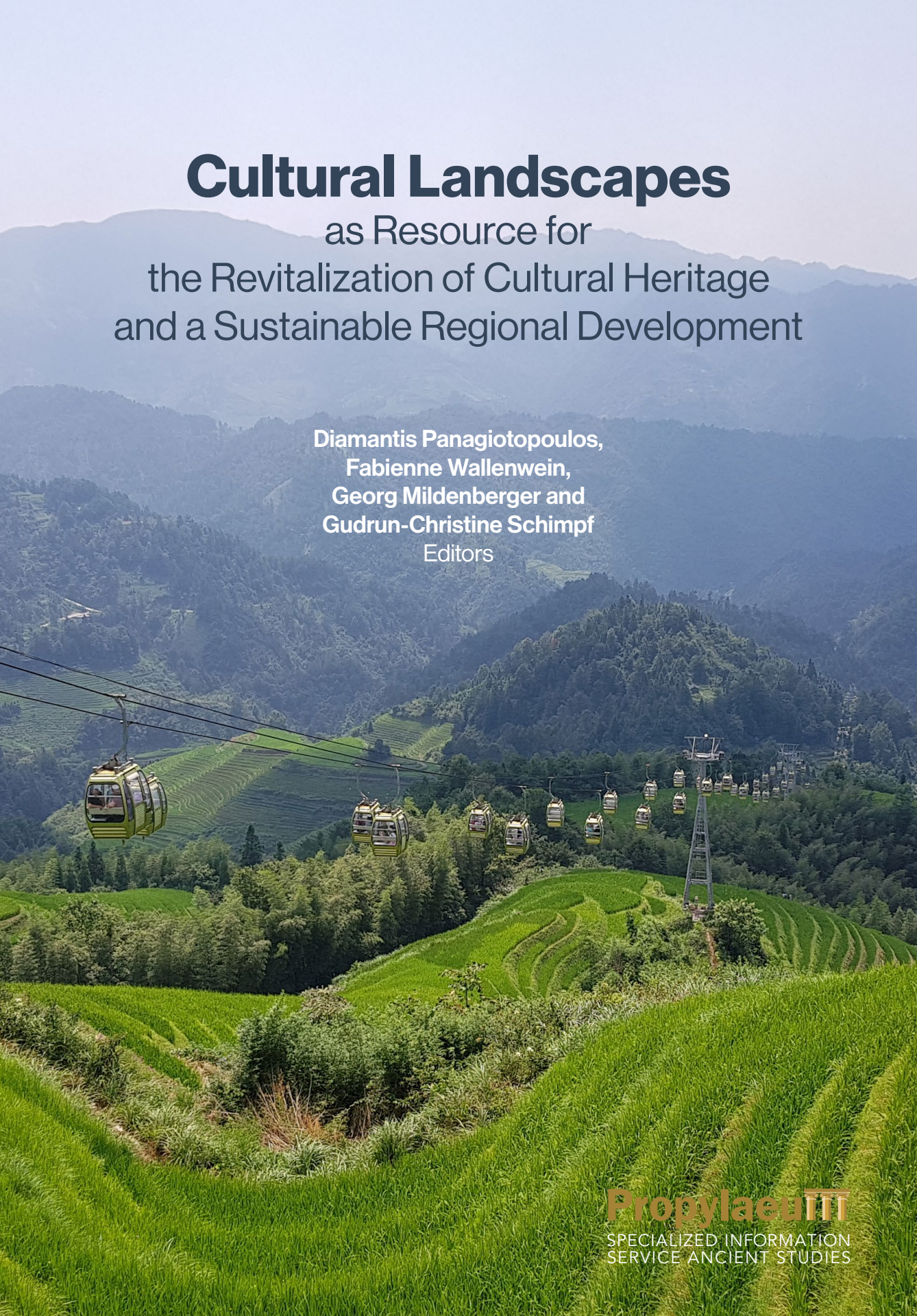
# Cultural Landscapes

## as Resource for the Revitalization of Cultural Heritage and a Sustainable Regional Development

**Diamantis Panagiotopoulos,**
**Fabienne Wallenwein,**
**Georg Mildenberger and**
**Gudrun-Christine Schimpf**
Editors



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# Contents

# Reflections on Inter- and Transdisciplinary Work in Social Sciences and Humanities

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**Abstract** Inter- and transdisciplinarity are still novelties for academic scholars. However, crossing disciplinary boundaries and leaving the ivory tower opens avenues to new insights worth leaving the beaten track. In this introductory chapter, we provide information on the background of the research project. We further examine the concepts of interdisciplinarity and transdisciplinarity, weigh their pros and cons for academic research and the conservation of cultural landscapes, and stress the benefits and advantages of these forms of cooperation. Finally, we give an overview of the following chapters in the book to orient readers.

**Keywords** Cultural landscape, social innovation, interdisciplinarity, transdisciplinarity.

## Introduction[1]

Everything started with the workshop "Negotiating Heritage in and beyond Academia" in Heidelberg in the fall of 2020 amid the Covid-19 pandemic, dealing with cultural heritage, use and perception of landscapes, as well as with conflicts around heritage sites. This first contact and exchange of ideas on the topic with scholars from different academic backgrounds and practitioners was very inspiring. It opened the doors for further cooperation as we realized the close interconnection between protecting artifacts and landscapes and a respectful attitude towards landscape custodians. The goal should be, so our starting point, to find a sustainable approach to cultural landscapes in consensus with the local population and civil society actors. A few months

1 We want to thank our student assistants Sophie Hardardt, Timur Mitrofanov, and Julian Schmitt for supporting us in researching and writing this chapter.

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later, an opportunity arose to apply for some seed funding with Heidelberg University's Flagship Initiative "Transforming Cultural Heritage." The editors immediately came together and discussed options for collaboration. This was our starting point for working on cultural heritage in a new way. In the interdisciplinary approach we developed, we investigated "cultural landscape" with regard to its potential as space for social innovation in marginal regions. This innovative approach looked for insights into the (re)vitalization of and social innovation in cultural landscapes that overcomes extreme forms of development and exploitation of local resources and is reached via a functional and transformative innovation process (B1, see fig. 1 below). Cultural landscapes shape and are shaped by the close interaction of humans with their environment. As an impact area and habitat, a cultural landscape is subject to a wide variety of socio-economic changes that exert a lasting influence on its very character. The aim was to investigate if and to what extent tangible and intangible heritage assets can be used as a resource for social innovation. Special emphasis was given on the empowerment of local communities and the selective promotion of local knowledge for sustainable regional development. We conducted three case studies to contrast the revitalization of an "inactive" archaeological landscape on the island of Crete in the Mediterranean Sea with the (re)valorization of two "active" terraced agricultural landscapes in southwestern China (cf. Panagiotopoulos et al. 2023) and Taiwan.

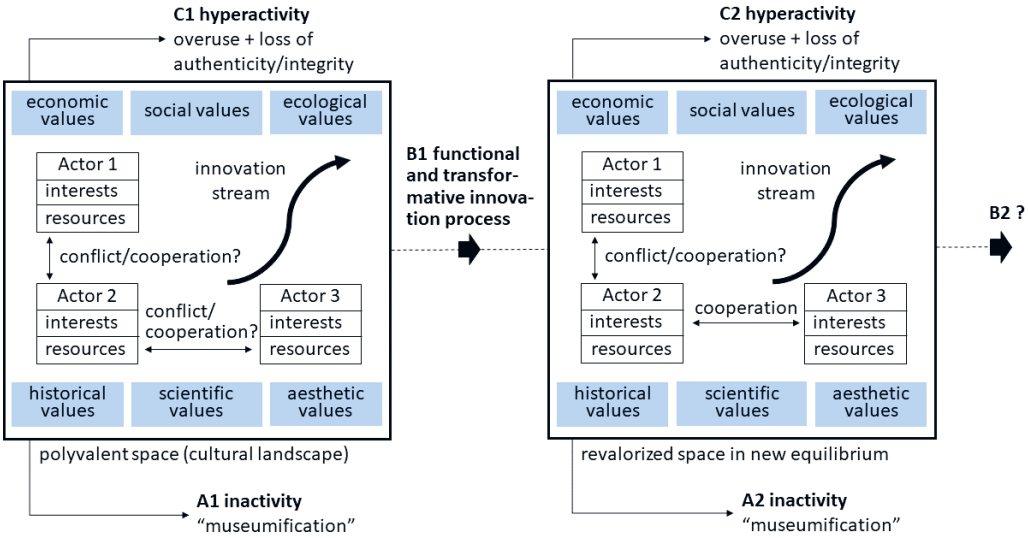


**Figure 1** A third way between museumification and overuse (Panagiotopoulos et al. 2023, 7684).

Our approach does not categorically exclude an economical aggregation of value by means of natural and cultural heritage resources from such a process. Overexploitation, however, should be avoided through social investment. Thus, the focus is not

exclusively set on economic benefit, but always on a contribution which is oriented towards the common good. The main question this approach seeks to answer is how different actors use their respective resources to implement their own interests, and how their interaction in the form of cooperation and/or conflict contributes to or prevents social innovation in cultural landscapes. The bottom line we came up with was that if we strive for "living landscapes" instead of museumification, we must consider the wellbeing of those living in these landscapes. Living in a cultural landscape should not be equated with living in a museum, but perhaps rather with a dyad: living with the landscape and living from the landscape. The challenge how this could be solved—keep a landscape alive but still attractive for the people living there today as well as for future generations—cannot be solved by one scientific discipline alone. Instead, we are convinced that tackling this problem requires different disciplines and people.

This was the beginning of our interdisciplinary journey; a so-called research tandem "Cultural landscape as a resource for social innovation. A contribution to the (re)vitalization of marginal regions" (Panagiotopoulos et al. 2023). The research tandem has now been working for three years (2021–2024). In the course of these three years, we held several workshops with a broad range of colleagues from various disciplines as well as practitioners. Their contributions stimulated, influenced, and enriched the research tandem's work and constituted a result of its own value, worth to be published. Therefore, this book presents contributions from these meetings and discussions with practitioners and scholars from different countries about opportunities for the revitalization of cultural landscapes, their heritage, and related obstacles. The collaboration as such but also the intriguing presentations and discussions further revealed advantages as well as challenges for interdisciplinary collaboration and research.

## Interdisciplinarity and transdisciplinarity: what are we talking about?

The three classic faculties—the trivium theology, law, medicine—always had an applied component. Their ratio essendi was to empower practitioners, priests, judges, and doctors. The young disciplines of technoscience stem from engineering schools and in their youth were learning more from practice than informing it. Until today, in the field of technology, there is a close connection between (fundamental) research and application in practice. In the disciplines that developed from the more frivolous artes liberales, the orientation towards an application of knowledge gained in a non-academic context is not always given. But not only is application or transfer of knowledge (besides teaching) unchartered territory. It gets even more complicated when one has to talk to other disciplines. Interdisciplinary work, not to mention transdisciplinarity, is still seen at least as a challenge if not as a waste of time leading away from real, fruitful, and straightforward research.

The terms “interdisciplinarity” and “transdisciplinarity” have long been actively used in scientific research, but there is no consensus in the literature on the definition of these concepts. The terms “interdisciplinarity” and “transdisciplinarity” were primarily coined by Julie Thompson Klein and Jürgen Mittelstraß in the late 1980s and early 1990s. However, instead of a common definition, a broad discussion has arisen about their meaning, both in terms of method and content (Mittelstraß 1987; Klein 1990; Bogner, Kastenhofer, and Torgersen 2010).

In its broadest sense, interdisciplinarity refers to the collaboration of researchers from various academic disciplines or across their areas of expertise to achieve common goals and objectives. Collaboration in transdisciplinary research requires scholars to expand beyond their own fields and work with experts from diverse disciplines, both within and outside of academia. Transdisciplinary studies, in contrast, involve scholars breaking the boundaries of their disciplines and joining forces with specialists from other spheres, including non-academic partners (Choi and Pak 2006, 351; Lawrence 2010; Alvargonzález 2011; Groth et al. 2019; Fam and O’Rourke 2021, 2). In addition to the different composition of the participants and the different fields of competence, another feature that distinguishes one approach from the other is that “while scientific cooperation in the form of interdisciplinarity usually means temporary cooperation, transdisciplinarity means that cooperation leads to a permanent scientific order that changes the structure of the subjects and disciplines” (Mittelstraß 2019, 31–32).

Interdisciplinarity and transdisciplinarity can be understood as responses to internal scientific crises, such as the internal differentiation of science, which can lead to a limitation of knowledge (Bogner, Kastenhofer, and Torgersen 2010; Mittelstraß 1987). They can also be used to solve external problems that are brought to science by external groups and contribute to the unification of different disciplines (Bogner, Kastenhofer, and Torgersen 2010; Luhmann 1994).

Kastenhofer (2010) describes second-order criteria which might be helpful in analyzing the interdisciplinary object at hand. The first is bandwidth: the category of interdisciplinary bandwidth deals with the number of different disciplines and sciences, in particular the distinction between “strong” and “weak” sciences and practitioners. Her second category is the type and extent of interdisciplinary integration. This category examines the question of whether interdisciplinarity is practiced and promoted in the project at the beginning, towards the end, selectively or comprehensively. The third category is scientific vs. societal relevance: This deals with the question of which logics and practices should be followed and which objectives should be pursued, as these can differ greatly in a societal context from a scientific context. The inclusion of society also matters, as science communication and the presentation of results always aim to have an impact on society.

In our case, we had interdisciplinarity from the very beginning with every partner contributing their ideas and expertise to a learning process. The team members came from the fields of Classical Archaeology, Chinese Studies, History, and Social Sciences. The project united three institutes of Heidelberg University, the Institute of Classical

and Byzantine Archaeology, the Heidelberg Center for Transcultural Studies, and the Center for Social Investment. The primary goal of our project has been to move beyond an interdisciplinary framework and work towards achieving transdisciplinary synergy, a challenging but ultimately rewarding endeavor.

## Problems and challenges of inter- and transdisciplinary work

The application of interdisciplinary and transdisciplinary approaches can give rise to several challenges, which can be divided into three main categories.

### 1. Problems related to disciplinary boundaries

Doing interdisciplinary research in general is characterized by unclear boundaries between interdisciplinarity and transdisciplinarity. The vague definitions can often lead to confusion due to their broad and non-specific usage. Apart from the challenge of defining terms precisely, there are several other difficulties and obstacles to achieve inter- and transdisciplinary collaboration. For example, problems related to limited disciplinary competence and the problem of competence required for inter- and transdisciplinary collaboration (Toš 2021). Another disadvantage is that hierarchies and relevance differ, and interfaces between the disciplines must be dealt with. There might also be content-related contradictions between the disciplines on a specific topic or formal differences in the individual disciplines (design, citation, etc.). Also, the dynamics of the individual disciplines might differ (progress, speed of development, etc.) (Arnold, Gaube, and Wieser 2014).

### 2. Problems related to the interaction of participants

The collaboration of professionals with varying competencies and backgrounds, especially in transdisciplinary projects, can often lead to significant differences in values, priorities, and culture of participants, creating the potential for failure at every stage of the project (Fam and O'Rourke 2021, 2). Another limiting factor is the scientific vocabulary and language for describing certain natural or social phenomena, which is accepted in the academic environment and incomprehensible to non-academic professionals. If different explanatory models are used, not everyone in the team might be familiar with them. Also, agreement needs to be reached on commonly used methods and theories (Arnold, Gaube, and Wieser 2014). Due to the absence of a recognized "scientific Esperanto," academic scholars are tasked with the responsibility of translating and rephrasing their thoughts and concepts to make them accessible to partners from other disciplines or non-academic partners (Sass 2019, 14). Another possible consequence of involving non-academic participants in research is that they may violate the procedures and rigorous standards set by academic institutions (Lang et al. 2012). Further, it might become challenging that researchers must fulfil a dual role: being representative of their discipline and representative of the interdisciplinary

team. This is especially tricky if there are discipline-specific perspectives on one topic or question (Arnold, Gaube, and Wieser 2014).

### 3. Institutional challenges

There are also institutional constraints in applying the two approaches. In particular, despite the increasing number of interdisciplinary projects, it is difficult for interdisciplinary researchers to embed themselves in the academic mainstream (Ledford 2015). Professionals in this field often face inadequate assessment mechanisms for status, promotion and lower success rates in grant applications (Bammer 2017). Furthermore, studies have found that scientists' productivity in publishing articles may suffer when they engage in interdisciplinary research, as it involves a substantial commitment of time and effort to gain proficiency in various domains of knowledge (Leahey, Beckman, and Stanko 2017). Problems in transdisciplinary research are known, for example, from the work of real-world laboratories. Kück and Schmid (2019) stated that the challenge of interdisciplinary collaboration is usually underestimated, the mutual appreciation of the respective competences is central to constructive transdisciplinary collaboration. This requires encounters in different situations and tasks as well as a reliable routine. Finally, the individual disciplines should not act primarily in favor of their own purposes. Kück and Schmid also distinguish three levels of cooperation: 1) the planning level referring to day-to-day collaboration; 2) the process level looking at the course of the project; and 3) the format level focusing on the results, publications, events, etc. Problems can arise on all three levels and at different points in time.

Finally, communication is key: it takes a high communication effort as well as a high degree of willingness to communicate with each other and understand the other (Arnold, Gaube, and Wieser 2014). So, all in all, "despite the overwhelming rhetoric, virtually nobody denies transdisciplinary collaboration to be easier said than done" (Maasen 2019, 104).

## Advantages and gains of inter- and transdisciplinary cooperation

Despite the difficulties and drawbacks described in the literature, there are still advantages to be gained from both methods. Even the multitude of interpretations for these two terms can be viewed as a benefit, since the lack of precise formulations is a factor that encourages the theoretical and methodological development of interdisciplinarity and transdisciplinarity (Vienni-Baptista 2023). Interdisciplinary and transdisciplinary researches are crucial in a practical sense, since the key to tackling global challenges (e.g., sustainability issues and environmental problems) lies in the collaboration between academics and civil society actors (Lawrence 2010; Da Rocha et al. 2020; Schipper, Dubash, and Mulugetta 2021).

Engaging in inter- and transdisciplinary collaboration not only promotes the exchange of knowledge between participants with diverse areas of expertise, but also

generates new research questions, ideas and approaches, and potentially paves the way for the emergence of new research fields (Groth et al. 2019; Morss, Lazrus, and Demuth 2021). Additionally, studies demonstrate that involvement in interdisciplinary projects can positively impact a scientist's visibility within the scientific community (Leahey, Beckman, and Stanko 2017).

However, how would one combine the necessary cooperation between the disciplines on the one hand and non-scientific actors on the other with a strong concept of disciplinarity? Sass observes that when working on this problem, it is necessary to remember that "transdisciplinarity (…) goes hand in hand with a certain kind of scientific attitude and ethos" (Sass 2019, 14). Since there is no common scientific language for fruitful cooperation, the willingness of researchers involved to translate their ideas and concepts, and to stay open for those of others, is very important.

Since the Horizon 2020 program, the European Union has stated that collaboration across disciplinary borders leads to "radical breakthroughs with a transformative impact" (Maasen 2019, 104). The reasons for this are manifold. Focusing on the individual researcher, it allows for recognition of the limits set by one's own discipline and closure of the blind spots in one's own discipline/research by other disciplines. The discipline of sociology, in particular, has the capacity to evaluate the social interaction between actors. By researching in interdisciplinary teams, the resources for the project can be increased, topics that do not fully belong to one discipline will be dealt with, and new areas of tension between (classic) disciplines can be recognized. Above all, it seems that the consideration of perspectives from the humanities, social sciences, and law leads to an improved acceptance of research results and their justification (Arnold, Gaube, and Wieser 2014).

## Implementing inter- and transdisciplinarity in the course of our project

The first steps of our cooperation took place at an interdisciplinary level. During the preparation of our research tandem application, each of us got acquainted with subject, methods, and objectives of the other disciplines and explored how the possibilities of a joint project would promote common research interests. We soon realized that the success of such a synergy was dependent not only on the interdisciplinary potential of each discipline but also the willingness for open cooperation and the specific research foci of the project participants. After the successful application and during the first stage of our project, the interdisciplinary exchange between all project members was consolidated in the course of numerous discussions as well as presentations in several formats of the Flagship Initiative "Transforming Cultural Heritage" of Heidelberg University. The circle of interdisciplinary cooperation was expanded through two international workshops at Heidelberg University in 2022 where we had the opportunity to practice an open dialogue within and beyond academia, involving scholars from eight European and Asian countries, and stakeholders from different

fields relating to cultural heritage. In the following year, we hosted an international conference, several contributions of which are presented in this volume. During all of these occasions, the participants experienced the open interdisciplinary dialogue as an asset, exploring new pathways inspired from the competence of other disciplines. The time was then ripe for a transdisciplinary endeavor in which the involved disciplines played a different role. Applying methodologies from the Social Sciences, an attempt was undertaken to explore the potential of Archaeology and Chinese Studies as applied sciences. The results of this cooperation were presented in the joint article mentioned above (Panagiotopoulos et al. 2023).

## Contributions to this book

The contributions to this book come from a wide variety of fields and backgrounds, some focusing on scientific research, others on strategies and actions. What unites them is their focus on place, landscape, perception, and challenges of today and tomorrow. The arrangement of the individual papers follows a logical path moving from theoretical concepts to practice-oriented perspectives and implementation. Georg Mildenberger and Gudrun-Christine Schimpf give a short overview of the theory of "social innovation." They present basic elements (and varieties) of the concept and give a short overview on applications in the context of regional development. They point out that up to now the strengthening of communities and recourse to local traditions and knowledge are well established. But the resources of cultural landscape are not utilized in a systematic way and neither are synergies for conservation. Alexandra Gaidos examines the concept of incubation, a widely used entrepreneurial strategy to nurture early-stage ventures, particularly in rural settings. One of the key challenges in marginalized, non-urban areas is, according to the author, to address societal issues by rethinking rural and cultural resources from an economic standpoint. Guillermo Reher outlines a framework for identifying the cultural values embedded in landscapes, using a sequential method that incorporates indigenous knowledge, storytelling, and mental mapping for data collection. Stelios Lekakis engages with commons theory, exploring the complexities and opportunities of leveraging collectively managed resources for the sustainable stewardship of landscapes and their heritage. Focusing on the rural cultural landscapes of the Aegean islands, he investigates a culture-centric approach to heritage management that is based on participatory processes and involves non-state, non-expert communities. Despina Catapoti, in her insightful analysis of "space" within heritage studies, discusses a shift from traditional, categorical views of nature and history to a postmodern, participatory, and fluid interpretation. Using three Greek case studies, she demonstrates the importance of this holistic and flexible approach, especially in the context of societal shifts brought by the digital age. Cord Arendes offers a fresh, idiosyncratic perspective on two questions about modern ruins: first, how the study of ruins has developed over the past century in history and cultural studies, and second, how ruins are experienced and

visualized through academic tourism. Diamantis Panagiotopoulos explores archaeology's potential as a creative discipline, using a field project in the Cretan mountains as a case study. The emphasis on the broader, dynamic notion of 'cultural heritage' in his contribution, rather than the narrow concept of 'antiquity', encourages archaeologists to create strategies for not only excavation but also the development of marginal archaeological sites as heritage spaces. Fabienne Wallenwein engages with the question of how landscape heritage may constitute a medium and/or a space for (re)establishing social and community ties. She presents recent approaches to landscape stewardship in two remote mountainous regions of East Asia: the Hani Terraces World Heritage landscape in southwestern China and the Gongliao rice terraces in northeastern Taiwan. Her comparative analysis focuses on the ability to respond to local needs, the creative use of new technologies and an appropriate balance between economic benefits and landscape conservation. Alexander Siegmund, Maike Petersen, Emmanuel Eze, and Johannes Keller emphasize the role of modern geotechnologies such as remote sensing, GIS, and mobile geotools in assessing and mitigating risks at UNESCO sites. Their paper clearly illustrates how environmental hazards and human conflicts make these advanced technologies essential for the sustainable development of heritage areas. Hexing Chang and Huixian Wang's contribution sensitizes us to the paramount significance of Chinese cultural landscapes in an era of excessive urban development. Landscapes which have been forged through a complex of natural, biological, and cultural processes over centuries or even millennia provide focal points of cultural identity and the most appropriate places for rebuilding harmonious relationships between humans and the land. Georgios A. Kalomoiris examines the role of digital tools in cultural planning strategies for pastoral communities in the mountainous regions of Crete. His paper proposes a collaborative roadmap that aims to balance global influences with local needs, revitalizing the socioeconomic dynamics of the area. Finally, Barbara Fath and Sabine Hagmann explore the "Prehistoric Pile Dwellings around the Alps," a transnational UNESCO World Heritage site spanning six European countries. These over 110 settlements, located in shallow lakes, present significant challenges for scientists and stakeholders due to their dual role as scientific data sources and tourist attractions.

## Lessons learned

A central research question that our tandem dealt with in its interdisciplinary exchange formats throughout the project lifecycle was whether cultural heritage could provide a starting point for social change. In our discussions with colleagues, experts, and practitioners, first answers were found and many new questions arose. After three years of engagement, we have the impression that there is a common interest in the humanities, social sciences, and non-academia to find new ways for conservation, on the one hand, and development of cultural landscapes on the other. One important aspect remains the inclusion of local people and actors from civil society.

This is not only relevant in the context of a change of perspective, in terms of what understanding of landscape and knowledge is available among local stakeholders and how this can be incorporated into the interpretation of landscape cultural heritage. Rather, greater attention should be paid to civil society actors in the processes described, as cultural heritage, natural heritage, and cultural landscapes can only be preserved through their active participation and constant involvement. Regular reflection ensures that the interests of future stakeholders, as well as changing interests, are heard. Finally, attention should also be given to how the interpretations of cultural landscapes are utilized by different stakeholders to serve economic or political goals.

Coming back to inter- and transdisciplinary work, one should keep in mind that interdisciplinarity requires additional time for many steps and tasks in the project (e.g., project meetings, applications for grants, writing articles). This is related to the problem that it is not possible to apply a simple division of labor. Rather, every project member needs to understand and be aware of, at least in principle, what others are planning to do. Also, every partner needs to foresee extra time to discuss the research design and the methods applied. Therefore, such an endeavor requires trust that every partner will be able to deliver, especially in times of tight schedules when this seems hard or impossible to realize.

When it comes to the transfer of knowledge, communication might pose additional difficulties in an interdisciplinary project. This is as much true within a mixed team as it is between scientific actors and the public. Terms might have different connotations, which might result in misunderstandings and differing expectations. Transdisciplinary work makes it obvious that practitioners have different problems, goals, and timelines. This might lead to unexpected changes and make adaptations necessary. Especially when it comes to talks and papers. Also, it is worth to consider that work ethics and working culture might differ between project partners.

Is it still worth all the hustle? Definitely—but just start reading and judge for yourself.

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# Part I:
# **Theoretical Perspectives**

# Social Innovation in Cultural Landscape Conservation

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**Abstract** Since about twenty years, the concept of social innovation has gained more attention in research and politics. Nowadays, social innovative solutions are searched for many social challenges of our present and future. We introduce here the concept of social innovation. Then, we reflect on the potential of connecting social innovation research with the concept of cultural landscapes. Combining research on social innovation with the preservation of cultural heritage and cultural landscapes is also an approach that highlights the importance of transdisciplinary research in solving the complex problems of our time.

