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Socio-cultural resilience, community engagement and conservation of UNESCO cultural landscapes.

Insights from case studies.

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Declaration

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Summary

In a global context, governing contemporary uncertainty is a great challenge that the territories are facing, especially in a vast area. This necessity has to overcome the mere idea of mitigation as urgency that only aims to preserve the *status quo*, opting instead for a proactive and adaptive approach.

The landscape is living and constantly ever-changing (Antrop, 2005) as its related identity (Butler et al., 2019). In this framework, permanence, identity, and the preservation of cultural values demand the integration of co-evolution in landscape planning. To bind together the theoretical notion of resilience with spatial plans and projects (Brunetta et al., 2019), the introduction of social resilience seems conducive to that end.

In a landscape investigation, permanence and change are in a significant relationship within the epistemological discourse to define the robustness of landscape as a system. To put this research in context, the community level of social resilience is the adopted approach that can guide the 'active conservation' of a UNESCO World Heritage Site while maintaining the sense of place.

Based on the State of Conservation reports, in 11 out of 28 World Heritage agricultural landscapes, the 14 primary threats "affecting the Outstanding Universal Value of World Heritage properties" (UNESCO, 2008a) include the "social/cultural uses of heritage" (*ibidem*). Among them, "identity, social cohesion, changes in local population and community" (*ibidem*) is the umbrella under which are listed relevant secondary factors affecting the heritage, i.e. "changes to identity and social cohesion", "changes in livelihoods", "migration to or from site", and "changes in local population and community" (*ibidem*). In this respect, a lack of adaptive, resilient tools to actualise the landscape identity concerning newcomers is recognised.

As noticed by Brunetta et al. (2019), the "debate around the relationship between cultural heritage and resilience has opened" (p. 9) in the academic literature and mainly falls into the target 11.4 "Strengthen efforts to protect and safeguard the world's cultural and natural heritage", as part of the SDG 11 (UN, 2015). The relevance of safeguarding and managing cultural landscapes also refer to other Targets reported in the 2030 Agenda for Sustainable Development (UN, 2015), as in the 2.4, 12.2, 13.1, 15.1 and 16.

So, it has appeared crucial to understand the relational trajectories of dynamic equilibrium and the acceptable limit of changes between permanence-memory and

transformations, which can interest a vast territorial area in long-term strategies. It highlights how "the capacity to preserve the know-how and approaches to protect cultural heritage depends on territorial governance, which leads to the possibility of increasing the intrinsic resilience of a system" (Brunetta et al., 2019, p. 8). Compared to newcomers, it seems therefore vital "… the need of local communities to reconstruct their sense of belonging, their history or cultural identity" (Brunetta et al., 2019, p. 8) in the landscape.

That said, some questions arise. How is social resilience articulated with the landscape identity? What is the acceptable limit between persistence and change, to reach both the systemic robustness required by UNESCO and to cope with dynamic changes for an effective community-led 'active protection'? What are the main objectives of cultural landscapes?

The present research intends to deepen this investigation also operating a case studies comparison between 2 cultural landscapes listed by UNESCO as "organically evolved landscape" in the "continuing landscape" sub-category (UNESCO, 2008, Operational Guidelines, Annex 3):

- the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato", in Piedmont, Italy (UNESCO, 2014); and
- the "Cultural Landscape of Honghe Hani Rice Terraces", in Yunnan, China (UNESCO, 2013a).

Despite the two cases are from contexts that are politically and culturally different (Taylor, 2009, 2012; Bell, 2017; Wen & White, 2020), the decision to compare these sites refers to the institutional agreements signed between Italy and China (2019), which provide for the twinning of managing bodies based on aims defined in the Statute of the Italy-China Cultural Forum (2016).

A qualitative approach has been carried out, including interdisciplinary and systemic analyses. First, it has been accepted "ontological uncertainties" (Shaw, 2012a, p. 292) and "… hidden interdependencies, complex risks that are lurking in the background …" (Seville, 2009, p. 5) with low possibilities of complex adaptive systems to "have control over system boundaries or trajectories" (McGreavy, 2016, p. 9). Overcoming ideas of resilience as a 'boundary object' (Brand & Jax, 2007; Baggio et al., 2015), the "complexity theory is the epistemological basis of evolutionary resilience" (Davoudi, 2018, p. 4).

Then, a comparative analysis of landscape components and forces of change was carried out for both sites. For the Chinese one, the study of scientific literature and interviews with 19 researchers, ICOMOS experts and cultural heritage professionals, both local and foreign, helped detect the changes that have occurred over the period 2013-2020. The results reveal a seasonal emigration (up to 2/3 of the natives and towards lowland cities), the abandonment of rice terraces (10-20% of the total while, above 1,000 m, 30-40% are at risk of drought due to climate change) and crops replacement to increase profits. In the long term, the continuation of the current agrarian system could be threatened, and the landscape affected in its integrity and authenticity.

Despite these social vulnerabilities, the term 'resilience' does not appear in either the Candidature Dossiers or the current management plans of these sites. Already in 2014, ICOMOS recommended the Italian State Party to pay: "… greater attention to the social values that make an important contribution to the management and conservation of the property …" (p. 319). The same advisory body also warned its Chinese counterpart that "the way that the traditional system adapts itself to modern demands, which is already drawing people away from the villages, ... could lead to difficult tensions" (2013, p. 79).

As cultural landscapes "… are part of our collective identity" (UNESCO, n.d.-a), such latent dynamics (Diamond, 2005) may cause "the degradation of memory and the community identity" (Brunetta et al., 2019, p. 9), resulting in a "… loss of the sense of belonging" (*ibidem*). The persistence of a territorial system, therefore, seems essential for building effective systemic responses in terms of resilience. Defining a community-led boundary between change and memory helps to reinforce communities, their structures, and attitudes regarding the landscape, assuming a continuously evolving balance.

