

## THE CULTURAL HERITAGE MAP OF APULIA PROJECT

### 1. INTRODUCTION

The editing of the new Regional Territorial Landscape Plan (PPTR), started by the Apulia Region at the end of 2007 with the coordination of Alberto Magnaghi (University of Florence), has opened a new season in the planning of the territory of Apulia and in the protection and enhancement of its landscapes. The Region Authority, actually, through the Regional Department of Land Management, has intended to promote a complex series of initiatives culminating in the draft of a new Plan, which will replace the existing Thematic Territorial Urban Plan for the Landscape (PUTT/P) (Deliberation of Regional Council 15 December 2000, no. 1748, BURP no. 8, suppl., 17 January 2002).

The process of drafting of the new Plan includes a specific activity in order to give a systematic aspect to the knowledge of the Regional Cultural Heritage, through the cataloguing and georeferenced localization of the Cultural Heritage of Apulia (LUCCHESI, CARTA, DI ZANNI 2008; VOLPE, DI ZANNI, LAURENZA 2008). This methodological route was born to develop «an idea of the landscape planning which, overcoming the constraining character applied to some preservation areas, would have the objective of enhancing actively territorial and landscape heritage, combining long duration identity and short term innovation, landscape and economy, the value of existence and the value of use in lasting and self-sustainable forms» (A. Magnaghi).

This activity is embodied in the draft of the Cultural Heritage Map of the Apulia Region, with which the four Universities of Apulia and the Regional Central Department for Cultural and Environmental Heritage, with the technical collaboration of InnovaPuglia, have been entrusted.

The project has so far led to the census of almost 10,000 sites, but the number is expected to grow rapidly (Fig. 1). Actually, the Map as well as the Plan, will continue to be updated by the activities of the Regional Observatory for the Quality of Cultural Heritage and Landscapes, in the implementation phase, and with the creation of which, as provided by the Code of Cultural Heritage and Landscape, Apulia becomes a leader in the Italian scenario, since for the first time in Italy it will be possible to make a constant and integrated monitoring of Cultural Heritage and landscape on the regional territory.

Since the Cultural Heritage Map «must form the basis for the identification of unbuildable areas, respectable areas, controlled use areas, to be determined, through a graduation of interest, in the planning phase» (Deliberation of Regional Council, no. 1787, 28 November 2006), the subject

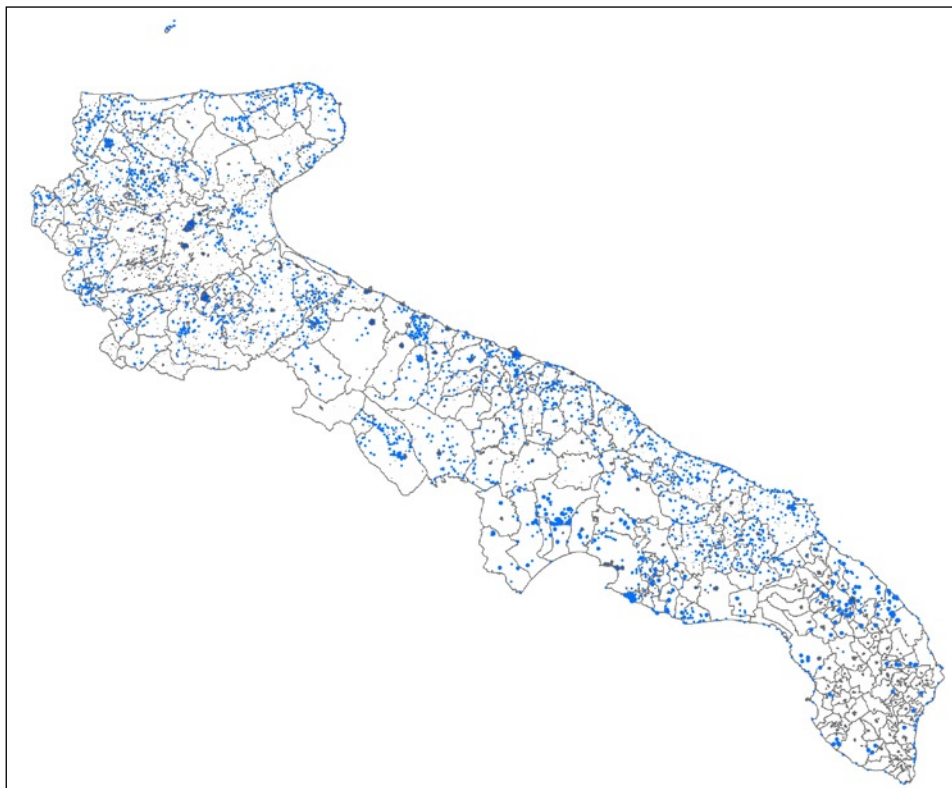


Fig. 1 – The Apulian Cultural Heritage localized by the Project.

of the census were all the buildings and the areas of cultural and landscape value located in suburban areas (in particular the buildings and the areas referred to in articles no. 136 and no. 142 of the Code of Cultural Heritage and Landscape), already published or whose data were present in the archives of Superintendence Offices, Universities or other Research Organizations that have been operating in the Apulia Region.

To these data all the other data gathered through previous instruments of regional, provincial and municipal planning have been added. It is therefore a *corpus* of data quantitatively and qualitatively significant that for the first time is collected and managed through a single computerized data management system, composed of a GIS platform, and an alphanumeric archive associated with it, destined to become soon a webGIS.

The particular system of sources used ensures that the Map represents nowadays the mirror of the state of knowledge of the Cultural Heritage of

Apulia. So, if for some territories, such as the Tavoliere Plain, the long tradition of systematic researches on the field, has revealed their extraordinary wealth in terms of Cultural Heritage, other territories now seem insufficient regarding the quantity of Cultural Assets counted and the quality of descriptive data associated with them.

