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Surveying and Actioning the Tangible and Intangible dimensions of Rural Heritage in RURITAGE H2020 Project

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Abstract

Rural Heritage is as important as it is difficult to circumscribe, identify and survey but it can also play a major cultural, social and economic role. This paper focuses on the methodology developed by the funded Horizon 2020 Project “Ruritage” where digital tools constitute a focus strategy for the regeneration process for rural regions. In this process the cultural and natural heritage of rural regions includes both tangible and intangible features the identification and visualization of which are very important for the new understandings created and effectiveness of its potential to be developed by local communities. An Atlas permits a simultaneous contextualization of various pilots for the uses required by the project where several pilots create networks for mutual learning process. A digital platform including a web GIS, based on OpenStreetMap, and a database constitute Atlas final output. It is part of a set of digital tools devised to support local stakeholders and monitor territorial developments.

The paper will discuss different kinds of contaminations: (i) highlighting cultural and natural heritage together with other resources; (ii) processing different kinds of data for a common purpose (iii) matching direct involvement of individuals and digital tools; (iii) creating a multilevel approach to combining tangible and intangible heritage through a multidisciplinary team. Critical issues of the developed methodologies will also be discussed.

Keywords: Cultural Natural Heritage, Intangible Heritage, Atlas, Rural regeneration, Rural heritage

1. Introduction

Rural areas encompass a large variety of outstanding cultural and natural heritage assets. They are an important resource warranting preservation and exploitation for improved life and well-being in rural regions and for raised awareness of cultural and heritage assets among local communities. Both a suitable exploitation and strong awareness can foster sustainable development in rural regions. At the same time, these elements allow the richness of the cultural natural diversity of European heritage to be preserved.

The RURITAGE H2020 research project (Rural regeneration through systemic heritage-led) strategies builds on a crosscutting vision of cultural natural heritage assets in their territories with these being surveyed to be activated as component of social, economic and environmental systems. It should be noted that it is an ongoing European research project, coordinated by the University of Bologna. The Politecnico di Torino university leads the work package of the RURITAGE Resource Ecosystem and is responsible for the rural landscape mapping and the Atlas.

The research gives shape to a very broad scenario of 20 use cases in 15 different countries, in Europe, and outside Europe selected to identify six Systemic Innovation Areas (Pilgrimage, Sustainable Local Food Production, Migration, Art and Festival, Resilience, Integrated Landscape management) where the research process allows the heritage-led regeneration process to be explored and experienced. Some use cases are UNESCO Global Geoparks namely “unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development” (UNESCO).

This rich and various scenario thus offers a very articulated dimension of cultural natural heritage in rural territories, both tangible and intangible. However, only in 14 use cases is heritage a driver of rural territories, while in 6 there are huge unexploited resources. The successful cases in the RURITAGE methodology function as role models for the extraction of best practices that become a benchmark and a turning point for 6 replicators.

In line with this main objective, the digital tools of the research projects constitute both a multilayered methodology for surveying (both role models and replicators) and a focus strategy for providing information and instruments to facilitate local communities in the regeneration process of their regions (replicators). A digital platform allows the integration of the tools and their combined functions as steps in an embedded process.

The RURITAGE Atlas is one materialization of this approach, and, at the same time, is the output of a survey of cultural natural heritage in the rural areas providing information for rural developments. It aims to integrate different readings of rural areas by creating a digital environment permitting a synthetic and analytic visualization of the heritage within territories, linking assets, traditions and cultural social economic capital. The platform combines its functions with other research tools. It will be made accessible on an open online data platform.



Fig. 1: The RURITAGE Atlas within the RURITAGE Resource Ecosystem.

