

Bioarchaeology as a means to enhance the territory

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Abstract. The bioarchaeological project in Valcuvia aimed to enhance and make accessible three archaeological sites in northern Italy. This initiative sought to address the historical, environmental, and cultural dimensions of the territory, using bioarchaeology as a multidisciplinary tool. Beyond unraveling historical narratives, the project aimed to preserve and revitalize forgotten archaeological sites, fostering sustainable redevelopment and tourism initiatives. The proposal encompassed archaeological research, museum site valorization, and multimedia dissemination strategies, creating an interconnected system for rediscovery, recovery, and promotion. The project involved local communities, offering educational programs, creating the *bioarcho.it* website and employing virtual reconstructions to facilitate remote exploration. Results included the completion of archaeological and anthropological investigations, closure of excavations, the end of the osteological analysis and the establishment of informative elements at each site. The project maximized impact, diffusion, and sustainability, contributing to the creation of the Insubre Bio-Archive for long-term preservation of the material retrieved from each site, but also from the Varese province. The bioarchaeological project in Valcuvia not only uncovered the historical tapestry of the region but also set the stage for sustained tourism, economic growth, and community involvement. The interconnected approach to research, preservation, and promotion serves as a model for revitalizing similar territories and fostering a positive relationship between history, institutions, and communities.

Key words: minor cultural heritage, peripheral archaeological sites, tourism, Bio-Archive, Valcuvia

Introduction

The bioarchaeological project of Valcuvia, developed between 2019–2023, has made it possible to enhance and make available three archaeological sites which have been subject to archaeological and anthropological investigation by our research group for several years (Licata et al., 2021). The three selected sites were the churches of San Biagio in Cittiglio and Sant’Agostino in Caravate and the crypt inside the church of Sant’Eusebio and Antonio in Azzio.

Bioarchaeology, a multidisciplinary field that unites archaeology with biological sciences, has emerged as a pivotal tool in unraveling the rich historical tapestry of Valcuvia, a geographical region nestled in northern Italy.

Valcuvia is a valley in the Varese area crossed by the Boesio stream, which flows into Lake Maggiore. The orographic watershed of the valley is formed to the south by the Campo dei Fiori (1226m) and to the north by the Sasso del Ferro (1062m), the Nudo (1295m), the Colonna (1203m) and the San Martino (1087m) mountain peaks, ranging from 1000m to just under 1300m above sea level. It has always been a very important territory because of intense passage and ancient connection between Ticino and the Alpine passes (Figure 1).

As an area steeped in centuries of cultural evolution, Valcuvia presents a unique canvas for bioarchaeological exploration. By delving into the biological remnants of past civilizations, bioarchaeology allows us to decipher the intricacies of human life, health,