Moreover, regarding the type of data used, the working groups have chosen to examine and assess also reports provided by publications of local relevance or more ancient ones, sometimes the only evidence of no more visible or unknown Cultural Assets. In addition to estates, it has been decided to file even the rich Epigraphic Heritage, for the most of Roman Age, that the Region preserves. This heritage, of which sometimes only the memory of the site of origin is kept, often allows supposing the presence of sites otherwise unknown. Although characterized by the limitations as described above, the Map is to all intents and purposes a turning point in the state of knowledge of the Cultural Heritage of Apulia, as well as a valuable instrument thanks to which it is possible to plan a new season of research, also in accordance with the intentions of the Region, or as a «dynamic instrument and in progressive updating in accordance with the progress of knowledge» (see Deliberation above).

The acquisition of such huge heritage of knowledge will allow planning a sustainable development of the territory, able to strengthen the already existing infrastructure apparatus, promote the exploitation of available natural resources and the retrieval of new sources of energy, limiting the conflicts with the needs for protection and enhancement of the Cultural Heritage. Therefore, the Cultural Heritage Map is an instrument now more than ever necessary in a Region as Apulia, which has witnessed in the last years a rapid spread of wind plants, expansion of cities and industrial areas, research for places and modalities for the disposal of waste.

The objective of the first stage of the Map, which started on 16 September 2007 and which ended on 31 December 2008, has been to identify all the estates and areas of cultural and landscape value, located in suburban areas, already published or whose data are present in the archives of Superintendence Offices or Universities. In total about 10,000 sites (5683 polygon sites, 4017 point sites, 161 not located sites) have been filed including 346 ancient cities, and 319 modern cities, 1000 topographical units (743 polygon, 248 point, 10 not located); and about 1400 constrained areas (605 direct architectural constraints, 99 indirect architectural constraints, 457 direct archaeological constraints, 129 indirect archaeological constraints, 141 landscape constraints).

For this purpose a computerized system for data management composed of a GIS and an alphanumeric archive has been realized. The activity of processing of the alphanumeric archive has revealed itself to be precious

thanks to the support offered by InnoVaPuglia, with the coordination of C. Caroppo, whose contribution to the work of the Map has been to ensure compatibility with the structure of the Territorial Information System (SIT) of the Apulia Region. A significant contribution to the creation of the models of the maps and the construction of the information architecture of the archive has been supplied by S. Laurenza.

A.BA., G.V.

## 2. THE STRUCTURE OF THE CULTURAL HERITAGE MAP

### 2.1 *The themes, the conceptual pattern*

The map has been divided into three essential themes: the Cultural Heritage Map, the Landscape Map and the Map of Constraints. It describes the cultural characteristics of the territory, with particular regard to estates and areas referred to in articles no. 136 and no. 142 of the Code of Cultural Heritage and Landscape. The Landscape Map includes civic uses, landscapes to be restored, anthropic landscapes and water landscapes. The Cultural Heritage Map includes all the Cultural Heritage scattered all over the landscape, the historical routes, the sheep-tracks, essentially all the buildings and the areas of cultural and landscape value located in the suburban areas. The historical cities, which are naturally part of the Cultural Heritage, have been described and represented as Cultural Assets themselves. The Regional Central Department for Cultural and Environmental Heritage of Apulia has also instructed consultants to identify and report, with reference to the whole Cultural Heritage of Apulia, farmhouses, towers, castles, churches and anthropic landscapes of particular value in order to arrange appropriate forms of protection. In the end, the Map of Constraints has traced out the perimeter and described all the located archaeological, architectural and landscape constraints existing on the regional territory. Printed documentation in digital format of such constraints has been acquired.

The implementation of such an articulated and complex project has naturally required a long phase of study, working out and testing of appropriate instruments to collect and describe effectively different types of Cultural Assets. The first phase has provided the analysis and study of the most important Italian and European experiences of cataloguing and application of information systems to the field of Cultural Heritage (GELICHI 2001; FORTE 2002; BUORA, SANTORO 2004). However, none of these experiences could represent, alone, a reference model, since generally the projects for cataloguing that were realized concerned only one type of Cultural Assets, i.e. in particular the archaeological ones. Regarding the Map of Apulia it has been necessary to extend this census also to the so-called architectural assets, cities, sheep-