Consequently, there is a need for local capacity building (Pratt, 2015) to strengthen communities, which are the main players in active landscape conservation. In UNESCO cultural landscapes, the landscape builds the community, which in turn builds the landscape.

So, it becomes clear how such perspectives require a people-centred approach for several reasons. Land use for vines or rice is permanence in these landscapes, but such use is dynamic. So, what would happen if immigrants were to change the cultivation techniques that distinguish these cultural landscapes? What would be the implications? And if the social context that produces these landscapes changed, would the heritage risk social decontextualisation? Therefore, what should be a proper management approach?

Since locals and migrants have different ways of perceiving landscape, how can the two visions be integrated? Is it possible to aspire to a collective identity? One potential answer may be the inclusion of adaptive capacity in integrated management systems. Resilient approaches using "… feedback in a more reactive way in tracking progress" (Coaffee, 2019, p. 48) could be included in the Objective: "a 'Social Landscape'" (UNESCO, 2014, p. 60), already part of the current Italian management plan. These could also be integrated into the general objective no. 1 of the Chinese management plan, to respond to the request to "regulate and guide the continuity of value" (UNESCO, 2013a, art. 51.1, p. 37).

As communities are attributes of the landscape, it seems essential to further strengthen the relationship that has produced and maintained these landscapes over time. Therefore, it is advisable to start analysing them through the lens of social resilience, establishing a new relationship between their values and the OUV, UNESCO Guidelines and management plans. In this regard, a digital questionnaire was submitted to North Macedonians living and working in the territories of Langhe, Roero and Monferrato, and to residents of these areas. In the municipality of Canelli, a Component of the serial Property, North Macedonians form the fifth largest community in Italy. Nine closed-ended questions were posed to 415 volunteers to understand their sense of belonging, their perception of the local landscape and its modifications, their management of the vineyard landscape, their integration and sense of community, and prospects for current and future generations.

This test highlighted different ways of understanding landscape modifications between the 2 groups. Furthermore, it has been found (also consulting statistics) that social changes are higher in areas with higher economic returns per hectare and the number of wine-related industries.

Therefore, this research highlights the need for an integrated management system, building on what the author learned during his visiting research period at ICCROM, Rome. If "… preservation of each area's landscape values is associated with the survival of cultural models that have left their mark on the territory …" (CoE, 2006), it is a means of improving personal and community well-being (Di Fazio & Modica, 2018). The aim is to strengthen community involvement by further linking the intangible and tangible aspects of the landscape. Therefore, building stronger rural communities able to manage change and continuity.

In a nutshell, this study intends to contribute to building the resilience of landscape for an integrated management system of these cultural landscapes, considering resilience as an important approach for strengthening territorial processes and foster innovation. Theoretical and practical outputs have been combined, where, on the one hand, reports have been discussed within the academic context, while, on the other hand, strategies and actions ones have been detected for benefitting the local communities. Findings could support managing bodies to "… promote practices with incentives to reinforce the community role and the adaptive capacity of systems" (Brunetta et al., 2019, p. 7). These include the possibility of introducing proactive landscape resilience tools into the integrated management system in the event of voluntary renewal of UNESCO integrated management plans.

Solutions for an integrated management system of a productive site within the UNESCO context have been proposed starting from the state of the art of heritage literature and manuals. They have pointed out the relevance of resilience in inputs and processes for correctly managing attributes and values, without focusing on the contribution of resilience in the planning dimension of the landscape. Especially in the attributes, the contribution of resilience in the processes is relevant to plan work programmes that include short-, mid- and long-term period activities and actions.

In the case of a potential revision of the management plan of these sites, resilience could be embedded in developing responses/proposals and implementation and monitoring processes but creating more connections among the different procedural steps. Specifically, in cultural landscapes, resilience is one of the necessary points on this integrated management approach, whose contribution influences the analyses of values/biocultural approaches and traditional knowledge practices. To further detail potential activities and actions, Beagan and Dolan's discourse on the five elements of resilience was implemented to support decision-making to preserve, maintain and enhance cultural landscapes (2015). Diversity, redundancy, network connectivity, modularity and adaptability are detailed with practical strategies and actions benefiting local communities.

The thesis demonstrates strong connections between identity and landscape resilience, especially in inland areas where the sense of identity is most prominent. Furthermore, it is structured to make it possible to replicate this investigation in ordinary case studies, i.e. ordinary landscapes. Concepts such as site-based and place-related heritage, people- and community-centred approach, living heritage, community-led changes, sense of place and identity, and the adaptation to 'new normal' conditions have been emerged as relevant to achieving the resilience of a landscape. Despite ongoing changes in social composition, UNESCO recognition helps to rebuild a diverse community, a 'community of purpose' bound together by the stewardship of these cultural landscapes. Critiques are also proposed, and an attempt is made to try to define the new and fresh concept of "landscape resilience" (Voghera & Aimar, 2022, in press), as an original contribution to research.

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Section 1

Research topic

1.1 Title

The title of the PhD thesis is: “Socio-cultural resilience, community engagement and conservation of UNESCO cultural landscapes. Insights from case studies.”

1.2 Research topic

The current research aims to explore the mutual relationship between social resilience and landscape and how to build effective landscape resilience. The primary theme is to understand the specific role of resilience in a landscape integrated management system and its possible applications, starting from the theoretical and epistemological analysis of the current state of resilience-related studies in the field of UNESCO cultural landscapes.

Resilience and its social dimension have to be intended as an operative tool to permit active or dynamic conservation of the landscape, mainly under the community-led perspective, with implications also in terms of planning (Elmqvist, 2014; Brunetta & Caldarice, 2019). It helps to face several challenges and vulnerabilities proper of a dynamic system in a co-evolutive setting. Comparative case studies are instrumental in identifying critical issues and vulnerabilities of these complex systems, selected within the UNESCO World Heritage List of cultural landscapes.

