

POLITECNICO DI TORINO
SECOND SCHOOL OF ARCHITECTURE
Master of Science in Architecture
Honors theses

Community planning of the Cultural centre ACREF in the Baba Dogo slum in Nairobi. From the urban view to the prototype of a window-door system

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The main aims of the work are:

- The design of a feasible building, that is the enlargement of the cultural centre of the local association ACREF.
- A process of community planning through eco-sustainable materials.
- The proposal of a new system for transparent windows and doors and their testing with a prototype.

The methodology of the research is the following:

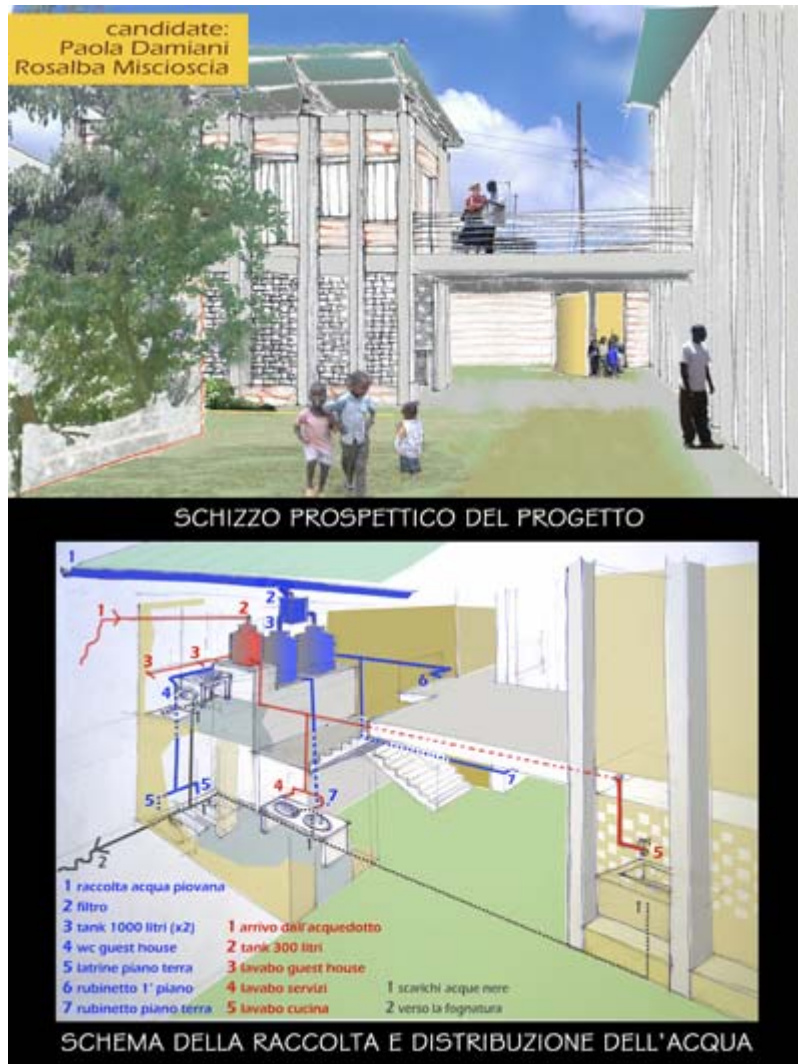
- The knowledge of the urban context (slums, social relations, etc.).
- A Field research.
- A Focus groups with local population and association members.
- The analysis of the local building features.

Our research is located in Nairobi, a city of 3 million people (60% of which lives in the slums). Baba Dogo has quite 60 thousand people, and it grows over private land. It presents different living and infrastructural typologies.

The relation among NGO World Friends and the cultural centre ACREF has made our research possible.

ACREF is an association is settled at the core of the slum, and it works over artistic education of young people and it sustains healthy safety projects.

At the centre there is land and spaces free for a future enlargement.



A field research has been the first step of our project. It has been founded on some qualitative interviews, on some measurement and on some polls over the future territorial re generation projects.

This survey has showed the different building typologies, the living standards and the access to principal infrastructures. This has showed the specific condition of marginality of the slum, in particular for what concerns the social and cultural condition of its inhabitants.

With the user of the centre we have organised some focus groups founded on participative methods to deliver:

- The number of users and use modalities.
- Spaces and rooms.
- Dimensions.
- Spatial relations.