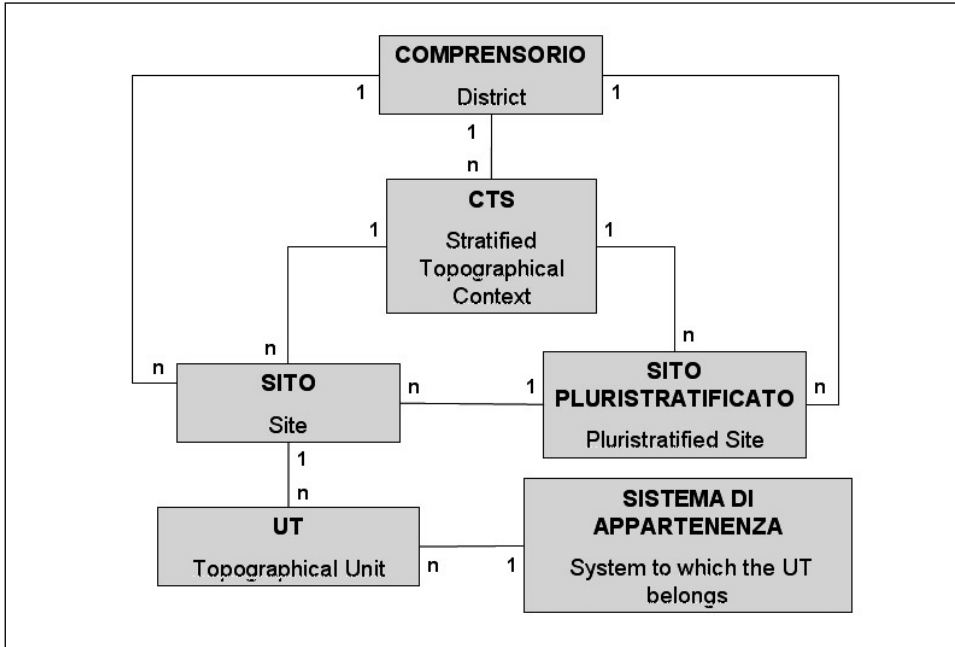


Fig. 2 – Logical structure of the *corpus* of data.



Fig. 3 – Example of a Plustratified Site in Ponte Albanito (Fg, Apulia): Neolithic villages, Roman farmhouse, Roman *villa*, Medieval farmhouse (“masseria”), Medieval castle.

tracks and the network of historic roads, and constrained sites. The source used in the work of census has been first of all the very rich bibliography existing on the Cultural Heritage of Apulia, with special attention also to the publications of local significance or to the more ancient ones, sometimes the only evidence of tracks nowadays completely vanished.

Then the census deriving from the analysis of all the publications has been integrated with the data collected during the still unpublished researches conducted on the territory by the same Universities of Apulia or by other Italian and foreign Research Organizations. Previous regional projects such as the Thematic Territorial Urban Plan for the Landscape (PUTT/P) and its accomplishments/adjustments, provincial ones such as the Coordination Territorial Plan of Foggia (PTCP) and municipal ones such as the General Urban Planning (PUG) have represented sources for the research of the Cultural Heritage reports as well.

The *corpus* of data, collected for the first time thanks to a single computerized management system composed of a GIS platform and an alphanumeric archive associated with it, is based on the concepts of UT (Topographical Unit), SITO (Site), SITO PLURISTRATIFICATO (Pluristratified Site), CTS (Stratified Topographical Context) (Fig. 2).

The concept of SITO unites all the Cultural Assets counted in the Map and allows overcoming the typical subject definitions referred to in the past (archaeological assets, architectural assets, etc.). Adopting the definition given by MANACORDA (2007), the site has been considered as «every place where history is deposited as a form of stratification» and as a «three-dimensional portion of space that bears within itself the signs of time, or the fourth dimension that has shaped it».

The minimum unit that helps to define a site is the UT. This definition, within the context of the Map, has a different meaning from the one that the concept points to in Landscape Archaeology. An example of UT with respect to the whole SITO may be one of the buildings that form a typical Apulian farmhouse called “masseria”, one of the huts that form a village or one of the tombs of a necropolis. This hierarchical type of breaking down allows, on the one hand, a more detailed reading of the settlements and, on the other hand, avoiding the risk of the multiplication of sites, also reported by MANACORDA (2007, 12-14) and resulting from awarding any type of evidence with the rank of site.

The use of the concept of SITO PLURISTRATIFICATO has also allowed taking into account and representing the rather frequent cases of stratigraphic overlapping of more sites (Fig. 3).

In consideration of the deeply contextual nature of the Cultural Heritage and, therefore, of the landscape too, the effort currently made is to overcome a model of a census that we could define “philatelic” (or in other words a model

which is based on a concept of the Cultural Asset as an isolated point) and to represent instead, through an interpretative effort firmly based on scientific data at our disposal, a reconstruction of the stratified landscapes of Apulia, from Prehistory to nowadays, able to reveal the *continuum*, or the plot in which those Cultural Assets have their origins and meaning, appearing to us as guardians of the identity-memory of the places and populations that lived in them (SETTIS 2002; VOLPE 2007).

The considerations made above clearly show that the methodological reflection, which directed some of the critical decisions of the project, not only regarding terminology but above all nature and evidence of the Cultural Assets to record, has been substantially affected by what we could define an “archaeological perspective”, or a scientific perspective which, by merging the principles of Landscape Archaeology (CAMBI, TERRENATO 1994) and those from Global Archaeology (MANNONI 1997; MANACORDA 2004), considers the Landscape and Cultural Heritage with the approach of Global Landscape Archaeology (VOLPE 2008).

A.BU.

## *2.2 A new conceptual model: the CTS (Stratified Topographical Context)*

A further attempt to innovation in the construction of the knowledge and in the interpretation of Cultural Heritage is represented by the experimentation of new conceptual models and at the same time of cataloguing ones. Starting from the observation of the deeply contextual nature of Cultural Heritage and therefore of the landscape, the working groups are currently engaged in an analysis aimed at recognizing, on the entire regional territory, some regional contexts significantly characterized by the peculiarities of their territorial mass, which is considered as «...historical accumulation of territorializing acts of different nature (such as: buildings, monuments, cities, communication infrastructures, ports, bridges, terraces, divisions of lands into farms, reclamations, channels, hydro-geological and environmental solutions)» (MAGNAGHI 2000, 63).

These areas have been defined CTS, or Stratified Topographical Contexts. Starting from the analysis of the wide basis of data now available, the attempt is to provide an integrated and diachronic reading of Cultural Heritage sedimented in a given territorial context, overcoming the model of census normally adopted, that we could define “philatelic”, which is based on a concept of Cultural Asset as an isolated point (VOLPE 2007, 20-32). One of the purposes of this interpretation level is to allow an integrated and diachronic reading of the relationship that has linked together some different Cultural Assets and of the relationship between these and their attendant historical, environmental and landscape context (combining factors), in order to grasp the co-evolutionary relationship and to provide, thanks to integration with data collected from the analysis of the Technical Secretariat of the Project, a support for identifying the

most appropriate forms and means of protection for all these territorial areas (Fig. 4). Moreover, through tracing out the perimeter of CTS, the potential use of landscape in certain areas has been reported highlighting the stratification of the Cultural Heritage and reporting any methods of use.

