The ‘earthen cities’ itinerary

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1. Common efforts
During the last fifteen years, local administrations, Universities and small-medium enterprises (SMEs) shared common important efforts on local earthen heritage, recognizing in it both the historical-traditional identity of the Campidano flatland and an economical source [Sanna in Achenza, 2004]. A decisive reconnaissance of the building material earth and a strong solicitation run by public and private interlocutors has certainly favoured, if not caused, some recent events of absolute importance, among those are:
- The foundation of the National Association of the Earth Towns in 2002, which includes over 30 Sardinian local administrations and about ten others in representation of three different Italian regions (Abruzzo, Marche and Piemonte);
- The publication of the Manuals for the Rehabilitation of Sardinian Historical City Centres [Sanna et al., 2009], which are at the same time a vehicle of knowledge on Sardinian earthen building cultures and techniques, and a guidebook for local administrations confronted with recovery actions and city plan upgrades;
- The establishment of the Labterra, the Centre of Studies and Research on Earthen Architecture, at the Department of Architecture of the University of Cagliari in 1997, coordinated by the author (architect M. Achenza);
- The institution of the Earthen Building Cultures course into the Architecture BSc at the University of Cagliari. The course, held by the architect M. Achenza, is studied as part of the UNESCO Chair “Earthen Architecture. Building cultures and sustainable development”.

In these years, the close collaboration between the Labterra and the local governments has led to recovering a remarkable part of both the tangible and intangible earthen heritage of the Campidano area, fostering the growth of a new local adobe producing SMEs. Although these are mostly related to the buildings' rehabilitation and preservation, the earthen products market highlights an upward trend also in relation to the new construction and correlated activities. Getting the master craftsmen started on reassessing the local construction techniques and reactivating the local manufacturing-maintenance system, showing clearly that the reinstatement actions on the building heritage would be able to bring about the recovery of the whole area. This chain reaction, strictly related to the place’s potentiality, prepares the ground for that sustainable developing model, pointed out by scholars starting in the 1970s, who identified the local sources as the driving force for the economy and the development of the whole territory. The current limits to growth, resulting from the past consumistic-materialistic ideal based both on profit and the misleading belief of a limitless progress, demands an alternative sustainable model able to replace the Market idol with the quality of human life, in balance with the surrounding environment [Mumford, 1970; Barbier, 1987; WCED, 1987]. A radical change well-expressed through the Mumford quotation: “The goal is not «more goods for more consumers», but «more life’s possibility for more
men»” [1970, p. 455].

During the last forty years, the advances in the sustainability issues overcame the building size in favour of the environment [Garofalo, 2003; Droge, 2006, Lehmann, 2008]. In this broader scenario, the city is considered as a small part of a breakable ecosystem through which it feeds itself and develops [Rees, 1997; Scandurra, 1995]. This one-to-one relationship between the human environment and the local supplies, of which the history of the city highlights several significant examples [Mumford, 1967; Smil, 2000; Benevolo, 2006; Gallo, 1996], has led the Sardinian case study to identify in local sources the necessary challenge for its own economic and productive relaunch. In this light, the CIVIS pilot-project ‘The ‘earthen cities’ itinerary’ induces the Earth Towns network to look on the Campidano earth as the main strategy to combine the conservation and rehabilitation of its heritage with a new development policy, able to appraise the communities’ traditional culture, and foster a new local ‘green’ economy.

2. CIVIS pilot-project- the goals

Difficulties of the Campidano area, mainly concerning the town’s ongoing depopulation, had led seven local administrations to draw up the CIVIS pilot-project through which a new future development centred on the earth (Fig.1) could be built. The project, started in 2006 but is still in progress, has become the load-bearing structure for the social, cultural and economic recovery of the territory, starting with the rehabilitation of the existing heritage. It organises itself around the achievement of three main specific goals which require the city’s network cooperation. Those are:

- Promoting both the urban regeneration and the local sustainable develop-
ment supporting the “building good practices” into the rehabilitation, and new construction of earthen architectures and public spaces. It gives specific prominence to the application of local, natural and traditional materials. This goal involves both the environmental - architectural quality of interventions and the “sustainable” features of the earth (healthiness, recycling, environmental-friendly and energy-saving property, etc.). The latter in particular also responds to the current need of “sustainability”, widely supported by the European policies during the last few years, with the aim to reduce the high energy and material consumptions conferred on the construction sector [Perez-Lombard et.al., 2008]. In fact, the material and architectural features of earth respond promptly to the 3R policy-Reduce, Reuse and Recycle-originated from the Kobe G8 Conference in 2008, through which this ancient material regains new values as up-to-date construction material, able to guarantee high levels of thermal comfort and sustainability. This is not restricted to its physical characteristics, but involves the whole construction, maintenance and decommissioning building processes and culture.

These “sustainable” issues, shared among the CIVIS’s administrations, do not restrict themselves to the construction sector, but broaden to more natural and healthy living standards, well-integrated into the ‘earthen’ environment which involves all the local productive processes and techniques. In particular, among the project’s practical goals, it aims to combine the earthen heritage with the handcrafted and agricultural-and-food chain in the territory, using the adobe buildings (existent or new) to exhibit and trade in branded local products.

- Promoting the development of sustainable tourism, through the creation of cultural-tourist itineraries. The latter are joined with urban and architectural re-qualification actions with the purpose of incentivizing and supporting the ‘horizontal’ or ‘scattered’ hotels on the territory. Specifically, the project achieves high-quality scattered hotels in these seven different towns, recovering the existing earthen structures or building new ones, in both cases according to the best sustainable standards as introduced previously. Some representative traditional buildings will be recovered and used as domus amigas: these are “stations” and informational focal points of the earthen path. These “containers” function as a territorial network of info-points, laboratories and launch windows, where showing and selling handcrafted and food farming products. Furthermore, in a similar manner to the previous goal, the itinerary interlaces the town’s earthen buildings (belonging to the traditional heritage or new ones) with the cultural assets located in the territory, such as local customs, traditional knowledge, wine-and-food traditions, archaeological sites and monuments, countryside festivals, etc. In this light, the former are responsible for the task of developing and enhancing the hospitality industry in support of local events and attractions. Both the hotel industry and the cultural assets have being mapped and catalogued in a database shared among the administrations. This mapping system is applied to each earthen building and collects, through a data-sheet, the following main information:

- the building’s technical features and integrity;
- the building’s history and peculiarities;
- the building owners’ tendency, both in sticking to the itinerary and research activities;
- a final evaluation by the technical experts on the possible admission to the itinerary.

An example of this technical file is shown in Fig.2; it particularly relates to a public earthen building located in San Gavino Monreale. Finally, of the practical actions still in progress, it is planned to support tourism through physical and virtual products, as itinerary website and guides, useful to the dissemination of the touristic and cultural information.

- Promoting both technical-administrative cultures and social perception links to the earth. The aim is the creation of real technical and administrative local cultures able to manage the earthen heritage and ‘rehabilitate’ people’s traditional building culture, abandoned since the 1950s and 1960s and at present belonging to few. This goal is reached through the dissemination of knowledge as professional training courses, related to both the heritage conservation and the sustainable design.

Concerning these topics, the Labterra plays a referential role, having significant experiences both in educational and professional courses. Regarding the educational ones, the Labterra has carried out important measures to integrate and promote the earthen culture and techniques, at different levels of educational modules (such as university educational courses, national and international workshops, summer schools, lectures at secondary schools on construction, etc.), whereas in relation to the professionals, the formation...
course ‘for experts in adobe production and construction with earthen elements’ represents an important example of the Labterra’s active involvement in the training of specialized professionals [Achenza, 2008].

3. **CIVIS pilot-project- the Strategies**

The CIVIS pilot project identifies several strategies to meet each goal. The main ones are summarized in the Table 1, below:

At present, the project has carried out some cross-actions, mainly related to the second and third goals, focusing in particular, on the territorial map system, developed individually by each administration.