The analysis of the findings, coming from a qualitative approach, could lead to formulating critical reflections about the role of the local communities and their interlinked experiences with the ‘idea of the landscape’ (Xiao et al., 2013; Di Fazio & Modica, 2018; Brunetta et al., 2019). The purpose is to list and suggest to the agencies or managing bodies of the selected UNESCO Sites potential actions or strategies to build up resilient thinking towards adaptive landscapes in a mid- to a long-term scenario.

1.3 Keywords

UNESCO cultural landscapes; productive landscapes; social resilience; management plan; community engagement; place and identity; landscape planning.

Section 2

Research questions

2.1 Motivations

As we understand the landscape as a cultural construct (Taylor, 2008), or an intellectual consortium in which the social process to construct it is detectable, it seems relevant to reinforce the 'idea of landscape' (Xiao et al., 2013; Brunetta et al., 2019) as a set of cultural and linguistic experiences. It makes it possible to better experiencing a territory and its perceptions. The landscape includes a cultural-heritage experience of the territory, where potential trajectories between permanence and continuous change help determine the robustness of the landscape as a system of systems. Related implications could change the concepts underlying dynamic landscape conservation understood as heritage and linked to the sense of place, as "… multiple aspects of identity have place-related implications" (Butler et al., 2019, p. 3).

In this sense, examining the persistence of a territorial system in a UNESCO cultural landscape seems vital to achieving an effective response, where "General resilience provides sources of memory …" (Folke, 2016, p. 4). If such memory is understood as "the dynamic exercise of remembrance" (Latina, 2018, p. 78), the social resilience at the community level can be intended as an operative tool to permit active conservation of the landscape from a community perspective. It can help to face several challenges and vulnerabilities proper of a dynamic system in a co-evolutive setting.

If the dynamic boundaries between persistence and change imply an intertwined correlation that relies on endogenous community resources (Davoudi, 2012, p. 5; Pratt, 2015), its reduction could diminish the capacity of the system in terms of resilience, first at the local level and then in a wider area. Indeed, the European Landscape Convention states that "… landscape contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage …" (CoE, 2000; Preamble). Therefore, applying the theories of the Faro Convention, it is essential "… to sustain and transmit to future generations" (CoE, 2005; Article 2.b) a productive landscape heritage that is intact or, at least, not further compromised.

Consequently, it seems necessary to base an effective reflection on the potential contribution of resilience concerning the updating identity in the new inhabitants (or newcomers) settled down in these UNESCO areas.

Although the discussed aims reveal a hoped-for centrality in governance and policies, the 17 UN Sustainable Development Goals explicitly talks about the

Cultural and Natural Heritage only in Target 11.4 (“Strengthen efforts to protect and safeguard the world’s cultural and natural heritage”, UN, 2015) despite “The Hangzhou Declaration: Placing Culture at the Heart of Sustainable Development Policies” (UNESCO, 2013b). However, an attempt to introduce the co-evolution in territorial planning can be identified in the next Target 11.a (“Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning”, UN, 2015) but does not seem entirely satisfactory for its partial formulation.

In the light of all these considerations, the present research proposal intends to contribute both in national and international debates, stimulating new connections amongst the PhD candidate, Universities and agencies in Italy and abroad. Another general goal is to approach this scientific track gaining a new analytical approach by the discussant.

2.2 Objectives

The investigations carried out for this thesis, and possible further analyses in the future, covered several desirable objectives. They are listed below, in a possible hierarchical order:

- understanding how to build the resilience of the landscape resilience in possible spatial planning frameworks, at a regional level or in a vast area;
- comprehending the acceptable limit of changes between permanence and dynamic transformation in a co-evolutive approach, which interests a regional area in mid-long term strategies;
- defining border thresholds and boundaries between landscape, agriculture, and identity in a systemic resilience perspective within the selected UNESCO case studies named the “Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato” serial property in Italy (UNESCO, 2014a) and the “Cultural Landscape of Honghe Hani Rice Terraces”, in Yunnan, China (UNESCO, 2013a);
- identifying social-resilient best practices in the current UNESCO World Heritage Sites listed as cultural landscapes, related to new possible landscape’s identarian scenarios under the ongoing change of the social component (newcomers), which could be effective in similar local contexts;
- comparing ongoing trends and dynamics related to the social component of the selected World Heritage Sites: the “Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato” in Piedmont, Italy (UNESCO, 2014a) and the “Cultural Landscape of Honghe Hani Rice Terraces”, in Yunnan, China (UNESCO, 2013a); and
- supporting the integration of the concept of social resilience within the current UNESCO Operational Guidelines on cultural landscapes and

emphasising the relevance of a more focused people-centred approach in the integrated management system of World Heritage sites.

2.3 Specific research questions

To consistently approach the stages of the present research, a list of questions usefully supports a progressive definition of the boundaries in the field of investigations. To better articulate the synopsis of this thesis, potential issues are turned into specific queries to stimulate critical and theoretical reflections. Below, a refined list of three questions follows:

- Question no. 1

  In the selected UNESCO World Heritage sites listed as cultural landscapes, what are the different ideas of landscape and related features to focus on?

  Due to the different ideas of landscape in the two countries and the European and Asian context in which these sites are located, i.e. Italy and China, a comparison was made to highlight potential similarities and differences in their components, as well as values and attributes. A theoretical analysis of the connotations and implications of the term 'landscape' in both UNESCO cultural landscape sites selected on the World Heritage List was carried out.

- Question no. 2

  What is the relationship between resilience and identity?

