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

## Conversion of military sites: planning and technologies the example of Sangano (To)

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"More than 8000 military sites covering well over a million hectares will have turned over to civilian use by the turn of the century. NATO members as well as former WTO members have accounted for the majority of total known closures [...]. The largest closed bases may have employed tens of thousands of military and civilian personnel" (BICC - Bonn International Center for Conversion, Conversion Survey 1996, Oxford University Press).

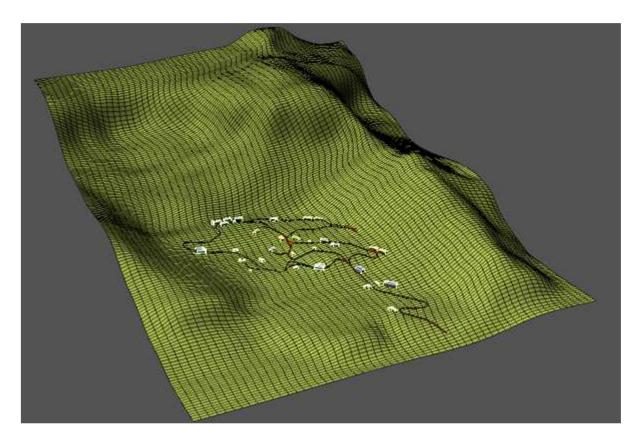
In Italy studies on conversion of military bases into civilian are still inadequate despite the considerable presence of facilities that need to be reclaimed. This research aims to provide scientific informations, reflections, theoretical concepts, practical examples and methodological informations to all those who are interested in conversion from military to civilian utilisation in Europe, particularly in Italy. A virtuous recovery of military areas, that are composed of different kind of buildings (barracks, shooting ranges, harbours, airports), potentially represents, for the inhabitants of those areas, an opportunity to improve their local context in environmental, social and economic terms. New areas, in certain cases already built, become available, enabling conversion studies, low energy consumption jobs, living quarters construction and the creation of new large green areas.

Military bases, especially those controlled by foreign armed forces, are historically included in cyclical process of renovation. It happens often that a military area is subject to movements and changes relating to variations in the international political situation and cutbacks appointed by new administrations. Governments place military facilities according to their needs, often related to strategic rationales. Even if a military base has been functioning for years, that doesn't invalidate the meaning of the reasoning: in United States "About 20-25 percent of all infrastructure is considered to be redundant" (BICC - Bonn International Center for Conversion, Conversion Survey 2003, Nomos Verlagsgesellschaft Baden-Baden).



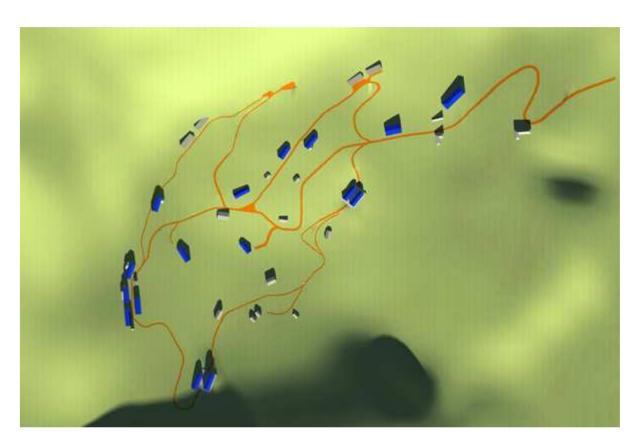
Web layout

The choice to use this web tool facilitate a free research and calls to architects, scholars and citizens promoting an exchange of their ideas by the *forum* linked to this website. Promoting renewable technologies is another important feature to achieve an environment sustainable architecture planning. Unused military bases that are considered in this research have a strong environment impact and clash with a model that is respectful towards environment. The process of Conversion of military areas to civilian, especially those that are unused, is a strong link between all this concepts and a nexus for recovery and innovation.



3d reconstruction of Sangano site

Today, the Italian government estate agency (Agenzia del Demanio), plays a leading role in the process of conversion and improvement of estates, also ex-military ones. During 2007 this agency, through two Decree laws, began to manage about 400 estates, previously owned by Ministry of Defence. Inside this website it is possible to refer to the list of those estates updated to 2009. One of these estates (Sangano) has been studied for a preliminary planning to connect the utilization of buildings covering, through the installation of photovoltaic panels, with the introduction of new productive activities. Choosing the way to use those estates should be the result of a democratic process with the contribution of both public and private subjects, that uses the *focus group* as an essential instrument for the definition of the project.



Shadow analysis

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