2. Surveying and Mapping Rural Heritage

The RURITAGE Atlas focuses on rural territories and their complex cultural natural landscapes. According to the European Landscape Convention, landscape is “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (ELC, Florence, article 1). The Atlas identifies and highlights the multiple layers and functions of rural areas and human-landscape interactions, and provides integrated georeferenced information linking gathered data, maps, images, 3D models, written information, textual and visual narratives. The data gathered and processed are represented and displayed in such a way as to be accessed and navigated according to an integral information management concept, capable of supporting the replication and upscaling of the heritage-led strategies. Following this mapping approach, RURITAGE territories have been mapped, visualized and narrated within the Atlas according to an approach that is not generalist but, rather, finalized to the objectives of the RURITAGE research project. The result is a combination of cultural natural landscape mapping and a methodology tailored to meet project challenges.

The overall methodology for defining both the RURITAGE Atlas interface and attributes has taken into account a twofold goal: on the one hand, interface and attributes aim to highlight the rural challenges and the crosscutting issues identified in RURITAGE; on the other, the research project stakeholders, with their specific needs, both role models and replicators, have been recognized as the leading actors and the final users.

For this purpose, a collaborative methodology based on questionnaires was implemented as an innovative rural landscape data gathering for mapping. The data gathering methodology, in fact, aims

to activate a collaborative and creative survey for acquiring information and documentation. In this aim two data gathering campaigns have been performed by actively involving role models and replicators stakeholders through a collaborative approach. This approach allowed local stakeholders identifying in their area sites of interest by co-mapping and drawing its boundaries, as well as defining the most relevant elements they recognize as representative of their territory.

The processed information can be visualized and interrogated in the Atlas. The availability of different kinds of visualization of the stored information, which is managed through databases, makes it possible to focus either on the single rural region or on crosscutting features. This information is stored in a database and linked to different applications in the ecosystem through web services in order to maximize their usability and allow integration with other tools that could be added. As a result, in order to create the information system knowledge representation of the RURITAGE rural areas:

- (i) both “the common” and/or “the specific” features have been mapped and highlighted
- (ii) the mapping focus takes into account the clustered rural regions in systemic innovation areas as well as each rural region;
- (iii) Atlas entry points take into account these multiple layers;

at the data visualization stage, Atlas entry points follow the overall RURITAGE narrative based on systemic innovation areas, role models, replicators, and identified rural challenges.



Fig. 2: The pop up window displaying general information about the role model in Crete.

Through the Atlas it is possible to visualize spatially the rural context for 20 use cases with their cultural natural heritage. However, the holistic RURITAGE approach to rural landscape that combines heritage with social, economic, and environmental visions, made it necessary to take into account such human interactions with the territories, and, as such, the mapped features of rural landscape integrate several aspects. In particular, features related to the characterization of the systemic innovation actions have been considered. To this end, the Atlas is the output of an extensive surveying and mapping of the rural regions.

The mapped areas are large-scale territories with many different specifications of rural landscapes and cultural natural heritage, including geoparks, UNESCO sites, cultural events, local food, cultural routes. Their rich diversity has enhanced an extraordinary broad spectrum of cultural and natural heritage characterization. The approach based on a simultaneous mapping of their features in 20 uses cases has also introduced a comparative perspective thus allowing the broad cultural, biological and landscape diversity of rural territories to be better taken into consideration.

on this articulated variety of rural landscape in Europe and beyond, the Atlas makes available the rich and varied functions of rural areas and human-landscape interactions by building an integrated digital environment based on WebGIS where data, maps, images, models and other information are linked and georeferenced. Data have been organized into attributes and spatialized. These mostly refer to perimeters, areas or sights that can be visualized as lines, polygons or points.

Compared to a traditional GIS, the RURITAGE Atlas offers more advanced and accessible visualization and interaction among data, images, and other tools (e.g. Rate my view, Best Practices, etc.), the possibility of making queries and modelling information to address queries. It allows an overview of rural landscapes, filtering information, and making queries about crosscutting information. It is possible to interrogate the database through a search mask. Mapped data have been clustered in sets of information significant for the context of the project and allow a guided search of the data stored. Lastly the Atlas also integrates and displays information from other research and data sources (e.g. CORIN

land cover and Nature 2000 data).