  In UNESCO's definition of the cultural landscape, the following statement is given: "They [cultural landscapes, *e.d.*] are part of our collective identity." In this sense, latent internal and external dynamics can cause "the degradation of memory and the community identity" (Brunetta et al., 2019, p. 9) and the consequent "the loss of the sense of belonging" (*ibid.*, p. 9). It leads to a generalised vulnerability of the landscape as a system, starting with the social fabric that makes it up. Indeed, local farmers are "… the creators of this heritage, the main force behind conservation and the beneficiaries of these efforts." (IUCN & ICOMOS, 2020, p. 42). Accordingly, "cultural and natural heritage are pivotal to maintaining the memory of the community and its sense of belonging and therefore its maintenance or valuation deeply increases the cohesion and resilience of a community" (Brunetta et al., 2019, pp. 7-8) based on a co-evolutionary process. Although "identity provides a sense of belonging …" (Butler et al., 2019, p. 3), its values can change over time. Thus, "… a debate around the relationship between cultural heritage and resilience has opened" (Brunetta et al., 2019, p. 9).

Consequently, this relationship will be further investigated in future research avenues moving from this PhD thesis, as it is constantly changing and site-specific.

- Question no. 3

  What is the limit between persistence and change to achieve both the systemic robustness that UNESCO calls for and, together, to cope with dynamic modifications for a community-led 'active protection'?

  If the goal is to achieve landscape resilience as a system, this limit implies an intertwined correlation based on local capacity building (Pratt, 2015). Thus, the contribution of resilience in the social component of the landscape intends to promote its dynamic conservation under a co-evolutionary approach. In this sense, while it is about "preserve and enhanced [historical landmarks, *e.d.*] through specific conservation or valorization projects", "preservation activities aim at a continuous reinterpretation of the object and not at static material conservation" (Brunetta et al., 2019, p. 9). This trend for an ever-changing landscape is confirmed also by other scholars, such as Norberg-Schulz (1979), Antrop (2005), Dossche et al. (2016) and Bürgi et al. (2017) among others. Such a dual approach requires an active role of heritage stakeholders because "the consideration of heritage in the process of resilience includes its social construction" (*ibid.*, p. 9). However, frictions persist between the drive for development and active conservation. To this end, the cultural dimension has been further investigated in the chapters of this doctoral research, exploring the transition "from persistence to preparedness" to "adaptability, and transformability" (Brunetta & Caldarice, 2019, p. 3). Furthermore, potential structural invariants in the spatial system and related fields have been investigated from a theoretical perspective.

- Question no. 4

  What will be the main objectives to maintain the identity of the selected cultural landscapes?

  Considering the specificities recognised in both World Heritage Sites mentioned above and reflected in the declaration of Outstanding Universal Value, this might seem a rhetorical question. However, the introductory dissertations on the importance of community in maintaining these landscapes and the call for a more person-centred approach raise managing questions. In the aporia between the misunderstanding of static maintenance of the physical integrity and authenticity of the landscape as if this is imposed by UNESCO and the intangible push for dynamic changes in different landscape values (socio-cultural and aesthetic-perceptual) by communities, there is a need for reconsidering the relationship between the Outstanding Universal Value, the UNESCO Operational Guidelines and the integrated management using the lens of resilience. To date, it seems that these two visions gravitate towards only partially overlapping areas. The former aims to maintain the image of the wine/rice system over time and therefore relates the community issue to this priority decision; the latter does the opposite, where the results on the landscape are secondary or at least collateral in this relationship.

- Question no. 5

Building landscape resilience: what are the resilient solutions in territorial systems to deal with changes in the socio-cultural component of the landscape (e.g. ageing and depopulation, the inclusion of newcomers, and foraging for landscape identity)?

According to the cognitive sphere of community resilience introduced by Kwok et al. (2016) that lists points useful to ensure a community-led continuation of the landscape, landscape resilience is "... a borderline, polysemic concept, whose debate is still opened in the literature ..." (Voghera & Aimar, 2022, in press). Precisely, "it is a believed that landscape can be a lever to stimulate resilience through involving, engaging, and empowering the members of a community" (*ibid.*). This novel concept aims at dynamic conservation of the landscape as a holistic system, which "… also encourages the sustainable development of the systems to reach a balance between farmers' lives and the productive landscapes while maintaining the core elements of the site …" (ICOMOS & IUCN, 2020, p. 42). Mitigation and adaptive approaches will be intertwined and necessary to ensure the building of landscape resilience through actions centred on respecting "the aspirations of populations (i.e. a community-based approach)". (Voghera & Aimar, 2022, in press). Possible structural and cognitive solutions to operationalise landscape resilience as a driver for change are discussed and explored in this thesis as an open problem, initiating a debate in the scientific community that may continue after this doctoral research.

Section 3

Proposed methodology

3.1 Introduction

This research aims to introduce some considerations regarding possible contributions of resilience in a landscape discourse, with the purpose to include strategies and actions as practical tools within local – supra-local norms and laws. Protection of the environment and, in particular, its experiential perception (visual and mental) appears much more than a desirable goal that also includes ethics and responsibility in the overall evaluation processes.

However, if the discussions about urban landscape's themes are manifold, as confirmed by a brief literature review on index research on Science Direct, SpringerLink, Taylor and Francis, and Wiley-Blackwell (June 2019), they seem weaker and more nuanced in extra-urban contexts. This trend appears closely related to many inland areas of Italy.

The connection with natural elements is deeply rooted in the collective memory of the community in these contexts, which contributes to creating a sense of identity and belonging linked to the place/landscape. Assuming that "the creation of identity is a constant process of identification … which develops through interactions with other individuals and our surroundings (Hague & Jenkins, 2005; Paasi, 2002; Twigger-Ross, Bonaiuto & Breakwell, 2003)" (Butler et al., 2019, p. 3), the landscape synergistically helps in the communitarian building. It also reinforces it and stimulates the continuous updating or rewriting (Paasi, 2002) of the intangible values (cultural dimension) that are specifically associated with its physical characteristics (natural dimension).

To approach this topic, first of all, the observer should explore the theory (or strategy) of contemporary complexity and its organisation before trying to manage it. This observance moves from natural sciences, highlighting values such as uncertainty and non-linearity (Common & Perrings, 1992), to a social dimension of human interactions. In these systems, resilience is examined in its theoretical approaches and concepts, involving basic thoughts and shades of meaning useful to deepen it.

