



POLITECNICO
DI TORINO

Honors thesis

COURSE OF ARCHITECTURE FOR SUSTAINABLE DESIGN

Abstract

**Participatory design in an ecovillage in Marche's hill for
the construction of a farm in straw.**

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by
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This thesis arises from reading of Yona Friedman's books, especially the book *Architettura di sopravvivenza*, written in the 70's, but still very current; the author exposes his theories on a new poverty and a need of change in a world where resources are not illimitate. An architecture that discovers natural principles and compatible techniques is then the key for leading to a more sober way of living. From an architectural point of view this is possible only with a new role for the architect, teaching people knowledge about planning. Friedman also believes that studying today's marginal movements is essential for finding the right solution for the future. Many people seek an alternative to the common practice, and a solution can be found in self-managed communities.

Therefore the first phase of this thesis is focused on the study of ecovillages as community movements, about how they are organized and the principles they are based on. Selfconstruction, the exploitation of renewable energies and the use of "zero kilometres" products are very common principles for any communities.

The cases analyzed are diverse and distributed throughout the country to represent the wide variety of realities.



Upacchi 19/07/2015



Torri superiore 03/08/2015



Le Trone 08/08/2015



EVA 22/08/2015

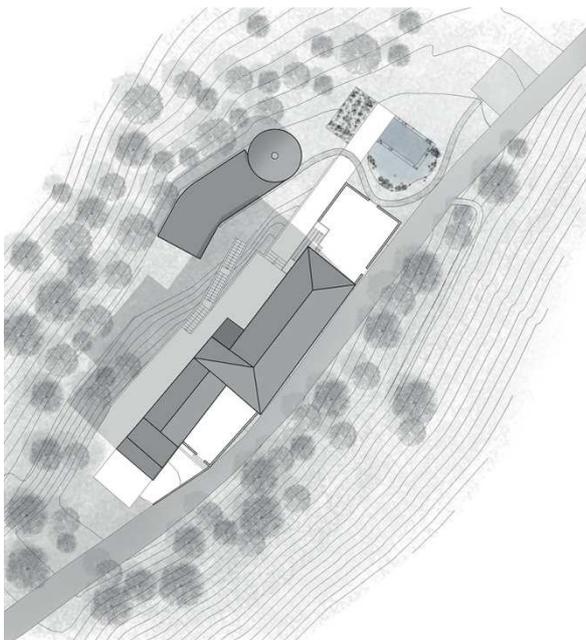


La città della luce 31/08/2015

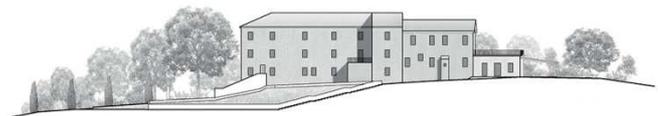
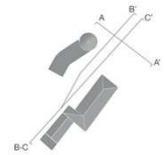


This analysis proved to be an opportunity to know places and people who have set their lives on respect of nature. It's also important keeping in mind that not all the ecovillages are able to organize themselves adequately. Despite the data from RIVE (Italian Network ecovillages) say that the community experiences of this kind are growing, the cases that have been able to consolidate themselves, are not too many. The Trune is an example of failure. This eco-village tried to be born in Val di Susa based on respect of nature and recovering a township, but without success because of lack of an important social cohesion. The mechanisms that are created in these realities are very complex and often not immediate for those who do not live in the same community.

The first part of analysis was followed by a project, that was achieved with the cooperation of Città della luce, an eco-village located in the Marche hills. The community is based on an old farmhouse where workshops, seminars and meetings are organized with other communities. Following a first meeting the necessity of a new facility for the community has been raised, located on the north side of the farmhouse, where at the moment there are two old buildings in a bad level of decay. The new building has to provide 10 beds and a common area accessible for the community members and guests. In order to be able to experience a shared designing process with the community and to establish a partnership, spending a period at the ecovillage was considered necessary in order to get to work together and know all the necessities.



Sezione A-A' Scale 1:500

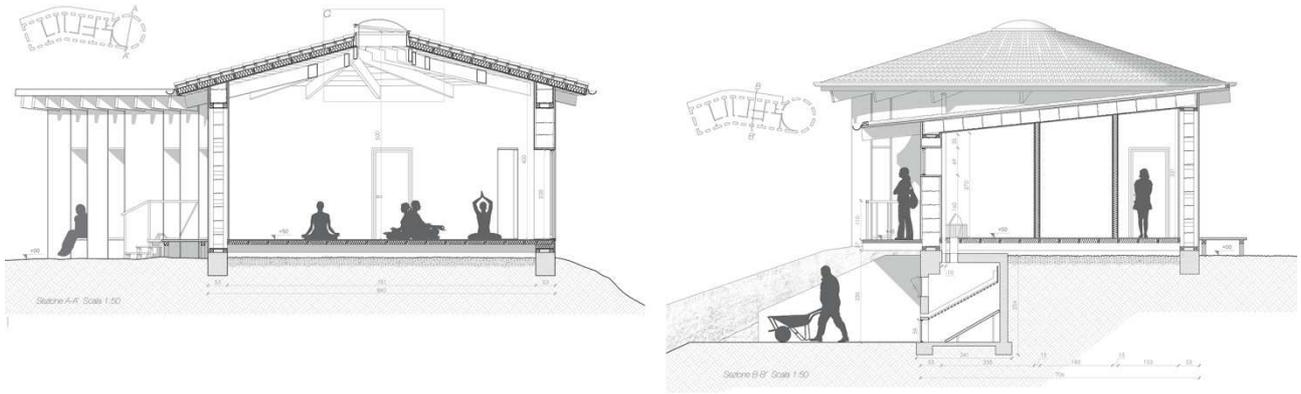


Sezione B-B' Scale 1:500



Sezione C-C' Scale 1:500

The designed building follows the principles of green building and fits the context harmoniously following the curves of the hills. The common area has a circular shape and reciprocal roof that recalls the way of living in a community. The studied construction technique is made of wooden supporting and cladding in straw bales, low cost material and easy to get in the region. As an alternative of wood it has also been presented a bamboo proposal.



The Anpil Pay 2.0 workshop, useful for the design process, includes the design and subsequent construction of a residential prototype load-bearing straw for Haiti. The construction phase on site was particularly interesting, for the proper selfbuilding design, with their simple and modular processes.

The project carried out with the ecovillage satisfies the criteria of sustainability and economy, seeking to contribute to a practice of building in line with the principles of low tech architecture.

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