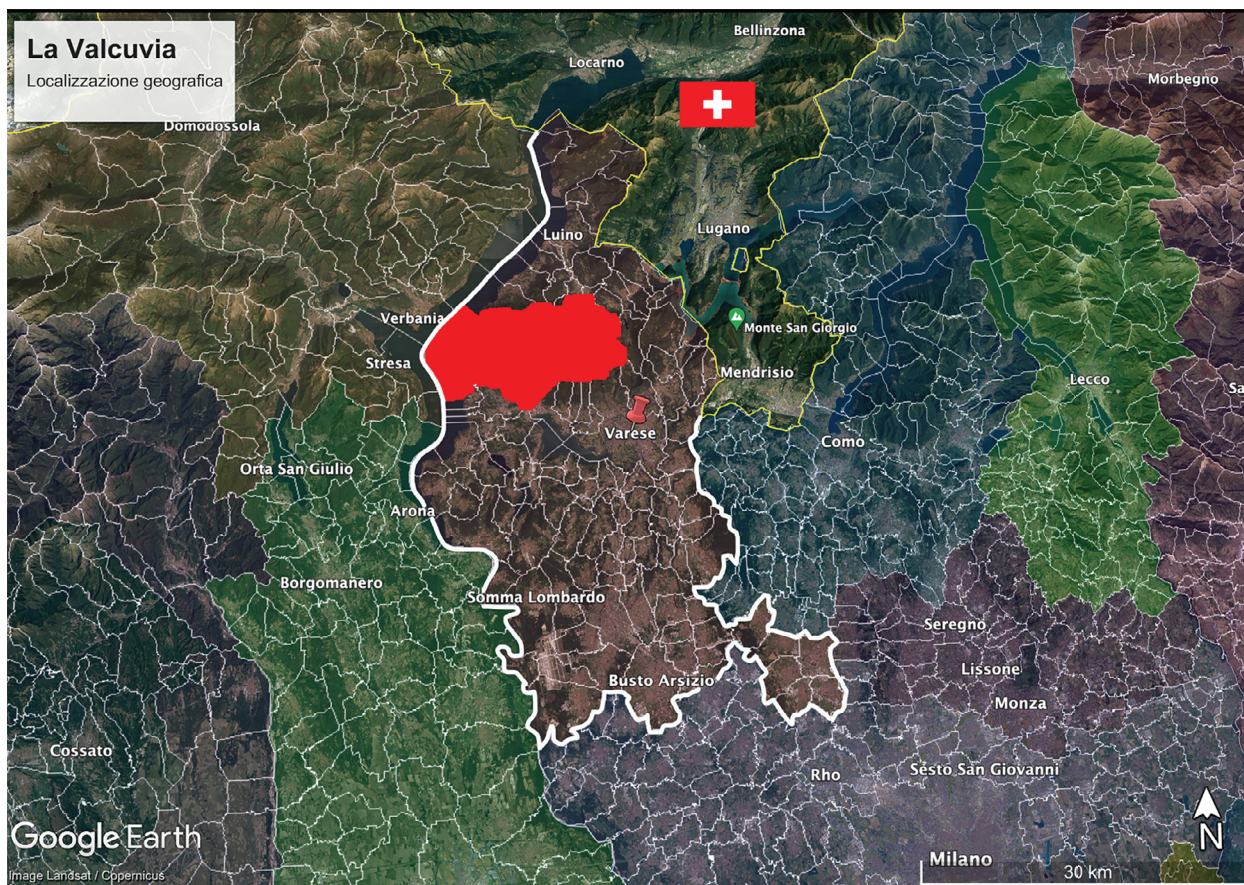


Figure 1. Geographical location of the Valcuvia territory

and societal structures that have shaped the territory over time.

The selected sites testify the ancient phases of Christianity in Valcuvia, from the 8th century to the Modern Age, and are representative of the religious rituals of the local populations (Mariotti, 2001; Ghidotti & Mariotti, 1988-1989; Binaghi, 2001-2002).

Furthermore, employing those strategies in Valcuvia not only aids in unraveling its unique historical narrative but also serves as a catalyst for a broader initiative aimed at preserving and revitalizing forgotten archaeological sites.

It is a duty to be concerned about the protection, valorization and dissemination of our heritage, considering how the management in the past of this territory with great archaeological and historical-artistic potential has been profoundly lacking.

From an economic point of view, until now there has never been any organic project for the enhancement or a coordinated promotion of summer or winter tourism.

From a social perspective there have been no harmonious proposals aimed at promoting, facilitating and building supportive communities, social capital and relational goods.

Until now, interventions aimed at promoting the culture, roots and traditions of the place and its people have been incomplete and poorly integrated, as have those concerning the environmental aspect, where there is still a long way to go for sustainable redevelopment of areas (Licata et al., 2021).

Faced with this situation, our desire was to propose a project for the valorizations of the countless development possibilities that Valcuvia offers, in relation to activities related to tourism, the environment,

its monuments, to its people and its history. There are many examples of possible activities and, with few funds and no environmental impact, it would be possible to start the all-around relaunch of this valley.

Unfortunately, also due to the lack of a network and an overall vision, similar projects have never been taken into consideration by the institutions so far.

The implementation of the activities, despite being simple and inexpensive, are a sure return in terms of development, work and promotion of the territory.

By leveraging the insights gained from our initiative, that we will present in detail here, we can affirm that this project is worthy of boasting the attribute of emblematic, in how much it was able to identify the critical issues and potential of the territory, aiming to “heal” one and increase the other. Its scope was to realize the needs of the community in question in strategies and actions aimed at safeguarding its past and its own materializations, protect the historical and population heritage and bring everything back to the level of “identity banner”, in which to recognize oneself and be recognized.

In creating this project, we realized how much the local communities care about the history of their territory and the valorizations of places of memory. The community was therefore involved in the creation of the program, its objectives and its implementation.

One of the cornerstones of the project is to propose an interconnected system of rediscovery, recovery, promotion, strengthening, enrichment and exaltation of a territory in its historical and cultural value, in order to then be able to give it back to the community itself, its inhabitants and others.