The following paragraphs also emphasise the relationship between communities as a system, users (locals/people from outside) as a component of related subsystems and their landscape in a multi-level, transdisciplinary and multifunctional way (Collier et al., 2013). Overall reflections tend to examine the evolving framework, suggesting possible lines and methodologies useful to investigate the system once defined its boundaries (Davoudi, 2012, 2013) and clarified possible boundary conditions (Folke et al., 2010). At last, potential practices are hinted as a convenient tool for building an explicit use of resilience.

3.2 Characteristics and aims of the research

Starting from a theoretical and epistemological review of the relationship between landscape and social resilience in a territorial system, the main objective is to identify and indicate how resilience can contribute to increasing the responsiveness of territorial systems to effectively cope with demographic/environmental pressures.

To accomplish this mission satisfactorily, the focus of these qualitative investigations intends to involve the managing bodies of two selected case studies.

As announced in the previous sentence, the methodology used in these insights is qualitative, avoiding the elaboration of quantitative data but using these as citations in aggregate and comparative form only.

A co-evolutive approach, identified as the most relevant to consider the complexity of the era in which we live, contemplates the systems at their specific analytical level. Based on this assumption, the surveys intend to focus on the descriptive state of the art of both systems, deployed through vulnerabilities and threat trends, offering possible resilient strategies and actions to be implemented in the integrated management system. After defining the boundaries of the investigations and obtaining initial results from the first case study, an analysis has carried out for the second one. A commentary on the two selected case studies follows.

The overall strategy intends to define resilient tools in landscape planning to respond to operative necessities and mitigative, adaptive and transformative strategies in a mid- to long-term perspective. They will contribute to building a potential integrated management system of these sites. A comparative analysis between the case studies is instrumental in understanding how similar problems are present in different contexts and in what ways they have been or will be addressed. Finally, it seems necessary to suggest where and how this process of integrating these results within existing regulatory frameworks can be replicated in other contexts (e.g. in ordinary landscapes). It can ensure the transparency of the whole process and also allow possible future replication in similar cases around the world.

3.3 Methodological framework

As introduced above, the landscape is the object of observation. It could be considered as a polysemy, consisting of both the physical value of existence and use. Consequently, each aspect of this study is investigated using a qualitative approach, in which the citation of quantitative data relating to both case studies is instrumental in fulfilling the mission by presenting comparable facts.

This choice is because qualitative data use features that can describe the complexity of a landscape and its psychological implications in users (locals/people from outside), which are generally based on aesthetics and its perceptual factors. In this sense, and with the aims to contemplate Michel Foucault' discursive formations (1969) in the relationship between object and subject in an investigation process, a post-structuralist approach seems beneficial for this purpose (Wilkinson, 2012).

This one involves the methodological paradigm as a carrier to describe and face the needs of this ongoing reasoning, formerly introduced in the text. However, one should premise the "acceptance of ontological uncertainties" (Shaw, 2012b, p. 311) linked to the low possibilities of adaptive systems to control boundaries or trajectories (Ramage & Shipp, 2009; McGreavy, 2016). Overcoming ideas of resilience as a boundary object (Brand & Jax, 2007; Baggio et al., 2015), it follows that the "complexity theory is the epistemological basis of evolutionary resilience" (Davoudi, 2018, p. 4).

That said, this framework allows one to describe the search for possible study methods in analysis, and secondly which might be the most suitable for the purpose. While the post-positivist paradigm suggests including context analysis as a basis for reasoning, common perspectives here are based on transformative and participatory stakeholder attitudes.

Afterwards, qualitative results of the investigations of the field of interest will be reported as case studies, analysing the possible replicability of them in other contexts. To that end, the transparency of those processes will be a necessary criterion to conduct objective evaluations.

Multi-, inter-disciplinary and systemic approaches are prominent in a resilience scenario since social challenges require transdisciplinary methodologies. Authors as Edward O. Wilson recall the relevance of consilience as unity of knowledge supporting holistic vision of the landscape (Wilson, 1998), using natural sciences (physical and natural sciences), anthropology, psychology, philosophy, spirituality, and the arts.

To initiate the search, methodological landscape analysis usually moves from historical evidence of the state of affairs, involving archival studies of past knowledge and related data (Diamond, 2005; Redman, 2014). Initially, the researcher has to ensure to examine the whole picture through the lens of inter- and trans-disciplinarity, including a deductive and normative approach. This necessary systemic process also includes working dynamics, risk identification, mapping, and control, which is instrumental for performing evaluation analyses to achieve the goals set out in a new promised plan.

Once the operational needs and strategies have been defined, a comparative analysis seems necessary to investigate a couple of case studies, useful to understand how similar problems have been solved in different contexts. These comparisons revealed new possibilities embedded in the exploration of contemporary trends.

3.4 Expected results

Qualitative results, coming from investigations and comparisons between the selected case studies, are going to produce:

- theoretical outputs, to be discussed with members of the national and international academic community, both in formal and informal ways and approaches (i.e. doctoral thesis, articles in scientific journals, chapters in books, conferences and related proceedings, symposia and meetings). In addition, non-academic dissemination was also considered preparatory to disseminate these insights to a wider audience, both in Italy and abroad; and
- practical results for the benefit of local communities. Results could support the managing bodies and agencies of the selected case studies to "… promote practices with incentives to reinforce the community role and the adaptive capacity of systems (Moulaert et al., 2007)" (Brunetta et al., 2019, p. 7).

Processes transparency and tracking are necessary criteria to conduct any replicable assessment in comparable contexts, according to spatial determinants and temporal variables.

In this sense, the desired result is to have the possibility to insert adaptive, reactive, and proactive landscape resilience tools in the case of a potential renewal of the management plan of these UNESCO cultural landscape sites, better if planned with a voluntary expiration of 10 years.