One of the first attempts made in this direction has led to the reading in terms of Stratified Topographical Context of a portion of land between the current city of Ascoli Satriano (Foggia) and the Carapelle River, where, along the definitely easier route rising from the river to the city, a concentration of settlements from the Early Iron Age follow one another continuously until nowadays (Fig. 5). The experimentation of the reading of cultural landscapes on a larger scale, or on the District, has been until now carried out on the Ofanto River, but expects to be improved through the overlap of the other descriptive components of the territory, in particular on the basis of environmental data. The detailed reading of this territorial sector was made possible thanks to data, in part still unpublished, collected during the research activities in the Carapelle River Valley conducted by the Laboratory of Landscape Archaeology of the University of Foggia (GOFFREDO, VOLPE 2007, 219-246; VOLPE, GOFFREDO, DI ZANNI 2007, 109-124). In some cases the possibility to insert, in the context of CTS, urban centres already subjected to protection being historical cities, such as e.g. Ascoli Satriano (Foggia), has been considered.

The proposal for the map for historical centres advanced in the context of the more general map for the construction of the Cultural Heritage Map has been inspired by the concept of historical city proposed by A. Magnaghi. The concept of historical city includes the ancient city (which starts roughly from the nucleus of the foundation and goes on to the various additions related to subsequent civilizations within the city walls or other natural or artificial boundaries) and the modern city (the city existing until the 1950s of the twentieth century, which has a variable date of foundation in different contexts, but, unlike the ancient city, concerns a stratification of two or three centuries). The group of the Cultural Heritage Map has been in charge of the historical city as part of the cataloguing, mainly with the purpose of preservation and enhancement; the Technical Secretariat of the Regional Territorial Landscape Plan (PPTR) has been in charge of contemporary urbanization (built after the second post-war), defining the main settlement morpho-types at a regional level, for which there is the need to define the critical points and, therefore, the types of landscape retraining and reconstruction interventions.

The proposed objective has been to combine in a unified regulatory framework, tracing out consistent perimeters, historic city (ancient and modern cities) and contemporary urbanization. The criterion for tracing out the perimeter of the ancient city is based on the systematic comparison between the buildings reported in IGM Cartography on a 1:25.000 scale of 1949 and the built elements reported in the historic IGM Cartography of 1870



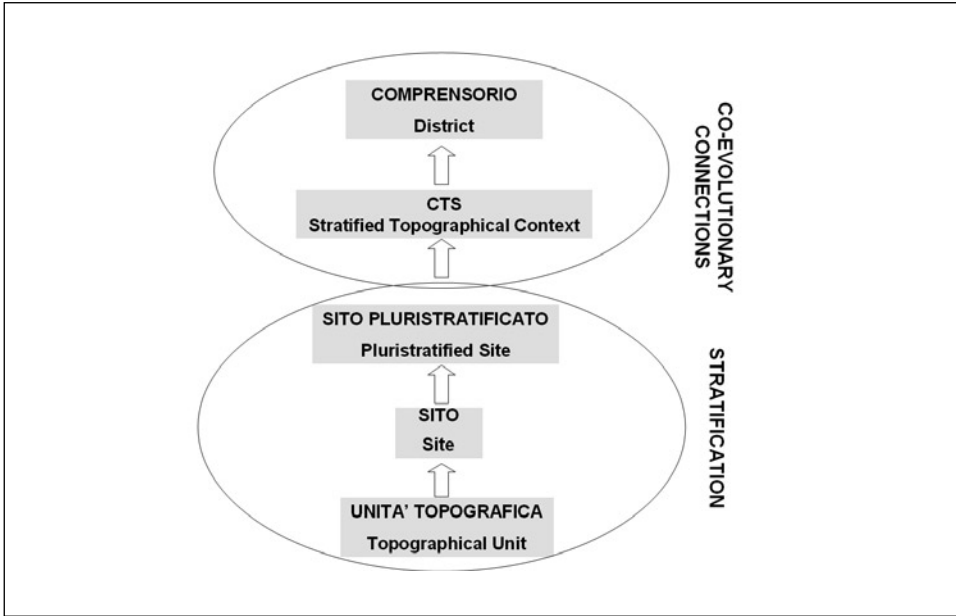


Fig. 4 – The conceptual scheme of the Cultural Heritage Map.

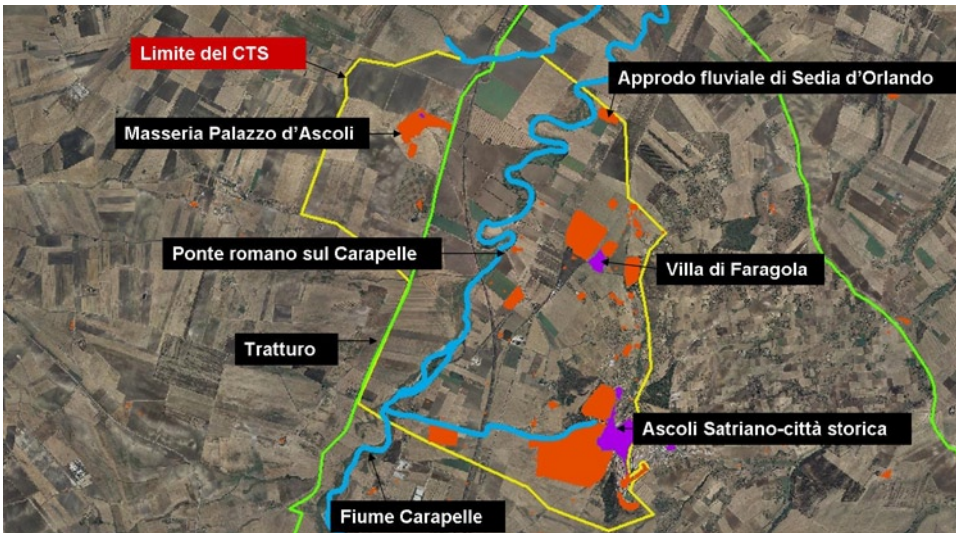


Fig. 5 – The Stratified Topographical Context in Carapelle River Valley.