**Keywords** Social innovation, cultural landscape, cultural heritage.

## The concept of social innovation

The concept of social innovation has attained increasing interest and influence in research and politics over the past two decades. Social innovative solutions are more and more understood as important approaches in dealing with change and challenges in the 21st century. A standard definition widely used by EU agencies is the BEPA definition:

> "Social innovations [are] new ideas (products, services, and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations. They are innovations that are not only good for society but also enhance society's capacity to act" (Bureau of European Policy Advisers 2011; compare also to European Commission 2013; The Young Foundation 2012).

As in all innovation, novelty is underscored by the definition. Typically, this is meant in the frames of time and geographic contexts. Even if the innovation is already implemented somewhere else an adaption of a new approach may still be called innovative, as long as it is new to the area. More important is the aspect, that a social innovation needs to address a problem or challenge previously unaddressed in the specific context. Fresh water supply in households in Western Europe is very common (but could

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be called a social innovation of the 19th century as Schimpf and Ziegler (2019) show). New ways of providing clean potable water can still be a social innovation if observed in one of the least developed countries.

However, the definition does not stop here. Not only should a problem be solved but the very fabric of society itself is modified. What does this mean? At least new connections between actors are established, networks of cooperation and maybe trust are woven. More demanding definitions expect social innovation to improve the situation of marginalized groups or a new, more equal distribution of power (Nicholls and Ziegler 2019; Terstriep et al. 2015).

As Wolfgang Zapf has shown, social innovations have long been recognized (see Zapf 1989). But in the last roughly two decades systematic research on social innovation has gained momentum (Cajaiba-Santana 2014; Moulaert et al. 2013; Pol and Ville 2009; Rao-Nicholson, Vorley, and Khan 2017; van der Have and Rubalcaba 2016; van Wijk et al. 2019). The European Commission played a vital role in this process by funding research and other projects in structural funds (INTERREG, AMIF, EAsI, ESF).

Nevertheless, social innovation research is still marked by definitional heterogeneity. Some researchers promote the normative dimension of social innovation and define social innovation as improved ways of dealing with pressing social needs or addressing "wicked" social problems (Churchman 1967 as outlined in Krlev, Anheier, & Mildenberger, 2018). But by others, social innovation is used to describe social change or transformed social practice (Franz, Hochgerner, and Howaldt 2015; Howaldt and Schwarz 2010).

On the side of empirical work, there is a remarkable focus on single organizations and case study approaches. Those tend to neglect broader social innovation developments. The importance of the phenomenon for a positive reaction to societal challenges makes it advisable to build bridges between case studies of individual organizations or action fields in wider regional contexts.

Even while the research field is still characterized by multiple conceptual approaches, two main schools of thought can be distinguished. The first approach highlights the positive impacts social innovations have in society. Social innovations are consequently seen as concrete solutions to social problems. For example, neurodiversity is embraced and new organizations are founded mediating between potential employers and individuals with certain traits, e.g., Asperger Autism. Special people get decent jobs and earn their own money. In this approach, the hiring company has to accept changes to accommodate the special needs. Employees must be trained to better understand the new colleague. Thus, not only one person's problem is ameliorated. At the same time there is a change in the environment. Other people learn to accept and even embrace neurodiversity (Cameron and Townend 2021). However, such empowerment, social cohesion, and change of social relationships are seen as further results. The second approach focusses mainly on changes in social practices, organizations, and social relations. Social innovations, so the conviction here, cannot be analyzed in the same way as products or services or business innovations. Rather origin and implementation of social innovations have to be researched in their

complex social context with the focus on the reconfiguration of social practices and dissemination. Those two schools of thought exist not exclusively. Many researchers (and practitioners of social innovation) point out that social innovations themselves generally show both aspects. They see social innovation as a concrete solution (new product, service, or infrastructure) and at the same time as a transformative component (change in social relation, new partnerships, building of social capital) (Krlev, Anheier, and Mildenberger 2019, 19).

Concerning social innovation research, Van der Have and Rubalcaba identify four research fields and corresponding research approaches: social psychology, creativity research, research on societal and social challenges, and research on municipal and regional development. In our research we use ideas from all fields but when it comes to cultural landscapes, we mainly pick up themes of the latter. So far, research on social innovation for municipal and regional development, thus with regard to landscape—or more abstractly—to spatiality, has mainly focused on the urban context, stressing the importance of social innovations for community building, social change, and the regeneration and revitalization of urban areas. Urban regeneration relies on social innovations as a means to resocialize urban spaces, foster social change, and enhance the meaning of community, while transforming social relationships within urban spaces to face social demands and satisfy needs. For an urban environment, it was suggested that social innovations emerge from complex social processes and constellations of actors, including local government, civic society, and organizations. Evidence from the WILCO project ("Welfare innovations at the local level in favor of cohesion") underlines the impact of local contexts which are not a mere local representation of national regimes. Cattacin and Zimmer argue that social innovations constitute a political process whose outcome depends on environmental factors such as coalition building as well as specific constellations of actors and are as such a reflection of city-specific (welfare) cultures. The city-specific settings determine the conditions for the emergence and development of local social innovations with the city governing elites, creating both opportunity structures and constraints. (Cattacin and Zimmer 2016). As Christmann points out, conflicts and the search for consensus are natural in these complex social processes (Christmann 2020).

While social innovations are increasingly discussed and analyzed in an urban context, there has been relatively little theoretical discussion on social innovations in rural areas. Consequently, there is a lack of empirical studies. Nevertheless, the European Commission tried to stimulate research by giving out calls for rural development and improvement of living conditions in the countryside. Thus, we see a series of EU-funded projects. RURACTION ("Social Entrepreneurship in Structurally Weak Rural Regions: Analysing Innovative Troubleshooters in Action") points to rural regions as a fertile ground for social innovation and stresses the importance of exchange, intensive networking, and governance processes for innovation. The SIMRA project ("Social Innovation in Marginalised Rural Areas") shows that social innovation is stimulated by a constellation of key actors (social entrepreneurs), support of political and governance structures, and various intermediaries. Four main lessons

are drawn from the SIMRA project: the keys for successfully facing challenges are (1) support of local actors at the early stage of social innovation processes, (2) enabling local actors to flexibly adjust methods and tools by acknowledging the non-linearity of the social innovation process, (3) promptly identifying management failures, and (4) recognizing the importance of strategic thinking concerning financial resources and required know-how (Govigli et al. 2020).

In addition to cooperation structures and elite consensus, prevailing research on social innovation in rural areas points to the importance of engaging local communities in the process, as civil society appears to be more capable of initiating social innovation than the public or private sectors. This suggests that the most effective outcomes arise when local communities are empowered to make decisions within a supportive, but not over-bureaucratic framework. Hence, a combination of top-down and bottom-up approaches is suggested for successful implementation of social innovation in rural areas. Research on territorial development through social innovation clearly shows that territorial features affect an innovation as such, as well as the impact of social innovation initiatives—both in cities and rural areas. Territorial contexts and social innovation activities can therefore not be investigated separately.

We see, however, the focus of social innovation for spatial development has shifted more and more from urban to rural areas, especially those being considered marginalized regions for different reasons (e.g., rural exodus, brain drain, ageing population, disappearing of infrastructure and services, etc.).

Consequently, issues related to rural development have become the focus of research projects in the last years. In particular, the following aspects of socioeconomic interactions in rural areas have been examined: promoting interaction between rural, suburban, and urban spaces (ROBUST ("Rural-Urban Outlooks: Unlocking Synergies")); the application of innovative initiatives developed by social entrepreneurs to shape favorable social change and foster social innovation (RURACTION and RurInno ("Social Innovations in Structurally Weak Rural Regions")); addressing the weak infrastructure and demographic crisis in agriculture and forestry, and stimulating the development of these sectors (SIMRA). Heritage preservation and its use to stimulate social innovation in rural areas have been studied primarily by the RURITAGE ("Heritage for Rural Regeneration") and the rurALLURE ("Promotion of rural museums and heritage sites in the vicinity of European pilgrimage routes") projects.[1]

In the paradigm proposed by RURITAGE, the key role in the regeneration of rural areas was given to cultural and natural heritage. Rural economic, social, and environmental development was supposed to be carried out through a system of innovative areas (SIA) consisting of six points: pilgrimages; sustainable local food production;

1 Cultural heritage in other spatial contexts has been studied in the PERICLES (PrEseRvIng and sustainably governing Cultural heritage and Landscapes in European coastal and maritime regions (https://cordis.europa.eu/project/id/770504)) and ROCK (Regeneration and Optimisation of Cultural heritage in creative and Knowledge cities (https://cordis.europa.eu/project/id/730280/reporting)).

migration; art and festivals; resilience; and integrated landscape management. The knowledge about these areas, gathered in the locations identified by the project participants as role models, was applied, adapted, or reproduced in six rural areas of Europe named by the replicators. The same approach was implemented within the IN SITU project ("Place-based innovation of cultural and creative industries in non-urban areas") that considered cultural and creative initiatives in non-urban areas of Europe as a driver of economic and social transformation. For this purpose, centers for practical implementation of innovative approaches were established in six European countries. RurALLURE pays particular attention to increasing the flow of tourists and pilgrims to the countryside by creating and promoting in the province a network of cultural institutions (e.g., museums) in the vicinity of the main European pilgrimage routes as a crucial element of social innovation. An essential role in this process was given to a special IT platform, which should make it easier for tourists to find information about sites of interest to them in the countryside and organize a trip there.

Mention should also be made of ongoing projects united under a common topic called "Innovative approaches to urban and regional development through cultural tourism," whose main objectives are to develop new approaches and methods to support European cultural tourism (IMPACTOUR), to explore opportunities to promote sustainable social, cultural, and economic development (INCULTUM), to focus on nature, communities, and cultural diversity (Be.CULTOUR), and to formulate strategies for new forms of cultural tourism (SPOT, SmartCulTour) with the help of new technologies (TExTOUR). Along with the need to develop tourism and popularize cultural heritage sites, one of the most acute and urgent problems in rural and neglected areas of Europe is the threat of the disappearance of traditional craft techniques and knowledge of producing and restoring artifacts. To solve this problem, it has been proposed to combine traditional crafts with advanced digital technology through innovative business models (HEPHAESTUS), to create effective and high-tech networks for the dissemination of traditional crafts knowledge (Tracks4Crafts), and to establish a process of craft education using telecommunications, which is especially relevant for remote areas (Craeft).

These European activities are just examples for a newer trend. Intangible heritage, like traditions or knowledge, and environmental heritage connected to human-nature interactions in rural and remote areas, are promising fields for research. They combine a constellation of both theoretical and practical issues that can be addressed from the perspective of a variety of methodological approaches and research disciplines, which, in turn, open up a wide range of possibilities for the application of data-driven knowledge to revitalize and develop social environment and economic relations in rural and remote areas.

Results of social innovation projects in rural areas show that social innovation is stimulated by a constellation of key actors (social entrepreneurs), the support of political and governance structures, and various intermediaries. Four important lessons can be drawn:

1. Stimulating participation by supporting local actors in the early stages of social innovation processes, involving local communities in the process, as civil society seems to be more capable of initiating social innovation than the public or private sector.
2. Empowering local actors to adapt methods and tools by recognizing the non-linearity of the social innovation process. The most effective results seem to occur when local communities are empowered to make decisions within a supportive but not overly bureaucratic framework. A combination of top-down and bottom-up approaches is suggested.
3. Monitoring the process and promptly identifying and addressing management failures.
4. Strategic thinking in terms of financial resources and required know-how.

## Cultural heritage/cultural landscapes

Our work builds on the endeavors sketched out above. Especially, we are interested in three strands: social innovation, rural areas, and cultural heritage/cultural landscapes.

Sustainable valorization of cultural landscapes while at the same time preserving their tangible and intangible cultural heritage is a complex scientific and social challenge. Especially in a non-urban milieu, the gap between scientific concepts and the social, political, economic, and ideological realities that determine the lives of local actors is clearly noticeable.

Cultural landscape as a special part of cultural heritage uniquely combines culture and nature and thus material and immaterial 'cultural goods' with their spatial context. Landscape, in this context, refers to the produced, lived, and represented space, constructed out of the conflicts, compromises, and relationships established for a limited time between competing and cooperating social actors (Mitchell 1996, 30). Especially, the close interaction of the natural and cultivated environments with the material and cultural reproduction of the communities inhabiting these spaces to us seems to necessitate the usage of concepts from social innovation.

## Cultural landscape and social innovation

However, the research presented so far is mostly not systematically focused on the aspect of cultural landscapes as a resource for social innovation and revitalization. Often, traditions are utilized in a rather arbitrary fashion as a quarry for new business ideas or they serve as a backup and common ground for community building in a rather vague way.

Therefore, 'cultural landscape' has not been considered so far as a resource of social innovation—neither in rural nor in urban areas. The results from social innovation

research as well as from cultural studies have shown however that social innovation and cultural heritage can join in a fruitful relationship. The concept of landscape opens new possibilities. By also including the concept of social innovation, the main focus is not just landscape management but also dealing with social questions and challenges. As innovation is a complex process, in the end not only a functional solution has been developed but the social fabric itself, the character of a society has changed. In the best case, the results are stronger social ties, a more equal distribution of power, and improved capabilities of communities and individuals. The social and political empowerment is characteristic for social innovative approaches and solutions in tackling social challenges and improving the living conditions of communities.

Social innovations have therefore the potential to strengthen local communities as a whole but also marginalized groups within these communities by empowerment and changed power relations. It has been suggested, for example, that social innovations can improve the social inclusion of women and other groups and contribute to a sense of pride, belonging, and usefulness. This in turn would increase the acceptance for the conservation of cultural heritage.

From this perspective, the question is therefore how to transform the assets of regions into a resource for local people, emphasizing the importance of empowering and engaging local communities in the conservation and management of cultural landscapes through social innovation processes.

## Conclusion

The interplay of cultural landscape concepts and social innovation methodologies is a promising concept to stimulate sustainable economic growth. The goal is to develop economic opportunities that use existing natural and cultural resources without destroying them while at the same time strengthening social ties and building communities. This is not only a concept. Quite a few of the contributions in this volume show the feasibility of the concept. The interplay of all academic disciplines is needed together with actors from the community to establish new solutions. Sometimes they may be small-scale and working in a single village or town, sometimes they will be regional and concern bigger political units. Depending on the scale and the political, legal, geographical, and historical conditions, a few or many stakeholders are concerned. Therefore, the competencies of sociology and political science will contribute to the establishment of participatory processes to develop a shared understanding of problems and opportunities.

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# Social Incubation: Potentials for Rural Revitalization

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**Abstract** Incubation has become a well-established approach to support entrepreneurship and the emergence of early-stage ventures. It is currently used to tackle a series of societal challenges such as marginalization, immigration, climate change, etc. But can incubation provide a new perspective into reimagining the reservoir of rural resources (i.e., landscapes, different forms of heritage, values, and lifestyle) from an entrepreneurial lens and provide solutions to marginalized rural areas? I discuss hereafter several challenges and potential avenues for adapting (social) incubation to become more useful for revitalizing rural areas with important cultural heritage.

**Keywords** Social innovation, social incubation, rural entrepreneurship.

## Incubation and the rural context

During the past few decades, entrepreneurial incubation has become a multifaceted tool, used for diverse purposes. From a coveted approach to revitalizing post-industrial areas through enterprise creation, to a model for finding commercial outlets for technological innovations, to a spearhead of entrepreneurship, incubation remains a fashionable concept (Aernoudt 2004).

Nowadays, there is a certain glamour surrounding the image of incubation, due to the normative assumptions that it brings forth successful, fast-growing technology start-ups that operate in competitive niches and generally attract high-skilled employees located in urban areas. The incubation method and organizational model—that is, providing entrepreneurial support and services to early-stage ventures—has become commonly recognized as the norm in helping young start-ups to launch. Despite its debatable effects (e.g., in terms of enterprise creation, long-term survival, and local wealth generation) and difficulties in measuring its performance (Hackett and Dilts 2008), incubation appears to be here to stay: it continues to receive support from public and private actors despite changing trends and policies.

As a method, incubation has gradually permeated other milieus beyond the high-growth start-up world. Incubation is now seen as a potential approach to finding answers to diverse societal challenges, such as the marginalization and discrimination of certain population categories, including women, ethnic, or religious minorities;

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the integration of immigrant populations; the fight against climate change; reduced financing in the arts and creative sectors, etc.

With this evolution, it has become an aggregator of creative forces and resources targeted at contemporary societal ills that proposes a unique solution—*entrepreneurialism*—and a unique method—*incubation.* Social incubation is an example of such efforts that exclusively support organizations that propose innovative and market-oriented solutions (Casasnovas and Bruno 2013) to regional welfare gaps in areas including health, education, social care, agriculture, and environmental preservation.

Rural areas are some of the regions facing increasing challenges because they suffer from state withdrawal (Richter and Christmann 2023) and marginalization from mainstream regional development policies and market initiatives (Vercher et al. 2021). These regions have been stigmatized (Bock 2016) and are not seen as environments conducive to entrepreneurship and innovation (Vercher et al. 2021).

It is in this rural context that I question what the relevance and contributions of social incubation can be. Precisely as the reservoir of rural resources—landscapes, different forms of heritage, values, and lifestyle—is apprehended under a new entrepreneurial perspective (examples include initiatives in the realms of culture, arts and crafts, sustainable agriculture, and tourism, etc.), the question arises of whether adequate support is given to these emerging initiatives. In the following paragraphs, I briefly discuss some of the topics that need reflection and provide potential avenues for adapting (social) incubation to become more useful for revitalizing rural areas with important cultural heritage.

## Potential avenues for adaptation

Although the core approach and objectives of incubation have remained unchanged over the years, incubators have gradually become disconnected from the challenges of rural territories because they are now mostly concentrated in urban, developed, and fast-growing areas. This does not mean that incubators cannot bring any further value to rural territories, but that to do so they need to reengage with the specificities of these regions and, in so doing, envision new methods of support.

Firstly, it is useful to emphasize that a tacit relation of power underpins the incubation phenomenon, due to the asymmetry—in terms of access to resources, knowledge, networks, etc.—that exists between the support organization (the incubator) and the persons seeking entrepreneurial support (the entrepreneurs). This asymmetry of power can be exacerbated in cases where an urban-based incubator seeks to intervene in rural areas where it has not yet built legitimacy. To avoid a reaction of local resistance and a feeling of top-down instrumentalization, a bottom-up approach seems to be the most fruitful (Neumeier 2017) because it ensures that the entrepreneurial support empowers rural communities to develop the necessary collective force to build an authentic entrepreneurial path (Gaddefors and Anderson 2018). Nevertheless, this bottom-up approach is dependent upon the establishment

of a trusted relationship between the community and the incubator and genuine investment by the support organization in the long-term well-being and development of the community. The incubator's margin for maneuver is generally contingent on the institutional arrangements it is involved in (e.g., institutional supporters, sources of funding, local development, and political agendas) (Gaidos, Palpacuer, and Gurău 2023). It should be noted that, while the entrenchment of social innovations in power relations is discussed in rural studies, this aspect is rather absent in social incubation research, where the lens of analysis is geared toward performance and market value. Further, as a method (and as a process), social incubation is ruled by certain practices—in terms of selection processes, evaluation, entrepreneurial support tools, and trainings—which are developed in competitive urban contexts that appear unsuitable when applied to the challenges of rural revitalization. I will use several examples to illustrate this point.

In most cases, entrance into incubation programs is highly competitive and, depending on the incubator's reputation, the selection rate can be very low. Selection criteria evaluate the potential growth of the venture, its speed to the market, and the innovative or tech-savvy character of the offer as well as the entrepreneurial acumen of the project leaders. This competitive nature is no less important in the case of social incubation, where the novel nature of the offer is scrutinized, as well as its potential social impact and its capacity to become scalable to other territories. The teams who succeed most often have an entrepreneurial background, master the business vocabulary, and are capable of convincing evaluators of their social mission, while reassuring on the economic feasibility of their ventures (Barton and Muñoz 2023; Kreutzer 2022). If incubators can afford to be selective in an urban context, this approach might not be productive in a rural context. Indeed, entrepreneurial culture and entrepreneurial role models are less prominent or lacking in rural settings (Fortunato 2014; Bock 2016; Summatavet and Raudsaar 2015) and the number of new entrepreneurial projects is less important.

This calls for an adapted selection process and criteria—for example, the socially innovative character of the initiative can be weighted as less important compared with the potential impact on local development—but equally for a reflection on the types of ventures to be supported. If, in general, incubators attract start-ups with a high-growth prospect in the short term, start-ups that target important markets, most often at a national or international level, and start-ups not attached to a particular territory, then there is a need for a change in the mindset, approach, and tools of incubation in a rural context. Entrepreneurial models that favor cooperation and are long-term oriented, thus promoting stability and embeddedness in the local socioeconomic but also historical context, seem more likely to spur on local development.

Moreover, the incubation offer is built around supporting individual entrepreneurs or small groups. The challenges faced in rural areas are interconnected, which means that the individual- or project-oriented incubation model is less effective. It has been shown that the social and relational aspect plays an essential role in rural development to fight against the remoteness and marginalization of these areas (Bock 2016).

A more systemic approach may be needed at the level of industries or sectors by considering the social, economic, and environmental entrenchments of social problems.

In this process of network and community building, questions of representativity emerge: whose voices are being heard and taken into account, which actors have or do not have the resources to participate in the entrepreneurial process, and which actors are included or excluded from the incubation journey? When engaging with rural contexts, the local history of collective action (Neumeier 2017) should be accounted for. Current incubation practices are therefore challenged to incorporate this collective dimension in an inclusive manner, and incubators are required to be mindful of the effects of their selection practices on local dynamics.

There is equally an issue of out-of-sync timelines. As social issues are locally entrenched and can be long-standing, social entrepreneurial projects need more time to get established and become effective. Their need for support can be longer than the current norm of incubation programs—very seldom do these programs go beyond one year of support (though some exceptions do exist: see for example the social incubator NESsT). Moreover, the pressure for quick results that is sometimes observable in urban incubators can be counterproductive. As social innovations suppose a change in social networks, mindsets, and power relations—and carry uncertainty—these processes take more time and demand long-term engagement by incubators.

It has been shown that for social innovation processes in rural areas to happen and become fruitful, there is a need to create connections beyond the local area with potential external partners (Vercher et al. 2021; Bock 2016). Moreover, this collective process requires constant animation (Vercher et al. 2021) to activate and maintain social relations, which carries an interesting window of opportunity for incubators who have, over time, developed important organizational skills in bridging and connecting different stakeholders. Effective incubators can capitalize on this need to engage with institutional and entrepreneurial networks to which they are already connected. For this collective emulation to take place, visible decentralized networks of support are important, as the incubator should have significant territorial coverage and be recognizable for local actors.

As (social) entrepreneurship engages with rural areas' local heritage through incubation support, new perspectives—as well as challenges—emerge. The capacity of incubation to instill entrepreneurial knowledge means it has the potential to revitalize rural areas, if done in a manner that allows local communities and actors to enact the rural (Gaddefors and Anderson 2018) and seize the entrepreneurial act in an authentic way. Indeed, rural areas are often pools of resources (Gaddefors and Anderson 2018), scenery, landscapes, social practices, cultural heritage, etc.—some obvious and others latent. Current societal trends, such as a return to craft making, a reshoring of certain industries, and a demand for local, more transparent products, put dormant cultural and industrial heritage in certain rural areas in a new light. These resources can rejuvenate a sense of pride and embody sources of inspiration for local ventures, in ways that align with the regions' history and heritage. However, activating these resources within new entrepreneurial journeys comes with a social responsibility

toward disenchanted local communities, who have already suffered from deindustrialization and a gradual retreat of public services.

There is, nevertheless, a risk of depoliticizing rural problems (Vercher et al. 2021) by assuming that civic self-responsibility (Richter and Christmann 2023) and social ventures are capable of revitalizing marginalized rural areas on their own, without larger institutional engagement. While social incubation can help to instill entrepreneurial knowledge, connecting stakeholders and orchestrating the collective entrepreneurial process is not a fool-proof panacea for the structural challenges faced by rural areas that are embedded in broader processes of social change (Bock 2016).

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# Solving for X. How to Assess Cultural Values Inherent in the Landscape?

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**Abstract** This paper will explore the variety of issues pertaining to the valuation of cultural values within an ecosystem services assessment framework. It will not be comprehensive, but rather focus on three aspects that provide some promise of future advances in the area. These are different ways of inquiring local communities about those values, the creation of tools to incorporate those values into storytelling and, finally, to use mental maps as a form of data collection regarding those values.

**Keywords** Cultural values, cultural landscape, public participation, citizen science, cultural heritage.

## Introduction

The Ecosystem Services concept is an attempt to quantify the value of the different dimensions of an ecosystem, from clean air to lush forests, etc. It was based on the expert panel convened by the WHO, World Bank, and various sections of the United Nations, including UNESCO, which drew up the Millennium Ecosystem Assessment (World Resources Institute 2003; Costanza et al. 2017).

As a paradigm it is still going strong, with thousands of articles published each year relying on it. On a theoretical level, however, it has some pitfalls which, since they were not overcome during the frenzy of drawing up methodologies of the 2000s, have become glaring absences in the 2020s. None more than the Cultural Ecosystem Services, which includes the cultural values of the landscape and how they constitute an asset for the people. A variety of different methodologies have been proffered to cover the valuation gap (Hirons, Comberti, and Dunford 2016). Some of the most recent attempts (Romanazzi et al. 2023) demonstrate that there is always a preference for objectifiable and non-participatory methods, despite overall recommendations to include public participation in planning (Council of Europe 2000, 2005). Below are

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three areas in which to consider obtaining greater valuation information from local community participation.

## Asking around

Cultural values are held by the people that witness and live with them. They can be taught as knowledge, but not retained as values until they are appropriated by the subjective. In order to understand those values and be able to begin to assess them, one needs to tap into the perception of said individuals. So, naturally, asking them is the expensive, complicated, and very hands-on methodology required to do so. Surveys, interviews, town halls, workshops, and any combination of these, constitute a myriad of possibilities that can be daunting. Most research projects cannot even begin to contemplate these sorts of activities for the time, resources, and strategies required. A natural consequence of this is that, despite the evident benefit of scientific soundness, research strives to limit as much as possible this methodology by using and developing indirect indicators.

A problem with this is often the voices of the local communities end up being sidelined much like during the heyday of ivory tower science. This is not only problematic because it ignores the recommendations on public participation mentioned above, but also because it tends to reinforce the subaltern status of many communities. There is much awareness regarding this problem, and this text merely aims to recognize and associate it with the issue of finding out the value of culture for people, even those who are traditionally marginalized. There are many, recent attempts at incorporating the cultural values of indigenous people in the ecosystem service valuation (Normyle, Vardon, and Doran 2023).

An interesting possibility for solving the logistical and methodological challenge of asking people what they know, is to tap into their willingness to contribute to things for free. Crowd-sourcing is a marvelous invention of the web 2.0, whereby people add information for the sole purpose of contributing to something greater than themselves, or through gamification (e.g., Google Maps). This can be used, and has recently, for assessing cultural ecosystem services (Langemeyer et al. 2023).

## Telling a story

One of the classic requirements of public engagement with cultural landscapes is the artifice of storytelling. This concept has evolved from a more top-down knowledge transfer tool (Wynn 2005) to become a deliberative stimulant for conflicting views of heritage (Bulkens, Minca, and Muzaini 2015), as well as incorporating indigenous stories to contrast colonialist visions (Fernández-Llamazares and Cabeza 2018).

