

**Honors thesis**

COURSE OF

Architettura per il Progetto Sostenibile

*Abstract*

veneer house project

a prototype construction in Nepal

My journey to Japan started in September 2015. I enrolled as a student-researcher at Keio University. I was assigned to Prof. H. Kobayashi, his laboratory has the goal to develop and construct buildings in areas damaged by natural disasters, usually in developing countries. The main project that addresses this goal is the Veneer House.

The V. H. are all born from almost the same structural frame, improved after each iteration. They consist of sheets of plywood cut by CNC machines, joint together to make the structural frame. This structure is highly modular and can be adapted to the necessities.

The initial concept born to solve the need of emergency housing subsequent to the tsunami in Japan in 2011. To this date, five projects has been built: two in Japan, Myanmar, Philippines and the one I took part in Nepal. Each of them has a different purpose, such as community centre, fishermen building, school, or private house.

Along with other students, I helped organise the construction field, the working schedule, the trip to the site, the accommodation, to negotiate with nepalese contractors and with local sellers of building supplies.

During my stay in Nepal I also joined Kobayashi-sensei when he attended institutional meetings where I had the chance to meet the Vice President of Nepal, Nanda Kishor Pun that appreciated the work of our team.

I left Japan during the last days of October 2015 with a group of three students. The schedule was planned to have 10 students always on the construction field, intermittently supported by the work of 3 local carpenters. The construction phase began on the first days of November and lasted until the end of the month.

We landed in Kathmandu, where we had to transfer to Jeeps to cover 6 hours that still divided us from Charikot.

The earthquake that occurred on the 25th April 2015 left the town devastated. I was shocked by the situation we found after 6 months, when we arrived. We arrived during the night, with no lights on the streets, as there is no electricity anymore, the image of the road with the seven floor buildings crushed and crumbled on the two sides impressed me greatly.

The Japanese university is organised on a strong seniority hierarchy, rather than by merit. I myself, despite having less experience in this field of younger students, have been responsible for organizing delicate phases of the project. My opinion has had considerable weight in the execution phase, probably more than what would have been considered appropriate in Europe. The organization of work included an account manager, a project manager, a construction manager and design manager. The project was run entirely by students, coordinated by A. Abe, the head of the project in Nepal.

A student of the undergraduate program M. Ooizumi, responsible for project accounting. She negotiated the compensation of the carpenters, the fees of the plywood factory, the currency exchange rates and established transport prices for the students to the site, a difficult task due to the block of fuel export from India. Ooizumi also coordinated the purchase of hotel and air tickets of the other students, independently managing a sum of 50000 Euro, provided by Keio University.

I coordinated the phases of paint finishing and thermal insulation, took part in decisions related to lighting arrangement and modification of some technical details while construction.

Along with the student A. Stubbs, I worked on monitoring and documenting of all the site operations and composed a site logbook that will be used to compare the activity of this site with those of future ones. As all the other 16 students, I also worked as a carpenter during all the period.

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