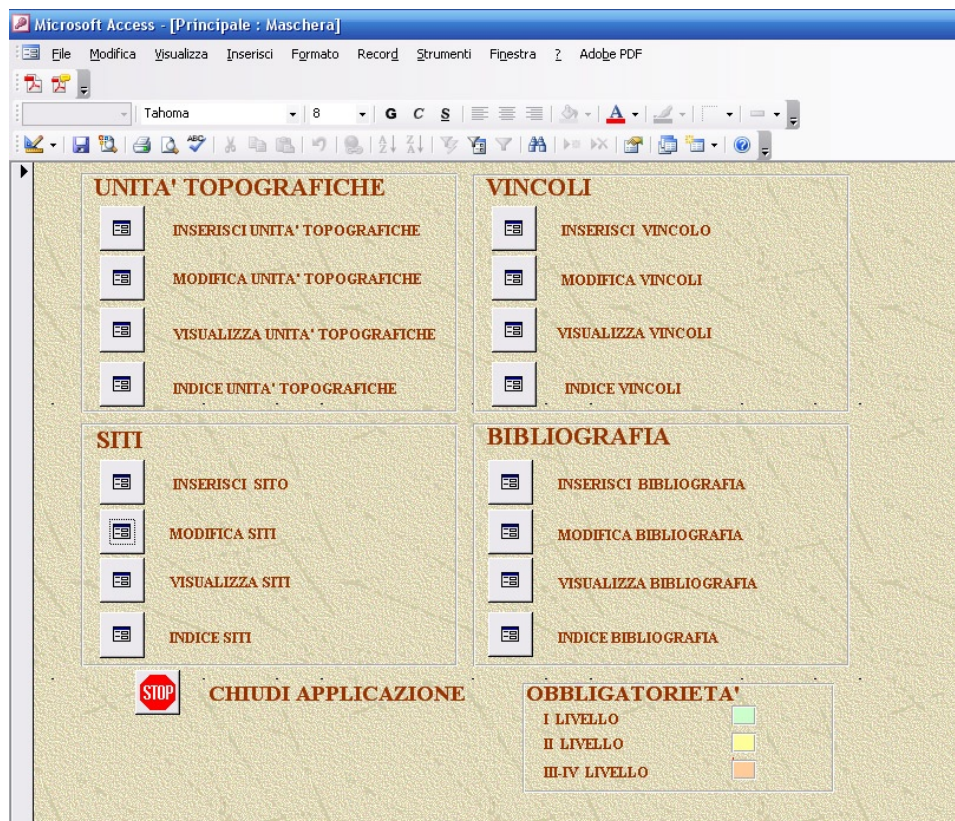


Fig. 6 – The entry form of the DBMS.

available on a 1:50.000 scale; the criterion for tracing out the perimeter of the modern city is based on the systematic comparison between the built elements in IGM Cartography on a 1:25.000 scale of 1949 and the Technical Regional Cartography.

R.G.

### 2.3 The structure of the database

The implementation of a Database Management System, articulated in a series of cards called UT, SITO, VINCOLI, BIBLIOGRAFIA (Topographical Unit, Site, Constraint, References), has been preceded by a long and complex cooperative work (Fig. 6). In the first phase the cards produced by the Central Institute for the Catalogue and Documentation (ICCD) have been scrupulously

analyzed: in particular the detection of fixed attributes according to the national regulations of Italian Ministry of Cultural Heritage and Activities has allowed assuring all the Institutions involved in the project of the respect of the basic parameters of the national catalographic standard.

It has thus been created a new model of sheet, focused on the basic concept of Site as Cultural Heritage, which allows cataloguing globally all types of territory data, representing, already at this stage, the different levels of vertical complexity (the stratification) and horizontal complexity (the co-evolutionary relationships) (Fig. 4).

The innovative element represented specifically by the UT sheets and the SITO ones is the fact that they do not refer to disciplinary and academic type distinctions among the Cultural Assets, but they tend to bring back, and therefore to describe, the Cultural Asset on the basis of its “objective” characteristics. By adopting a classification based on the concepts of Tipo (Type), Categoria (Category) and Funzione (Function) for which appropriate glossaries have been arranged, these sheets allow describing any type of Cultural Asset provided by the Map without distinctions such as “archaeological asset”, “architectural asset”, “historical-artistic asset”, which do not reveal anything about the real nature of the Cultural Assets, but they rather concern the discipline that traditionally made it the subject of study. According to the classification of Cultural Assets made on the basis of Tipo, Categoria, Funzione, for example, a site such as “Masseria” Tipo belongs to the “Settlement” Categoria and has a Living/Residential and Production Funzione; a site such as “Aqueduct” Tipo belongs to the “Infrastructure” Categoria and has the “Water” Funzione; a site such as “Sanctuary” Tipo belongs to the “Area/Place” and has a “Religious/Cult” Funzione.

