## POLITECNICO DI TORINO FIRST SCHOOL OF ARCHITECTURE Master of Science in Architecture (Construction) <u>Honors theses</u>

## URBAN DEVELOPMENT AND SQUATTER SETTLEMENTS.

Bamako case study: a local materials response

by Cristina Cimarusti Tutor: Pierre-Alain Croset Co-tutors: Emilio Caravatti and Simonetta Pagliolico

The primary purpose of this work is the promotion of local materials and appropriate technologies in the developing countries, in order to improve the conditions of life of the interested populations and at the same time, their economic, social and environmental growth.

The choice to building with earth is closely related to the context in which the project will take place: the Mali, a country where, for a long time, through its endless variations, it has characterized the architecture.

The decision to operate in a urban area, inside of an informal zone, deprived of infrastructures and basic services, has certainly involved many difficulties to the conception of the project.



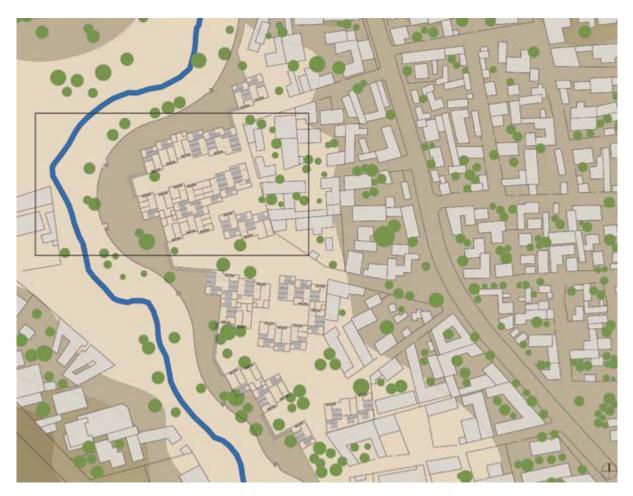
District of Banconi: the housing situation

For such reasons the whole work can be divided in two phases.

In the first one, it has been analyzed the context: the Mali and his traditional architecture; the city of Bamako and the district of Banconi object of the intervention; and finally the housing problem nodal point of my searches.

In the second phase, It has been analyzed the earth as construction material not only from a technological and technical point of view, through its chemical and physics characterization, but also in reference to the different practical and partner-cultural problems connected to its contemporary use.

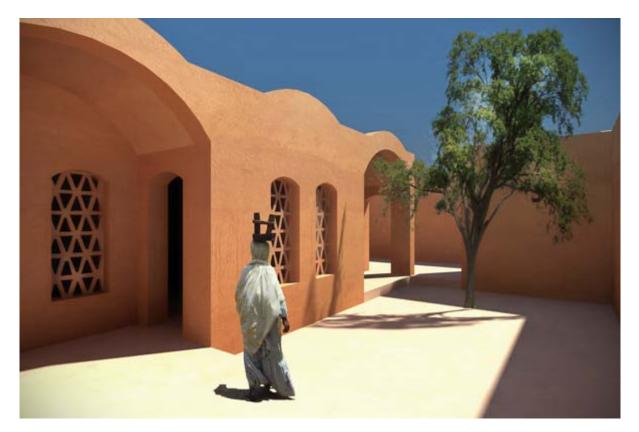
The rehabilitation of a spontaneous district, has required in first place the editing of a program and subsequently of a masterplan; everything in the respect of the local normatives and of the dimensions of the plots already used by the government.



A part of masterplan

The study of the traditional residences, of the different habits and necessity of the population, of the whole social context, it has been fundamental for the formulation of an appropriate housing model.

The house proposed, similar for some aspects to the Victor Pelli's model of progressive house, has been conceived through a series of phases with the purpose to answer to the different economic demands and the varying number of the future users. In fact, to depart from a simple scheme, studied to define its principal characters, the variability is exclusively given by the addition of new unities to this basic model.



House model in the first phase

Although the program foresees that the future users, known since the beginning of the operation, participates both to the conception of their residences and also to the same realization, in the first phase it is fundamental the support of specialized technicians for a correct learning of the structural comportment of the building, so that to transfer to the inhabitants all the necessary knowledges for a possible future extension.

Finally, to completion of the intervention it is anticipated the realization of a public utility structure, financed by an international ONG, whose purpose would want to be to furnish the district of a community space acted to promote the associationism and the professional training, and setting the bases for a general development of the population of the whole district. For this reason, the individualization of the site, although in the immediate proximities, it has not placed inside the same residential area.

For further information, e-mail: Cristina Cimarusti: cristina.cimarusti@libero.it