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<th>Goal</th>
<th>Strategies</th>
<th>Priority</th>
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<td>n.1</td>
<td>Activating integrated structures for cultural promotion, exhibitions and commercialization of branded products linked to the sustainability issues.</td>
<td>- promoting bioarchitecture; - giving value to local, natural and traditional materials and building construction techniques; - mapping representative earthen buildings and handcrafted - agricultural-and-food local producers;</td>
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<td>n.2</td>
<td>Building balanced synergies between the earthen building and cultural heritage’s protection and their touristic applications.</td>
<td>- establishing touristic-cultural itineraries and facilities on the territory; - earthen building heritage’s reclamation and requalification for service- touristic purpose; - requalification of public spaces; - activation of info-points with touristic purpose;</td>
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<td>n.3</td>
<td>Involving local administrations and creating different levels of experts able to manage both the existent heritage’s preservation and the new sustainable design, compatible with local environmental peculiarities.</td>
<td>- activation of laboratories and training courses; - activation and implementation of documentary centres and facilities for the knowledge collection, organization and movement of knowledge;</td>
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Table 1 Civis project’s main strategies and priority

4. **Conclusion**

In 2006, seven Sardinian local administrations presented the CIVIS pilot-project, and won the regional selection, through which they envisaged a different territorial model centred on tangible and intangible local earthen heritage. The main idea is based on the rehabilitation of the traditional earthen architectures and the earthen building culture, which has become the driving force to regenerate the whole area. This force does not restrict itself to the construction sector, but more broadly to more natural and healthy living standards, involving all the local productive process and techniques. In fact, the “sustainable” features of the earth, both as construction material and building culture strictly related to the territorial sources, combine well with the natural, biological and sustainable local handcrafted and agricultural-and-food pro-
ductive chain, each becoming the launch window of the other.

In this way, the project promotes, through the earthen heritage’s recovery, a different developing model for the whole territory centred on sustainability (sustainable architecture, sustainable construction materials, sustainable productive and construction cultures, sustainable tourism, sustainable hotel industry, etc.) and the dissemination of knowledge. Concerning the latter, the project particularly endorses the local cultural assets, promoting touristic-cultural itineraries and activating different levels of educational-training courses, related both to heritage conservation and sustainable design.

Thanks to the close collaboration with the University of Cagliari (Labterra Research Centre), the local administrations and the SMEs, these initiatives will stimulate a new territorial economy. The Labterra’s active support of the territory has aided the enterprises and governments to find in the "local" their main sources which contrast with the environmental disasters of globalization, and promote a future sustainable model in a consistent way with most recent European policies. In this scenario, according to many, the ‘local’ power, in balance with the surrounding environment, has become «the solution and not the problem» [Droge, 2006; Lerner, 2009].

Notes
1 The Campidano flatland is located in the Middle-South area of Sardinia and is characterized by the adobe building technique. The development of this building culture is due to the soil properties, constituted mainly of Quaternary sediments such as gravel, silt and clay, which have caused a predominantly flat, agricultural area.

2 The corporate charter of the National Association of the Earth Towns has been signed in Samassi (Sardinia) in February 2002. Founders of the Association are the Municipalities of Samassi, Villamassargia, Serramanna, Vallermosa, San Sperate, Musei, Samatzai, Segariu, Serrenti, Nuraminis, Selargius (all in the province of Cagliari), Montegranaro (pr. Ascoli Piceno), Casalinctranda and Roccamontepiano (pr. Chieti), Treia (pr. Macerata). (http://www.terracruda.org/associazione)

3 Labterra, http://www.terracruda.org/content/lab-terra.

4 The UNESCO Chairs on Earthen Architecture number 31 in the world and only 4 in Europe. The University of Cagliari gained the Chair in 2001 and, from then, it fostered several teaching and awareness activities. (http://www.unesco.org/fr/university-twinning-and-networking/access-by-region/europe-and-north-america/italy/).

5 In Sardinia, the earthen products market shows an upward trend, also regarding the new constructions. It is possible to read a short review on this in M. Achenza, 2003.

References