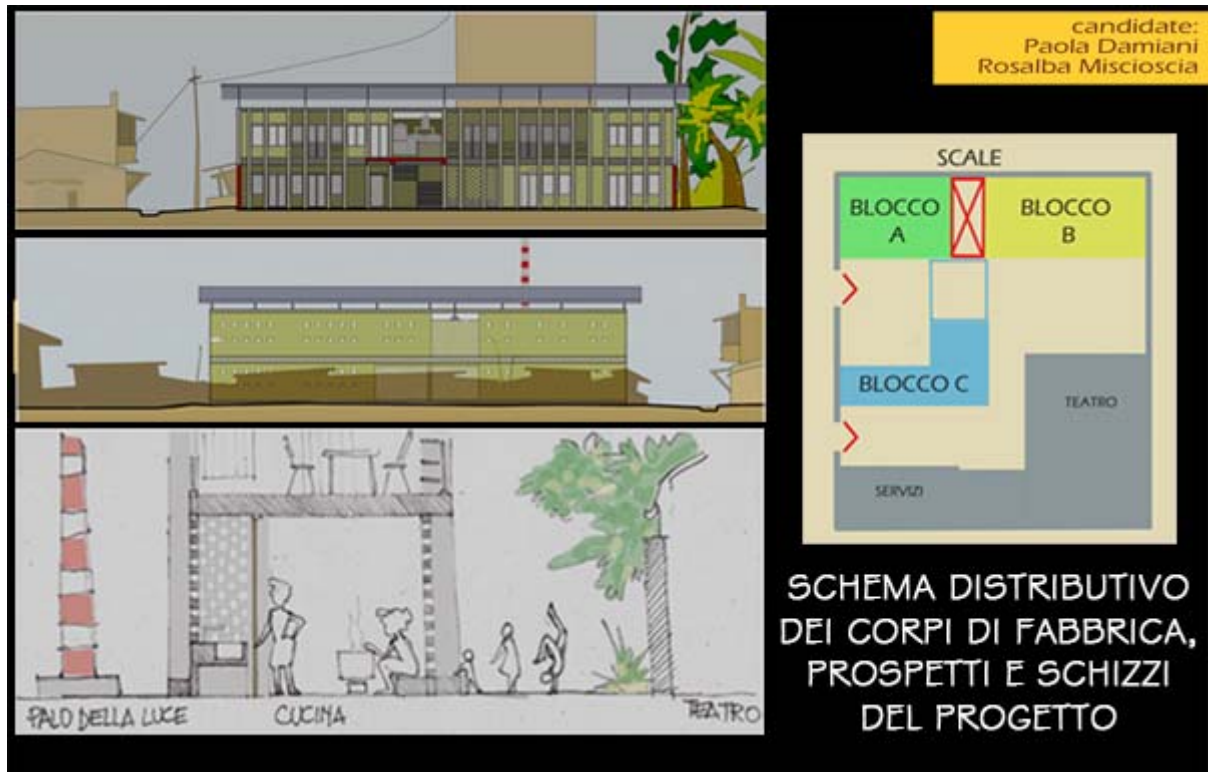


The main priorities appeared have been the following ones:

1. Offices for activities management.
2. Library and documentation centre.
3. Adult afternoon-school.
4. Taylor Workshop for women.
5. GuestHouse for artists and researchers.
6. Taylor artefacts shop.
7. Kitchen.
8. Water supply tank.
9. Open space with plants and porch.

The building system follows the local ways: a mixed frame on reinforced concrete and tuff block walls, reinforced concrete attics, a ventilated roof made by a metallic structure. In particular we studied some details, like: windows and doors, a floating floor, pierced walls, ventilation system. We studied a system to optimize the rainwater and the water works collection.

Light is one of the most important demands for the project of internal spaces. In facts, quite the totality of informal houses is without windows or, if they have, they are closed up for security reasons. Also, glass is a too expensive resource and difficult to find into the slums. So, we have studied a window-door system made of a steel frame and transparent waved panels in fibreglass. The components are easy to reach and to assemble together.



We have studied through two different prototypes the assembling and disassembling system.

Basic for the future project development was the low cost. To reach this aim we thought the design in three different blocks that people can build in different time.

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