

EARTHEN ARCHITECTURE – HERITAGE@ RISK!

Case Study 1 – Gela, Sicily, Italy

This case deals with the impressive remains of the fortified city wall, 8 metres high, of the old city of Gela in Sicily, a colony founded by Greeks from Rhodes and Crete in the Mediterranean Sea in the 7th century AD. There are remains of a public thermal baths of approximately the same period, and finally, well-conserved remains of a series of buildings (maybe an *emporium*) for receiving and dispatching goods which had been unloaded from ships, either according to their destination on the island by land route or by boat up the Gela river.

The first two remains can be seen within the public park, the others are currently being excavated. The huge sections of the city wall in mud brick were protected two years after the excavations (1954-56) by a cover of glass tiles, a protective measure which has done more damage than good, and now, the work of disassembling the tiles and consolidating the bricks is nearly finished.

Case Study 2 – Sardinia, Italy

This extremely large complex concerns civilian dwelling places at a sub-regional extent, that are scattered over more than half of Sardinia and at present include hundreds of houses, villas and rural dwellings dating from the Spanish occupation (about 15th century) up to the middle of the 20th century. In spite of good care and traditional maintenance by the current owners, this entire heritage will be gradually destroyed, as soon as the houses are abandoned or replaced by horrible constructions in concrete and plastic. Today, many villages, 20 at least, are protecting between 20 and 70 % of cultural heritage built in mud brick or earth.

In conclusion, these two examples should be registered as "heritage at risk" (which had been done already in Pouille; Italy, for the *trulli*, the old stone field shelters constructed in form of cones), due to their materials offering great help to the authorities responsible for preservation and conservation of cultural and natural heritage.

1 – Gela, Sicilie, Italie

Le premier est au niveau archéologique (à savoir, historique et monumental) mais avec une forme d'architecture très bien définie et dont l' hauteur arrive jusqu'à huit mètres. Il s'agit des restes imposantes de l'enceinte murais fortifiée de l'ancienne ville de Gela (Sicile méridionale), une colonie fondée sur la mer méditerranée par les Grecs de Rhodes et de Crète vers VIII^e siècle a. J.C; des restes d' un bâtiment thermale public, à peu près la même époque; enfin, des restes très bien conservés d'une série de bâtiments (peut-être un *emporium*), destinés à recevoir et répartir les marchandises, déchargées des navires, selon leur destination sur l'île, par voie de terre ou bien par traineau sur le fleuve Gela.

Les premiers deux restes sont à l'intérieur d'espaces verts ouverts au public, les autres sont à présent en cours de fouille. Les vastes portions en brique crue de l'enceinte furent protégées deux ans après les fouilles (c.1954-56), par un revêtement de dalles en verre; les dommages en ont été bien plus graves que la protection et à maintenant des oeuvres de démontage des dalles et de consolidation des briques sont en train d'être terminés.

2 – Sardègne, Italie

Ce complexe, bien très vaste, est au niveau de logement civil à extension sub-régional: il est éparpillé sur un peu moins de la moitié de la Sardaigne et à présent est encore constitué par centaines de maisons, villas et habitations rurales, datant dès l'occupation espagnole (env. XV^e siècle) jusqu'à la moitié du XX^e.

En dépit du bon soin et de l'entretien traditionnel de la part des propriétaires actuels, c'est l'entier patrimoine qui va se détruire, au fur et à mesure qu'on l'abandonne ou on va le substituer par des horribles constructions en béton et plastique. Beaucoup de Communes (une vingtaine au moins) abritent aujourd'hui entre 20 et 70 pour cent du patrimoine habité, bâti en briques crues ou en pisé.

En conclusion, il faudrait enregistrer les deux zones (on l'a déjà fait -à grande échelle- dans la Pouille, Italie, pour les *trulli*, les anciens abris champêtres bâtis en pierre, en forme de cône) comme "patrimoine à risque" en raison de leurs matériaux, offrant en telle manière un aide très valable aux autorités responsables de la sauvegarde et conservation de l'environnement soit naturel, soit bâti.

Case Study 3 – Moenjodaro, Pakistan

Moenjodaro is an archaeological site on the Indus River, in Pakistan. It is a very important site in terms of the world, being on UNESCO's World Heritage List, and also in terms of earthen architecture. It is now attacked by the water of the surrounding Indus river. Being on a small platform above the river (some argue that this platform was built on purpose to settle the city), it heats up more than the surrounding fields (at the same level of the river), making it a preferential place of evaporation. The movement of the water is thus from the Indus River, through the cultivated fields, dumping fertilisers and other chemicals, to the archaeological remains, that act as evaporating antennae. The salts carried by this water, from fertilisers, etc, crystallise at the earthen surface of the remains, and have a physical-chemical behaviour that destroys those very thin surface layers.

UNESCO had a protection program at this site, that ended in 1997, but the results were not satisfactory enough. Amongst other items, it consisted in:

- Lowering the water level at the site, through the installation of a large number of tube-wells to dump the water before it reached Moenjodaro. However, it did not work out as expected and the evaporation phenomenon still continues, and the daily formation of crystal-hydrolysed salts (at 37° C) still continues, causing a continuous degradation of this very important site
- River-flow control by providing hockey / T-shape sloping spurs and the armouring of the existing bunds facing the river
- Plantation and landscaping to provoke more water absorption
- Conservation of structural remains by the "Moenjodaro Conservation Cell" (MCC)

It is urgent to take care of this site, which is one of the keys of our civilisations, as well as a link between East and West, Europe and Asia (see also p. 152).

Case Study 4 – Central Asian Sites

The Earthen Architecture International Scientific Committee has deep concerns over Central Asian sites especially in the former Soviet republics, considering these sites to be heritage at risk.

ICOMOS International Scientific Committee for
Earthen Architecture