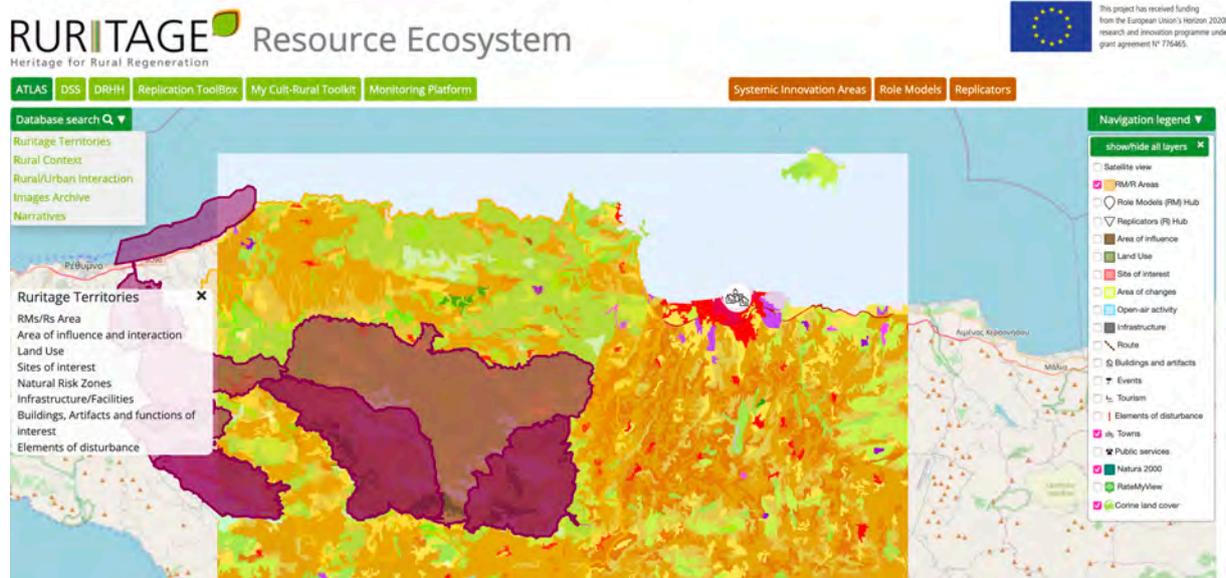


Fig. 3: Atlas queries and CORIN land cover data.

2.1 Conceptualizing Cultural Natural Heritage

The Atlas provides evidence of cultural natural heritage in the territories of the role models and replicators with information about their relevance to the main aims of the Ruritage project for rural regeneration. The final system of spatialized information is the result of a systematic and analytical survey that makes available the Atlas as a tool for enhancing the knowledge of the rural landscapes with tangible and intangible opportunities and problematic issues in the landscape mapped in great detail. The combination within the Atlas of both of the above is intended to highlight local specific catalysts for various territories.



Fig. 4: Atlas navigation and visualization of Rate my view App photographs.

In the Atlas the mapped features focus on and illustrate tangible and intangible elements of the cultural and natural sites. These include some important specifications of the rural landscapes: topography, sites, built/unbuilt environment, activities and main functions, land uses, infrastructures, rural/peri-urban and urban interactions, itineraries and other features, including cultural natural heritage and (specifically for replicators) elements of disturbance and interference. They also highlight infrastructures, accessibility, elements of disturbance and the main relationships between rural and near urban areas. These features refer to a complex system of sites, traditions, activities and land uses that is strongly related to local historical developments. It also refers to interactions between rural areas (with their

villages) and cities nearby. In cities, in fact, populations of rural territories can find some essential functions that may not be available in their own territory (e.g. special cultural function such as an opera, central governance function, main infrastructures such as an airport, etc.). Attributes are defined to provide information about the heritage of the Past of these regions as well as to illustrate their Present, with current situation and uses/re-uses, accessibility, main infrastructures.