There is a new niche of research being carried out currently regarding the storytelling role of digital tools. As often happens, the technology that allows virtual and

augmented reality has quickly become cheaper and more advanced. This has led to a variety of possibilities that are still lacking scientific support. As a result, there is a progressive rise in research carried out regarding the impact that these sorts of experiences have on public perception and awareness (Millard et al. 2020; Floch and Jiang 2015).

Storytelling can be the creation of simple narratives that help explain things that happen. When dealing with cultural landscapes, the dimension of time needs to be the mold upon which to cast the present. This idea is behind the Cultural Values Model (Stephenson 2008), where embedded values of the past are, in turn, creating values in the present.

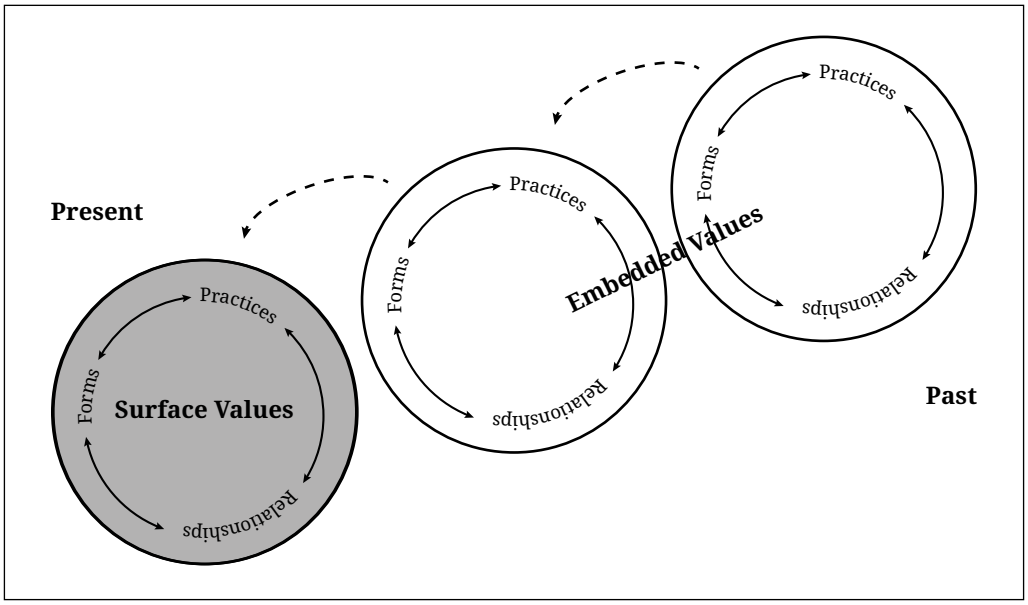


**Figure 1** The Cultural Values Model shown in its temporal dimension, and how it affects the values perceived by people (Reproduced from: Stephenson 2008, 136, Fig. 5).

Making use of these digital enhancement techniques and storytelling can help incorporate and become self-reinforcing mechanisms of cultural value education for local communities. And this is, as of yet, almost unexplored territory in science.

## Drawing it out

As any pedagogue or psychologist will tell you, there is something powerful about a blank piece of paper. It provides the space to express yourself, and the freedom to do so in any way.

The concept of mental or cognitive mapping is inextricably linked with cognitive psychology. It is usually a term that refers to how information is organized within the brain, by creating a topology of concepts and relations. It has also, however, been impressed with a veneer of spatiality thanks to environmental psychology, where the space is not just the topology within the map, but also in geographical space (Kitchin 1994). It is this second branch, often, though not always, termed mental mapping, which has become an interesting possibility for understanding cultural values in landscape, particularly through the work of geographers. The educational and self-reflective value of these freehand maps has been pointed out (Hayes 1993). Indeed, the analysis of these mental maps has been found to be an excellent way to understand the human dimension of multifunctional landscapes (Soini 2001), and thereby deal with the differences and contradictions that may arise.

In my own classes I use this technique to first ask my students to draw their hometown, the place where they live, and then later invite them to evaluate what they drew, and how that can be an expression of those things they value, their cultural heritage, and also how those things express who they are—their identity. This technique has proved to be formidable in getting across the point of the importance of heritage, and how the landscape is an expression of one's identity—all with simple drawings done in class.

A simple premise like this one can be made more interesting by, for instance, asking specific things: "what is important to you?" or "what heritage do you know?". These questions, and the blank piece of paper, force people to rely on their own cognitive maps, and their own experience and perception. And by asking many people the same questions, quantifiable, objectifiable, and subjective information can be extracted and analyzed, ideally for later stages in the study.

Allowing local communities to express what their landscapes are in order to assess things like the cultural values they consider to possess has been surprisingly little used. As a technique all it requires is to ask people to draw their landscape, or their town, or their valley, then analyze the results. Perhaps a follow up question about what was drawn, or even a synthesis map derived from all the others, can be ways to ascertain what is merely subjective, and what can be considered, objectively, to be the cultural values of the community as a whole.

## Conclusions

Sometimes, by shying away from more complicated interventions to avoid different types of costs, we fail to understand that the data needed is there, but we need to generate it. We cannot always rely on what is available if we truly want to break free from the structuring constraints we inherit by using datasets, which were not meant to elucidate this type of information. We need to try to go beyond.

The pretense that there is a methodology that is perfect for every case study is beyond the intent of this paper. But it is important to point out that all methodologies

have drawbacks that must be recognized and addressed. This paper began with the goal of exploring how we can figure out the value of cultural assets within an ecosystem services framework. While this has been explored in many ways by different scholars, it has not been holistically addressed the way current society, and the public policy recommendations, strongly suggest.

The local communities are not only the subjects of science, but they are also the data providers, the testing ground, the stakeholders, the prime consumers and consultants and, after all, the people most interested not only in their area, but also in what can be done about the challenges their area may be facing. For any researcher who believes in action research, they are the ultimate goal of science. In today's context, all science needs to be action-based in order to maintain its relevance to society, so the alternative is not really an option, rather a retreat into the tower.

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# Landscape Heritage and the Commons Potential. The Case of the Aegean Sea

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**Abstract** This paper explores the application of commons theory to landscape heritage, with a focus on the rural cultural landscapes of the Aegean Sea region. The study examines how commons—defined as resources and processes managed collectively by communities—can provide a new framework for understanding and managing cultural landscapes and their heritage remains. By investigating the historical and social dynamics that shape these landscapes, the research highlights the importance of community involvement in the production and reproduction of heritage. The study argues that viewing landscape heritage as a commons not only enhances its preservation but also promotes resilience against contemporary challenges.

**Keywords** Cultural landscapes, commons, heritage, Aegean Sea.

## Landscapes and their communities

While overcoming the traditional concept of pictorial and aesthetic products of western appreciation, contemporary scholarship has been attributing new meanings and various characteristics to cultural landscapes reflecting the needs and challenges of our era (Panagiotopoulos et al. 2023).

Landscapes are now considered as cultural constructs with natural and cultural connotations (Olwig and Ingold 2019), shaped by the interplay of natural, cultural and social elements (Menatti 2017). The integrity of these landscapes is jeopardized when any of their constituent elements are threatened (Fairclough 2020).

Landscapes are influenced by local contexts as well as national and global phenomena, making them subject to constant change (Turner et al. 2020). This dynamic nature renders the term "living landscapes" somewhat redundant, yet it underscores the need for a historical approach to examining landscapes, taking into account temporal, spatial, and cultural factors, as well as acknowledging the observer's perspective (Taylor and Lennon 2012).

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While these perspectives offer diverse avenues for research, they converge on a central theme: the significance of locality and the presence of the communities that inhabit and shape landscapes.

This public emphasis is exemplified in the European Landscape Convention (ELC), which defines landscapes as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Council of Europe 2000, Article 1). UNESCO further elaborates on this by describing cultural landscapes as "combined works of nature and humankind," reflecting "a long and intimate relationship between peoples and their natural environment" (UNESCO 2024).

These discussions prioritize the public's role in the historical understanding, interpretation, and management of cultural landscapes. While this approach is not entirely novel, it aligns with a broader trend in cultural heritage management. The 1990s marked what is often referred to as the "social turn" in heritage management, where attention increasingly shifted from experts to include non-specialists, including peripheral communities and taxpayers (Lekakis 2020b: 20–21).

In addition to the ELC, the Faro Convention emphasizes the importance of placing people and human values at the center of an expanded and interdisciplinary concept of cultural heritage, recognizing it as "a resource for sustainable development and quality of life in a constantly evolving society" (Council of Europe 2005, Preamble). This approach has since become well-established in various landscape policy texts (Fairclough et al. 2020), including the recommendations on Historic Urban Landscapes (UNESCO 2011), which also provide practical methods for public participation.

A common thread in the normative documents mentioned above is the description of heritage as a "common good," a concept likely inspired by the UNESCO 1972 Convention. This Convention, renowned for the World Heritage list, which includes assets of "Outstanding Universal Value," aims to protect the "common heritage of mankind," asserting a somewhat ambiguous "common ownership" of heritage on behalf of humanity (Council of the European Union 2014). In these texts, heritage as a common good is frequently discussed alongside other compelling language, emphasizing the priority of involving the public more fully in heritage decision-making.

But what, precisely, are the commons?

## Commons & (landscape) heritage commons

Although the concept of the commons—referring to a public right to a resource—may initially appear broad and difficult to define, it is, in fact, a precise and well-established governance practice. Commons encompass the management of vital everyday resources, such as pastureland, water, and the atmosphere.

The clarity of this concept can be largely attributed to the work of Elinor Ostrom, a seminal figure in contemporary commons studies. Ostrom's lifelong contributions, as showcased at the Ostrom Workshop at Indiana University (Indiana University 2024)

and in her influential book *Governing the Commons: The Evolution of Institutions for Collective Action,* focus on the collective management of Common Pool Resources (CPRs). These are natural or man-made resource systems that are subtractable and pose challenges in excluding potential beneficiaries from accessing their benefits (Ostrom 1990, 30). Moreover, her work addresses the complexities of such systems in the context of current challenges.

Ostrom's contribution attracted a great deal of attention to the field and opened up new horizons in the study of the commons, particularly in relation to the abundant and diverse cultural systems and social interactions of traditional communities that formulate sustainable strategies for land use, crop collection, cultivation differentiation, and natural resources management (Ostrom 1990, 88–101). Although Ostrom's approach has been critiqued for its (institutional) economic perspective, it is widely acknowledged that her work revitalized the field, providing a foundation for a diverse group of scholars who have either followed her lead or advanced more radical approaches (Lekakis 2020a).

By synthesizing the extensive literature available today, we can define commons as goods and processes used and produced collectively, administered in egalitarian and participatory ways by the communities that manage them. The involvement of these communities in the process of commons production and reproduction is referred to as "communing" in the literature, which also serves as an analytical tool for determining whether an activity qualifies as a commons; i. e.

(i) if it involves tangible or intangible resources, public or common,
(ii) if it is managed by one or more communities of 'commoners' and
(iii) if it is protected by a framework or rules organized and actively defended by the commoners, in the participatory act of 'commoning'.

This tripartite framework has both a political dimension and a transformative potential, and it can be applied to other 'public' resources. Over the past decade, the focus has increasingly shifted to heritage (and cultural landscapes as a broader category) to assess whether the complex interplay of cultural, social, and economic factors fits within this tripartite schema. Although the literature on heritage commons is considered fragmented (Avdikos et al. 2023), we can identify key elements when discussing heritage:

(iv) the tangible and intangible material (for example, a cultural landscape or a historic building and the social/traditional knowledge or local practices and visions surrounding them),
(v) the communities and their values (local and distant stakeholders surrounding the resources, the public in a plural and diverse form, e. g., archaeologists, administrative bodies, locals, tourists, etc.) and
(vi) commoning (namely, the present and aspired governance arrangements along with the products in the process, either in the form of (scientific) knowledge and information or as relevant tourism and education activities).

To structure our discussion, we will examine case studies from my research area, where the application of commons theory to landscape heritage has provided valuable theoretical and practical insights.

## Rural landscape heritage in the Aegean

In recent years, I have engaged in various research projects on both sides of the Aegean Sea (Greece and Turkey) that focus on rural cultural landscapes and particularly rural heritage (e.g. Dragouni and Lekakis 2023; Lekakis and Dragouni 2020; Turner et al. 2020).

Rural heritage can be understood as the tangible and intangible outcomes of a network of edifices, natural resources, and socioeconomic activities that have co-created the broader natural, social, and cultural landscape. The structures associated with land cultivation and animal husbandry practices, such as terraces, trails, threshing floors, windmills, water mills, wells, fountains, and cisterns, as well as temporary accommodation and storage facilities, are prominent features in the landscape, framing the rural space of the recent past in the present.

Research at the local level has revealed that these structures are highly variable and responsive to environmental conditions and landscape-management strategies, particularly crop diversification in response to broader socioeconomic contexts. Many of these structures have ancient origins (e.g., terraces from the later medieval period, ca. 1000–1600 C.E.) and are the result of successive investments in the landscape over time (Turner et al. 2020). These examples of anonymous architecture were passed down through generations until the 1950s and 1960s, when the advent of electricity and mechanized production and transportation methods transformed rural spaces, leading to the disruption of local communities and their integration into modernity. Today, they are mostly partially used or abandoned.

Despite their significance, the attributes and values of these structures remain largely underexplored. In most cases, they are interpreted through folk studies as a continuum from antiquity, serving the national narrative by linking the nation's history to its geographic context. In the field of heritage management, rural heritage is often aestheticized for (alternative) tourists seeking to explore the hinterland, regarded as a natural and picturesque setting for walkers, devoid of social or political agency, or simply neglected (Lekakis 2023).

Applying (heritage) commons theory has provided a fresh perspective, shifting the focus to community understandings and practices regarding these landscapes and their features. In one study on Naxos Island, Greece (Lekakis and Dragouni 2020), we were able to map the significance of (cultural) memory in shaping the place for the community and fostering a bottom-up appreciation of monuments—a form of social monumentality understood outside the national framework for heritage. This process was termed "mnemeiosis," derived from the Greek word "mneme" (memory), to contrast with the typical "monumentalization" imposed by the state—the top-down

**Figure 1** Rural landscape from central Naxos Island, Greece. Collapsing stone walls, and an abandoned threshing floor can be observed in the middle of the photo, among the uncultivated fields. Author 2018.

process of defining and delineating a heritage site. Mnemeiosis represents a paradigmatic commoning process, where communities attribute values and produce heritage that is constantly evolving and in flux (Lekakis and Dragouni 2020, 87–91).

On Naxos Island, these self-referential narratives, intertwined with personal and family histories, converge with romantic notions about the significance of rural heritage, underscoring the need to preserve it for the sake of collective memory in a rapidly changing world. This contrasts sharply with the precarious status of rural heritage in terms of management, as it is not yet part of the official heritage framework of protected sites and monuments, and therefore lacks proper protection.

Commons theory in this context allowed for a relative freedom in appreciating the diverse values of this type of heritage and involving numerous stakeholders in the discussion. It also offered the potential for developing new forms of community-based management to enhance resilience to various pressures, such as urbanization, rural depopulation, mechanization of the rural economy, renewable energy infrastructure, the tourist gaze, and the degradation of the historic rural landscape (Dragouni and Lekakis 2023).

## Ways forward to heritage commons

When discussing the Aegean rural landscapes, the application of commons theory has been instrumental in identifying both historical insights and future management directions. It appears that landscape heritage, like all heritage, is relational, with its past and future embedded in the communities that engage with it, constantly shaping and reshaping it.

In this specific context, the absence of formal state policy creates opportunities for flexibility in negotiating assessments and management strategies for the future of rural heritage. This opens the door for the involvement of non-state, non-expert communities, and participatory processes that align with the latest developments in the field, closer to the framework of heritage described by normative documents from the 1990s onward.

However, conceptualizing (landscape) heritage as a commons also invites a broader discussion. There is a need for a culture-centric approach to heritage management, revisiting essential, often overlooked elements of the internal social dynamics that underpin heritage. We must return to treating heritage—and all cultural products—as products of history and society. This can be achieved locally, in context, by promoting localities and understanding the attachment to place before connecting with global processes that extend beyond identity and memory politics. This approach cannot be effectively utilized unless there is a strong motivation to transform these resources into rights, acknowledging their social importance for communities and avoiding overly revolutionary or ambitious narratives.

This transformation can be accomplished through collective action focused on prefiguring change in managing the public texture of culture and heritage. As a result of this approach, commons can emerge as a viable and realistic strategy for culture and heritage, establishing connections with other resources and giving rise to commons ecologies. These ecologies would contribute to a multi-modal, commons-centric transition, where participants actively engage in a polity that tends toward a new world, already beginning to take shape beneath our feet.

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# From Region to “Regionalization”

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**Abstract** This paper critically examines the concept of “space” in heritage studies, highlighting how dominant theoretical perspectives, initially shaped by modernist views on nature and history as domains to be controlled and categorized, have gradually shifted towards a postmodern understanding that values diversity, participation, and fluidity in the interpretation of heritage. In addition, the present work showcases how the “digital turn” has further facilitated foregoing developments by transcending conventional boundaries of “space,” offering new avenues for engaging with and preserving cultural heritage. Through the examination of three case studies from Greece, what is underscored in particular is how the concept of “regionalization” may (a) reconfigure access to heritage, (b) enrich collective memory, and (c) challenge traditional notions of space, thereby advocating for adaptive heritage management strategies that accommodate the complexities of the contemporary, “hybrid” world. Conclusively, the paper calls for a re-evaluation of heritage policies to embrace these transformative theoretical insights, suggesting that a more holistic and flexible perspective on heritage management can radically alter perceptions of engagement and belonging in the digital age.

**Keywords** Space, “region” vs. “regionalization,” digital turn, non-locationist mnemonic practices.

## Understanding the relationship between “space,” “heritage,” and the “past”

This paper delves into the intricate concept of “space,” a topic that garnered significant attention at last year’s forum in Heidelberg, as evidenced by the frequent invocation of spatial terminology such as “region,” “local communities,” “environment,” and “landscape” within the conference’s dialogue, but also more broadly within the current discourse of heritage studies. The emphasis on spatial terms underscores a profound and enduring connection between how we conceptualize space, interpret heritage, and understand our collective past—a relationship that is far from superficial, imbued with a rich historical context that merits a more detailed exploration.

Historically, the modernist era, spanning from the Renaissance to the early 20th century, heralded a period where emphasis was mainly placed upon providing an understanding of the world through the creation of clear, well-defined, and ‘purified’ categories set in opposition to one another (Catapoti and Relaki 2013). In this

Catapoti, D.: “From Region to ‘Regionalization’.” In: D. Panagiotopoulos et al. (eds.), *Cultural Landscapes as Resource for the Revitalization of Cultural Heritage and a Sustainable Regional Development.* Heidelberg: Propylaeum-eBOOKS 2024, pp. 45–51. https://doi.org/10.11588/propylaeum.1466.c21616

framework, established as early as the 17th century, Newtonian physics proposed that space could be calculated and quantified, suggesting that space is fundamentally a measurable construct. Newton characterized the universe in terms of absolute space and absolute time where the laws of motion apply universally. This model enabled the precise mathematical depiction of the positions, velocities, and accelerations of objects, which could be systematically calculated and predicted using his laws (Strong 1957).

In a manner akin to Newton's conception of the universe as a measurable entity, "nature" too was seen as a quantifiable realm governed by physical laws rather than metaphysical forces. The mechanisms of nature were believed to be quantifiable through the formulation of scientific laws. For Newton, propositions in natural philosophy were "physical," if grounded in observational evidence. He argued that science could collect evidence from experiments to formulate general propositions about phenomena (an approach presuming not only the uniformity of nature but also its measurability) (Strong 1957, 49–50).

In light of these transformations, during the period of modernity, nature began to be approached through the employment of a spatial metaphor and was envisioned as a *territory.* In fact, nature was described as a territory to be shaped and commanded by human intervention but also as a domain to be comprehended and made intelligible through human *logos* (Thomas 2004). This duality in perception fostered a symbiotic relationship between socio-economic ambitions, such as those driving the industrial revolution, colonialist, and nationalist endeavors, but also the scientific imperative to theoretically decipher the natural world (Harvey 1990). Central to the modernist paradigm was the belief that scientific rationality was the primary, if not sole, instrument through which humanity could exert dominion over the environment, a belief that underscored the era's approach to both the natural world and the "world" of the past (Lowenthal 1985).

History and archaeology adhered to these very principles when they were initially launched as scientific disciplines in the 19th century (Catapoti 2013, 264; Hamilakis 2007). Interestingly, the understanding of the past as territory coincided with the Western powers' recognition of uncharted lands ripe for exploration and subjugation, notably the so-called New World. At a time when the ruling authorities of the West began to realize that there was new, previously unknown territory to be conquered and subjugated, in the same way, the past, a greater and more distant land, also became available for "colonization", through the new sciences of history and archaeology (Catapoti 2013, 10).

The conceptualization of the past as "territory" fulfilled diverse objectives and was exhibited through multiple modalities. The distance established between people and the past acted as a boundary for distinguishing "official," objective history from alternative (second order) interpretations, and by extension, engendered an asymmetrical relationship between "specialists" and "non-specialists." The past and its management were thus confined to specific institutions (i.e., heritage organizations, museums, universities), with the role of the steward (i.e., the territory's gatekeeper)

being attributed to the specialized personnel of those institutions (i.e., the scientists) (Hamilakis 2007; McGuire 2007). Institutional mechanisms designed to regulate access to the past ranged from the physical barriers surrounding archaeological sites to the curatorial practices of museums and the adoption of a specialized "scientific" language, all effectively mediating the public's interaction with the past. Under this scheme, a narrative monopoly was established, with the interpretation of the past being confined to the authoritative voice of specialists, thus marginalizing alternative perspectives.

However, the latter part of the 20th century witnessed a paradigmatic shift, commonly referred to as the "postmodern turn" (Hassan 1987) which challenged the foundational premises of modernity's relationship with the world. This shift was characterized by a questioning of absolute truths and a valorization of relativism, difference, multivocality, and even humanness (the quality of being human). For instance, in Michel Serres' work "The Natural Contract" (Serres 1995) humanity's relationship with nature is re-evaluated, while it is also seen as an essential shift from modernist cosmologies focused on humans towards a new model that places the Earth and its elements at the center (with humanity placed at the periphery). Serres' work is largely attuned with the idea that traditional categories of subjects and objects are inadequate in a world of fluidity, exchangeability, and multifunctionality (Catapoti and Relaki 2013, 10). Castells's network theory (Castells 1996) also suggests that we need to move beyond fixed entities and instead focus on networking processes as the primary unit of analysis in late 20th century epistemology. He claims that ultimately, what we study are complex, overlapping, and disjunctive orders where multiple, heterogeneous flows are interwoven across time and space, akin to a hypertextual pattern. In a similar vein, John Urry's work (Urry 2000) advocates that we should envision the world as a network that accommodates spatiotemporally diverse, interconnected components. In fact, the sociological term "regionalization" refers precisely to the workings of such diverse spatiotemporal zones, which cannot be analytically captured by traditional sociological concepts (cf. Giddens 1984). Urry explains how these concepts are increasingly inadequate for understanding social relations that stretch across multiple and diverse spatiotemporal zones; he argues in particular that societies are no longer confined to specific geographical territories but are better understood through the lens of flows, movements, and networks that transcend traditional boundaries.

In the aftermath of all foregoing developments, from the 1980s onwards, the rigid boundaries that had once circumscribed the past as a discrete, uncontested entity also began to dissolve (Catapoti 2013; Catapoti and Relaki 2013). During this period, what was first and foremost re-evaluated was the exclusive stewardship of experts over the past; the new intellectual agenda advocated instead for a more inclusive and participatory approach to heritage that would recognize the validity of diverse voices, experiences, and interpretations (Hamilakis 2007). The past began to be seen not as a fixed territory of dense, coherent meaning but as a malleable resource capable of engaging with and being enriched by a multiplicity of alternative narratives.

The emergent reconfiguration of heritage discourse was not merely a theoretical exercise; it reflected broader socio-political and intellectual currents that emphasized the interconnectedness between past and present, an interconnectedness that put under severe scrutiny conventional spatiotemporal boundaries (Catapoti and Relaki 2013). Terms like "complex connectivity" and "network sociality" (Urry 2000) stressed the fluid, dynamic nature of social spaces, a condition that was taken to have the ability to constantly reshape spatial boundaries and scape-bound identities. Such theories have been integral to understanding how mobility is redefining social relationships and spaces in the modern world but have also prompted several critical inquiries with regard to heritage: What implications arise if space and time are not singular, but multiple? How do different communities and groups perceive heritage and what factors influence their choices to remember or forget specific elements? Furthermore, it is essential to identify the various stakeholders involved in these processes. Additionally, it is pertinent to examine the conditions under which heritage acts as a vehicle for social integration and the circumstances in which it becomes a contested arena. These questions underscore the complex interplay between heritage, community, and identity within diverse spatiotemporal contexts, highlighting the need for a nuanced analysis of heritage as both a unifying and divisive force (Catapoti 2013).

During the transition from the 20th to the 21st century, the "digital turn" further challenged traditional associations between heritage and space by emphasizing the emergence (if not gradual crystallization) of a hybrid existence that merges offline and online experiences (Malpas 2007). This shift redefined the concepts of community and subjecthood, which are now perceived as fluid and extending beyond physical space. The notion of belonging has evolved to become "anti-locationist" and "ec-static" (beyond *stasis*), indicating a dynamic state of being that defies static definitions and resists confinement. These changes significantly influence how heritage is approached, prompting critical questions about its definition, its stakeholders, and the decision-making processes that determine its value (Cameron and Kenderdine 2010). Questions such as for whom and by whom heritage is curated, and which communities and subjects are involved in its management, are central to current scientific discourse. Today, there is therefore an urgent need to adapt to the multifaceted and evolving nature of our hybrid world, to rethink strategies for heritage management, and to reconsider our locationist understanding of space, heritage, and the past.

## Non-locationist communities: Three examples from Greece

In the wake of all foregoing developments, the present paper argues for a re-evaluation of the concept of space within heritage discourse, advocating in favor of approaches that embrace the complexities and diversities brought forward by the "digital turn." By acknowledging the limitations of traditional frameworks and by exploring the possibilities afforded by new understandings of space, we can foster a more inclusive, dynamic, and engaging relationship with heritage. To illustrate this

point further, the present paper embarks on a brief presentation of three case studies from Greece, each illustrating innovative approaches to heritage and spatial engagement. Through these examples, the paper seeks to demonstrate how the emergence of new topologies offers a wide array of alternative perspectives on heritage and community engagement, transcending geographical constraints and traditional modes of interaction.

**GYAROS 1949: Stories from Exile**

Gyaros, an uninhabited island in the Cyclades, has a poignant history as a place of political exile, first in the early Roman Empire and prominently between 1948 to 1974, when it became a site of imprisonment for more than 22,000 political prisoners. Despite its harsh landscape and the passage of time, the island's legacy endures, marked by the physical remnants of its past and its ecological significance as a NATURA Special Protection Area for the Mediterranean monk seal (https://www.marineregions.org/gazetteer.php?p=details&id=29487). In collaboration with Ms. Vasia Toufekoula for the purposes of her MA thesis (Toufekoula 2018), we embarked on an initiative to spotlight Gyaros' historical importance through an anti-locationist perspective. Our approach was influenced by the digital project *1917 Free History* (https://project1917.com/), which uses a simulated social network to recreate historical events in real-time, thus offering a template for immersive, interactive historical engagement. Toufekoula's work proposed a digital platform that would allow users to explore Gyaros' history through a mix of archival materials and interactive features, creating a virtual space for engagement free from the constraints imposed to the visitor of the physical site. This approach not only ensured the preservation of the site's ecological integrity but also democratized access to its historical narrative, allowing for a personalized and immersive exploration of its past.