3.5 Contribution of the research

The innovative contribution of this PhD research to existing scholarship on the topic is related to identify and suggest the insertion of possible social resilience strategies and actions, guidelines, tools, or rules in both existing and new UNESCO site management plans. A site management plan is a voluntarily drawn up document that "… must specify how the Outstanding Universal Value of a property should be preserved, preferably through participatory means" (UNESCO, 2019a, para. 108). It "involves a cycle of short, medium and long-term actions to protect, conserve and present the nominated property. An integrated approach to planning and management is essential to guide the evolution of properties over time and to ensure maintenance of all aspects of their Outstanding Universal Value" (*ibid.*, para. 112).

As stated in the previous section, the existing site management plan of a cultural landscape inscribed on the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List would be better if it were reviewed periodically. UNESCO does not provide a written rule regarding an exact deadline of the management plan, but it is required to proceed with constant monitoring that is explicit through the Periodic Reporting and, among other actions, there is the one to proceed with the updating of such Plan. It is customary to work on an update at least every ten years; if some virtuous site wants to do it even more often, this practice is certainly useful and productive.

The procedure aims to create a dynamic, proactive and operational policy with a medium-term perspective. Updates and additions to this Plan may be formulated to address specific site-dependent issues. Instead, in new ones, their writing should include from the outset resilient tools or strategies that can embrace specific actions towards building effective landscape resilience. Short-, medium- and long-term actions will be developed according to a timeline, which can contribute to defining specific policies oriented towards effective social resilience.

Coping with these processes, two case studies were selected from those listed as UNESCO cultural landscapes: the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato", Italy (UNESCO, 2014a) and the "Cultural Landscape of Honghe Hani Rice Terraces", China (UNESCO, 2013a), despite the political and cultural differences between the two countries (Taylor, 2009, 2012; Bell, 2017; Wen & White, 2020). Their comparative analysis aims to offer a voluntary research contribution to make proactive the Institutional Agreements signed during the official visit to Italy of the President of the People's Republic of China and General Secretary of the Communist Party of China on March 22, 2019. In the signed official documents between Italy and China, a twinning of the managing bodies of both these World Heritage Sites was indicated at point 15, based on what was established in article 2 of the Statute of the Italy-China Cultural Forum (2016). Specifically, point g proposes to: "… exchange of experiences and technologies in the protection and restoration of cultural heritage, in particular: dissemination and use of risk assessment technologies and conservation of cultural heritage". Besides, point j recommends "cooperation and exchanges between institutions and local communities of UNESCO World Heritage sites of the two countries".

However, due to the severe constraints imposed by the COVID-19 pandemic crisis, twinning-related cultural activities were limited in the period 2020-2021; therefore, the Year of Culture and Tourism between Italy and China was rescheduled for 2022.

3.6 Target subjects

This doctoral thesis intends to offer fruitful study support for the incorporation of resilient tools into the proactive and integrated management system of a given UNESCO cultural landscape, according to local, regional and state regulatory frameworks. The aim is to build effective landscape resilience that needs to be based on the specific values/attributes of each site. This perspective deals with the interaction of different aspects, such as environmental, social and administrative.

In which manner do the communities pose themselves towards demographic shocks and environmental pressures? In particular, the role of communities is relevant to put in the field an effective response to react to existing vulnerabilities. In this perspective, their participation in the dynamic conservation of the landscape can result in effective system resilience, depending on the responses to specific needs raised within the local social group. The contribution of the social resilience in this complex pathway seems relevant to build a territorial resilience that is "… conceived as the co-evolutive property of a system" (Brunetta et al., 2019, p. 6). Moreover, the preservation of identity values is pivotal if we can talk of cultural landscapes, in which natural and cultural heritage live together in a constant daily rebalancing. For instance, the application file of the World Heritage Site named "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a) was changed to insert the intangible values at the core of the submitted proposal. This overview confirms that "… resilience … emerges from the characteristics of a complex interaction between the system itself and the interaction between society and its governance" (Brunetta et al., 2019, p. 6).

This proposal intends to propose a double opportunity: the first moves into the theoretical field of research (as discussed in the previous chapters), and the second aims to support operational actions or strategies to enhance the role of communities involved in active landscape conservation over a long period.

Section 4

Framing of the research topic

4.1 Resilience: a co-evolutionary concept

4.1.1. A short summary and glossary of the term resilience

To conduct sound research, it seems essential to take a step back and reflect more on the various nuances of the word ‘resilience’. As pointed out by Vardy and Smith (2017, p. 175), resilience “… incorporates multiplicities of difference into a single and apparently incontrovertible consensus”. However, “resilience is complex, it is rhizomatic in that each re-emergence offers a variation; it is therefore polysemic in nature embedding diverse, and sometimes contradictory, logics into the practices it informs” (Rogers, 2017, p. 12).

Therefore, the target is to deepen its meaning by appealing to the philosophical and theoretical sense of the term, avoiding shaping a specific definition of resilience in this research. These attempts come from the definition of systems theories that have examined various ideas as part of the resilience thought, from ecological to the socio-ecological one (Brand & Jax, 2007; Folke et al.*,* 2010). Evolutionary resilience (Davoudi, 2012, 2013) pays attention to the “illusive equilibrium” of a system (Davoudi, 2012, p. 4) due to a sum of different layered complexities at every scale. In this sense, the evolutionary principle implies its unceasing redefinition as an outcome of the ongoing socio-ecological dynamics.