On the other hand, the simultaneous contextualization of the rural landscapes of the pilots in the RURITAGE project is also intended to create networks for mutual learning processes between role models and replicators. For this purpose, the common categories of landscape reading have been identified also including a specific check on the six systemic innovation areas that allow a comparative perspective. For instance, the Atlas includes data about some pilgrimages in all pilots when relevant. The database has been designed to this end, and a filter system has been shaped in order to provide clustered information by queries.



Fig. 5: The layers of a Rural territory in Lesvos visualized in the Atlas.

2.2 Strategies and boundaries of the Atlas design

The RURITAGE Atlas approach is based on the cultural landscape concept of human interactions with natural areas, which has created a cultural integration through a number of factors. The RURITAGE Atlas strategy for conceptualizing, collecting and representing data has been devised to achieve this integrated vision of the rural assets: cultural natural heritage within its historicized territories. The output combines the possibility to highlight and to navigate the physical natural features with the human and cultural dimensions of those territories, its changes, its activities. In this way, the approach integrates space and time in the concept of the heritage of rural regions.

The mapped features thus do not seek to achieve a complete overview or a canonic “cultural landscape” or rural landscape identification. Despite the number of historical and cultural layers of landscapes, rather than focusing on the historical dynamics of landscape creation, the mapping especially emphasizes the characteristics of the places and their potentials.

The scale of the project approach requires that huge areas be taken into account and that different systems (for the purposes of regeneration processes) and many different categories be integrated at the same time. This large scale did not allow the heritage categories to be covered in detail nor the historical changes to be analyzed. For this reason, historical insights have been developed only for the six rural regions that function as replicators.

The information about rural regions and their qualification is rounded out with some quantitative data (e.g. demographic information, dimensions such as surface areas, etc.). The output of this mapping consists finally in a huge number of rural landscape features.

The Atlas is intended for a non-specialized public. The quantity of mapped data together with the large size of the territories can create some difficulties in Atlas use. It can be difficult for users to prioritize the information by navigating the territories. They will meet a great quantity of points and layers on which to click and open a pop window with information. The quantity of information may be both a source of excitement and frustration: they may get lost due to the sheer volume of data. Furthermore, there are many IPR issues that make it difficult to provide a full use of images, and especially of music and video (traditional music and dance).

As mentioned above, a guided consultation is also made available to overcome this limitation. The database can be queried in order to facilitate data clustering through key features. The search mask guides users in their research by providing a menu with a list of selected information. The final output

makes available a large amount of data, a full representation of the rural layers in the space, an interactive data visualization by queries. By navigating and entering in the mapped layers, it is possible to open pop up windows with a textual identification of the mapped data, and associated images or making queries through selected features.

From a technical point of view, the mapping process includes a double conceptual and operational path. Data have been organised and visualised through QGIS free open source Geographic Information System to identify and spatialise areas, borders, features and layers. The georeferenced information migrates into the RURITAGE Ecosystem platform in order to achieve a new kind of usability of the georeferenced data to be more easily navigated and interrogated by users. The aim of this process is to move beyond a GIS system visualization towards a richer and more user-friendly access to data.

3. Actioning Heritage-led rural regeneration

Globalisation has introduced new challenges in rural areas too. Bio and cultural diversity loss and climate change are among of the most pressing challenges of our time. Moreover, globalization requires a level of local developments that is very difficult to achieve due to the demographic, economic, and technological disadvantages of rural territories. Regions with difficulties in their accessibility via fast connections suffer problems of competitiveness in the global economy. The uncertain condition is made worse in isolated territories when some more critical factors exacerbate their instability. This is the case with illegal migration and the need to integrate migrants. Some Mediterranean islands, such as Lesbos, show this critical situation. Other rural territories have major problems due to the destruction provoked by natural disasters. In the mountain area of the Italian Appennines, for instance, there are villages that are still struggling to recover years after the last earthquake. Both these geographical areas face problems of isolation or risk that are challenges to overcome even under ordinary conditions.

