts with vegetation that collect rainwater, and waste water is purified through an ecologically-sound system that uses activated sludge.

2019 Aga Khan Award for Architecture
Cod. 5216.SEN

Bambey University
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In Senegal, shade and water are everything. This project, a close relative of another in Gaston Berger, San Luis, which was commissioned by the Ministry of Education and the World Bank, aims to respond to this context as a perfect machine, beautiful in its efficiency and without an engine.

We developed the project from its cross-section, providing the building with a large double roof and a great lattice on the south facade, an L-shaped shield laying on its back, which avoids direct solar radiation but is permeable to air. This shield creates a Venturi effect generating a constant air flow between the building envelope and the lecture rooms, reducing the interior temperature by 10-15 °C degrees, a change from the outside 40-45 °C.
The building is simple in its construction, appropriate to the possibilities of the place: concrete blocks built on site covered with mortar and steel latticework; repetitive, with only one type of window; long, creating a visual reference and hand-crafted – the manufacturing of the 20,000 blocks of the lattice gave employment to more than a hundred workers of Bambey for 6 months.

To solve the lack of sewage and rainwater networks problem, we incorporated infiltration rafts with vegetation that collect rainwater, as a natural meander that is integrated into the landscape, favouring the natural development conditions of native vegetation. A purification system by means of activated sludge allows the purification of waste waters, which, once purified, are discharged to the same rafts.