**Decorated Bread (https://decorated-breads.tavros.space/en/)**

This project, led by new media artist Maria Varela (and curated by Olga Hatzidaki, under the scientific supervision of the author), investigated the tradition of decorated bread, a significant cultural practice in rural Greece, through the prism of contemporary art and digital collaboration. By fusing traditional bread-making techniques with algorithmic design and facilitating online collaborations between artists and bread-makers, the project embodied a rhizomatic model of knowledge-sharing and cultural expression. The project's innovative approach fostered a symmetrical collaboration among participants, blurring the lines between tradition and modernity, art and craft, experts and audiences. This culminated into a hybrid exhibition that not only challenged established roles and perceptions within the art and heritage sectors but also promoted a multifaceted exploration of spatial distance and proximity, emphasizing the fluidity of identity and community-building in the digital age.

### Curating a museum both online and offline

Kostas Paschalidis, an archaeologist (with a specialization in Mycenaean Prehistory) and curator of the National Archaeological Museum of Athens (NAMA), extends the boundaries of his professional role through his active presence on social media (https://web.facebook.com/kostas.paschalidis.5), where he connects historical/archaeological narratives related to NAMA with contemporary socio-political issues. His approach extends the museum experience beyond the confines of the museum, drawing parallels between the past and present and engaging online users in meaningful dialogue. Online engagement with Paschalidis' posts has significantly increased visitor numbers in the physical confines of the Museum. His (unofficial) role as an online curator exemplifies how an expert's investment in the creation of personal as well as socially sensitive narratives in digital platforms can enhance the visibility and relevance of cultural institutions, fostering a sense of intimacy and connection that ends up transforming user online experience into a museum visit.

## Conclusions

The three case studies demonstrate how hybrid cultural heritage projects transcend traditional spatial and conceptual boundaries, facilitating new forms of social engagement and interaction. Such initiatives offer accessible, inclusive, and dynamic experiences, underscoring the potential for digital technology to reshape our understanding of space, community, and heritage. They highlight the importance of alternative strategies in heritage management, especially in addressing the challenges posed by (long dominant) locationist approaches. They also reveal the transformative potential of digital tools in rethinking access to cultural narratives, enabling a participatory exploration of the past that enriches our collective memory and identity. As we move forward, the lessons learned from these case studies may inform broader strategies and expand the rich initiatives in heritage discourse.

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# “Simply Beautiful” and “Always Worth a Trip”? Some Thoughts on Modern Ruins and the Visualization of Heritage

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**Abstract** This paper provides an insight into some of my own recent reflections on two contemporary questions of historical culture: first, what challenges does the study of ruins from the last 100 years pose to history and cultural studies? My point is that recent material legacies challenge us with new ways of seeing and thinking *within* and *for* society. Second, what does it mean for the treatment of material heritage in research *and* in the public sphere when academics act as stereotypical history tourists? This includes questioning whether academics travel differently when traveling for professional reasons, and whether heritage today can be equated with photographed heritage.

**Keywords** Ruins, material legacy, concrete, cultural landscape, heritage, photography, history tourism, history of tourism, public history.

## Modern ruins

“Ruins don’t age” claimed an article in the German daily newspaper *Süddeutsche Zeitung* a few years ago (cf. Steinfeld 2015)[1]—but, one may add, a lot of 20th century buildings do. On the one hand, nothing seems to have aged more brutally than the large-scale urban concrete structures of the second half of the century, regardless of whether they date from the 1960s, 1970s, or 1980s (see fig. 1). On the other hand, *bloq*, a magazine focusing on social and cultural issues in and around Mannheim, Heidelberg, and Ludwigshafen, dedicated its third edition to “concrete and its secrets” (3/2023, editorial), while a regional interior design magazine, *Freisberg*, explores “brutalist visions and visionaries who used creativity to create brutal beauty” in an edition titled “Truly Brutal” (55/2023, editorial), which likewise deals with colossal concrete landscapes.

1 This and all following translations from originally German texts by the author.

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**Figure 1** Neckar Embankment Development North, Mannheim, south-west Germany, built between 1975 and 1984. © Cord Arendes 2022.

Ruins, like other sites, buildings, and material artifacts that contain or are suspected to contain traces of history, "exert an unbroken fascination in our time because of their historical substance, spatial configuration and historical significance, which is based on the historicity and uniqueness of urban spaces and, not least, the attribution of historical authenticity" (Bernhardt, Sabrow, and Saupe 2017, 9). Nothing seems to point more clearly to our—often long forgotten—pasts than ruins. But what exactly constitutes a ruin? The answer differs according to discipline. As the French classical archaeologist Alain Schnapp states, ancient ruins, in particular, have their own *poetics:* "poetics of the eternal, the reversibility of fate and the transformation of the world as a reflection on the passing of time and the decline of kingdoms and cities" (Schnapp 2014, 52). Here he describes a surplus that we will not find in our numerous suburbs or industrial areas.

The valorization of ruins was perhaps never greater than in the heyday of Romanticism. For the art historians Charlotte Schoell-Glass and Elizabeth Sears, the atmosphere of "vanitas" (i.e., the spirit of transience) could not find a better symbol than the ruin: "beyond the emotional sympathy with ruined things, their external characteristics, such as signs of corrosion and plant growth on stone, patina on metals, chipped paint on paintings, etc., were elevated to new aesthetic values and even artificially created" (Schoell-Glass and Sears 2009, 103). Building materials like concrete,

which are hostile to the making of ruins, had not yet been invented in the 18th century; and even in 1935 the Russo-German and—following his emigration—American art historian Horst W. Janson stated in a letter to his friend and colleague William S. Heckscher, that "America knows no ruins" (ibid., 97). Here Janson was referring to the seamless coexistence of old and new in American cities as he saw it from a European perspective (ibid., 101).

In 20th century Europe, philosophers like the German Hannes Böhringer argued that ruins gain a new aesthetic quality over time, no matter how boring or even ugly the buildings were in their original state: "precisely because the ruin in its form is unintentional, unpredictable and accidental [even in the case of abrupt destruction, the later form is not foreseeable; C.A.], it contains a formal complexity that could never be achieved through intention and composition" (Böhringer 1982, 373). And the cultural historian and museologist Anne Eriksen added that "not alone in art history ruins have become an autonomous aesthetic object and a topic of independent aesthetic reflection" (Eriksen 2014, 70).

Since my own research is tightly focused on public and contemporary history, for me, ruins are neither poetry, nor antiques from the age of Romanticism; nor do I consider them as works of art. Just the contrary—they are "real." The ruins I deal with are mostly large building complexes erected between the late 19th and later 20th century. These modern ruins—not spectacular contemporary ruined buildings (cf. Matzig 2017)—include large structures from the 1960s to the 1980s that German architectural scholars have referred to as both "brutalism" and "recent cultural heritage" (Eckardt et al. 2017, 6). This material heritage is too similar to contemporary buildings for its heritage character to yet be clearly defined. Nevertheless, "the architectural features of the 1950s to the 1980s constitute a cultural heritage that unites Europe" (Meier 2017, 94) and can serve as a storeroom for our 20th century memory.

This memorial function has recently been discussed even in relation to Germany's decommissioned nuclear power plants. The authors of an article in the German weekly newspaper *Frankfurter Allgemeine Sonntagszeitung* compared the historical relevance and the cultural value of nuclear power plants to former industrial areas such as the Zollverein Coal Mine Industrial Complex in Essen, which has been a UNESCO World Heritage Site since 2001. For König and Oswald securing an "afterlife" for such buildings would not only contribute to the "considered confrontation with a major social conflict" (König and Oswald 2024), it would also generate value for the tourism sector. Both aspects would contribute to the reuse of "a ruin that was no longer functional for its original purpose" (ibid.). As this example shows, any form of subsequent use entails the physical and material re-appropriation of buildings, structures, or artifacts—even in cases that have a dramatic history (though where the history is properly traumatic, subsequent use is impossible).

Not only nuclear power plants, but many other industrial ruins are frequently seen by those who live or work near them as visible expressions of failure rather than as forms of the past that have persisted into the present (and will continue to persist into the future). From such a point of view, we can still see—or at least sense—what they

once represented, yet at the same time they point towards transience and emphasize the fact that everything that exists will one day become a ruin. One of the many areas of special interest in the field of ruins are air-raid and other military shelters, many thousands of which can be found in Germany alone. Should these concrete giants be re-used or should they all be torn down or blown up? The former bunkers have found new lives as churches, clubs, exhibition spaces, room for start-ups, or even apartment blocks, not least on account of rising rents in Germany's larger cities (cf. Weissmüller 2016; Tillmann 2016). Reminders of the recent past—emphatically not "ancient history"—also include numerous material remains from dictatorships and authoritarian regimes, including National Socialism, all over Western and Eastern Europe. Most of them are considered examples of dissonant or difficult heritage (cf. Macdonald 2009). This group of architectural remnants comprises industrial buildings and plants, military facilities including bunkers as well as functional buildings such as administration buildings or "hybrids," i. e., mixed-use complexes.

As a contemporary and public historian, I am particularly interested in such buildings, their surroundings, and all the associated material remains of the past that reach into our present: one can "feel" these architectures even though they are often re-used for non-military purposes or have (recently) become regional tourist hotspots (cf. Arendes 2016). This is even true for large-scale National Socialist (infra)structures such as Tempelhof Airfield in Berlin, the KDF bathing resort of Prora on Rügen, the remains of the Army Research Center *(Heeresversuchsanstalt)* in Peenemünde (Usedom), the *Ordensburg Vogelsang* ex-training center in the Eifel region near the Belgian border, and the *Valentin* submarine pens on the Weser River in the village of Farge, near Bremen. In most cases, these buildings contain only indirect references to acts of violence committed by the Nazi regime, but they must nonetheless be regarded as places of perpetration. These facilities are not only symbolic of political and ideological training, the representation of the regime in architecture and mass marches, or the development of weapons technology. They also document the widespread use of forced laborers and prisoners from concentration camps—in both their construction and during their operation. That is anything *but* the poetry of ruins.

A few years ago, the contemporary historian Martin Sabrow introduced the term "shadow place" *(Schattenort).* He was primarily concerned with interpreting and categorizing the past from the perspective of our Western European present: "It is, above all, the current reception of the historical revelation and its place in the cultural memory of posterity that determine the shape and blackness of the shadow that lies over the sites, not the historical events themselves" (Sabrow 2017, 8). Sabrow intended the term not least to avoid having to talk about *dark places, dark heritage,* or *dark tourism:* "Shadow places differ from dark or 'evil' places insofar as their meaning is not reduced to acts of horror; they are *shadow places,* not *dark places,* because in them there is light as well as darkness, and continuity of civilization as well as rupture with civilization" (ibid., 10–11; emphasis in original). And all the architectural complexes mentioned above are ultimately (and to some extend also unfortunately) parts of our heritage. By thinking about the expectations that were associated with them

a few decades ago (including the history of the architecture of concrete locations), their spatial-landscape contexts, and the corresponding local, regional, and national narratives over many decades, we are enabling ourselves to undertake new ways of seeing and thinking *in* and *for* society—far beyond the mere interest of these places as tourist sites and their "misuse" as indicators of the presence of a past. However, we ought not to forget that, even as academics, we tend to think in visual terms. Ultimately it is not even necessary for these sites to be accessible to the public—whether in larger or smaller numbers—as numerous photographs exist of most of them: heritage in the early decades of the 21st century is primarily photographic and therefore visually documented. This has consequences for the structures and processes of *doing heritage;* it also raises questions concerning researchers' own working routines.

## Visualization of heritage

The way we deal with our heritage in general today is mostly subject to the mechanisms of tourist interest (see fig. 2), as a late summer view of the old town of Bern shows.[2] Here, tourism means the collection of destinations, or, more precisely, as many destinations or heritage sites as possible. But this behavior is not limited to holidaymakers. Even the behavior of "academic tourists" is not entirely free of these mechanisms. But does the "tourist gaze" (Urry 1990) of academics in this particular context differ significantly from the views and interests of ordinary tourists? Do researchers travel differently, for example, when they are traveling for professional reasons only?

Academic tourism is generally understood as journeys undertaken by academics, either to attend conferences and congresses or to stay in a place—usually one that is also of interest to tourists—for research purposes. Particularly in the humanities, where large archives are located in cities of cultural and historical importance, there is most likely a high correlation between research value (acquisition of data) and tourist value (relaxation in a pleasant environment). Conferences and congresses in "famous" cities are also becoming increasingly popular, which leads to the fusion of professional and private travel—including contact with heritage sites. The question "Why are they here?", which is frequently asked in tourism research, often cannot be answered precisely in an academic context (cf. Johnson 2015)—as a variety of reasons may apply.

Like other travelers and tourists, researchers are always on the move. Does this *dual role* have a concrete impact on the cultural valorization of heritage? Both sides, researchers and tourists alike, actively drive processes of "inheritance" (Bendix 2018) by staying at historical sites, albeit with different priorities. Epistemologically and economically driven approaches to tourism in centers of material heritage have

2 Some of the following arguments have already been the subject of an earlier blog post (cf. Arendes 2023).

**Figure 2** "Old Town" of Bern, Switzerland, UNESCO World Heritage Site since 1983.


more in common than they do have differences. The reflections of Marco d'Eramo and Valentin Groebner on selfies, tourism, and the role of history for authentic experiences have made a clear case for this (cf. D'Eramo 2018; Groebner 2018). In the creation of tourist-friendly city centers, sometimes nostalgically glorified, sometimes seemingly organically grown, material heritage has often degenerated into urban beautification (Shanken 2022, 180, 189, 199). Overall, we know very little about the perception of art in public spaces. Meaningful academic judgements about how people perceive monuments or heritage in their everyday lives and what meaning they may attach to them are of limited value in the absence of empirical reception studies (cf. Schult 2024, 10). There is a great need for future research in this area, although it is highly time-consuming and involves legal and ethical constraints (cf. Arendes 2022a, 2022b).

As the aforementioned close connection between heritage and tourism shows, the "value" of tourist hotspots and highlights depends to a large extent on whether they can be experienced first-hand and perceived as "authentic." Without wanting to repeat the discussions carried out in History and Cultural Studies in recent years, it should be briefly pointed out that the authenticity experienced by visitors to a site is primarily based on their own—not always rational—expectations. The increased awareness and thus the value the heritage has gained, especially in the last two decades, can be exemplified by its ubiquitous visual presence: we already know what


**Figure 3** Eyjafjallajökull volcano, Iceland, UNESCO Geopark "Katla" since 2015.
© Cord Arendes 2022.

a medieval monastery or a UNESCO Geopark (see fig. 3) should look like before a planned trip. And, if we lack this knowledge, it is very simple to use the visual memory of the internet to get a first visual impression of a material heritage site or to form a concrete image of it. Heritage is largely a photographed heritage and a heritage documented in audio-visual media.

Over the past decade, smartphones and their built-in digital cameras have contributed to an increase in the public significance of places. Though equipped with comparatively little photographic functionality, but easy and safe to use, the smartphone has played a major role in reassessing our view of the *here and now* and, thus, of the material and immaterial legacies of the past. If we look at the private practice of photography, various forms of cultural understanding of the self and of the other are condensed in the *selfie,* the digital photographic self-portrait that has spread worldwide (cf. Ullrich 2019; Eckel, Ruchatz, and Wirth 2018). And since the selfie is intended to be shared at least among friends and acquaintances, the time and place of the recording are always recognizable. This is true even where the complex structures of heritage are difficult for the public to understand or decipher at first glance—for example in public sites related to totalitarian systems like National Socialism.

The infinite possibilities offered by small, portable digital cameras have been a major factor in historians no longer only taking photographs for private reasons, as

**Figure 4** "Centennial Hall" Wroclaw, Poland, UNESCO World Heritage Site since 2006.


they did in previous decades, and relying rather on official photographic material from newspapers or photo agencies for their research and teaching. In retrospect, this can be considered to have been a bad habit even in previous decades like the 1970s. Instead, they now produce a steadily growing number of photographs themselves, the content of which is sometimes more, sometimes less closely related to their profession, and is used correspondingly. Not least in terms of copyright, we stay on the safe side by using our own photographic material, especially when it comes to publishing. Historians therefore sometimes operate in a no man's land between history tourism and history of tourism. And in their work, they take on different roles, which, for the sake of simplicity, will be referred to here as *recreational* and *professional.* These are inextricably linked—ideally, the knowledge of academic theory complements the proximity to practice. By reflecting on their own position or point of view *behind the lens*—how they simultaneously produce and analyze the photographs—researchers can contribute to clarifying the constructed and processual nature of heritage.

The photos in this article illustrate that this can (and does) sometimes happen almost incidentally. They have all been taken since 2018 in a mixture of private (holiday) and professional contexts (lecture tour, conference participation, research project). The motives for taking the photos also differed: some were intended to record private memories, others were already serving documentary purposes at the time they were

taken—by visually documenting places as heritage, they are simultaneously valorized (see fig. 4). Our own academic engagement with heritage has thus led us to document heritage sites and other places that have a direct or even indirect connection to the subject area of "heritage" and to collect the photos for potential use in research and/or teaching.

Circling back to the start of our reflections: our common heritage is always worth the trip, especially when it has been processed by academic experts and didactically prepared. The transfer of knowledge often happens by means of photographs: a place to see is, or may be, a place to be. In many cases, even a short detour is enough to get a glimpse of it. However, for academics specializing in historical and cultural studies, this context can be defined even more narrowly: while traveling is not a professional obligation for them, it should at least always be associated with *keeping one's eyes open,* on the one hand, and reflecting on one's own position(s) in the negotiation and discussion of heritage, on the other.

In sum: it is fruitful to ask ourselves how our reality and the reality conveyed by images or photos overlap—or not. It should be noted that the photo alone cannot be equated with mediated perception. Rather it is the duplication in social media that ensures an afterlife and enriches even modern ruins with some kind of beauty.

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# Part II:
# **Practice-oriented Perspectives**

# ‘Excavating’ Cultural Landscapes. Practicing Archaeology as a Creative Discipline

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**Abstract** Following the parabolic growth of the notion of cultural heritage in recent years, archaeological sites and landscapes, as two of its key manifestations, have gained pivotal scientific and societal importance. They pose now a complex and demanding challenge that requires innovative research methodologies and management strategies. This article examines current issues related to the archaeological exploration and modeling of such places, drawing on both theoretical perspectives and a case study from southern Crete. Its main objective is to demonstrate that archaeology has the potential not only to observe but also to intervene in the diachronic trajectory of heritage places, thus evolving itself from a destructive to a creative discipline.

**Keywords** Archaeology, excavation, heritagization, archaeological sites, cultural landscapes.

## Introduction

One of the most remarkable recent developments in archaeology is its gradual shift from a discipline focused on antiquity to one centered on cultural heritage. This emerging field is broader and more dynamic than the traditional archaeological understanding of the past, since it also includes the dimension of the present as a main field of enquiry and action, and consequently, offers numerous opportunities for archaeologists to engage with contemporary issues at the intersection of science, politics, economics, and society. Archaeology’s new role, amid current developments in this and related fields, leverages its untapped potential to remain relevant in today’s world and—more important still—to justify its existence in a modern society that constantly redefines its priorities. However, this shift not only presents opportunities but also necessitates a fundamental reassessment of traditional archaeological methods and objectives. Archaeology can no longer be limited to the destructive process of excavation or the passive study of ancient artifacts; it must evolve into a more active and creative ‘applied discipline.’

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The best indicator of this transformative process—along with its challenges and opportunities—is the involvement of archaeologists with sites and landscapes, beyond the traditional task of excavating them that still represents the core of this discipline (Erickson 1992; Downum and Price 1999). Acknowledging the pressing necessity that archaeology in the 21st century has to define itself as an open academic discipline with a social dimension, the modeling and stewardship of archaeological sites and landscapes pose one of its greatest challenges. Aside from major sites developed to serve as major touristic attractions, many lesser-known and peripheral sites are often neglected and at risk due to structural issues and competing interests. Protecting and conserving these sites has understandably been the top priority for state archaeologists and current archaeological legislation, especially given the threats posed by natural deterioration and modern development in both urban and rural areas. However, achieving even these basic goals is hindered by numerous challenges, primarily financial. Many archaeological sites either deteriorate post-excavation, face threats from real estate speculation, or are destroyed by looters. Effective protection requires significant investment, yet the limited budgets of governing institutions fail to ensure sustainable management practices for conservation and revitalization efforts.

Under these circumstances, state archaeologists often find themselves operating under constraints rather than creatively engaging with cultural heritage, thus focusing mainly on preservation with limited capacity to integrate heritage sites into modern society. This situation is mirrored even at major archaeological places that attract thousands of visitors each year; due to financial limitations, their management typically extends only to essential protective measures. Nonetheless, in recent years, state archaeologists in Greece and Italy have successfully implemented major conservation programs and master plans to enhance the accessibility and visibility of heritage sites through European initiatives, showcasing the potential for a 'creative approach.' Among several examples for an exemplary management and modeling of archaeological sites/parks, one could highlight Messene and Nikopolis (Greece) as well as Selinunte and Agrigent (Italy). Yet, such initiatives remain the exception rather than the norm.

Additionally, academic archaeologists conducting fieldwork in Greece and Italy often focus almost exclusively on scientific endeavors, thus limiting the relevance and impact of their work on local communities and regions. This issue is compounded by a pressing threat to Mediterranean cultural heritage posed by the private sector, particularly during financial crises, when entrepreneurs seize opportunities to undertake ambitious projects that often lead to the irreversible damage of cultural and physical heritage. The economic exploitation of some of the Mediterranean's most ecologically sensitive areas rarely delivers the promised benefits for sustainable regional development or improvements in the quality of life for local populations.

All these involved stakeholders—state authorities, local governments, the archaeological service, academic institutions, entrepreneurs, and communities—comprise a complex social conglomeration. In this field of interaction, which is marked by divergent and sometimes conflicting interests, several challenges arise. The first is the crucial question whether we can develop sustainable management models for

protecting, preserving, and promoting heritage places without risking commercialization (Timothy 2011; Bendix 2018; Pacelli and Sica 2021). A further challenge refers to the potential role of archaeology in the 21st century: Can this academic field contribute to sustainable development of heritage sites and landscapes by embracing an 'applied discipline' approach? Is it possible for archaeologists to acquire relevance and significance in modern society through practical applications of their theoretical concepts (Erickson 1992)? Finally, one should focus on the active role of citizens and local communities which have to participate as active agents in every effort relating to the present and future of the cultural heritage of their own region (Arnstein 1969; Stroulia and Sutton 2010; Mergos and Patsavos 2017).

By striking a balance between archaeological theory and practice and committing to a participatory approach that includes all stakeholders, archaeological sites and landscapes can be innovatively modeled, thus contributing to sustainable development in peripheral Mediterranean regions. The scientific and social potential of such an approach is discussed below, where the concept of archaeological *entopias* and an ongoing archaeological project in south-central Crete as a case study are briefly presented.

## Archaeological sites/landscapes as entopias

To ensure the ongoing relevance of archaeological remains in modern times, their historical value alone is insufficient. Monuments and sites must be actively modeled, ideally through interdisciplinary projects that engage archaeologists, historians, ethnologists, architects, and geographers. Within urban environments, design interventions should focus on revitalizing spatial and temporal connections, enhancing both physical and cultural accessibility by constructing, 'translating,' and communicating heritage. Concepts like porosity and permeability (Wolfrum 2018), along with multifunctionality (Labadi and Logan 2016; Williams 2015), offer ways to reintegrate heritage sites into modern cities, transforming them into dynamic spaces for social interaction. On the other side, for archaeological sites in rural regions—often referred to as 'emptyscapes' due to their lack of social activities and memory (Campana 2017, 2018)—the main challenge lies in developing landscape-oriented strategies that counter isolation. These strategies should aim to foster dialogue with the present and integrate these sites into the social and economic life of local communities. One innovative approach is to transform rural archaeological sites into spaces that merge temporal and biological diversity, using creative conservation methods like integrating cultivation within these landscapes (Donadieu and Inzerillo 2014). A biodiversity-driven masterplan could serve as a design tool to link past, present, and future, as well as culture, ecology, and economy. In both urban and rural contexts, the goal should be to move beyond mere spatial coexistence toward 'cohabitation,' creating an interface between the past and the present.

This conscious 'placemaking' can operate on both symbolic and practical levels. First, it has the potential to transform monuments, sites, and landscapes into living

spaces of memory, belonging, and collective identity at a local or national scale. Second, it can shape these spaces as heritage sites with economic potential, such as tourism or urban renewal. A key element for successful placemaking is solidarity, which can bridge social divides between the different groups involved. Consequently, a pressing need in modern heritage management is the principle of 'commoning,' which establishes frameworks for managing shared resources through participatory methods. Bollier (2016, 2) describes commoning as the "acts of mutual support, conflict, negotiation, communication, and experimentation necessary to create systems for managing shared resources" (see also Bollier and Helfrich 2015; Roued-Cunliffe and Japzon 2017). Engaging with heritage should always follow a participatory approach, or 'commoning heritage.' The Structured Democratic Dialogue (SDD) methodology offers a scientific framework to facilitate forward-thinking discussions with all relevant stakeholders, including public institutions, academia, economy, and society (Kakoulaki, Flanagan, and Christakis 2023). By applying the SDD approach, it becomes possible to identify shared concerns, develop common agendas, and create a shared language that transcends social boundaries and bridges the gap between scientific and indigenous knowledge (Nakashima 2010; Raina 2019).

To define a clear objective for a heritage plan for archaeological sites or landscapes, it is essential to start from their current state—how they are perceived by visitors and local communities today. Many archaeological sites are experienced as 'heterotopias' (Foucault and Miskowiec 1986), or 'different places' separated from real-world contexts. Within the confines of these sites, they often appear as 'landscapes of ruins,' spaces fossilized in time, devoid of activity except for visual observation. A central challenge for modern archaeology is to develop strategies for transforming these spaces into 'entopias' (Doxiadis 1966, 1975), or places 'within'—distinct, authentic locations that are simultaneously ideal, existing, and functional. Archaeological entopias can serve as living places of collective memory and as foundations for the sustainable development of local communities.

This concept can be applied to both urban and rural sites, albeit with different tools and objectives. In rural areas, the key challenge is to expand the focus from the fenced archaeological site to the broader cultural landscape. For a long time, archaeologists concentrated primarily on material remains, often neglecting the natural environment and its influence on ancient societies. However, recent advancements in landscape archaeology, digital documentation of spatial data, and societal concerns have shifted the focus from the 'site' to the 'landscape,' offering new opportunities for archaeologists to engage with regions rich in cultural and natural heritage. Their basic aim must be to integrate heritage places into the daily life, economy, and social activities of local communities. In every effort, the main objective should be to foster 'cohabitation,' creating a bridge between past and present. The implementation of the 'entopia' concept and the challenges it presents are explored in the last part of this paper, using the ongoing archaeological project at Minoan Koumasa (south-central Crete) as a case study.