Having said this, it is clear that the objective set during the design phase, i.e. that of activating a positive relationship between history, territory, institutions and community, has been reached. The community today is aware of its places and its resources of the archaeological heritage enhanced and functional.

The territorial transformations generated around the three sites have a significant impact on landscape and environmental structures. All this will stimulate, following the inauguration of the bioarchaeology route, a tourism eco-compatible and, above all, attentive to the social, economic and cultural aspects of the territory of Valcuvia.

Methods

We have resumed the objectives initially proposed during the drafting of the project: i) promote and enhance the archaeological heritage; ii) enhance the landscape heritage and increase awareness of the three selected sites; iii) involve local communities in activities related to the archaeological route; iv) disseminate the results of archaeological and anthropological research; v) create tourist itineraries focused on the theme of bioarchaeology; vi) create a model of collaboration between public training institutions (Schools and Universities) and protection (Superintendence), with the support of local authorities (Municipalities) for the valorizations of archaeological areas and the surrounding territory; vii) increase the activities of the Valcuvia area, the availability of the archaeological, artistic and cultural environmental heritage and the promotion of archaeological itineraries; viii) increase the reception capacity of local populations; ix) increase employment levels.

Results

The results have been divided into main strategic directions.

Archaeological and anthropological research, valorization and dissemination of museum sites and closure of excavations and anthropological analyses

The archaeological and anthropological investigations on the three sites selected for our proposal were completed (Tesi et al., 2019; Licata et al., 2020). All this has allowed us to acquire new essential data to better understand the history of the ancient communities of Valcuvia (Licata et al., 2016; Tonina et al., 2018; Fusco et al., 2018; Larentis et al., 2019; Tesi et al., 2019; Fusco et al., 2020; Larentis et al., 2020; Licata et al., 2020a; Licata et al., 2020b; Licata et al., 2022; Tesi et al., 2020a; Tesi et al., 2020b; Fusco et al. 2022; Tesi et al., 2022; Larentis & Calderoni 2023).

Museums speak for themselves

For the purpose of cultural restitution of the bioarchaeological context to an entire community and its

inclusion within a cultural tourist itinerary, we have equipped each site with informative-integrative elements, both physical (information panels), and multimedia (website and QR-code) which have given rise to a clearly recognizable and self-explanatory path.

Maximize impact, diffusion, valorization and sustainability over time

By impact we mean what the effect that the activity carried out and its results has on people, practices, organizations and systems. The dissemination of results produced throughout the entire activity of communication has certainly maximized the effects of the activities that were carried out in this project.

The diffusion was characterized by the different broadcast episodes of the information on the results of the program and the initiatives of the key actors: University of Insubria, partners, supporters and financiers.

Sustainability is the ability of the project to continue and use its resources beyond the end of the funding period. The results of the project will also continue to be used and valued in the long term thanks to the creation of the *Insubre Bio-Archive* where our bioarchaeological finds were collected, cataloged and made available to the community.

The sustainability of the project is also evident from the possibility of activating guided tours of the sites today fully valorized in their bioarchaeological peculiarity. Many new proposals have arisen from the realization of this project by others who intend to promote the territory through exploration and development.

The local community, through associations and municipalities, are approaching the project by reporting other ancient necropolis worthy of attention and valorization, through projects of inclusion of the sites within the bioarchaeological path accomplished here.

Multimedia diffusion strategies

We created the website bioarcho.it (Figure 2), QR-codes, 3 = virtual reconstructions, video playback and an online scientific journal, the Journal of Bioarchaeological Research, to spread our cultural heritage in an innovative and dynamic way. In fact, there is an increasing need to disseminate cultural heritage, understood in its broadest sense, from the archaeological site to the museum, from the monument to the document. It has now become clear that the methods used only a few years ago are insufficient to deal with a world in which communication, language and the means of expression have profoundly changed.