The need to define in detail the different levels of DBMS has brought to the realization of a synthesis of the several terminological lexicons produced by ICCD, for the attributes of primary significance, i.e. Type, Category and Function. Thus, on the basis of predetermined codes for each Category and Function, the system, according to the choice of the Type, automatically proceeds with the registration of the Category associated with it. For the Function field instead a list of multiple-choice values freely associated with each Type has been preferred.

The objective of this new approach given to cataloguing work has been to overcome the fragmentation in different sheets according to the categories of Cultural Assets to describe, which is typical of models produced by ICCD, and rather to articulate the descriptive text through data normalization.

This overcoming has been made necessary, moreover, by the clear inadequacy of similar concepts to define pluristratified and complex Cultural Assets which are often those which stand on the territories of such a wide and uninterrupted anthropization as the Italian ones. Actually there are frequent

cases of a Medieval or Modern building with walls in a better state of preservation and therefore suitable for architectural type analysis which are generally defined “architectural asset”. This building may reuse part of masonry of a more ancient partly buried site and thus defined as archaeological.

The sheets related to the VINCOLI with all the information spaces useful for the registration of information regarding protection have been connected to the SITO sheet, which may include one or more UT. In addition, the SITO sheet can be part of a more complex stratified and topographical set, identified only on a representative level, such as the Pluristratified Site (identified by a specific code including all the cards of the sites that it is made of). The sheet related to the References has been then linked to the UT and SITO sheets, in order to make the extraction of a list of references possible at any time.

A final observation concerns the cataloguing of the historical settlement-infrastructure systems, consisting of roads, sheep-tracks, aqueducts, centuriation marks, but also by the system of coastal towers, divisions of land into farms, etc. These systems, mostly only in part known, have represented a problematic factor, which is difficult to include in the architecture described so far, made of UT and SITO (e.g. the emblematic case of the Via Traiana, whose route is well known thanks to a series of sources of different nature and of which has been identified and investigated only in some sections).

Such evidence cannot be treated as a Site, nor can be the whole Via Traiana, which rather crossed many sites along its route. The methodological reflection conducted in the context of the project has led to a different solution, which provides the cataloguing of the single, partial evidence as UT (e.g. a stretch of road, aqueduct, centuriation marks), related not to SITO but, precisely, to settlement-infrastructure systems, equipped with a specific code and called SISTEMA DI APPARTENENZA (i.e. the system to which the UT belongs).

In the end, regarding the definition of the horizontal level of the logical structural system (i.e. the one characterized by co-evolutionary relationships), the sheet of CTS has been made (cfr. *supra*). In response to a contextual vision of the historical landscape, this sheet collects all the useful data for the definition of a complex system, but in any case consistent system, including all those components (objects or traces) and those (environmental, temporal and spatial) data useful for the definition of a dataset or a set of complex data based on “functional” type reports.

C.A.

## 2.4 *The data processing and cartographic representation*

As regards the more properly mapping aspect, the Map is characterized by a high level of precision in the location and perimeter of the Cultural Assets, thanks to the possibility of using as a cartographic base the Regional Technical Map on a 1:5000 scale and the original and high definition Orthophotomap



Fig. 7 – Example of localization of SITI and UT on the basis of the new Regional Technical Vector Map.

realized on purpose. Such accuracy is essential for the purposes of protection and planning for which the Map has been promoted. The representation of the Cultural Assets, in accordance with graphic possibilities offered by the GIS platform (point, line, polygon), has been made by tracing out the perimeter of polygons in the case of areas or buildings with certain localization, by using points in the case of features with not defined or exact location and extension, and by using lines in the case of elements, mostly identified on the basis of aerophotographic tracks, of which the linear trend is known, but the largeness is difficult to define.

The guidelines useful for establishing the basic procedures of the graphic digitalization of the several UT and Sites, as well as a series of best practices for all the working groups involved have been defined. First of all, in order to provide InnovaPuglia, responsible for the final management of the Information System of the Region of Apulia, with the format of the final files, the shapefile format (.shp) – standard established by OGC (Open Geospatial Consortium) – has been chosen. The cartographic basis on which the several groups have digitized the graphic elements are the new Regional Technical Vector Map on a 1:5000 scale, with WGS84-UTM 33 system, and the Orthophotomap 2006. The cadastral maps, useful for tracing out the perimeter of the Constraints carried out by the working group of the Regional Department for Cultural Heritage, have been added to the ones mentioned before (Fig. 7).

Analyzing more specifically the data to be graphically represented, it has been noted that actually, since most of the data has been acquired from bibliographic references, the positioning of UT and SITO, on a cartographic base so detailed and different from the one used by the authors, has been often difficult. Actually, the cartographic basis used in publications are often very simplified and schematic, useful as a reference for the topographical positioning of Sites, and those few which are positioned, are mostly positioned on cartographic tables of IGM on a 1:25.000 scale. Therefore, a georeferenced mosaic of the 1:25.000 IGM tables related to regional territory has also been used as a simple “functional reference level” for a quicker identification of the location areas of the sites. As regards the software, the choice has been made on the GIS processed by the regional administration and by InnovaPuglia, who have also the task of creating an interface with two level access different for basic and expert users.

For the definition of the modalities of graphic representations of UT and Sites, the parameters established show that they are expected to have the following forms:

- Polygon: well defined, positioned and georeferenced unit. It is the case of all data from on field activities (see field surveys and excavations) and from detections by Remote Sensing, and in particular low level aerial photographs.
- Point: data whose location and position are uncertain, and have never been georeferenced (see data from references and historic archives).
- Line: all those elements of which it is possible to determine position, georeference and linear, but not dimensional development, or largeness (see data from photointerpretation and Remote Sensing, e.g. stretch of road, rests of walls, roads, paleo-riverbeds, etc.).