**Figure 1** The archaeological site of Koumasa (south-central Crete) from southeast. © Mario Carvalhal (2022)

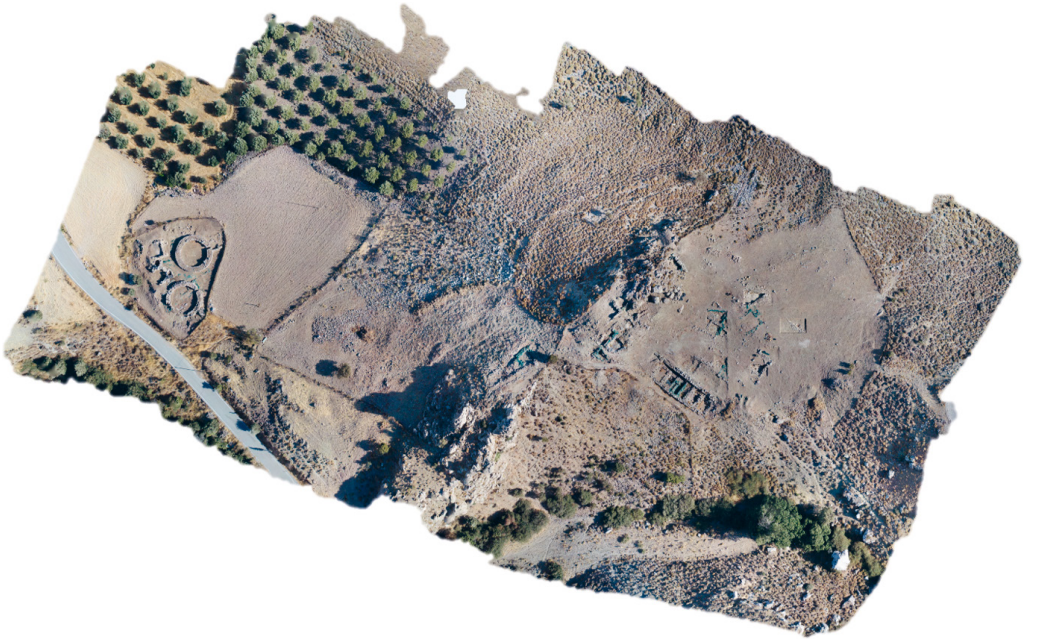

**Figure 2** Orthophoto of the archaeological site of Koumasa. © Martin Kim (2022)

## Reconstructing an archaeological landscape

Since Stephanos Xanthoudides' excavations from 1904 to 1906 and the publication of their results in 1924 (Xanthudidēs 1924), Koumasa has held a significant place in Minoan Archaeology. Situated strategically on the foothills of the Eastern Asterousia mountains, overlooking a large portion of the Mesara plain (fig. 1–2), Koumasa was predestined to be a key regional center during the social transformations that led Early Bronze Age Crete to develop into a palatial society. This prominence was highlighted by the remarkable finds from the early excavations, which included hundreds of clay and stone vases, seals, amulets, jewelry, and ritual objects.

More than a century after this first period of archaeological work, a new research project began in 2012, under the auspices of the Archaeological Society at Athens and in collaboration with the Institute of Classical Archaeology and Byzantine Archaeology, University of Heidelberg, and the Heraklion Ephorate of Antiquities (Panagiotopoulos 2023, 194–98 with further bibliography). Initially, this interdisciplinary project aimed to thoroughly investigate the nearby settlement and correlate the new excavation data with Xanthoudides' earlier findings. This endeavor was promising, as the systematic excavation of a southern Cretan settlement connected to a cemetery has long been a major desideratum in Minoan archaeology.

However, as the project progressed, the impact of the Asterousia region and its people on the archaeological team became more profound than anticipated. Living, working, and forging relationships with the local community led the team to reconsider their initial objectives (Fig. 3). It became clear that traditional archaeological approaches—focusing solely on the site and its historical importance—would be one-sided, if not naïve, especially in a period of a severe crisis during which the region was grappling with unprecedented economic difficulties. To address the current challenges, which the local population was facing, and unlock the full potential of archaeological research in this untouched landscape, a significant shift in the project's overall concept was necessary. This shift broadened the scope of the research in both time (diachrony) and space (landscape), prompting rethinking at both scientific and social levels.

At the scientific level, the project expanded its focus beyond the site itself, considering the broader landscape and its diachronic development. Koumasa is uniquely positioned at the border between two contrasting regions: the fertile, densely populated Mesara plain and the barren, sparsely inhabited Central Asterousia mountains (fig. 4). The diverse landscape of mountains, valleys, and coastlines around Koumasa provided an opportunity to explore the dynamic relationship between human activity and the natural environment in Bronze Age Crete. This approach revealed the hermeneutical potential of the site as a key location for understanding long-term patterns of human-environment interaction in the Mediterranean.

At the social level, it became, as already mentioned, evident that it would be both unjust and ineffective to focus solely on Koumasa's significance in Minoan times or the long history of the Asterousia region while expecting local communities to

**Figure 3** Working together with three generations of the local population.
© Andreas Neumann (2017)

**Figure 4** The Mesara plain and the Asterousia mountain range.
© Diamantis Panagiotopoulos (2011)

preserve this heritage amid an economic crisis. These communities, struggling with issues like low olive oil prices and rising grazing costs, faced more immediate concerns. Experiencing this situation, the following question arose almost inevitably: can archaeologists play a more active role, not just documenting central and non-central places, but helping generate processes of regional importance?

Given that archaeological projects are planned as long-term endeavors, they have the potential—if not the responsibility—to impact the development of isolated regions. The challenge is to find ways to align scientific goals with the needs of local communities, working together toward shared objectives. Archaeology's primary concern in the 21st century should be integrating knowledge of the past and heritage preservation into an innovative strategy for landscape stewardship, merging local experiential knowledge with scientific expertise into a participatory planning process (Spek 2017). A holistic approach should encompass all key aspects of the region's diachronic history, from its geology, geography, flora, and fauna to its material remains and the authentic practices of the local population.

The Koumasa project aims to meet these challenges by developing a master plan for the sustainable development of the wider region, grounded in the aforementioned concept of *entopia* as a framework for studying and shaping a spatial entity based on its identity, relevance, and uniqueness. In collaboration with other archaeological projects, disciplines, local communities, and authorities, the goal is to preserve, study, and promote this unique landscape, seeing it not as a static, protected archaeological site, but as a vibrant space where the past and present coexist.

The outdated model of a museum where material relics are displayed in isolation from their original context must be replaced by a new vision: the landscape itself as the museum (fig. 5). The experience of visiting should not be limited to gazing at artifacts in sterile settings but should involve a journey through space and time, engaging all senses in an unspoiled region where the traces of human-environment interaction can be seen and understood in context. Visitors should be able to perceive ancient and modern realities of the landscape as a unified whole—experiencing the sights, sounds, and smells of both past and present in a genuine, multisensory manner. This approach offers a more meaningful way to connect with the past than artificial reenactments, as all stimuli—what visitors see, touch, hear, taste, and smell—are authentic and form part of a continuous historical narrative. This multisensory perception of the landscape also offers a chance to incorporate local communities and their traditions as integral parts of the experience, creating opportunities for sustainable economic development that respects the region's unique character and fragility.

For these reasons, the Koumasa excavation sets a goal that may seem paradoxical at first glance: to be a project that will never be fully completed, but one that will continue for decades, becoming an integral part of the landscape's cyclic rhythms. In this context, Koumasa will not be a fossilized archaeological site, but a living 'co-laboratory' of research, where both the local population and visitors will be given the opportunity to witness the core of the archaeological process, i. e. the transformation of a find into an exhibit through the implementation of cutting-edge scientific methods

**Figure 5** The cultural landscape is an open museum that can offer a unique multisensory experience. © Diamantis Panagiotopoulos (2014)

and the generation of archaeological knowledge. Through this work, the project seeks to activate the power of the place, contributing to a collective effort to make Asterousia a region of unique aesthetic and scientific significance.

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# Social Processes of Heritage: Insights from Rice Terrace Landscapes in Southwestern China and Taiwan

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**Abstract** Asian rice terrace landscapes have long been valued for their aesthetic qualities, which continue to attract both Asian and international visitors. By now, the economic "exploitation" of both tangible landscape "assets" and related local knowledge in these formerly isolated mountain regions has become a frequent subject of study. Much lesser attention has been given to the social value and function of rice terraces and their heritage. This short paper strives to explore if and how landscape heritage may constitute a medium and/or a space to (re)establish social bonds and to revive rural community life. Building on textual sources and short-term but broad field research, it discusses recent approaches in two remote East Asian mountainous regions, the Hani Terraces (哈尼梯田) World Heritage cultural landscape in southwestern China and the Gongliao (貢寮) rice terrace landscape in northeastern Taiwan.

**Keywords** Cultural heritage, rice terrace landscapes, social value, Hani Rice Terraces, China, Gongliao, Taiwan.

## Introduction

The first Asian cultural landscape ever inscribed on UNESCO's World Heritage list was a rice terrace landscape. The Ifugao Rice Terraces in the Philippines were listed in 1995, only three years after the official introduction of cultural landscapes as a heritage category. Long before their inscription, rice terraces were considered representative for how human-nature interaction had shaped the earth's surface in Asia. German Jewish architect, planner, and urban historian Erwin Anton Gutkind (1886–1968), for example, included Chinese rice terraces in a 1956 essay that put forward ideas from his groundbreaking *Our World from the Air.* Therein, he takes a (back then) radically new approach, namely by observing the transformation of the earth's surface from a bird's-eye-perspective. To him, land transformations were a result of a four-stage process mirroring humanity's changing attitude toward its environment.

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In this framework, the Chinese rice terraces represent the second stage, a sophisticated "I-Thou" relationship in which people reshape and rationally adapt their environment, and adopt a respectful attitude towards other community members. This intimate inter-human and human-environment connection is disrupted and replaced by an "I-It" relationship in the third stage (Gutkind borrowed the distinction between I-Thou and I-It from Martin Buber). The third stage, in contrast, is characterized by "aggressiveness and disintegration," manifesting itself in urban expansion and rural isolation grounded in an exploitation of natural resources (Gutkind 1956, 21).[1]

Gutkind's categorization undoubtedly renders a romanticized depiction of Chinese rice terrace landscapes that stands in stark contrast to the harsh conditions under which rural communities used to—and nowadays still—maintain their livelihoods. Nevertheless, his observations point to differing value systems that were relevant in generating specific landscape appearances. By now, the rebuilding of social relations and knowledge, and thereby a reactivation of social value, has found acknowledgement as an alternative model for rural revitalization (e.g., Labrador 2011; Utami et al. 2022).

## Social value as process

Rice terraces are at the same time a human and wildlife habitat, vegetation reservoir, and agricultural production site. As agricultural landscapes, they do not fit into single administrative categories but their management requires an integrated approach that combines aspects such as water regulation, forest protection, and cultural and natural heritage conservation. Still, an integration of cultural landscapes in state-led development schemes may produce detrimental effects on heritage, not least when certain values are neglected in favor of others. Cultural landscapes are particularly vulnerable to such one-sided management, primarily because they are "living heritage." Their social values are difficult to assess (Jones 2017) and, as a consequence, hardly considered.

Formal recognition of social value by the international conservation community has itself taken a long time. Due to the initially small range of disciplines engaged in conservation, mainly experts from archaeology, history, architecture, and art history, early "classical" guidelines such as the Athens Charter (1931) and the Venice Charter (1964) centered on the monumental character of heritage. At that time, the major aim was to safeguard historical, aesthetic, and scientific values of cultural heritage.

1 From today's perspective, Gutkind's approach in looking at vernacular architecture on a global scale is certainly regarded as selective, generalizing and rendering essentialist representations of other cultures (Vellinga 2019). Still, his observations point out the centrality of an intimate relation between local culture, social organization, economic structures, and environmental context.

The complexity of considering social value in theory and practice lies in the wide array of aspects that constitute it. Besides individual and collective identity, memory practices, emotional and spiritual attachment as well as a sense of place that may be linked to a site, heritage may generate social benefits such as maintaining knowledge and social coherence (ICOMOS China 2015, 61). Scholars suggested to conceive social value as a dynamic process rather than a static category. Drawing on her work with Waanyi women in northern Queensland, Australia, archaeologist and Museum Studies scholar Laurajane Smith defined heritage as "the act of passing on knowledge in the culturally correct or appropriate contexts and times." She stressed the mnemonic function of landscape for passing on oral histories to younger generations as it offers a "sense of occasion" for both transmitters and receivers (L. Smith 2006, 46–47). The Canadian architect and cultural landscape theorist Julian Smith also highlighted the experiential dimension of cultural landscapes. In his view, this task can only be carried out by the cultural group who created and sustains them (J. Smith 2010, 46).

Many regard the continuously adapted Australian Burra Charter (1979, revised 1981, 1988, 1999, and 2013) as the primary document to consider such experiential, mnemonic, and sensual aspects formed by a set of equally weighted values in the conceptualization of heritage's cultural significance. A review of more recent relevant charters consolidates this shift in understanding, from "intrinsic" heritage values to such "assigned" (European Landscape Convention, Council of Europe 2000, amended 2016) and "ascribed" by people (Faro Convention, Council of Europe 2005). Despite such formal recognition, a prioritization of historic, aesthetic, and scientific over social value continues due to established institutional and evaluation structures as well as resource constraints in heritage management practice (L. Smith 2006; Emerick 2014; Jones 2017).

In line with the view that social value is of a fluid, iterative, and embodied nature (Jones 2017), we may ask whether and how landscape heritage constitutes a medium or a space to (re)establish social bonds and to revive rural community life. In tracing this question, the following reflection focuses on the social dimension of agricultural landscapes and their heritage. It draws on desktop and field research, the latter conducted in 2023 in the Hani World Heritage-listed rice terraces in southwestern China and the Gongliao terrace landscape in northeastern Taiwan.

## Conservation and management approaches

Despite significant differences in scope, historic development and demographic composition, both rice terrace landscapes in southwestern China and Taiwan face similar challenges. Their mountainous terrain prevents the use of heavy machinery for cultivation, and agricultural yields are often barely enough to feed a household. As a result, younger generations of farmers abandon their fields to find better living and working conditions in urban areas. These dynamics have led to a hollowing out of local villages, accompanied by decay and replacement of tangible heritage such as

local architecture as well as, in particular, a decline of community ties and intangible practices, including the use of "traditional" farming techniques and local customs.

The Hani Rice Terraces in China's Yunnan province have been part of a macro-level development strategy since the 1980s. Besides mining and agriculture, the provincial government greatly fostered its tourism industry and invested in large-scale infrastructure projects. However, hopes that economic benefits gained from GDP growth would "trickle down" to the rural poor remained largely unfulfilled (Donaldson 2011). In 2013, the Hani Terraces were successfully inscribed on the World Heritage list. The ensuing period of mass tourism opened the door to entrepreneurs in the hospitality industry from the provincial capital Kunming or even megacities in other parts of the country, such as Shanghai and Guangzhou. Local Hani who constitute a majority of the population in this region had little opportunities to participate and were mainly engaged in cleaning and gastronomic services (Fuller et al. 2022).

More recently, the focus has shifted to development at the village level and a new approach introduced to one of these villages, Azheke (阿者科), received international attention. The "Azheke Plan" designed by the School for Tourism Management at Sun Yat-sen University in Guangzhou is based on a detailed redistribution scheme of tourism-generated revenues to local villagers. Following fix profit distribution guidelines, 30 percent of the total revenue remain with the village's collective tourism company and 70 percent of the profits are distributed among all villagers. The profit share every villager receives is measured according to certain criteria, including the state of one's traditional dwelling, engagement in terrace cultivation, and whether or not one holds a local registration (SYSU 2022). Until today, nine profit sharing meetings have been held and the Chinese tourism expert who invented this model, Bao Jigang (保继刚), received the 16th UNWTO Ulysses Award at the 25th UNWTO General Assembly in October 2023 for his contribution to poverty reduction.

In the mountains of Gongliao district at the northeastern tip of Taiwan, terrace farming revitalization was initiated under very different circumstances, but as a reaction to similar topographic restraints (see fig. 1). The Gongliao hillsides only allow for small-scale farming and a single crop yield per year, which pushes farmers to additionally engage in part-time jobs outside of the villages. While the niche position of Gongliao's rice fields between industrial production and larger-scale agricultural development had long kept them below the radar of governmental attention, the region came under a sudden threat in 2010 when the Ministry of the Interior set up plans to expropriate the land and sell it to developers. When these plans became known to farmers and a bird-watching group that frequently visited the hillside, they mobilized to protect the terrace landscape (Wei 2018). By making use of political resources and social capital of some of the birdwatchers, the development plan was successfully revealed to the media and eventually had to be given up. In order to prevent future expropriation, an influential specialist at the Forestry Bureau with connections to the birdwatchers established a program for revitalization of terrace farming and delegated it to the Environmental Ethics Foundation of Taiwan (EEFT, 人禾環境倫理發展基金會), an environmental NGO (ibid.).

**Figure 1** Rice terrace fields in the Gongliao Mountains, Taiwan, April 2023.
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Another central actor in the revitalization process is a cooperative named Hehe (和禾) that was founded by a former teacher at Gongliao primary school. While EEFT operates from an urban base, the Hehe cooperative organizes core activities along the agricultural production cycle such as seed transplantation and harvesting together with farmers and volunteers. The Hehe program attaches great importance to balancing local values and environment preservation with economic profits. Cooperating farmers commit themselves to refrain from the use of heavy machinery, pesticides and herbicides, and to keep their fields constantly filled with water.[2] Both EEFT and Hehe proceed from an ambition to revive the local farming community and to reconnect humans with nature, a vision that, at an international level, is integrated with the so-called Satoyama Initiative.[3] Other than profit maximization, this approach promotes core social values such as mutual support, reciprocity, and an exploitation of natural resources only to the degree necessary. This value-orientation renders the approach

2 Interview with Hehe founder, Gongliao, Taiwan, 4 May 2023.

3 The Japanese term *satoyama* (里山, literally "uplands near villages") refers to a land-use mosaic of human settlements and "secondary" nature (woodlands, grasslands, agricultural fields). It is eponymous for a global initiative launched in 2010 under the auspices of the Institute for the Advanced Study of Sustainability of the United Nations University in Tokyo. It aims at maintaining biodiversity and human well-being in "socio-ecological production landscapes and seascapes" (SEPLS) through revitalization and sustainable management (see Takeuchi 2010).

comparably holistic, addressing not only issues of economic feasibility, but also the long-term transmission of local knowledge.

## Terrace cultivation

Terrace cultivation clearly is at the heart of conserving the unique character of rice terrace landscapes. Not only the material preservation of myriad paddy fields cascading down the mountains, but also cultural practices and social organization revolve around the dynamic agricultural production cycle and related processes such as water regulation. Bouchery, for example, in his in-depth study of the Hani terrace irrigation and drainage system, pointed to distinctive roles in Hani society that are connected to terrace cultivation, such as the "channel guardian" responsible for the irrigation network (Bouchery 2011). Moreover, natural and cultural elements of the terraced landscape are figuratively portrayed on local clothing, as found by Formoso in his work on the symbolism of costumes worn by Niesu women in Yuanyang county (元阳县, Formoso 2000).

Linking up to Smith's above-mentioned "sense of occasion," the passing on of certain aspects of culture requires appropriate temporal and spatial conditions. In the past, the Hani terraced landscape has been a place where local knowledge and skills such as farming and handicraft techniques were passed on in the fields and around Hani festivals, of which many are now listed as intangible cultural heritage. Following changes in lifestyle and a high outmigration, the significance of farming and its related cultural elements for maintaining community bonds declined. The implementation of the Azheke Plan introduced a new social event, public profit-sharing meetings, to take place in the Hani village. In these meetings, Hani residents receive their share of the total revenue generated from ethnic tourism in front of the entire village community. Besides the strong symbolic demonstration of collective conservation work translating into actual material benefit, the profit sharing meetings have become a social gathering that underlines shared community characteristics, including the cultivation of terraced paddies and the maintenance of traditional "mushroom houses" (蘑菇房, so named after their outward appearance, see fig. 2).

The Azheke Plan undoubtedly has a clear economic focus. Still, the new engagement with heritage that it triggered has also become a social process that involves members of the village community across different age groups. Its success or failure will largely depend on its capacity to kickstart a long-term recentering of community life on local heritage and a related involvement of local Hani beyond the economic sphere, e.g., in heritage interpretation.

In Taiwan's Gongliao mountains, new strategies have recently been explored to revalorize terrace farming and related local knowledge. One interesting initiative is the rice planting competition, an opportunity for second-generation farmers to challenge master hands and showcase their seedling transplantation skills. Supported by the New Taipei City Education Bureau and EEFT, the competition format aims to

**Figure 2** Historical Hani dwelling in Azheke village, 2023. © Fabienne Wallenwein

**Figure 3** Rice planting competition, Gongliao, 2024. Photo provided by courtesy of EEFT.

convince second and third-generation farmers to return to their hometowns and reverse views of farming as being "outdated" (Sun 2023). The competition is supposed to provide an opportunity for bringing generations together, generating mutual respect and acknowledgement of the farming culture's value. So far, the competition has taken place three times and received broad media and local attention (see fig. 3). It has become an established social event that draws second-generation farmers, many of whom additionally work in off-farm jobs, back to the mountains during this period.

Moreover, Gongliao's Hehe cooperative participates in local market events, most importantly the regularly held farm produce markets in the capital city of Taipei. These events are not only used to sell local products such as rice, honey, and homemade biscuits, but also function as platforms for disseminating terrace cultivation-related knowledge. By showcasing the benefits of this mode of production for maintaining biodiversity, the community aims to raise awareness of the societal benefits generated through terrace farming among the general public. This approach upholds a strong educational focus. It targets young and interested urban volunteers who are willing to engage with this specific type of heritage and aims to generate solidarity on the part of society to support the cooperative's work. Rather than maximizing outreach, it carefully navigates between greater economic benefits and landscape protection.

## Digital technologies and virtual spaces

In both southwestern China and Taiwan, stakeholders seek out new opportunities gained through digital technologies and virtual spaces to expand the visibility of terrace landscapes, attract visitors, and reach out to consumers, but also to challenge established social perspectives on terrace cultivation. A comparison of both landscapes shows considerable differences with regard to the groups of stakeholders employing new media and spaces, as well as the goals pursued therewith.

Visual representations of terraced landscapes that highlight their aesthetic values have long been major catalysts for ethnic tourism. Starting from around the late 1970s, photography has become an important medium used by government officials, domestic, and non-Chinese visitors to put paddy fields in southwestern China into perspective. While the complex and characteristic landscape mosaic formed by a myriad of paddies is only revealed when staged or contemplated from a downward angle, such a photographic lens carries the risk of reinforcing static views of landscape, as well as notions of rural inferiority (Chio 2014, 190–91). Still, it has become a widespread practice in China's multiethnic terrace landscapes to set up controversial viewing platforms at suitable elevated locations where hard-working farmers are exposed to the tourist gaze (cf. Urry 1990, see fig. 4). Here, what astonishes the spectator is the landscape in its entirety rather than an eye-level sight of individual fields.

More recently, drone technology has been used to, arguably, render more holistic landscape representations. Similar to Gutkind's approach mentioned in the

**Figure 4** View from the sightseeing platform constructed at one section of the Hani Rice Terraces, 2023. © Fabienne Wallenwein

introduction, aerial images of the Hani Terraces play an important role for generating a new perspective on this marginal region long associated with poverty and "backwardness." A research group from Sun Yat-sen University's School for Tourism Management, for example, made use of drone-shot video clips and images to attract visitors when establishing the tourism company in Azheke village. The material was not only used for promotional purposes, but also to underline its World Heritage character and related responsibilities. The dissemination via diverse social media channels can be expected to raise awareness of this preservation responsibility, maybe even generate solidarity among a national audience.

In recent years, the rising importance of digital platforms for cultural production and promotion as well as their incorporation of the rural realm has further led to new socio-economic mechanisms and entanglements designated as "platformization" or "platform ruralism" (Nieborg and Poell 2018; Wang, Xu, and Liu 2022). In the case of the Hani Terraces, virtual spaces and social media platforms are employed to reach out to new target groups for selling collectively produced organic local goods, such as red rice, red rice vermicelli, and rice liquor (see fig. 5).

Young and well-educated locals have started to make use of such new opportunities for offering cultural experiences and hospitality services. One example is a Hani woman with the nickname "Lanzi" (兰子) who gave up her former job to return to a village in the terrace landscape in 2019. On her way to becoming a young entrepreneur, she and her team explore new forms of engagement with local heritage and


**Figure 5** Locally produced red rice packaged for sale, 2023. © Fabienne Wallenwein

disseminate knowledge on traditional Hani clothing and food culture via different social media platforms (Wang and Zeng 2021). Although digital space and media provide rural residents with unpreceded opportunities to construct images of rurality themselves, and to increase visibility of everyday life, this new potential must still be treated with caution. Scholars criticized that urban-centric and market-oriented digital representations of rural spaces are romanticized, commodified, decontextualized and tend to conceal urban-rural inequalities (Zhao 2024, 496). Such negative effects were observed in particular where farmers are highly dependent on big platform firms and their sometimes exploitative terms and conditions.

While in China's Hani Rice Terraces the use of new digital tools and virtual platforms aims at crossing physical mountain borders, the approach adopted at Gongliao in Taiwan is much more introspective. Both EEFT and the Hehe cooperative use social media for outreach. They do so on selected platforms such as Facebook and Line, the instant messenger services most widely used in Taiwan. However, in most cases, one needs to proactively approach these initiatives to be added to their groups. This procedure can be regarded as a threshold guaranteeing that group members have an honest interest in their work, their activities, and their products. Gongliao residents also manage their own group for village community members to share, among others, farming and conservation-related information. Terrace cultivation and engagement with local heritage can therefore be observed to expand into virtual space and both create a new social network as well as solidify existing social community ties.

Although great importance is attached to the use of manual labor for cultivating the terrace fields, digital technology is used where appropriate or beneficial for preservation of the landscape. Examples are digital documentation of rediscovered

plant or returning animal species, as well as live broadcasting during events in order to limit the number of visitors to the fields. During the above-mentioned rice planting competition, visitors were directed to gather at the former local primary school and follow the event via the broadcast so as not to damage the field ridges (Sun 2023). This solution further shows the great level of attention paid to local farmers' interests. The Hehe cooperative also uses social media to promote and sell its agricultural produce. However, as agricultural yields remain on a small scale, it is more effective to do so within its own groups rather than via a big sales platform.

## Conclusion

This brief investigation of heritage as a social process by example of two rice terrace landscapes in southwestern China and Taiwan has shown how engagement with cultural and natural heritage may enhance social bonds and community life when proceeding from local needs. In the Hani Rice Terraces, the eradication of poverty and the generation of opportunities for local villagers to make a living remain the most urgent tasks. While the Azheke Plan may not provide an answer as to who will cultivate the terrace fields in the next generation, the biannual profit-sharing meetings have so far become an important community event. The possibility to transcend mountain borders by use of digital platforms further encouraged some younger natives to return to their villages and re-explore the potential of landscape heritage, thereby increasing chances for its revalorization.

In Taiwan, non-governmental organizations play a central role and are regarded as mediators in conservation between responsible government bodies, mainly the Forestry Bureau, and local communities. This rather micro-oriented approach has a clear long-term perspective that is seen in the slow but steady growth of customer groups and young voluntary urban supporters of terrace cultivation. Events such as the rice planting competition employ heritage to pursue ambitious social goals, in particular, a greater appreciation of farming and related professional knowledge and skills. In the face of real expropriation threats, environmental and heritage protection efforts have further become important strategies in defending local interests as well as strengthening intergenerational relations.