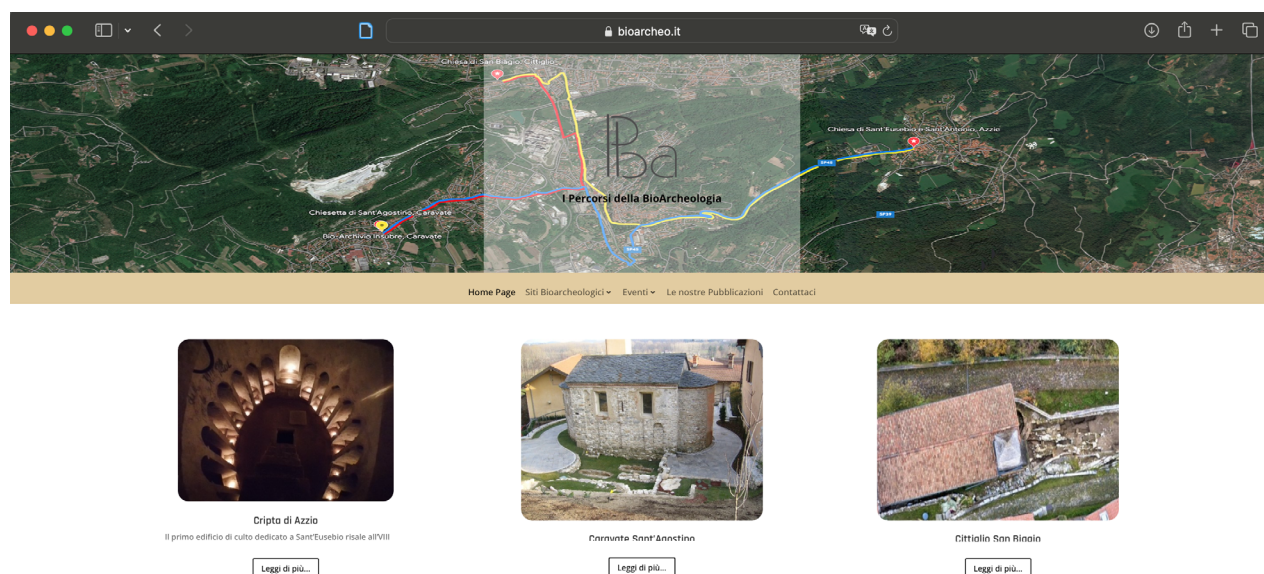


Figure 2. Homepage of the website bioarcho.it

“Remote viewing”

The bioarcho.it website and the QR-codes on the panels at each site, and not only, enable the user to visit the sites even remotely. In addition, these technologies, including virtual tours, allow to be autonomous, reducing any costs or the lack of availability of staff for guides.

Communication respectful of history

The creation of explanatory panels at the sites resulted in a functional and culturally stimulating solution, as they present in detail the bioarchaeological discoveries of the particular archaeological site.

This valorization project takes into account the different realities and existing structures and their relationship with the surrounding landscape. All this is aimed at spreading knowledge and exploiting the site, in perspective of returning these realities to the community, stimulating the awareness of one's past and promoting the development of cultural tourism also aimed at areas of small attraction.

Environment and landscape

The creation of the bioarchaeological route of Valcuvia succeeds in enhancing the itineraries of the city-countryside system. The focal points of the museums are in fact closely connected, also due to the proximity of the sites, with routes dedicated to cycling and horseback riding.

The inclusion of our route has therefore contributed to the redevelopment of the city-countryside system.

Integration of young people

The objective of creating a bridge between institution, territory and citizens, for making the heritage accessible to all, was achieved by offering activities and teaching sessions for secondary school students and presentation days.

Sustainable tourism to increase economic well-being

The creation of the bioarchaeological route produces a cascading multiplier effect on the visitor's first

expense, to the full advantage of the local economy first, then regional and finally national. When the tourist spends their money, to purchase goods or services, it triggers a chain reaction that produces additional economic benefits in both directions. The operators in the sector, to meet the new demand, are obliged in turn to procure the goods and services they need to organize their offer.

Simplifying, you can state that tourist spending produces three types of benefits: direct and indirect and induced. With the realization of our project, following the publicizing of the route, sustainable tourism will be stimulated, respectful of the natural, social and artistic environment. A new tourism with low environmental impact, which does not hinder but promotes other social and economic activities, taking into account the territorial specificities involved.

Discussion

The proposed strategy aimed to redevelop the Valcuvia territory through valorization of three archaeological sites relevant from a bioanthropological point of view.

Through the creation of a bioarchaeological touristic offer, it will be possible to stimulate local institutions to also enhance other archaeological realities, still unknown, but which are closely linked to the territory of Valcuvia.

The project, born from studies developed over the years by our group of researchers, has promoted the archaeological excavation and the analysis of human remains in the areas of San Biagio in Cittiglio, Sant'Agostino in Caravate and Sant'Eusebio and Antonio in Azzio.