On the other hand, these places such as Lesbos or the villages in the Appennines, also benefit from exceptional natural and cultural resources. Landscape studies deal with the multidimensional tourism-landscape relationship, “a holistic approach to culture-nature, people-landscape, local-global, tangible-intangible, agriculture-nutrition, consumers-producers, and past-present relationships, appearing as a new tool for local development through the utilization of local natural, cultural, human, spatial, and social capital” (PAVLIS).

The RURITAGE project focuses on multidimensional layers of rural landscapes with the aim of “achieving sustainable development based on a balanced and harmonious relationship between social needs, economic activity and the environment” (as mentioned by the European Landscape Convention). For this purpose, it includes migration and resilience among its systemic innovation actions together with other important heritage assets in rural regions such as pilgrimages, local food, art and festivals and integrated landscape management.

It integrates socio-economic objectives and the need for a technical knowledge able to create and enhance an integrated information system that makes available replicable solutions. By doing so, the RURITAGE approach goes beyond the state of the art of the transformation of a landscape resource into an asset. This approach can contribute to provide concrete solutions to local territories for “a heritage-led rural regeneration” via step by step guided regeneration process.

The strategies for regeneration capitalize on successful rural regions, with which the project establishes mutual learning activities for fostering knowledge exchange. A comparative perspective empowers this approach allowing rich analyses. The analyzed processes, with their capitals, challenges and barriers provide cross-cutting keys to interpretations. They become clues for understanding indicators of successful actions and for designing strategies of replicability in other regions, with other features, at different times.

In this context, the purpose of the Atlas is to provide a coherent rural mapping approach. With its huge variety of mapped rural territories, both of role models and replicators, it makes understandable the uniqueness of each territory and its heritage together to potential affinities in its management. It represents, in an interactive online system, some affinities that are actual and allows users to search for other potential affinities. The numerosity of use cases and the comparative approach are finally a powerful tool for understanding the natural, cultural and historical significance of the rich diversity of rural landscapes in Europe and beyond.

4. Heritage in Context

The mapping for the RURITAGE Atlas frames the intangible heritage of rural landscapes. “The landscape is part of the land, as perceived by local people or visitors, which evolves through time as a result of being acted upon by natural forces and human beings” (Council of Europe).

The Atlas thus focuses on the specificity of a place, with its uniqueness of sites of interest, biodiversity, cultural characterization, archaeological remains and historical developments in countryside, villages and small towns. It encompasses multi-layered aspects of the intangible heritage of the landscape. On the other hand, through a holistic approach, it also integrates cultural and social functions, such as collections in museums as well as art, crafts and food festival, and heritage buildings. These tangible and intangible features are also strongly connected with the cultural natural heritage of the rural landscape. They refer in fact to cultural heritage in the region as a whole.

In this way the Atlas links intangible values of landscape to physical sites and human artefacts, such as buildings and activities that are relevant for history, heritage, culture, nature, society in local territory. It stores, filters and connects non-homogeneous data. The Atlas finally appears as a network of information. It geo-localises and makes understandable cultural natural heritage in territories, by providing related information such as institutions and private stakeholders.

The Atlas thus allows enhancing the local Identities of rural territories, with the diversity of cultural natural heritage. However, landscapes are part of a dynamic process of continuous change. For this purpose, the cultural and natural heritage is always made readable in its specific context.