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# Potential of Modern Geotechnologies for Analyzing, Monitoring, and Communicating the Sustainable Development of UNESCO Designated Sites

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**Abstract** Preserving UNESCO designated sites amid diverse risks like environmental hazards and human conflicts necessitates sustainable development strategies. This paper examines the diverse challenges faced by these sites (UNESCO World Heritage, Biosphere Reserves, and Geoparks) and underscores the role of modern geotechnologies, including remote sensing, geographic information systems (GIS), and mobile geotools in assessing and mitigating risks. Geotechnologies aid in hazard mapping, disaster risk reduction, and documenting conflicts' impacts in various ways, from analyzing and monitoring to modeling structures, processes, and changes. They also enhance visualization, communication, and education efforts, facilitating professional planning as well as public awareness and engagement in conservation. However, there is a significant knowledge gap among UNESCO site managers on the use of modern geotechnologies, highlighting the need for targeted training programs. Within the scope of a collaborative initiative, the UNESCO Chair at Heidelberg University of Education has designed two pilot training courses and conducted them in Costa Rica and Malawi to convey essential skills in target-driven use of remote sensing, GIS, etc. Closer collaboration between UNESCO entities and stakeholders can enhance capacity development efforts, fostering disaster resilience and sustainable development to safeguard cultural and natural heritage for future generations.

**Keywords** UNESCO World Heritage and Biosphere Reserves, geotechnologies, sustainable development, capacity development.

## 1. Sustainable development of UNESCO designated sites

The aim of the UNESCO Program is to contribute to sustainable development and the 2030 Agenda by preserving and promoting UNESCO designated sites at various levels (Jagielska-Burduk, Pszczyński, and Stec 2021). In the face of growing (human-induced)

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environmental risks and hazards as well as threats from human conflict, such international measures have gained importance. UNESCO designated sites are found in diverse landscapes and face a broad variety of challenges (Ashrafi, Kloos, and Neugebauer 2021; KC 2021; Kapsomenakis et al. 2023). Threats to the sites can be as manifold as the sites themselves: Prominent UNESCO designated sites particularly struggle with the massive attention and have to regulate visitor numbers to prevent deterioration (Coccossis 2016). Structures within large cities may face damage due to air pollution or an impairment of their visual integrity through construction projects (Di Turo et al. 2016; Ashrafi, Kloos, and Neugebauer 2021) while others are located within regions subject to geo- or natural hazards such as earthquakes, floodings, or wildfires (Mallinis et al. 2016; Pavlova et al. 2017; Cigna, Tapete, and Lee 2018). Some sites such as the prehistoric pile dwellings around the alps are confronted with even more complex issues: Some of the sites are located under water and are exposed to increased erosion connected to changed shipping routes or due to felling along the shoreline, which destabilize the ground (Ostendorp et al. 2016; Hafner and Schlichtherle 2007). In countries with current violent conflicts, the preservation of UNESCO designated sites is aggravated even further (Levin et al. 2019). Assessing these highly site-specific potential hazards and developing suitable actions for prevention or adaptation is crucial in the management of UNESCO designated sites.

Despite its importance, the focus of international efforts on UNESCO designated sites cannot exclusively lie on the mere protection of them but also needs to include their sustainable development to ensure their preservation for future generations (Xiao et al. 2018). To emphasize this, the sites are also targeted by the UN Sustainable Development Goals (SDGs) which directly focus on their protection (SDG 11.4) and indirectly on their sustainable development (e.g., SDG 8.9) (UN 2015; Xiao et al. 2018). Sustainable development, which includes environmental, social, and economical aspects of the tourism sector, can, for example, create jobs, boost local products, and create incentives to also preserve intangible cultural heritage (Xiao et al. 2018). The sustainability of UNESCO designated sites has also been connected to their resilience and disaster risk reduction (Eze and Siegmund 2024a).

Their managers play a pivotal role, both in the protection as well as the sustainable development of UNESCO designated sites. They have to consider locally diverse conditions and challenges such as tourism, natural disasters, and socio-economic factors. Therefore, site-specific concepts for development and education must be developed for each UNESCO designated site. Detailed information about the status and ongoing processes of the natural and human-made environment in the core and buffer zones, as well as within the wider setting, form the basis for these concepts. Modern geotechnologies such as remote sensing, GIS, and mobile geotools are highly relevant for generating, analyzing, and visualizing such information and thus for the protection and sustainable development of UNESCO designated sites. This relies on UNESCO site managers' capacity to effectively utilize geotechnologies. Current studies, however, indicate significant knowledge gaps and the need for further training in this area (Eze and Siegmund 2024b). The following sections will illustrate the potential

of geotechnologies for protecting UNESCO designated sites, focusing on satellite data and the use of mobile geotools (see Chapter 2). Subsequently, an example will demonstrate how training for UNESCO site managers can be designed to utilize this data effectively (see Chapter 3).

## 2. Use of modern geotechnologies

The studies of Eze and Siegmund (2024b) as well as Orimoloye et al. (2021a; 2021b) highlight the utility of modern geotechnologies, such as remote sensing, based on satellite images as well as unmanned aerial vehicles (UAV, drones) and GIS for hazard mapping and advancing disaster risk reduction. The availability of different spatial scales and resolutions of earth-observation data offers a range of applications relevant for the protection and sustainable development of UNESCO designated sites. Freely available satellite imagery such as from the Landsat and Sentinel programs can be used to monitor large-scale environmental processes, which may directly or indirectly affect UNESCO designated sites. Higher resolution data, though usually commercialized, can provide detailed information of damage on structures. Satellite imagery, for instance, allows for regular and systematic monitoring of large areas, enabling the detection of changes in land use, vegetation cover, and potential threats. GIS complements this by integrating various data layers, facilitating the visualization and analysis of complex spatial relationships. This helps conservationists and site managers to identify trends, assess the impact of human activities, and implement timely interventions (Siegmund and Prodan 2022).

Comparing satellite or even historical aerial images from earlier decades of the 20th century with those of current time points allows tracking changes in physical and environmental conditions of and around UNESCO designated sites (Elfadaly et al. 2018). Elfadaly et al. (Elfadaly et al. 2018) modeled the effects of uncontrolled urban expansion on the historical temples of west Luxor (Egypt) using a variety of remote sensing data ranging back as far as the 1960s. The high repetition rate of earth observation missions such as Landsat (eight days) or Sentinel (five days) further holds the possibility to track even short-term processes such as the spread of wildfires or flooding to assess threats or damage to protected areas. For instance, Landsat data was used in a study to assess the damage on the Machu Picchu Natural Park (Peru) caused by wildfires (Lasaponara et al. 2022) or to model the burn probability and fire potential for the 20 monasteries on Holy Mount Athos in Greece (Mallinis et al. 2016).

Though destruction of UNESCO designated sites during times of violent conflict cannot be prevented by geotechnologies, they may help in documenting assaults on these sights at times when access on the ground is largely restricted. For instance, the destruction of the Temple of Bel in May 2015 in Palmyra during the war in Syria was confirmed by very high-resolution satellite images (Cerra and Plank 2020). Also, after the destruction of the Kakhovka Dam in Ukraine in June 2023, the Institute of Geography & Geocommunication – Research Group for Earth Observation ($^{r}$geo) provided

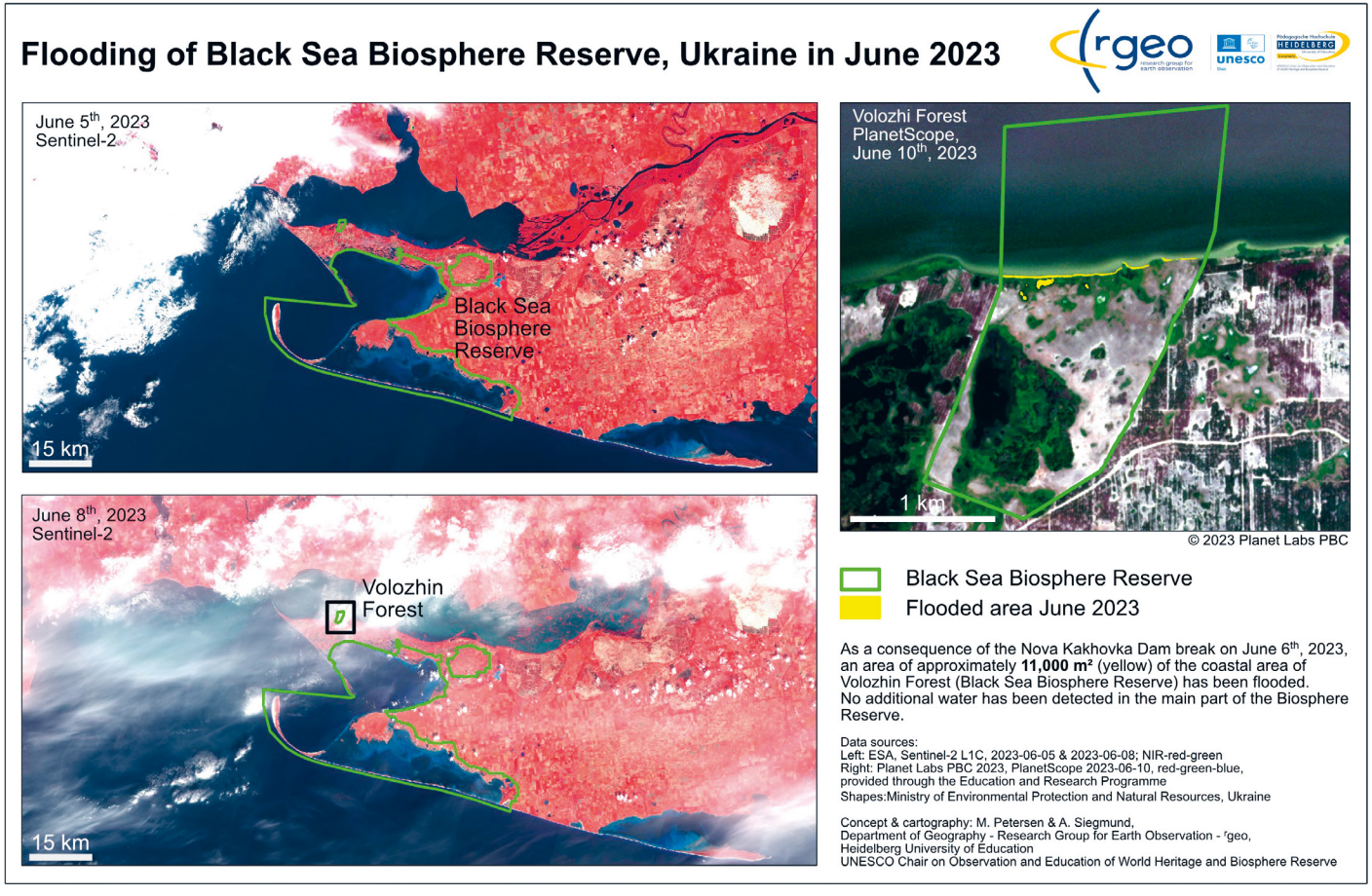


**Figure 1** Flood map provided by the Institute of Geography & Geocommunication – ʳgeo after the destruction of the Kakhovka Dam, Ukraine in June 2023 (Heidelberg University of Education).

UNESCO stakeholders with a map of the flooded area within the Black Sea Biosphere Reserve, Ukraine, approximately 150 km downstream of the dam. The analysis was based on a comparison of satellite images of before and after the destruction of the dam (see fig. 1).

Geodata such as digital elevation models together with information on soil conditions, historical data, and climate projections are further used to predict severity and extent of future floods. Resulting hazard zones can be demarcated and, consequently, mitigation measures for UNESCO designated sites within these zones can be planned and prepared (Figueiredo, Romão, and Paupério 2020).

Furthermore, the Institute of Geography & Geocommunication – $^{r}$geo used different sources of geodata to assess potential land-use conflicts in the context of the expansion of renewable energy. The analysis did not only consider where the development of new plants would interfere with existing core- and buffer zones of UNESCO designated sites but also where the wider setting might be affected, e.g., by compromising the visual integrity of the sites.

Modern geotechnologies are already used to develop early warning tools for hazards such as wildfires (e.g., European Forest Fire Information System – EFFIS (Copernicus Emergency Management Service 2024b)), floods (e.g., European Flood Awareness System – EFAS (Copernicus Emergency Management Service 2024a)), or illegal logging (e.g., Global Forest Watch (Global Forest Watch 2024)). These often use a combination of earth observation data, weather forecasts, information on geology, soil, and land cover as well as participatory approaches.

Furthermore, insights gained through modern geotechnologies about the development, threats, and protection strategies of UNESCO designated sites can make a significant contribution to their visualization, communication, and education. On one hand, visualizations and maps can illustrate large-scale processes comprehensibly. These can be integrated into informational/educational materials, social media, or AR and VR applications. On the other hand, mobile geotools like Actionbound or the app BLIF:Explorer, developed by the Institute of Geography & Geocommunication – $^{r}$geo and the related UNESCO Chair of Observation and Education of World Heritage and Biosphere Reserves at the Heidelberg University of Education, offer the possibility to create educational opportunities through digitally supported excursions (Keller et al. 2024), which are especially attractive for younger people. Geotechnologies have also already been used to visualize the unbalanced global distribution of UNESCO designated sites through cartograms (Blersch et al. 2023).

## 3. Training of UNESCO site managers

The uses of modern geotechnologies for the protection and sustainable development of UNESCO designated sites are manifold, however, using them requires a certain level of training. A prerequisite for this is the availability of free data and easy-to-use applications for processing digital geodata like satellite images, UAV data, etc.

This is made possible by the Landsat and Copernicus programs of NASA and ESA respectively. For the Copernicus program, many free and web-based services and applications have been developed in recent years, allowing even beginners to conduct analyses and visualize the results. New policies such as the Infrastructure for Spatial Information in the European Community (INSPIRE) work towards more open and transnational utilization of geodata. This emphasizes the importance of such geotechnologies while also facilitating the access to geodata. The Institute of Geography & Geocommunication – ʳgeo has developed a web-based application to convey the principles of remote sensing to first-time users. This application, BLIF (www.blif.de), is currently being extended to also cover current technological developments such as UAV data, time series, or hyperspectral data. The adaptive e-learning platform geo:spektiv (www.geospektiv.de), also developed by the Institute of Geography & Geocommunication – ʳgeo, offers e-learning modules for different topics and target groups, including students as well as UNESCO stakeholders (within the project Space2Place). These applications are already used to train different user groups on the principles of modern geotechnologies. Nevertheless, more training concepts tailored to the specific needs of UNESCO site managers are needed. This was also confirmed by a national needs assessment, conducted by the Institute of Geography & Geocommunication – ʳgeo among UNESCO site stakeholders within Germany on their prior knowledge and training needs regarding geotechnologies, which is currently expanded on an international scale. This global needs assessment systematically collects the level of experience regarding modern geotools among global UNESCO site stakeholders. The survey also collects information on the preferred course format, length, and topics of respondents.

Closing the knowledge gap among UNESCO site stakeholders regarding geotechnologies is one of the main goals of the UNESCO Chair in Heidelberg. Therefore, it is currently working on the development of a multi-level training concept for UNESCO site managers in close collaboration with UNESCO. This concept includes several introductory course formats, which could be completed individually or as part of a University Master Program.

As a pilot program, the UNESCO Chair in Heidelberg cooperated with the Malawi National Commission for UNESCO (MNCU) and the UNESCO Chair at the University for International Cooperation, Costa Rica (UCI), to design and conduct two training courses for UNESCO site stakeholders in the respective countries with the help of four young researchers from three countries.

For both partnering countries, Biosphere Reserves were selected as case studies, as these were closest to the needs of the local partners. Site-specific issues such as drops in lake levels or illegal farming and required skills such as use of satellite images and data collection with mobile devices were identified together with local experts.

Participants were UNESCO stakeholders from the Biosphere Reserves and related governmental organizations. Those participants who completed the pre- and post-course survey reported an increase of their perceived level of knowledge on remote sensing, GIS, and mobile geotools. They displayed a high level of interest in and

motivation for the topic and the collaboration partners voiced an interest in repeating such formats. An analysis to assess the long-term effects of these trainings is currently ongoing.

The results from the course evaluation and the needs assessment will help to design training courses on modern geotechnologies designed specifically for the level of knowledge, needs, and preferences of different UNESCO site stakeholders.

## 4. Conclusion

While this contribution can just cover a few exemplary use cases of modern geotechnologies for visualization, communication, and education of UNESCO designated sites, it highlights their broad potential. At the same time, it indicates the complexity of available data, applications, and opportunities, thus emphasizing the need for suitable training courses. To develop and conduct trainings that aim at the specific needs of UNESCO stakeholders, these needs must be analyzed and centrally evaluated. A closer collaboration between different UNESCO entities would be beneficial for capacity development. Therefore, the valuable work of the UNESCO Chair in Heidelberg could be supported more efficiently by other UNESCO stakeholders to support their research and training endeavors.

Evidently, there is a pressing need for capacity development initiatives focused on enhancing the utilization of geotechnologies for analyzing and monitoring changes at and around UNESCO designated sites to increase disaster preparedness, resilience, and thereby foster sustainable development. By addressing this capacity gap, the UNESCO Chair of Observation and Education of World Heritage and Biosphere Reserves at the Heidelberg University of Education and its partners can empower site managers with the tools and knowledge needed to effectively mitigate disaster risks and safeguard the UNESCO designated sites under their stewardship.

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# Cultural Landscape as an Art of Survival and Its Implications for Contemporary Landscape Architecture

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**Abstract** Across the vast territory of China, numerous cultural landscapes have been shaped over centuries through the wisdom of local inhabitants, who maintained a stable and sustainable human-land relationship. These landscapes can be called an "art of survival," forged through countless attempts, adaptations, failures, and successes, involving a complex interplay of natural, biological, and cultural processes with the land. In the era of urbanization, globalization, and industrialization, urban development in China faces the challenges of losing cultural identity and of a deterioration of human-land relationships. Traditional cultural landscapes, as manifestations of an art of survival, can inspire contemporary urban planning and landscape design in China and around the world. They provide innovative concepts and actionable guidelines for rebuilding harmonious relationships between humans and the land.

**Keywords** Cultural landscapes, art of survival, landscape architecture, ecological infrastructure, human-land relationship.

## Chinese cultural foundations: cultural landscapes as an art of survival

Approximately 4,000 years ago, a harrowing scene unfolded at the Lajia (喇家) archaeological site in China's Qinghai province: at the base of a wall, a woman knelt with her young child in her arms, looking up to the sky in desperate prayer for a savior (Xia, Yang, and Ye 2003). This poignant tableau, discovered among the skeletal remains at the Lajia relics near the Yellow River, captures a moment of sudden calamity that crystallized the helplessness of humanity in the face of natural forces and their yearning for a transcendent "divine" intervention. This scene was part of

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a widespread, simultaneous occurrence of natural disasters, including floods and earthquakes, which led to the destruction of the Lajia village (Zhou and Zhang 2015). Such disastrous events were not uncommon in ancient China. Based on these catastrophic experiences, which cost countless lives, the practice of seeking appropriate and auspicious habitats has been a central theme in the tragic yet poignant narrative of China's 5,000-year relationship with its lands.

### Hydraulic management

The mythological ruler Yu the Great, a prominent figure in Chinese culture, is celebrated for possessing great understanding of how to befriend the floods and how to cultivate and develop farmlands in appropriate places. Due to his skills in planning the landscapes of ancient China, he has traditionally been esteemed as a major deity. Additionally, there are historical figures such as Li Bing and his son, who oversaw the construction of the Dujiangyan irrigation system in present-day Sichuan province. They have been revered as local deities due to their successful management of water in specific regions. Their work is said to have transformed a flood-prone river basin into fertile farmland, which continues to sustain millions of people in Sichuan today.

### Site selection

Historically, geomancers who study both celestial signs and terrestrial forms played a crucial role in selecting dwelling sites and discerning auspicious locations across the vast network of villages and towns in China. These practitioners often associated the local topography with mythological entities such as the Black Tortoise, Vermilion Bird, Azure Dragon, White Tiger, and various spirits and deities. This belief of China's landscape being inhabited by divine spirits gave rise to a profound integration of spirituality and environmental consideration in traditional Chinese settlement planning. Site selection is therefore to be seen not merely as the practical act of choosing a place to live but also a mode of environmental adaptation deeply embedded in Chinese culture. This process encompasses a complex system for interpreting environmental conditions. It represents a choice made after thorough research and utilization of natural conditions such as geography, climate, and hydrology.

### Field creation

Fields reflect the true relationship between humans and the land, embodying the necessity for people to adapt to natural processes and patterns for their production and livelihood. Across diverse regions, humans have used minimal labor, resources, and material energy to create fields perfectly suited to support the growth of a wide range of crops, from aquatic to early maturing species. The technology of field construction can be summarized by the term "cut and fill." Functional cut balanced with functional fill creates a field. Cut and fill should be viewed as a single integrated action, not two separate ones, and it occurs on a human scale, within the capabilities of human and animal power (Yu 2007). Finally, fields are also about the storage, conservation, diversion, and utilization of water resources, forming a systematic engineering approach.

### Cultivation and harvest

The field system encompasses not only the selection, cultivation, and maintenance of crops but also a comprehensive understanding of hydraulic management, site selection, field creation, farming, irrigation, planting, and harvesting. Through crop rotation, intercropping and the exploitation of symbiotic and mutualistic relationships among organisms, people have created productive agroecological systems. Examples of such systems include the mulberry dyke fish ponds of the Pearl River Delta, the Hani terraced fields of Yuanyang in Yunnan province, and the "floating gardens" of the ancient Aztecs of Mexico. Responding to natural disasters such as floods, droughts, earthquakes, and landslides, former generations accumulated wisdom over centuries that has sustained a stable and enduring human-land ecological relationship. It represents the "art of survival" achieved through myriad trials, adaptations, and physiological experiences in interaction with various natural, biological, and cultural processes on the land.

## The fading of the art of survival and cultural identity

In the context of rapid urban economic development in China, agriculture has swiftly receded from its dominant position in the socio-economic landscape. Similarly, the everyday, local landscape art rooted in agricultural technology and civilization, which nurtured notions of survival and land stewardship, has also declined. Starting in the early 1990s, China witnessed the emergence of an "urban cosmetic movement," followed by a vigorous "new rural construction" campaign that swept across the country. These developments have brought China's landscapes to the brink of a severe crisis: degradation of ecological integrity, loss of cultural belonging, and disappearance of historical heritage. With the gradual disappearance of old cultural landscapes, how can harmony in the human-land relationship be reconstructed in contemporary times? Contemporary Chinese landscape design faces three main challenges:

### The little feet aesthetic

For nearly a thousand years, young Chinese girls were compelled to bind their feet in order to marry into wealthy urban families. Foot binding initially was a privilege of the upper classes and having "big feet" was seen as synonymous with rural peasants and a rough lifestyle. This custom persisted until the collapse of the Qing Dynasty in 1911. For a long time within Chinese culture, beauty was equated with being unproductive, deliberately crafted, and morbidly dysfunctional rather than natural, healthy, and useful.

This notion of nobility and beauty was not exclusive to traditional Chinese culture. Prior to Spanish colonization, Mayan priests and urban nobles in Central America sacrificed physical integrity to maintain their power and social status, willingly deforming their bodies by flattening their skulls and disabling their limbs, often beginning when they were just a few months old. For centuries, as a declaration of

superiority and power, urban nobles worldwide have held the privilege of defining beauty and refined taste. Foot binding and deformed foreheads are just two of the myriad cultural customs that idolize urban elegance and demean rural simplicity. These cultures share a common trait: they define beauty by betraying innate health, productivity, and survival, which can be referred to as the "aesthetic of little feet."

In China, the "refined taste" of urban development, architecture, and landscape design evolved in a similar manner as the aesthetic of little feet. For thousands of years, farmers leveraged the art of survival passed down by former generations while adapting to the threats posed by natural disasters. However, with the increasing level of urbanization in China, the fruits of these centuries-old survival experiments—the beautiful rural landscapes—are gradually being deprived of their productivity, self-regulatory capacity, life-supporting ability, and inherent beauty. Much like rural girls forced into foot binding and becoming disabled, these landscapes are rapidly being devastated and abused under the guise of "beautification," "elegance," and "modernization."

### Cultural identity crisis

As a primary subject of phenomenological study, identity in the context of cultural landscapes and human geography pertains to the unique geographic characteristics that distinguish one place from another. It involves an adaptation to the spirit of the place, recognizing oneself as belonging to a particular location composed of both natural and cultural phenomena—an encompassing environmental whole (Relph 1976; Seamon 1980). By identifying with a place, humans possess their external world, feel connected to a larger universe, and become a part of this world (Norberg-Schulz 1980). If landscapes are seen as embodiments and symbols of societal ideologies (Cosgrove 1998), then it is reasonable to assert that landscapes serve as identity cards of a country and its culture. When examining the majority of sites listed as national and World Heritage, it becomes evident that the heritage considered representative of Chinese culture is mostly the product of imperial and scholarly upper-class culture. While not denying their achievements, it is essential to ask: Does placing such imperial upper-class cultural landscapes in contemporary urban settings still represent the cultural identity of present-day China?

Meanwhile, faced with the extensive destruction of traditional culture during urban construction booms and the impacts of globalization on regional cultures (Wu 2003), the crisis in urban cultural landscape creation is another manifestation of a cultural identity crisis. The imitation of Western urban architecture and the rise of large plazas in urban landscape construction are clear expressions of this crisis. Caught between the grandeur of China's imperial past and the complexity of modern Western influences, China finds itself at a loss. What is China's cultural identity? This is a critical question that contemporary Chinese and global landscape designers must consider.

### Crisis in the human-land relationship in China

In China, two-thirds of more than 660 cities face water shortages, and nearly every river flowing through its urban and rural areas is polluted. The country has approximately 25,800 dams that are over 15 meters high, accounting for more than half of the world's total number of dams. For several consecutive years, China has consumed more than 50% of the world's steel and over 30% of its cement annually. Where is all this material going? It is used in the construction of large, monumental plazas and buildings, to line natural riverbeds, and to build dams across rivers. The cost of rapid economic development has been substantial environmental degradation. Original farmlands, natural forests, and grasslands—a diverse mosaic of land types—have been transformed into homogenized urban built areas. These transformations are precipitating a crisis in living space and national ecological security that are both unprecedented in history.

## It is time for a revolution: reviving the art of survival, and the big feet aesthetic

Faced with the loss of cultural identity and the increasingly deteriorating relationship between humans and the land in this era of urbanization, globalization, and industrialization, contemporary landscape architecture must take on the mission to reconstruct a harmonious relationship between humans and the earth. Achieving this goal requires a revolution in values, aesthetic perceptions, definitions, and design methods, as well as in practice. This ideological revolution was named the "Big Feet Revolution" (Yu 2006).

It encompasses two key concepts/philosophies:

1. Revive the art of survival: Reinterpret the value of cultural landscapes and derive wisdom from them.
2. Establish the big feet aesthetic: Although ordinary, it prioritizes simplicity and authenticity, using health and productivity as standards. This involves a reappreciation of the beauty of the land and fosterage of respect and care for adapting to both the natural and cultural processes on the land.

It further encompasses actions on two levels (Yu 2016):

1. Think like a "king" and convince the "king:" This involves landscape planning aimed at establishing ecological infrastructure across various scales. It requires adopting a strategic and comprehensive viewpoint typically associated with leadership ("thinking like a king") and involves persuading those in positions of power (the "king") of the necessity and benefits of ecological infrastructure.
2. Act like a peasant: This level focuses on the actual transformation of the landscape through design and engineering to construct ecological infrastructure. It emphasizes grassroots, hands-on engagement in the practical aspects of

ecological development, akin to the traditional, meticulous approach of a peasant to land and resource management.