Generally speaking, and according to the leading literature on the topic, resilience deals with, and even may include:

- resistance (Folke, 2006; Shaw, 2012a, 2012b);
- robustness and persistence (Davoudi et al., 2013);
- robustness and identity (Aimar, 2019);
- coping with fragility and uncertainty;
- instability, transient stability, or multiple and dynamic balance (Davoudi et al., 2013; Loupa Ramos et al., 2016);
- redundancy (Voghera, 2015) and dissipation (Coaffee, 2019);
- flexibility, elasticity and adaptability (Adger et al., 2005; Adger, 2010; Shaw, 2012b; Folke, 2016);
- innovation and transformability (Davoudi, 2013; Folke, 2016);
- maintaining its functionality and composition (Walker et al., 2004);
- antifragility (Taleb, 2012);
- trust, reciprocity, and responsibility;
- management and control;

- sensitivity and cognizance; and
- in "… the interpretative approach to planning …" (Brunetta & Caldarice, 2019, p. 5), "fluidity, reflexivity, contingency, multiplicity, and polyvocality" (Davoudi & Strange, 2009, p. 37).

These terms refer to the symbiotic relationship between ecosystem (Folke, 2006), landscape (first 10 points on the list), human communities (points 11, 12 and 13), and in planning theory (latter one) ever-changing over the centuries. For instance, the idea of nature and the so-called *paysage* has reformed constantly, moving from a concept of wild entity to tame to assure the necessary conditions for life and stability (as in the American frontiers of the Old West, for example) to the contemporary idea of its kind weakness and fragility. In both models, the relation of western communities with the territory is different and has experienced changes during times.

On the one hand, it is therefore necessary to detail more the content of social resilience at the community level to contextualise more this research. Several authors refer to it in different fields, listing different principles and indicators. Some of them are in common with the broader concept of resilience before mentioned (e.g. responsibility-engagement, trust), and are reported below using bullet points:

- critical awareness (Kwok et al., 2016, p. 198; Leys & Vanclay, 2011);
- responsibility (Kwok et al., 2016, p. 198; Reid et al., 2020);
- shared views (Kwok et al., 2016, p. 198);
- place attachment (Maclean et al., 2014; Kwok et al., 2016, p. 198);
- sense of community (Khalili et al., 2015; Kwok et al., 2016, p. 198);
- community participation (Kwok et al., 2016, p. 198);
- cooperation (Kelly at al., 2015);
- strengthen of networks (Keck & Sakdapolrak, 2013; Maclean et al., 2014; Kelly at al., 2015);
- education and learning (Maclean et al., 2014; Kelly at al., 2015; Khalili et al., 2015);
- exchanging information (Khalili et al., 2015);
- engagement (Maclean et al., 2014; Kelly at al., 2015);
- empowerment (Kwok et al., 2016, p. 198);
- trust (Keck & Sakdapolrak, 2013; Kelly et al., 2015; Khalili et al., 2015; Kwok et al., 2016, p. 198).

Adaptive co-management of dynamic and shared landscapes (Leys & Vanclay, 2011) encompasses the contribution of the above factors, communities being directly responsible for maintaining productive landscapes over time. Its members are its farmers, managers and decision-makers (Santoro et al., 2021), sometimes even at the same time. These can be both communities-of-interest and communities-of-place, which play an active collaborative role in the planning, management and sustainable development of valued cultural landscapes (Selman, 2007). They, therefore, offer community-led social responses to cultural heritage management strategies through everyday practices and narratives (Reid et al., 2020). In this way, community activism can be considered a key factor impacting cultural landscape resilience. However, this view seems to be more linked to a western vision of the management process and also of the candidature of the cultural heritage. According to other authors, in fact, “Chinese World Heritage management is a government-led process wherein community participation is happening to a minimal degree. Most properties have insufficient involvement of residents in decision-making …” (Li et al., 2020a, p. 9), but “Even within these constraints, several properties have advanced community-based procedures and conducted relatively high levels of community participation, such as Honghe Hani Rice Terraces...” (*ibidem*). However, “Within both international and Chinese management practices, when people’s needs are sufficiently discussed and integrated into management schemes, the heritage projects receive better local support and run more smoothly” (Li et al., 2020b, p. 7).

In light of this, it is possible to state how resilience is a Western-born concept and, as a resulting fact, western-based thought with several potential limitations according to different cultural backgrounds. According to several authors in the literature (Klein et al., 2003; Rogers, 2017; Coaffee, 2019), it is presumably a native term originating from Old Latin and only later imported into the English-speaking linguistic context during the 17th century. Consequently, subsequent translations of the above-mentioned multiple meanings associated with this broad conceptual umbrella may perhaps lead to dissimilar results when referred to the context of the Asia Pacific and its diverse cultures (Aimar & Jigyasu, forthcoming/2022).

For each of them, specific features are associated, which vary accordingly to the local culture of the country although mutual historical influence. According to a survey conducted specifically for this research, in East Asia, for example, the Chinese did not have a corresponding term for resilience, and it was necessary to create a new one. In this language, resilience usually means the ability to last or sturdiness, usable according to the reference context. Because of the historical-cultural ties that bind China to Japan, even in Japanese, there are no corresponding entries in its *hiragana* form, i.e. a Nippon phonetic lettering system. However, only the *katakana* writing system integrates it, but as an imported idiom. In fact, Japanese regulations allow the use of terms from abroad by transliterating them with the *katakana* syllabary of the phonetic alphabet. Resilience is transcribed by the phonetic expression *Re ji Ri e n su* into the word レジリエンス. As in China and Japan, there are no matches in the native vocabulary for this term in South Korea. In Chinese, the term resilience is typically referred to as toughness (韌性) resistance (抗逆), and therefore may vary according to the setting in which it is used. In Korean, this can be divided into two aspects of recovery from shocks or setbacks (회복성) and versatility/adaptability (탄력성), but also be mutually crossed to assume both implications (회복탄력성).

In South and Southeast Asia, the latter meaning related to the concept of resilience is also detectable in Thai (ความยืดหยุ่น or *Khwām yụ̄dh̄yùn*) and Filipino (*katatagan*) but, differently from the aforementioned cultures, it is an indigenous term as in Hindi. In the Indian language, the term takes on the meanings of fortitude and strength (सशक्त or *Sashakt*), in particular the inner strength of an individual. Differently, in Bengali, the word resilience is not native, but its interpretation as shock tolerant is more similar to that associated with the term of adaptability (অভিঘাতসহনশীল or *Ovighatsohonshil*).