All three sites are archaeological realities that have been considered worthy of further investigations and explorations, as well as restoration of archaeological evidence brought to light, with the aim of making these realities “open-air museums”.

The religious complexes that are the subject of our interventions are all characterized by the exhibition of archaeological evidence, in particular from the funerary areas which needed to be subjected to conservative restoration. Moreover, all three sites are characterized

by the presence of human remains which, in addition to being useful for the study of past populations, also present a strong museum potential. The osteoarchaeological find represents an anthropological asset that must be displayed in a museum, thus becoming part of the good archaeology of the territory.

Expression of ancient Christianity, representation of funerary rituals, narration of the biological history of past populations, the archaeological path that was created by the conjunction between these three sites will also create a model and offer, for example, the study and valorization of areas with similar archaeological findings both in the territory and elsewhere.

The University promoted excavation activity on the site of the church of Sant'Agostino, initiated by the Superintendency of Archaeology, Fine Arts and Landscape of Lombardy in 2000, interrupted in 2004 and resumed by our group in 2018. The same intervention affected both the external and internal areas of the church of San Biagio in Cittiglio, excavated for the first time by the Superintendency Archaeology, Fine Arts and Landscape of Lombardy in 2006, and reopened of recent from our group. Finally, the recovery and study of the osteoarchaeological remains of the Franciscan friars preserved inside the ossuary of the church of Sant'Eusebio and Antonio di Azzio.

Over the years, the anthropological study of the osteoarchaeological remains has taken place in situ, thanks to the setting up by the University of educational laboratories for the cleaning, restoration, archiving and study of the recovered material (Vanni & Fusco, 2023). As for Sant'Agostino, as anticipated, thanks to the new space provided, the laboratory has been set up within the new Bio-Archive.

Throughout the duration of the project and for all three sites, educational activities/courses were always offered to high school students as part of the school-work projects and also to university students.

The methodologies offered by the fields of radiology, molecular biology and archaeometry contribute to the implementation of the possibilities of anthropological study. Further in-depth analyses, such as the dating of the remains through the examination of ^{14}C and the biomolecular ones for the extraction of ancient DNA, were conducted in parallel with the study of the remains, thus making use of the support of

numerous experts in other fields of research and specific methodologies.

Creation of thematic itineraries

The University, in planning agreement with the Superintendence, the diocese, the parishes and municipalities have managed to make the archaeological evidence accessible in all three bioarchaeological contexts.

The sites, now transformed into museums, can be connected in thematic itineraries such as:

- i. Christianity and funerary rituals in medieval and post-medieval times in Valcuvia. This thematic area tells of funerary rituals over the centuries through visits of the excavated tombs and funerary objects;
- ii. Christian art in Valcuvia in medieval and post-medieval times. This thematic area tells the story of Christianity of the places over time through visits of artistic representations: architectural structures, frescoes and furnishings;
- iii. The ancient populations of Valcuvia. The thematic area leads to knowledge of medieval and post-medieval populations of Valcuvia through the visit of the analyzed skeletal finds, restored and displayed in the closed areas of the individual sites (churches, sacristies and laboratories of anthropology annexes).

The archaeological sites, thus collected, will be the "fil rouge" of the environmental and thematic itineraries that leads the visitor to the knowledge of the territory and the people of Valcuvia.

The implementation of the project brought immediate positive effects to the territories involved.

First, the valorization of unknown areas of great archaeological interest has allowed the involvement of local realities, reinforcing the feeling of connection between the community and its past.

The results that emerged were immediately enhanced through innovative forms of communication and dissemination such as publications, scientific workshops, but also events open to the public.

The project led to the creation of a new tourism product and consequently to the creation and offer of integrated tourist packages inherent to the itinerary.

The implementation of the project will lead both to an increase in national and international tourist flows and to an increase in reception capacity, as well as to a development of integration between the economic activities of the area.

Conclusion

The territory involved, in this way, will become attractive thanks to the valorization of still unexplored places and the municipalities and all the assets involved will become part of a project which will certainly not end with only the intervention on the sites entailed now but will encourage other places, before all those present in neighboring areas, to “join in our way” - that is, through the valorization of reality understood as bioarchaeological, in its complexity of a funerary monument witnessing the rituals of the past, and of osteoarchaeological finds, biological archives of demographic and epidemiological findings of the ancient populations - eager to thus return to the created itineraries.

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