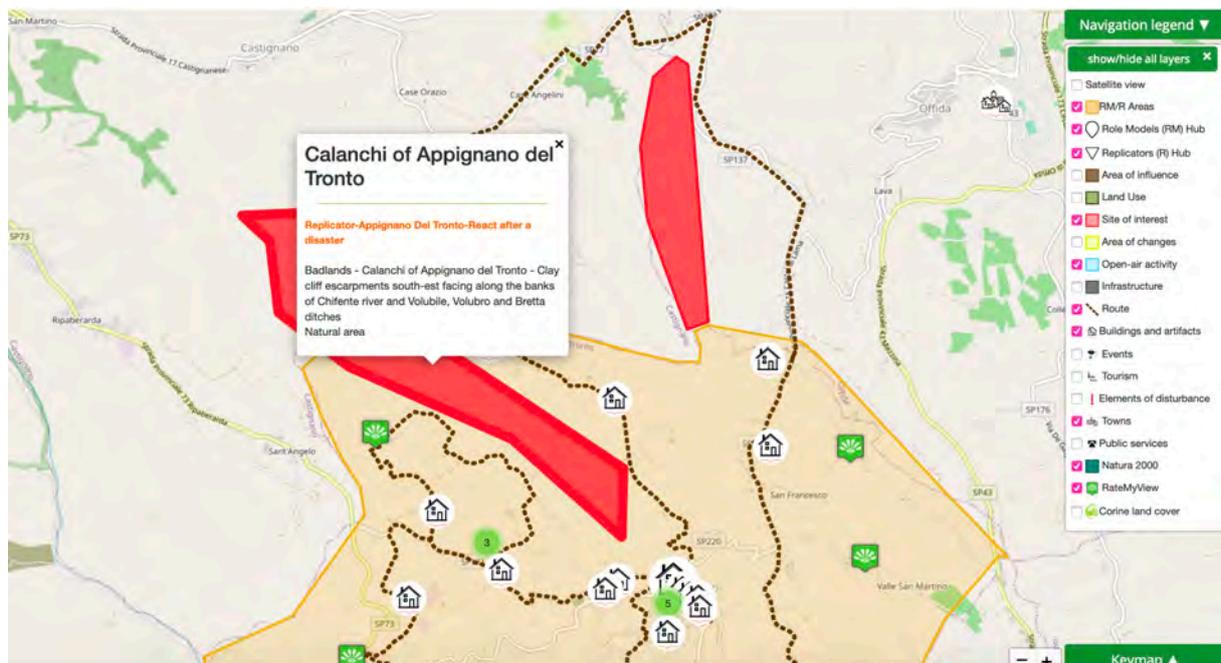


Fig. 6: Cultural Natural Heritage features in Appignano del Tronto react after a disaster replicator.

5. Conclusion

The rural heritage is mapped and appears in the Atlas in the context of its territory. Beyond symbolic, esthetic, and intangible dimensions of rural landscape, there is an integrated experience of rural heritage that is possible foster for enhancing a comprehensive vision of its values. This combination in the space of the current time can foster new understandings and strategies. The cross-cutting comprehension can activate cultural natural heritage as a catalyst for economic competitiveness and sustainable and inclusive growth.

Users can find in the Atlas a way for promoting the rich and diverse cultural natural heritage in rural territories, but also a tool for enhancing the awareness of this resource and the 'sense of place'. By exploring the Atlas, in fact, with its identification of features and visualisation of different components of local specificities in the wider context of the RURITAGE project, the range of opportunities can be more easily recognised. It can support decision makers, policy makers, land managers, investors, teachers and citizens.

By addressing a non-specialised audience, the RURITAGE Atlas will increase public understanding of the unique characteristics of cultural natural heritage and raise awareness of its environmental significance at a global level. Taking steps to understand it, the Atlas will help to protect and activate rural heritage and fundamentally increase public knowledge.

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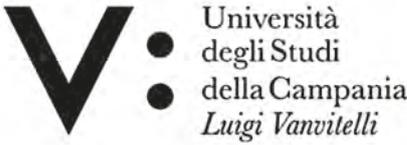
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