In this way a series of information levels that reflect the several types of data collected especially regarding the in-depth analysis of data, for each single UT and Site and the possibility to identify, with more or less accuracy, the position and area of the indicated entity have been produced. The GIS, exactly for its function of protection and prevention, as targeted to the implementation of the “Map of risk”, has allowed the production of four levels reporting: on the one hand the survival of the Cultural Asset, on the other hand the possible risk to which it is subjected to. The first level corresponds to areas of archaeological interest in accordance with letter m of the article no. 142 of the Legislative Decree D.Lgs. 142/2004, the second one to archaeological risk areas (e.g. areas of fictile fragments with perimeter traced out as polygon), the third one to areas requiring urgent in-depth analysis (assets localized with punctual geometry), the fourth to areas with insufficient documentation that need to be subjected to in-depth analysis in case of interventions.

A.V.R.

### 3. CONCLUSIONS

#### *3.1 The critical points and the limits of the project*

The project outlined so far has been complex and articulated not only for the content but also for the skills that have been involved in the work and have contributed to the implementation of the project itself. From the start some critical points due to the dimension and complexity of the project have emerged. These critical points concern the presence within working groups of different disciplinary components, research traditions of each single University, operating with different approaches and on different territories, the need to identify Cultural Assets of many types, each with specific traditions of studies, the necessity to meet adequately the needs of the Regional Department of Land Management.

However, the same elements of complexity have been an extraordinary wealth for the project, which can aspire to become a “best practice” for example in the field of the prior assessment of archaeological interest, representing a model of methodological, disciplinary, institutional integration (MALNATI 2005; VOLPE 2008, 455-458).

Regarding the content, it is necessary to highlight that the Map does not represent nowadays the complete description of the Cultural Heritage of Apulia, but the representation of the state of knowledge of this heritage. Therefore, while for some territories, as the Tavoliere Plain, the long tradition of systematic researches on the field, carried out also by the University of Foggia, revealed the extraordinary wealth in terms of Cultural Heritage, other territories now seem insufficient as regards the quantity of counted assets and the quality of descriptive data associated with them.

Moreover, as regards the reliability of data, 43% of the identified and described sites are represented not by polygons but by points and are mostly difficult to locate because the informations about assets are not enough. Moreover, at the moment the network of historic roads is not included in the Map, except for the sheep-tracks, whose study the Secretariat of the Regional Territorial Landscape Plan (PPTR) has been entrusted with.

#### *3.2 Future development of the project*

One of the most innovative elements introduced by the Code of Cultural Heritage and Landscape seems to be the protection of the modern city, even if on the basis of criteria and regulation modalities perhaps different from the ancient city. Until now, the urban planning instruments have been entrusted with the protection and enhancement of the historical centres, except for single monuments, villas, historical gardens or monumental complexes reported by the Superintendence Offices, since the Landscape Planning as the

PUTT (*ex lege* no. 431/85), is referred to open suburban spaces, therefore it excludes the cities.

However, the Code, referring to the definition of the landscape given by the European Landscape Convention (Florence, 20-X-2000) expects the Landscape Planning to deal with the whole regional territory, including historical city and contemporary urbanization. While for contemporary urbanization it is clear that, «except for some persisting assets of historical, artistic, cultural interest incorporated in the urbanization itself, the tasks of the regulatory and planning intervention concern mainly the Landscape Planning in relation to other planning tools» (MAGNAGHI 2008, 2), for the historic city the Map of Cultural Heritage may provide new regulatory instruments in order to integrate the policies and urban planning defining the prerequisites or the “structural invariants”, and giving these the force of a superordinate constraint.

Moreover, among the innovative instruments created there is the one that will allow each user who uses the Map on line to report personally known Cultural Assets absent in the census. This procedure will enrich more the framework with the knowledge of the territory and will be an effective procedure for the involvement and participation of citizens in the project as provided for by regional, national and local documentation (QSN 2007-2013, 105; DSR 2007-2013, 118-119; LINEE GUIDA AREA VASTA 2007, 14-15).

It will also be desirable to define a procedure allowing any organization responsible for research, protection and enhancement of Cultural Heritage of Apulia (Superintendence, Universities, Region Authorities, Local Authorities, etc.) to update the system through the transfer of possessed data to the Regional Observatory for the Quality of Landscapes and Cultural Heritage that will ensure standardization in phase of implementation. This procedure would be useful, in particular for the Municipalities whose Cultural Heritage is at the moment less known. In this way it will be possible, moreover, to ensure the continuation of a “direct line” created among the Regional Authorities, Universities and Regional Central Department for Cultural and Environmental Heritage and therefore the constant updating of the Map, without which it risks a rapid obsolescence.

In the end, Universities may provide systematic projects dedicated to the verification on the field of the sites located as uncertain points, so they can further specify the degree of reliability of many Cultural Assets listed in this stage.

A further and strategic line of development may be to build an archive of the material and immaterial Cultural Heritage of Apulia, integrating the Cultural Assets counted in the Map with the other kind of local cultural resources. Therefore, it will be possible to carry out qualitative-quantitative type territorial analysis able to effectively support the policy makers and all the participants in local development (Touristic promotion agency, Local action



groups, cultural districts, Local Tourist Systems, etc.) in planning investments, strategies and policies of development and enhancement of the territory, in particular in the tourism sector (CARTA 2003, 2004, 2005).