### Think like a king: from site selection to ecological infrastructure across scales

Inspired by the ancient practice of site selection and the underlying pursuit of a harmonious environment, Turenscape's approach is to emphasize the importance of maintaining a harmonious relationship with nature in urban planning and landscape design, as well as preserving the harmony between humans and their heritage. Ecological infrastructure planning serves as an approach to achieve these goals. It prioritizes the establishment of ecological safety baselines for urban expansion and specifies protective guidelines, selecting appropriate areas for development and construction. Ecological infrastructure planning operates across multiple scales, including national, regional, and community levels.

### National ecological infrastructure planning

National Ecological Infrastructure Planning is a critical strategy for land development and management in China, aimed at maintaining national ecological security while promoting socio-economic sustainability. At the national scale, it involves systematic analysis and evaluation of the five most critical natural processes for maintaining ecological security: water conservation, flood storage, desertification control, soil conservation, and biodiversity protection. The overall plan for a national-scale ecological infrastructure is generated by superimposing ecological security patterns of individual ecological processes classified into three levels of protection: low, medium, and high (see fig. 1 and 2, Yu et al. 2009). The nationwide implementation of national-scale ecological infrastructure requires an integration into the statutory planning system and a permanent protection through legislation and relevant policies, guiding and restraining both disordered urban expansion and human activities. This approach offers valuable insights for China in delineating ecological lands, improving and implementing ecological functional zoning, and regional regulatory policies.

### Convince the "king"

Since 1997, Chinese landscape architect and Turenscape founder Kongjian Yu has urged city mayors and urban development decision-makers to recognize the problems and dilemmas caused by current urbanization processes. In 2003, Kongjian Yu and Dihua Li published *The Road to Urban Landscape: A Dialogue with Mayors.* This book criticizes China's unsustainable urban beautification movements and highlights the ecological challenges the country is already facing, a situation which is very likely to exacerbate. Furthermore, the book argues for the necessity of constructing cross-scale ecological infrastructure and establishing ecological baselines for urban development.

In the past 20 years, Kongjian Yu and his firm Turenscape were able to make important achievements with regard to convincing decision-makers on different administrative levels of the necessity to construct ecological infrastructure. In cities like

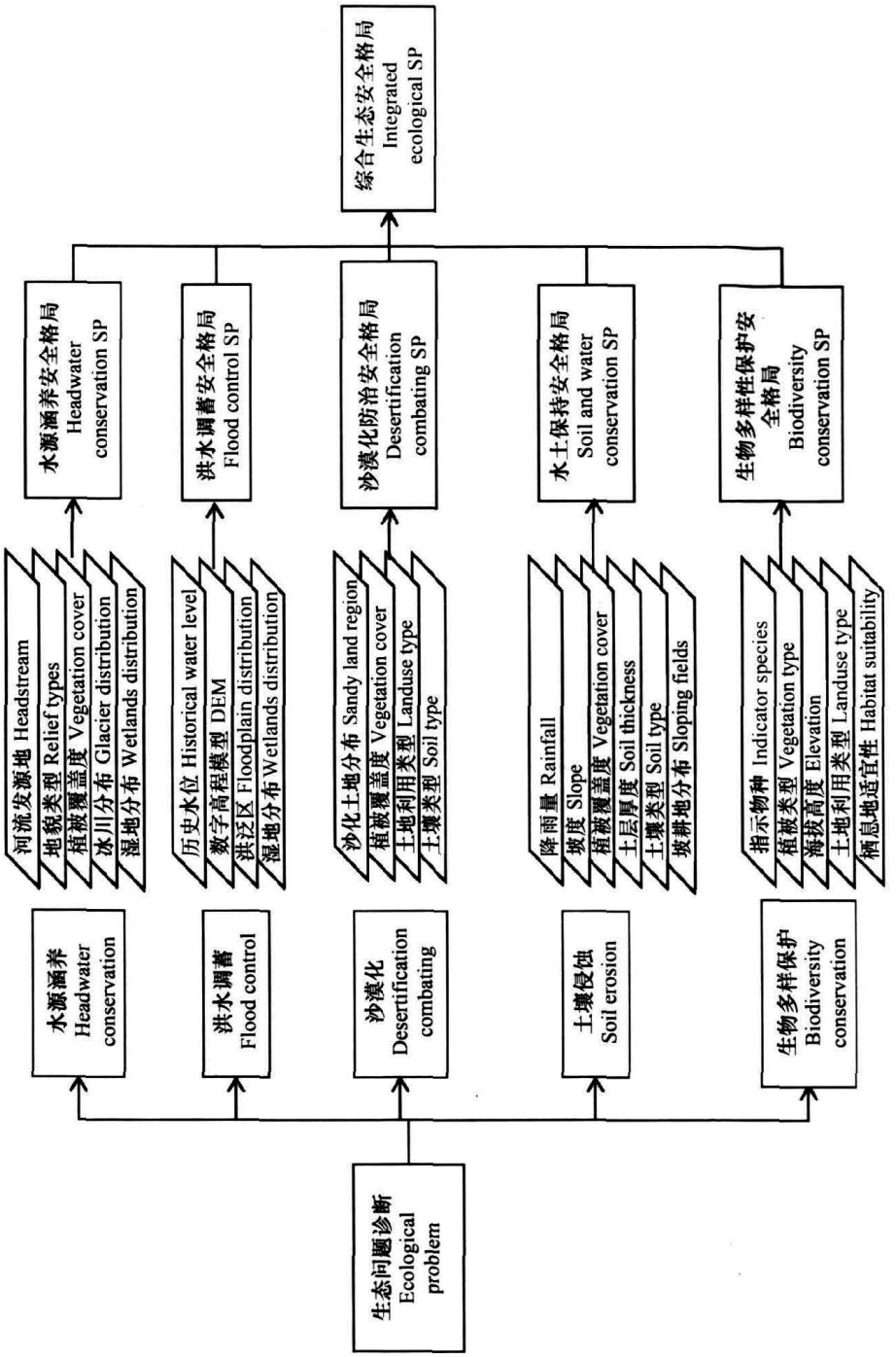


**Figure 1** The research framework of China National Ecological Infrastructure. © Turenscape Academy

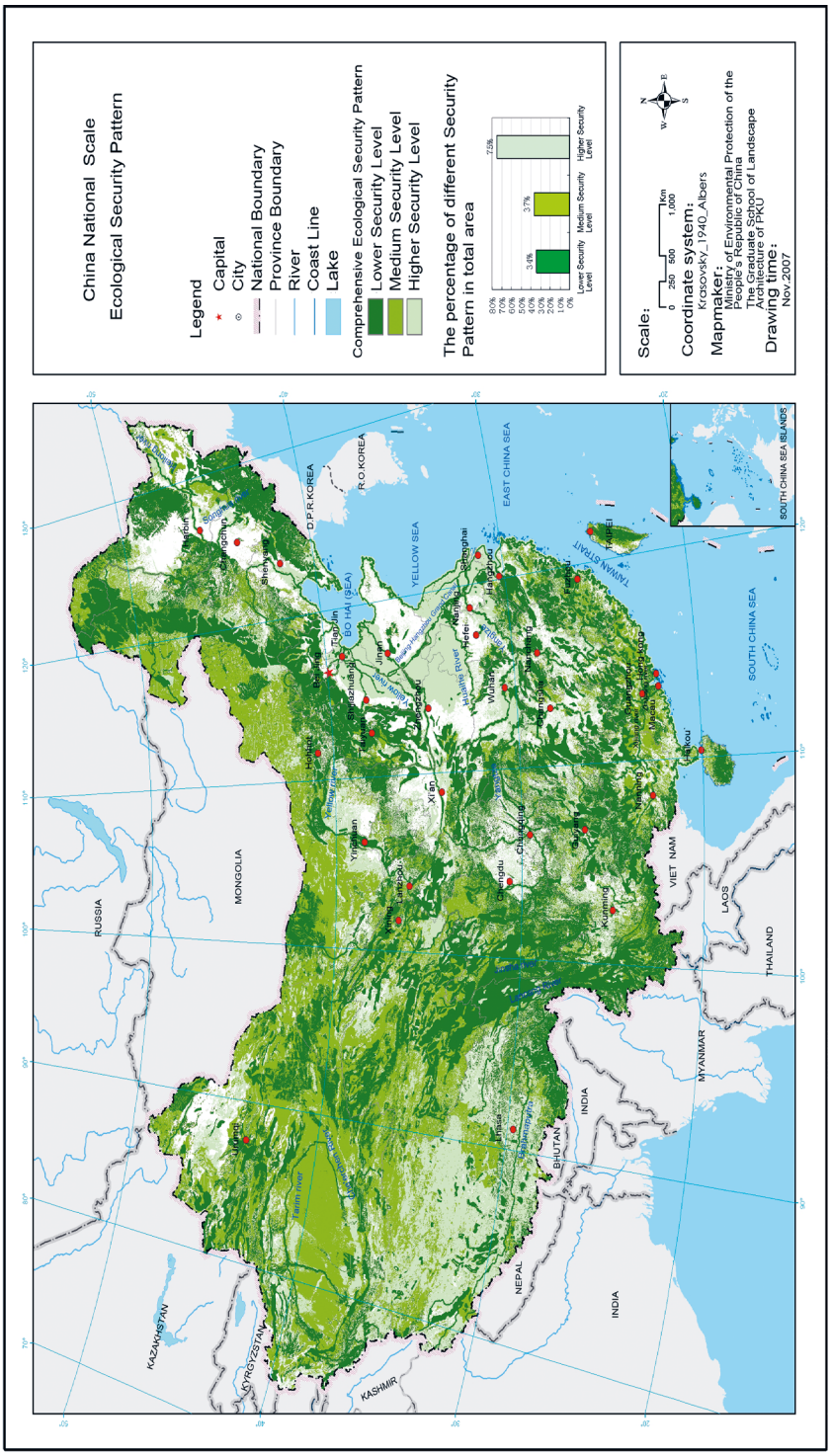


**Figure 2** National Integrated Ecological Security Pattern. © Turenscape Academy

Zhongshan in Guangdong, Taizhou in Zhejiang, and Suqian in Jiangsu, Kongjian Yu successfully persuaded the respective mayors to immediately cease river channelization projects or modify ongoing constructions.

In 2006, Kongjian Yu wrote a letter to China's Prime Minister at that time, Wen Jiabao, in which he criticized the pervasive destruction of urban areas over the previous two decades. He highlighted that many rural areas still harbored a rich ecological and cultural heritage and proposed a "negative planning" approach. This approach involved planning and constructing a National Ecological Security Pattern and an Ecological Infrastructure Concept at various scales to identify and safeguard vernacular cultural and ecological assets, thereby setting a baseline for urbanization.

Two weeks after sending the letter, Kongjian Yu was invited to elaborate on his "negative planning" approach and the Ministry of Environmental Protection assigned him the task of drafting a National Security Plan for the entire country. By 2011, this approach had been adopted in the official Methodological Guidelines for National Land Use Planning and National Land Use Zoning (Ministry of Land Resources) and was implemented in various municipal and land use plans, including those in Beijing, Shenzhen, Chongqing, and Guangzhou. One year later, the building of a national ecological security pattern became one of the five major goals in the new central government agenda.

## Act like a peasant: landscape transformation through design and engineering to build ecological infrastructure

Inspired by ancient Chinese survival strategies and agricultural wisdom, Turenscape developed replicable construction modules to address challenges and problems on a massive scale in a cost-effective manner. The application of these modules is presented in the following with regard to three aspects: water management, field creation, and cultivation and harvesting.

### Water management: befriending floods

In ancient China, communities were established around natural water sources, with people settling along rivers and lakes. Today, as global climate change introduces extreme weather events and issues of unequal water distribution, Turenscape advocates for "befriending floods." This approach involves establishing comprehensive hydrologic ecosystems to effectively cope with flood disasters brought about by monsoonal climates, restoring the self-purification capabilities of urban water systems, and enhancing the resilience of ecosystems.

In Jinhua City, Zhejiang province, the feasibility of the "befriending floods" concept is being tested at Yanweizhou Park. Located in the subtropical region of Eastern China, Jinhua is characterized by a strong maritime monsoon climate, with distinct dry and rainy seasons, the latter often disrupted by flooding. Traditionally, high concrete embankments were constructed along the rivers to prevent flooding.

Turenscape's design solution involved flood inundation analysis for various recurrence intervals, meeting the flood protection needs for a 50-year event: preserving and restoring natural habitats, combining native vegetation and topography to construct an ecologically resilient flood embankment suited to the flood recurrence intervals. Originally, the site had two rigid flood embankments designed for 20-year and 50-year events, which disrupted the continuity of the wetland ecosystem. In the design of Yanweizhou Park, the hard embankments within the park were demolished, applying the principle of on-site balance between cut and fill to transform the riverbanks into terraced planting zones submersible during floods (see fig. 3).

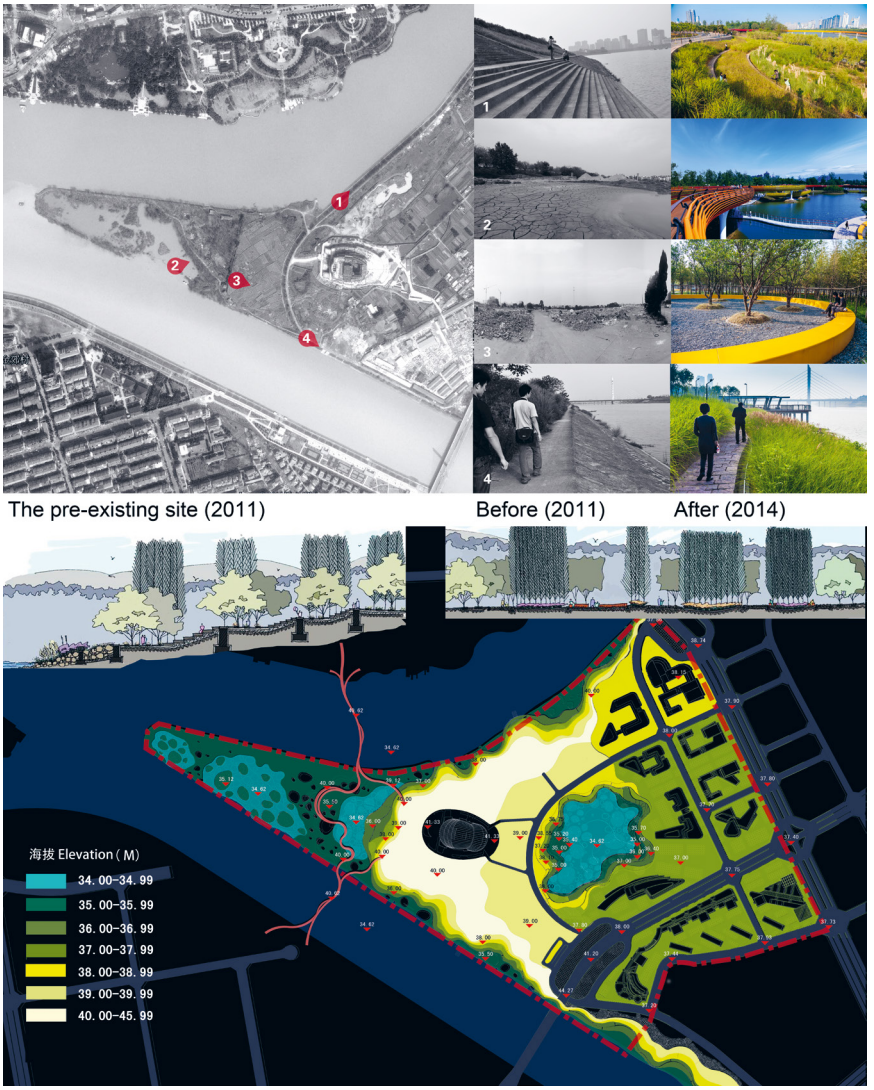


**Figure 3** Designed elevation of Yanweizhou Park. © Turenscape Academy

**Figures 4-1 to 4-3** The three images (from top to bottom) show Yanweizhou Park during a 100-year flood event, a 20-year flood event, and during the dry season. © Turenscape Academy

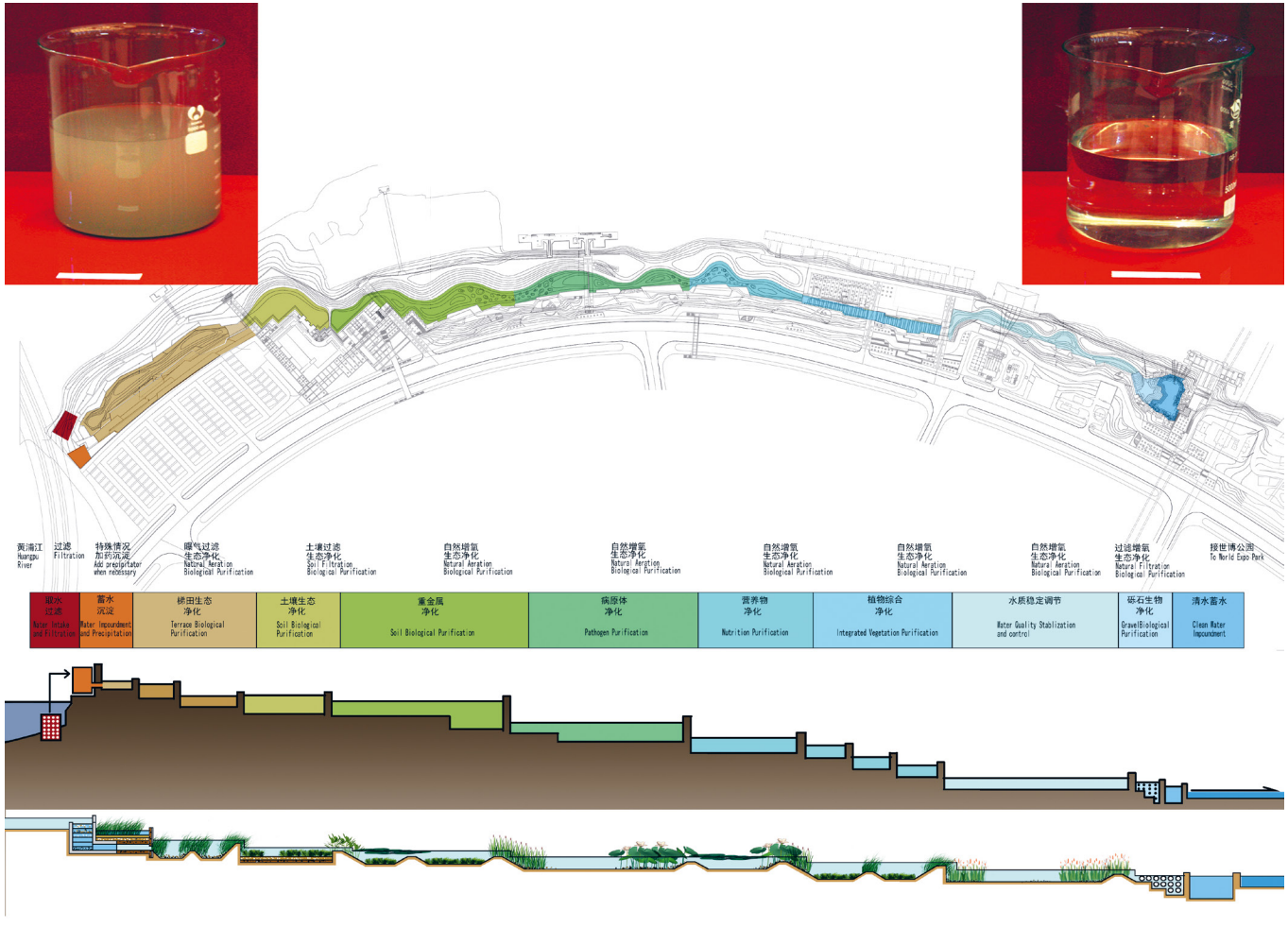


**Figure 5** The water cleaning mechanism of a man-made wetland. © Turenscape Academy

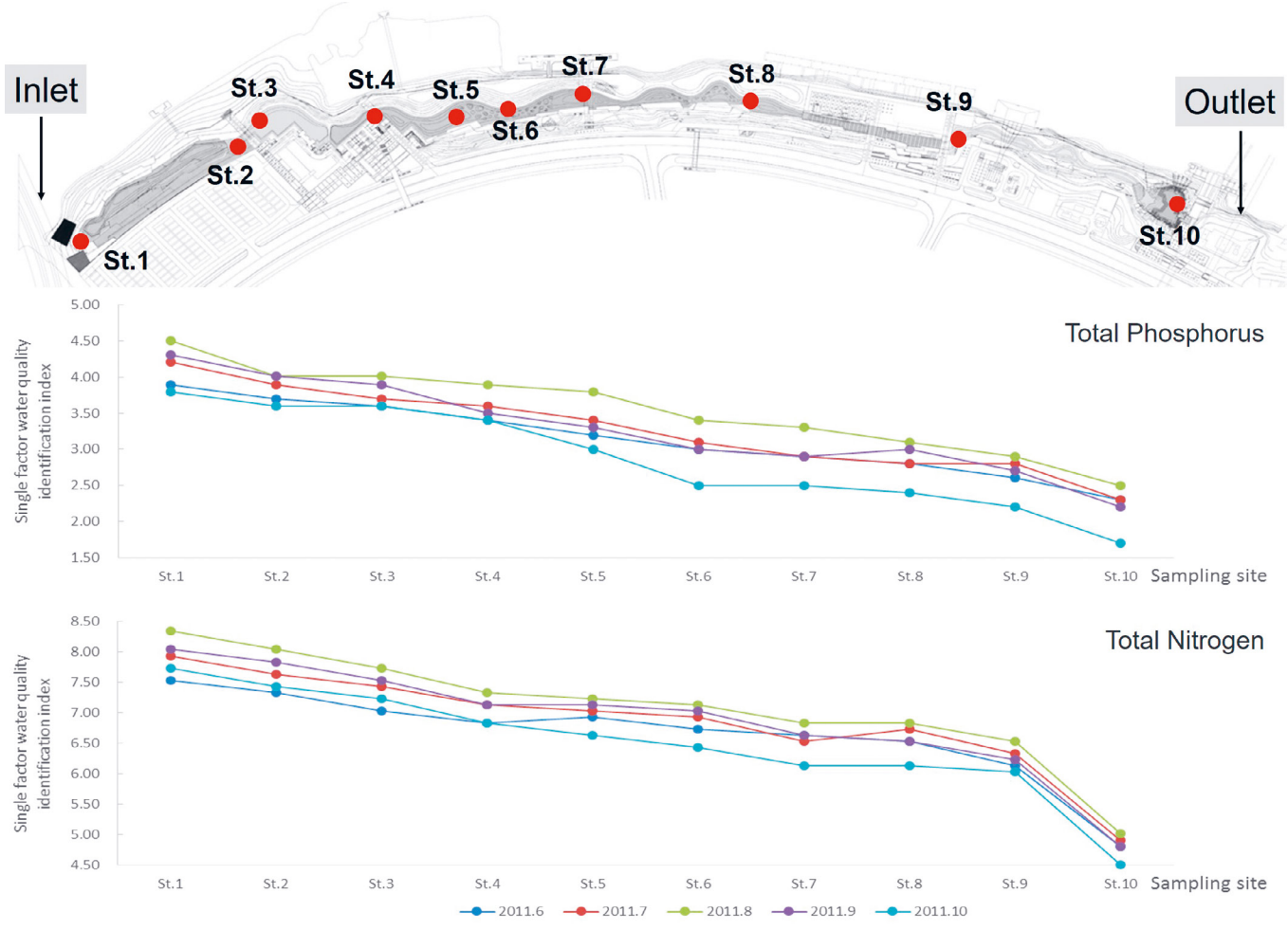


**Figure 6** Monitoring the purification effects of terraced wetlands. © Turenscape Academy

The proof of concept for Yanweizhou Park's approach to befriending floods has been validated. Since its completion in 2014, the park has successfully managed both 20-year and 100-year flood events (see fig. 4-1 to 4-3). It constitutes a resilient urban landscape. A 100-year flood will partially submerge the park but still satisfies the most basic transportation needs. The ecological flood embankment design, vegetation adapted to both drought and inundation, and 100% permeable paving all contribute to the landscape's ecological resilience. Furthermore, through the design of universally usable trail systems and pedestrian bridges, the fragmented city is reconnected, fostering community interaction and making the park a focal gathering place.

### Field creation: cut and fill like a peasant

At Shanghai's Houtan Park, Turenscape has built an ecological purification system inspired by traditional field construction and irrigation techniques. The design utilizes an inner river to ecologically purify the polluted water from Huangpu River. Through cut and fill methods, an inner river wetland has been transformed into a terraced wetland landscape system stretching 1.7 km in length and 5–30 m in width. It is segmented into various functional zones. When water from the Huangpu River enters the terraced wetlands, it percolates down the terraces, undergoing sequential filtration and thus achieving water purification (see fig. 5 and 6).

The designed terraced wetlands have a water purification capacity of 2,400 cubic meters per day. The purified water not only supports the park's water features but also meets the park's daily needs for irrigation, road washing, and other miscellaneous uses. The principle behind the water purification design follows the natural wetland purification mechanism to structure the artificial wetland (see fig. 7). In this process,

**Figure 7** Terraced wetlands. © Turenscape Academy


**Figure 8** Masterplan of Luming Park. © Turenscape Academy

various elements involved in water purification not only serve as aesthetic landscapes and recreational spaces but also as a platform for ecological education.

### Planting and harvesting: go productive

Three to four decades ago, 80 % of China's urban population still lived in rural areas. China has 20 % of the world's population but only 8 % of the world's arable land, 10 % of which has been lost in the past 30 years due to urban development. Traditional agricultural landscapes not only possess aesthetic value in contemporary landscape design but also represent a reenactment of traditional Chinese cultural landscapes.

Landscape design in Quzhou City's Luming Park, Zhejiang province, for example, integrates agricultural landscapes with low-maintenance native plants, creating a productive and beautiful urban park. The park spans approximately 32 hectares and features a complex topography with upland red sandstone hills, riverbank sandbars, flat farmlands, shrublands, and wild grasses, with a riparian forest of maple and poplar trees along the riverbanks (see fig. 8).

During the time of China's rapid urbanization, such sites were considered disorderly, ugly, and valueless, with their historical and cultural heritage value largely unrecognized (see fig. 9). The common engineering approach to such sites was aggressive leveling to create lawns, which simplified design and construction processes and facilitated the installation of roads, water supply, and drainage systems.

In 2013, Turenscape proposed a new landscape concept, positioning the urban park not merely as a public green space but also as an ecological infrastructure that provides ecosystem services for the entire city. On a macro scale, the project aimed to address current crises, including climate change, food supply, energy security, and water scarcity, while introducing a new aesthetic of productive and low-maintenance landscapes.

The site's original landscape base and natural habitats were fully preserved; abandoned areas were planted with productive crops in seasonal rotation: rapeseed in

**Figure 9** Luming Park before construction. © Turenscape Academy

**Figure 10-1 to 10-3** Luming Park after construction. © Turenscape Academy

spring, sunflowers in summer and autumn, and buckwheat in early winter, alongside vibrant rotations of wild herbs (see fig. 10-1 to 10-3). The meadows filled with low-maintenance wild chrysanthemums serve as valuable medicinal materials. The site's original natural surface runoff system was entirely retained, and a series of ecological detention ponds were designed to capture rainwater, enriching the soil moisture. All pavements within the park are permeable; a network of pathways, boardwalks, and pavilions floating above vegetation and streams allow visitors to wander through nature without excessively disturbing natural processes. This transformation of an urban abandoned site into a productive and beautiful landscape also preserves the site's ecological features and cultural heritage.