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### REFERENCES

- BUORA M., SANTORO S. (eds.) 2004, *Progetto Dürres. Strumenti della salvaguardia del patrimonio culturale: carta del rischio archeologico e catalogazione informatizzata. Esempi italiani e applicabilità in Albania (Villa Manin di Passariano-Udine-Parma 2003). Alte tecnologie applicate all'archeologia di Dürres (Dürres 2004). Atti del secondo e del terzo Incontro scientifico*, Trieste, Editreg.
- CAMBI F., TERRENATO N. 1994, *Introduzione all'archeologia dei paesaggi*, Roma, Nuova Italia Scientifica.
- CARTA M. 2003, *Pianificare nel dominio culturale. Strutture e strategie per l'armatura culturale in Sicilia*, Palermo, Dct.
- CARTA M. 2004, *Strutture territoriali e strategie culturali per lo sviluppo locale*, «Economia della cultura», 1, 39-56.
- CARTA M. 2005, *Indicatori e strategie per la formazione di distretti culturali*, «Economia della cultura», 2, 195-207.
- DSR 2007-2013, *Documento Strategico Regionale 2007-2013 della Regione Puglia, approvato con Delibera di Giunta Regionale n. 1139 del 1 agosto 2006 (Bollettino Ufficiale della Regione Puglia, n. 102 del 9 agosto 2006)*.
- FORTE M. 2002, *I Sistemi Informativi Geografici in archeologia*, Roma, MondoGIS.
- GELICHI S. 2001 (ed.), *Dalla carta del rischio archeologico di Cesena alla tutela preventiva urbana in Europa*, Firenze, Edizioni All'Insegna del Giglio.
- GOFFREDO R., VOLPE G. 2007, *Fotografia aerea, archeologia globale e paesaggi antichi della Daunia. Esempi dalle valli dell'Ofanto e del Carapelle*, «Archeologia aerea. Studi di aerotopografia archeologica», 2, 219-246.
- LINEE GUIDA AREA VASTA 2007 = Regione Puglia, Assessorato alla Programmazione, Nucleo di Valutazione e Verifica degli Investimenti Pubblici, *Linee guida per la pianificazione strategica territoriale di Area Vasta*, Atto NVVIP, n. 151 del 15.5.2007.
- LUCCHESI F., CARTA M., DI ZANNI A. 2008, *La storia, lo spazio, il paesaggio. Una ipotesi di rappresentazione multi temporale del patrimonio culturale stratificato per la tutela e la valorizzazione dei beni culturali pugliesi*, in P. PERSI (ed.), *Territori contesi: campi del sapere, identità locali, istituzioni, progettualità. Atti del IV Convegno Internazionale sui Beni Culturali Territoriali (Pollenza 2008)*, Pollenza, Grafiche Ciocca, 101-110.
- MAGNAGHI A. 2000, *Lo sviluppo locale*, Torino, Bollati Boringhieri.

- MAGNAGHI A. 2008, *Nota sulla proposta di scheda per i centri storici per la Carta dei Beni Culturali*, Documento interno al progetto del PPTR, 10 gennaio.
- MALNATI L. 2005, *La verifica preventiva dell'interesse archeologico*, «Aedon. Rivista di arti e diritto on line», 3.
- MANACORDA D. 2004, *Prima lezione di archeologia*, Roma-Bari, Laterza.
- MANACORDA D. 2007, *Il sito archeologico fra ricerca e valorizzazione*, Roma, Carocci.
- MANNONI T. 1997, *Archeologia globale e archeologia postmedievale*, «Archeologia postmedievale», 1, 21-25.
- SETTIS S. 2002, *Italia S.p.A. L'assalto al patrimonio culturale*, Torino, Einaudi.
- VOLPE G. 2007, *L'archeologia "globale" per ascoltare la "storia totale" del paesaggio*, «Sud-est», 20, 20-32.
- VOLPE G. 2008, *Per una "archeologia globale dei paesaggi" della Daunia. Tra archeologia, metodologia e politica dei beni culturali*, in G. VOLPE, M.J. STRAZZULLA, D. LEONE (eds.), *Storia e archeologia della Daunia. In ricordo di Marina Mazzei. Atti delle Giornate di Studio (Foggia 2005)*, Bari, Edipuglia, 447-462.
- VOLPE G., DI ZANNI A., LAURENZA S. 2008, *La Carta dei Beni Culturali della Regione Puglia: dalla lettura del paesaggio alla progettazione dell'infrastruttura informatica*, in G. VOLPE, G. DE FELICE, M.G. SIBILANO (eds.), *L'informatica e il metodo della stratigrafia. Atti del Workshop (Foggia 2008)*, Bari, Edipuglia, 75-90.
- VOLPE G., GOFFREDO R., DI ZANNI A. 2007, *Herdonia e l'archeologia dei paesaggi della Valle del Carapelle. Per un museo archeologico diffuso*, in L. LONGO, V. VECCHIONE (eds.), *Sistemi locali e sviluppo. Lineamenti per un piano strategico*, Foggia, Claudio Grenzi Editore, 109-124.

## ABSTRACT

The Cultural Heritage Map of Apulia, started in September 2007, is a mapping project carried out by the Regional Department of Land Management (Apulia, Italy) in collaboration with the Regional Department for Cultural Heritage, the four Regional Universities of Apulia and the Regional Central Department for Cultural and Environmental Heritage. The project aim is to create a thematic cartography in order to archive, map and describe in detail the Cultural Heritage of the territory of Apulia, superseding the traditional method of cataloguing based on a concept of Cultural Heritage as spots on a map. The other main purpose of the project is to analyze and describe the stratified historical landscapes of the regional countryside, from prehistory up to now, as long-term evidence of the identity of people and places. These aims have been achieved combining different disciplines and methodologies and a geo-database which is part of the Apulia Region GIS organized in different themes and informative layers. This is intended to be an innovative and dynamic instrument for Cultural Heritage preservation and it is expected that conformity with the Cultural Heritage Map of Apulia will be the necessary requirement for the approval of every land-planning activity in order to preserve the local Cultural Heritage.