## Conclusion

For millennia, former generations have engaged in continuous negotiation and reconciliation with nature to secure their right to survive, thereby giving birth to the art of landscape design—a vivid representation of the interplay and connection between humans and nature. In this new era, the balance between humans and nature is once again disrupted, precipitating yet another crisis in human survival. We must establish a new harmonious relationship between humans and the land to navigate through this crisis, addressing environmental and ecological crises, the loss of cultural identity, and the erosion of our spiritual homes.

Contemporary landscape design must reevaluate cultural landscape and the "art of survival" that underlies it. It must find its place and evolve within the authentic human-land relationships, amid the ordinary and the everyday. Spatially, it must guide urban development through the design and construction of ecological infrastructure, thereby safeguarding ecological and cultural heritage.

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# The Revitalization of Mt IDA (Psiloritis) in the Digital Age: A Glocal Approach to Cultural Planning for the Rural Communities of Mt Psiloritis Crete (Greece)

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**Abstract** In an era where digitalization has become integrated into the real world, it is now feasible for municipalities, communities, cities, and villages to gather the elements that constitute them as cultural entities, with the ability to develop multidimensional perspectives for their human resources. Cultural Planning emerges as a methodological and participatory process aiding authorities, institutions, groups, stakeholders, and citizens in recognizing, safeguarding, and leveraging cultural assets within their regions. By fostering a human-centric approach, this planning framework aims to enhance quality of life and nurture cultural vibrancy. My paper introduces an innovative adaptation of Cultural Planning, originally conceived in urban settings in Europe in the 1960s, to rural areas and cultural landscapes of mountainous Crete, Greece. Focusing on the rural expanse of Mt Psiloritis (Psiloritis UNESCO Geopark) in Crete, mostly characterized by pastoral communities, my study proposes a collaborative roadmap facilitated by Cultural Planning, digital tools, and the strategic exploitation of cultural resources. Embracing a "glocal" approach—balancing global influences with local needs—this model seeks to redefine the socioeconomic dynamics of the region by use of creating the Digital Psiloritis platform.

**Keywords** Cultural planning, digital culture, rural communities, cultural democracy, cycling economy, social innovation, cultural heritage.

## Introduction: the repositioning of culture in a digital-local nexus

The current era has already manifested elements of speed, complexity, and interaction as its structural characteristics. Concepts of space and time nowadays acquire hybrid characteristics with the idea of digitalization spreading as a dominant condition in an ever-expanding, constantly changing social, economic, political, and cultural environment (Schwab and Malleret 2020; Catapoti Oktōvrios 2022).

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The approach, management, and handling of COVID-19 have provided valuable insights and studies on a range of issues, prompting a re-evaluation and reframing of matters concerning our overall outlook and approach to life. Simultaneously, the approach to culture has changed, coupled with the cultural and creative sectors, whose activities have transformed almost more than any other sector of the economy.

The rapid decline in cultural activity at the economic level for organizations engaged in such activities is globally contracted by $750 billion according to a 2021 UNESCO report, compared to 2019, resulting in the loss of approximately 10 million jobs. Similar studies by major organizations such as EY and Deloitte have quantified the reduction in cultural business volume, contributing amid the pandemic to the exploration of recovery methods and the adoption of cultural activity as a genetic substance for future societies (Lhermitte 2021; Kouvidē and Maroulē 2023).

Specifically, as early as November 2020, four significant European organizations presented the manifesto "A Cultural Deal for Europe," emphasizing the horizontal importance of culture not merely as a sector (sometimes even a sub-sector) but as a vector of positive change, necessitating its integration into all policy areas. From green transition to Europe's geopolitical ambitions, and from digital transformation to the design of a Union of Values, the concept of culture is now established as the primary determinant and cohesive substance for the recovery of societies, aiming to build a new model of the future Europe (Kouvidē and Maroulē 2023).

The concept and factor of everyday culture now emerges as vital issue for the quality of life of individuals who seek new experiences, knowledge, and perspectives to upgrade their socio-economic life model (Hellmanzik 2022).

Alternative forms of work (remote, digital), education, and digital penetration or integration, dissemination, and networking in our daily lives are now constants of a new reality for which the pandemic is recorded as a historic milestone, the moment of implementation as an intermediary period that served as a lever and accelerator of developments.

Thus, the period of the pandemic and the digital leap into new technologies brought a significant turn in cultural planning and new cultural plans in the post-pandemic era, utilizing cutting-edge technologies (AR, VR, mixed reality, blockchain and NFTs, digital repositories of oral local history, and cultural heritage recordings) to leverage the cultural wealth of the past and sometimes the present with the tools of the future (Hellmanzik 2022).

In today's digitally expanding world, there is a rich opportunity to rediscover localities, redefining intercultural dialogue. New technologies can act as catalysts, bridging cultural capital with emerging social innovation, posing a contemporary challenge with far-reaching implications. The methodology of cultural planning explored in this paper serves as a guiding framework for communities to construct a tomorrow founded on grassroots efforts, outwardness, and collaboration, with culture at its core.

## The cultural planning methodology: a participatory tool of regional transformation, empowering communities for urban regeneration and rural development

Cultural planning stands as a collaborative methodology aimed at reinvigorating urban centers and fostering development in rural areas by harnessing the power of cultural resources, wealth, and activities. It entails a participatory process of identifying and leveraging a community's cultural assets, encompassing its history, art, music, traditions, and natural resources, to drive economic and social progress (Hellmanzik 2022).

Originating in Europe during the 1960s, cultural planning emerged as cities faced the challenges of transitioning from industrial hubs to post-industrial landscapes. It gained momentum in subsequent decades as communities sought innovative strategies for regeneration amid shifting socio-economic dynamics. Initially focused on urban revitalization, cultural planning gradually expanded its scope to include rural development initiatives (Pavlogeorgatos 2018).

By adopting bottom-up approaches and participatory governance models, communities embarked on a journey of self-transformation, repurposing industrial infrastructure into cultural heritage sites and fostering the growth of creative economies. As a modern scientific tool, cultural planning emphasizes the formulation of coherent cultural policies, capacity-building in cultural resource management, and the promotion of citizen well-being. It underscores the qualitative enhancement of everyday life culture, promoting alternative economic models and participatory governance structures.

The methodology encompasses diverse cultural projects, ranging from analytical plans to targeted initiatives tailored to specific sectors or communities. It prioritizes geographical and administrative contexts, stakeholder engagement, and data-driven decision-making, ensuring inclusivity and sustainability. Cultural planning's impact extends beyond urban settings, with successful implementations witnessed in rural regions worldwide. By fostering community engagement, preserving cultural heritage, and promoting entrepreneurship, cultural planning contributes to the sustainable development of rural economies and communities (Pavlogeorgatos 2018).

In my PhD thesis, which focuses on the development of cultural planning methodology for the rural communities of Psilortitis (Crete, Greece), characterized by its rich cultural heritage and natural landscapes, cultural planning holds promise as a catalyst for rural revitalization.

By harnessing local assets and fostering collaboration, it aims to create a model of participatory rural governance that integrates agriculture, tourism, digital innovation, and cultural entrepreneurship. Through strategic partnerships and innovative initiatives, cultural planning seeks to enhance the well-being of rural communities, preserve cultural and natural wealth, and stimulate economic growth. By embracing cultural planning principles, rural areas can unlock their potential as vibrant, sustainable, and resilient communities, enriching the lives of residents and visitors alike.

## Creating the digital mountain: Mt Psiloritis as a glocal case study for cultural regeneration

My research delves into the intersection of social innovation and cultural heritage, particularly in the context of rural communities. This exploration is coupled with the development of a novel model of cultural design tailored to rural communities, focusing on the case study of the cultural landscape of the UNESCO Geopark of Psiloritis.

The mountainous communities of Crete at Mt Psiloritis present an initially contrasting case study for cultural planning methodology, as the majority of existing methodologies were primarily developed for urban centers and industrial areas. Hence, this approach signifies a pioneering departure within the region where I both reside and operate professionally, particularly as the founder of Androidus Argastiri (https://www.androidus.gr/en), a cultural organization specializing in digital culture. The mountainous communities surrounding the current UNESCO Geopark of Psiloritis, including Mount Psiloritis itself, manifest distinctive mountainous characteristics (altitude, geographical coordinates), socio-economic demographics, and cultural peculiarities within the scope of my research as a network of a unique cultural confederation (see fig. 1).

The originality elements underpinning this research commenced with data collection for the development and establishment of a new cultural plan-management model for Psiloritis within the administrative boundaries covered by the current Geopark.

The anthropogeography of the area, covered by the mountain massif of Psiloritis as the present Geopark, spans an area of 1,272 sq. km, encompassing eight municipalities, 96 settlements, and approximately 40,000 inhabitants, formed the basis for selecting communities based on mountainous criteria as case studies.

Specifically, the mountain communities of Psiloritis I selected and examined through the Geopark of Psiloritis establish a cultural network with similar socio-economic structures and cultural activities within a unified framework of documenting human and cultural resources, as well as specific elements for development and utilization (see fig. 2).

Primarily pastoral and secondarily agricultural, these mountain communities have populations that appear not to be abandoning the area (based on data from ELSTAT census), in contrast to other mountainous regions in Greece where depopulation predominates (see fig. 2).

Simultaneously, within this cluster of mountain communities, there exists a particularly strong and active cultural imprint through iconic archaeological sites, historical monuments, and traditions of a vibrant intangible cultural heritage, which is revitalized through cultural activities and production.

The fundamental absence of new forms of economic activity, prospects for employment in new sectors, modernizing primary production through innovative combinations of primary and tertiary sectors, as well as the upgrading of everyday culture for citizens, constitute a vital triptych of purposes for creating a new model of cultural

**Figure 1** Panoramic View of Anogeia Village (Anogeia Municipality), one of the main rural communities of Psiloritis UNESCO Geopark. © Georgios A. Kalomoiris

**Figure 2** The drystone pastoral houses in the Psiloritis Geopark region at 1,400 meters altitude. © Georgios A. Kalomoiris

design. This model aims to be digitally designed and locally implemented, developing prospects for interconnection and dissemination.

The new cultural model of the mountain communities of Psiloritis will be based on the development and enhancement of creative production, networking among communities, utilization of cultural and natural environments, and activation of the human potential of the region through international examples.

This cultural heritage, combined with the active human potential of the area, constitutes a reservoir for creative exploration in terms of contemporary cultural entrepreneurship in an interconnection of creators and primary sectors, digital tools, and authentic experiences, gentle forms of tourism, and sustainability.

An outcome of this research is the idea of Digital Psiloritis emerging as an inspiration for creating a multidimensional website and forum where visual, auditory, and written documents, virtual tours, interviews, landmarks, and techniques will be gathered to vividly and contemporarily depict what Psiloritis is from antiquity to the present day.

The concept of the Digital Summit as an initiative to create a Digital Multispace capable of hosting all applications related to the utilization of the cultural heritage of a vibrant mountain with active human activity.

This mountain preserves, through oral tradition and generational succession, cultural elements, traditions, customs, practices, and techniques that can contribute to the creative reconstruction of today with a green imprint, terms of sustainability, circular economy, and new work prospects.

The purpose of this research is to comparatively study international examples in conjunction with the Greek reality, local peculiarities, and the participatory design of involved stakeholders, through the synthesis of a new cultural plan with common goals and collaboration among the different communities surrounding Psiloritis.

This constitutes a developmental field of substantial and creative social dialogue, with outcomes that incorporate the views of the local community, thereby ensuring the necessary consensus in final decisions and the policies that implement them. For this reason, it is understandable that there is no specific form, no ready-made model for implementing cultural planning, but rather a continuous formation of strategic planning with gradual steps, implementation stages, and the core participation of the area's citizens.

These stages must be meticulously crafted with a focus on specific steps, incorporating flexibility and adaptability to accommodate the diverse local conditions and nuances of each community. It is imperative to draw insights from international case studies to inform our approach effectively. At Androidus Argastiri, our role, guided by applied research, is to pioneer the development of digital tools aimed at the preservation, management, and dissemination of our region's cultural heritage through cutting-edge technologies, audio-visual media, and innovative cultural productions. Collaborating closely with esteemed institutions such as the University of Crete, FORTH, and local municipalities, we have spearheaded the creation of ground-breaking applications in virtual and augmented reality, including IDAology (https://

**Figure 3** A complex of activities and initiatives of Androidus Argastiri in the field of digital culture. © Georgios A. Kalomoiris

idaology.gr/en/home-english/) and MetARTum (https://metartum.site/en/) as well as the Adractos Virtual Museum and Oral History Repositories. By intricately piecing together elements from our natural and cultural surroundings like a mosaic, we are shaping the Digital Psiloritis (see fig. 3 and 4).

This endeavor encapsulates a holistic approach, encompassing a network of organizations, initiatives, and dynamic applications that define the mountain's digital presence in the metaverse era. Its overarching objective is to cultivate and nurture an ecosystem characterized by digital architecture, local installations, and translocal connectivity, thereby showcasing the enduring cultural history of the mountain in synergy with local human factors. Local communities, thematic communities, and digital communities are being formed and returning to an open-access discussion and collaboration, harnessing the commons through a revised global-local perspective of things (glocalism, design globally, manufacture locally).

Based on the above context, the common goal of research and implementation via the cultural organization Androidus Argastiri is the utilization and networking of a set of research projects and apps revolving around the documentation of tangible and intangible cultural heritage, the connection of craftsmanship and cutting-edge technologies, and the recording of the oral history of the mountainous communities of Psiloritis. This effort aims at preserving, disseminating, and interacting with local culture within a global context.

As a second outcome of my applied research, which operates on the principle of fostering local-to-global engagement, with a central emphasis on the exchange of cultural elements and the facilitation of intercultural dialogue, our efforts are poised to culminate in the inaugural Crete Biennale. Scheduled for August 2025, this landmark event will unfold amid the mountainous communities of Psiloritis.


**Figure 4** Idaion Adron Cave Archaeological Site (Nida Plateau in Anogeia Municipality) during the Ikesia Festival in 2022. © Georgios A. Kalomoiris

The above initiative symbolizes an active endorsement of rural areas with a vibrant cultural footprint adopting a policy of outward orientation and intercultural exchanges with the rest of the world. Through an open invitation to artists, creators, and artisans from around the globe, space will be provided for inspiration and the creation of artworks that will remain in the region, essentially following the philosophy of the emblematic artistic event of the Biennale.

Inspired by the primal elements of creation such as stone, soil, wood, and wool in interaction with oral history, living cultural heritage, and digital cultural applications, both the Biennale Crete and the Digital Psiloritis emerge as strategic moves in cultural policy at the local and regional levels. Both initiatives of cultural strategy are significant to operate synergistically as accelerators for development and enhancement of creative production, community networking, and the exploration of ways to leverage cultural and natural resources.

Through a combination of research and participatory design, the activation of the region's human potential becomes a top priority, with a focus on international examples and best practices that embody the global-local approach for Psiloritis. With international observation and the domestic dynamism of a human force seeking perspective, the Digital Psiloritis, through the esteemed branding of artistic creation by the Biennale, is crucial to serve as a milestone for establishing the cultural model of the mountainous (rural) communities of Psiloritis.

## Conclusions

Cultural planning at the research level and digital culture as an emerging field of work jointly open new prospects as applied research to enhance collaboration and bottom-up participation, reinstating communities as the most favorable new domain for exchanges, diversity, resilience, and development.

Further research shall be undertaken, and first results implemented through the following initiatives:

a) The creation of a new distinct model of cultural planning in Greek rural communities, with a case study focusing on the cultural landscape and the communities of Psiloritis (Greece, island of Crete).

b) The establishment of a digital culture platform that aggregates actions and applications primarily designed and implemented by the cultural organization Androidus Argastiri, focusing on showcasing cultural heritage and oral history for the region.

c) The organization of a large-scale creation exhibition, Biennale Crete, as an open challenge for outwardness and cross-cultural exchange, bringing together artisans and craftspeople from around the world to the Psiloritis region in August 2025.

All of the above represent stages of a philosophy emerging due to research and actions in the field, serving as a bridge between cultural heritage and social innovation in the era of the metaverse, paving the way for glocal approaches.

With selective change and a repositioning of countries on the map of the emerging new era, the prospect of building new glocal networks is dynamically brought back to the agenda through organized local communities, models of participatory governance, and initiatives of cultural democracy at local, regional, national, and even global levels.

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# World Heritage Property "Prehistoric Pile Dwellings around the Alps:" Knowledge Transfer or Tourism Promotion?

**Barbara Fath & Sabine Hagmann***

**International Coordination Group UNESCO Palafittes – Prehistoric Pile Dwellings around the Alps (Switzerland and Germany)**

**Abstract** The "Prehistoric Pile Dwellings around the Alps" has been a serial transnational World Heritage site spanning six countries since 2011: Switzerland (which submitted the nomination), Germany (the states of Baden-Württemberg and Bavaria), France, Italy, Slovenia, and Austria. A total of 111 pile dwelling settlements are inscribed by name on the World Heritage list. They are located in the shallow areas of the circum-Alpine lakes, in regions covered by bogs and on wetland meadows. Analysis of the organic material that has been preserved there offers insights into significant developments in human history. In the context of changing environmental conditions, the emergence of land cultivation and cattle breeding, the invention of the wheel and wagon, and the introduction of copper (and later, bronze), metalworking can be examined in detail along with the societal upheaval caused by these breakthroughs. Close collaboration between the fields of archaeology and natural sciences is essential in this process.

**Keywords** Transnational serial heritage, prehistoric pile dwellings, heritage and tourism management, subterranean sites on lakeshores and in marshland.

## World Heritage "Prehistoric Pile Dwellings around the Alps" and its "Outstanding Universal Value" (OUV)

The serial and transnational World Heritage property "Prehistoric Pile Dwellings around the Alps" was inscribed in the World Heritage list in 2011. There are 111 sites in the six circum-Alpine countries of Switzerland, Italy, Germany, France, Austria, and Slovenia representing the more than 1,000 currently known pile dwelling sites in the Alpine region.

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The inscription of the "Prehistoric Pile Dwellings around the Alps" in the World Heritage list and its "Outstanding Universal Value" (OUV) was mainly based on the unique preservation conditions at these sites, one of a total of ten defined criteria for assessing the OUV. In the case of the prehistoric pile dwellings, the OUV is mainly linked with criteria IV and V, which describe the importance of the site complex as archaeological sources for our understanding of the development of early agrarian societies in the Alpine region. Under anaerobic conditions in a constantly wet environment, organic materials in particular have been preserved alongside numerous other artifacts. Architectural elements and construction timbers, food remains and provisions, everyday objects as well as tools and textile remains have all been recovered.

These are excellent prerequisites for modern bioarchaeological and palaeoecological investigations. Precise dating of the wood using dendrochronology enables the development of individual settlements to be reconstructed and the interaction between humans and the environment to be traced in detail. This can also contribute important evidence to the current discussion of human-environment relations and climate change. The pile dwellings provide insights into the world of early European farmers, their everyday lives, agriculture, animal husbandry, and technical innovations in a timeframe from the 5th to 1st millennium BC (see fig. 1).

**Figure 1** Chalain (Jura, France), Station 19. Excavating a travois made of ash and a yoke made of oak, around 3000 B.C. © CRAVA Photo: Pierre Pétrequin

## Management between protection, research, and communication

The UNESCO World Heritage center requires a long-term management plan when World Heritage sites are applied for. The management of a World Heritage site is always quite complex due to various factors including the responsible institutions. In the case of the pile dwellings, this is exacerbated by the fact that the listing is a serial and transnational site complex. This is why there are coordination groups at national and international levels in addition to regional ones, in which the site managers exchange ideas and jointly develop concepts and implement projects. The primary domains of site management are protection, research, and mediation of the property. The concept for communicating knowledge about the World Heritage site, its OUV, and the need for protection to be in a position to pass it on to future generations plays a crucial role because the “Prehistoric Pile Dwellings around the Alps” lie hidden under water or in bogs and are not visible above ground (see fig. 2).

Special attention is paid to imparting specialized knowledge to young scientists. With this in mind, the State Office for Monument Preservation at the Stuttgart Regional Council organized an international workshop for young students and postgraduates in cooperation with the International Coordination Group of the World Heritage “Prehistoric Pile Dwellings around the Alps” and the Swiss Coordination Group UNESCO Palafittes: “An introduction to archaeological and natural resource management in wetland environments.” Twelve young scientists from five countries

**Figure 2** Schreckensee (Baden-Württemberg, Germany). The prehistoric pile dwelling settlements are located on the peninsula. © Landesamt für Denkmalpflege im Regierungspräsidium Stuttgart/Otto Braasch

**Figure 3** Recovery of a wooden slab wheel at the pile dwelling site of Alleshausen-Grundwiesen (Baden-Württemberg, Germany). © Landesamt für Denkmalpflege im Regierungspräsidium Stuttgart/H. Schlichtherle

around the Alps took part in this workshop in August 2012 in the Northern Federsee fen (see fig. 3).

The focus was on practical fieldwork, an insight into the archaeological findings, and the possibilities of scientific methods. Speakers in different disciplines from various institutions in Baden-Württemberg and Switzerland rounded off the program.

In 2021, the Kuratorium Pfahlbauten (Austria) organized an introductory course in research, documentation, and protection of archaeological underwater sites related to the UNESCO World Heritage "Prehistoric Pile Dwellings around the Alps" in Upper Austria in the form of a summer school. Eleven young divers from eight countries took part in the program. Over the course of two weeks, they were introduced to scientific diving in a lake (Lake Mondsee), the handling of wetland finds in the laboratories of the federal State Museum of Upper Austria in Linz, and dealing with management and public relations in the context of underwater sites.

The regular exchange of experience on the topics of preservation and protection of wetland sites takes place via the international conference "Archéologie et érosion," which occurs every 10 years, as well as via the regular international conferences on

the preservation of archaeological remains in situ (Preserving Archaeological Remains In Situ (PARIS).

## World Heritage and tourism—an ambiguous relationship

Article 27 of the World Heritage Convention calls on UNESCO to “strengthen, by all appropriate means, in particular through education and information programs, the appreciation and respect by their peoples of the cultural and natural heritage referred to in Articles 1 and 2.” Furthermore, “the States Parties undertake to keep the public fully informed of the threats to this heritage and of the measures taken pursuant to this Convention.”

In practice, World Heritage sites are marketed as cultural highlights by the tourism industry. The term ‘tourism’ appears in connection with the possible threats to a World Heritage site and there is often talk of touristic overuse. Two good examples in the circum-Alpine region are Venice and the Dolomites.

Due to their hidden and scattered location (see fig. 4), the pile dwellings are not directly affected by over-tourism. Nevertheless, the pile dwellings are not entirely unaffected by increasing tourism on the circum-Alpine lakes, the surge in water sports activities, shore and beach use, and leisure boating. Increasingly low water levels or heavy weather events caused by climate change are intensifying these threats to the sites.

A prerequisite for high-quality tourism is sensitizing the local population to the topic of World Heritage. Usually, World Heritage is seen in a tourism context, but not as an obligation and opportunity for the preservation of cultural assets. Closely related to this is the anchoring of the topic of World Heritage in the respective school curricula. In this context, the challenge is to encourage co-operation with different institutions, each pursuing different objectives, to achieve a common goal.

## Mediation, valorization, and participation—a holistic package

Due to these developments, good mediation and broad communication of the World Heritage site complex, its OUV, and, above all, its need for protection are of particular importance and, in view of the effects of climate change, of particular urgency. Innovative concepts are therefore necessary, which are being developed by the site management together with application partners and participating cities, municipalities, associations, and museums: Immediately after inscription, management and communication structures were created in all six countries, including the “Pfahlbauten-Informationszentrum” in Baden-Württemberg as part of the department of monument protection and the “Kuratorium Pfahlbauten” in Austria. These institutions are not only charged with site management, but also coordinate all previously mentioned partners.

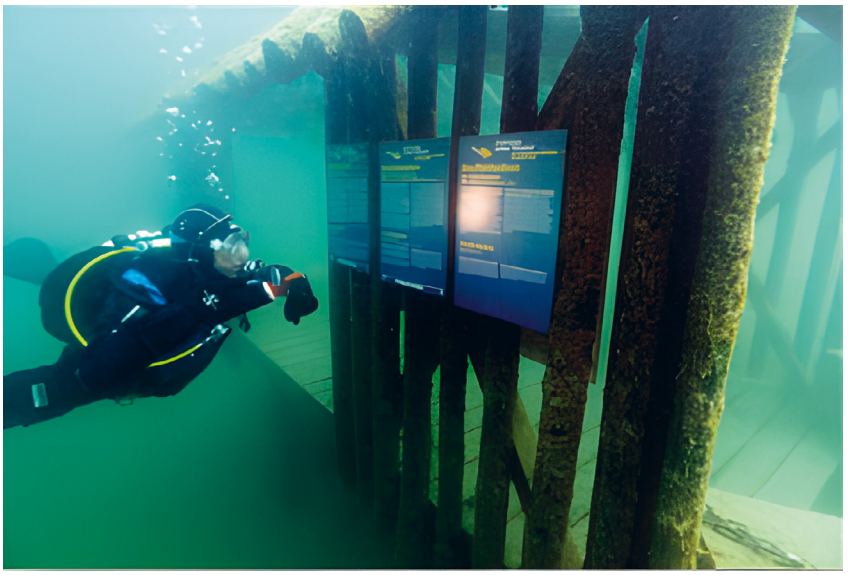

**Figure 4** Mediation under water at the theme diving park at Lake Attersee.
© Kuratorium Pfahlbauten

In addition to the mediation concepts of the management structures, the museums also play an important role in mediation. Although pile dwelling artifacts in museums are not part of the World Heritage designation, which only applies to the sites themselves, the artifacts and their integration into museum communication concepts offer a vivid and accessible source of information for visitors. Close co-operation between World Heritage management, museums, and tourism offers advantages on all sides: museums, as well as educational trails and other educational programs, are tourist destinations that attract additional interest through World Heritage. Tourism can be an important point of communication and a multiplier that also reaches target groups outside of those usually interested in archaeology and culture.

The fourth partner is the municipalities on whose territory the sites are located and associations that volunteer their time in the field of pile dwelling World Heritage. In Baden-Württemberg and Bavaria, these communities have joined together to form the "Pile Dwelling Working Group" (AG Pfahlbauten) and represent an important pillar of the Pile Dwelling Network.

In addition, conscious cooperation between tourism, heritage conservation, and all other partners can develop strategies from the outset to avoid the effects of excessive tourism and sensitize people to what is exceptional and in need of protection.

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# Index

This anthology offers an accessible and exciting read on cultural landscape(s) and their heritage as resources for regional development. It presents thirteen reflection papers that are based on inter- and transdisciplinary exchanges from 2020–23 as part of Heidelberg University's Flagship Initiative "Transforming Cultural Heritage." The contributions bring "classical" heritage research disciplines such as archaeology and history into a vivid and fruitful dialogue with social sciences, area studies, and practical conservation. Topics discussed include the promotion of local characteristics and knowledge as well as a more community-orientated landscape stewardship in Europe and Asia.

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