Taking note of the above, what would happen if such ideas of resilience were applied to World Heritage cultural landscapes in these contexts? As pointed out by Buckley et al. (2019), "Resilience is likely to be supported or weakened by multiple factors and can apply differently across the identified values and attributes" (p. 11).

4.1.2. Approaches arising from resilience thinking

As introduced earlier by Buckley et al. (2019), resilience can be applied to different sectors, including ecosystems, human communities, foodways or urban, peri-urban and rural systems. In this perspective, "… ideas of 'bouncing back' and returning to an earlier static state are often not feasible, or even desirable goals" (p. 11). As examined in the preceding paragraphs, defending the status quo is indeed not a viable option in light of the pressures described and the need to provide answers.

Therefore, flexible procedures are a necessary condition to keep into consideration changing flows and variables in contemporary society. However, at the same time, it seems relevant to remember that some behaviours are not entirely predictable, as they are non-linear (Berkes & Folke, 1998; Davoudi, 2012) and time-dependent. Moreover, external perturbations are also unpredictable (Davoudi, 2013), both in numbers and their magnitude (severity). Those could determine positive or negative feedbacks that will affect or influence the initial contexts. To this end, dynamism and the ability to adapt autonomously to the whole system (Folke, 2006) play a key role, especially in the case of uncontrollable risks. They can be both internal and external and refer to natural, socio-economic, cultural and political spheres.

As a clear example, dramatic natural events usually present a high level of magnitude, which is easy to detect by the public in the domain of socio-personal security. On the other hand, it seems more problematic to tackle problems latent in time and of low intensity because they affect several generations of people and the changes are so small that they almost go unnoticed. Jared Diamond (2005) has admonished this dangerous memory loss in the following terms: "… Creeping normalcy or landscape amnesia made it harder for them than for me to remember what conditions had been like in the 1950s. Such experiences are a major reason why people may fail to notice a developing problem until it is too late. …" (p. 435). In that sense, it emerges how using resilience tools in planning could help to face problems that risk persisting over time.

4.1.3. Resilience in a legislative and planning perspective

On a regional/national scale, politics has identified resilience as an influential tool because of its crucial role in the anticipatory perspective of decision-making (Redman, 2014; Rogers, 2017). Despite the reassuring message ensured by this adaptivity vision ('bounce back' or 'bounce back better' approaches) by politics (e.g. the "Building landscape resilience publication" by the Central West Local Land Services of the Australian Government in 2016) as a response to a wide range of shocks, perturbation, crisis or emergencies, it appears relevant to precise that resilience cannot be confused as a conservative engineering tool (Davoudi, 2012) able to defend the status quo (Holling, 1996; Folke, 2006; Redman, 2014) or returning to it (Shaw, 2012b). Besides, it is not even a consequence of the impact of austerity on economics (*ibid*., 2012b) that could oblige in 'doing a lot with a little' in terms of operational resources, although other scholars have different opinions in this regard, as Jacobs and Malpas (2018). For these reasons, it is necessary to define "under what condition" resilience works in any single system (Davoudi, 2013, p. 5), besides contemplating the fact that resilience accepts the collapse as a carrier of new opportunities (Olsson et al*.*, 2006). In any case, it helps to improve the overall responsiveness of a system, shortening its reactivity over time even in decentralised locations. For instance, shared public services among a net of neighbouring villages could enhance the overall effectiveness in landscape protection or the ecosystem services in actions "following a fire in a forested ecosystem" (Folke, 2006, p. 259) thanks to connectivity, flexibility, and analysis tools available (including e-demand, for example).

Although these postulates mentioned above indicate several challenges, the method used seems useful in making citizens aware of the changes underway. These could influence decision-makers to give a different interpretation of the transformations society is facing, revising the cause-and-effect system of actions occurring in a changing scenario. Resilience could contribute a practical framework that favours new bottom-up planning processes in the medium to long term, according to the UN 2030 Agenda (2015). It could also help better manage human, economic, and material resources, addressing the cost reduction of environmental impacts through the lens of collective responsibility.

4.1.4. Communities and resilience

Interpreting the outcome of the local and supra-local dynamics, in terms of population and inhabitants, is one of the tasks that will be considered through a proper evaluation process regarding some statics data. For instance, the depopulation of some internal extra-urban areas of Italy seems to be due to drivers such as ageing of landowners, lack of generational turnover, decrease in several farms, and low income from agricultural labours), amongst others. The World Bank IBRD IDA has shown that global value added (% of GDP) due to agriculture, forestry and fisheries has declined dramatically over the period 1995-2018, from 7.585 to 3.318 (The World Bank IBRD IDA, n.d.). These potential risk factors could compromise both the coming image of the landscape and the sense of communities in the next future at different scales.

Taking these critical factors as part of a worldwide trend, the question of which community is possible in a next scenario seems as urgent as it is pressing. A possible response could consider both local and digital communities, where traditional communities could be amalgamated into a new one, formed by mixing a 'community of interest' with a 'spatial community'. In this perspective, blurring the boundaries between physical and digital enables a broader response to be deployed, especially in rural areas where constraints weigh more than in other contexts; here are a few:

- rural population is steadily decreasing compared to that living in urban settings, in terms of numbers. Globally, the rural population was in fact 3.413 billion in 2018 (UN DESA, 2018a, country code 900), while the urban one was 4.219 billion in 2018 (UN DESA, 2018b, country code 900). They were 3.401 billion of rural population in 2015 (UN DESA, 2018a, country code 900) compared to 3.981 of urban individuals in the same year (UN DESA, 2018b, country code 900). Forecasts to 2050 indicate a projected rural population of 3.092 individuals (UN DESA, 2018a, country code 900), while the urban population is estimated at 6.679 billion people (UN DESA, 2018b, country code 900). In Europe, this difference increases dramatically, where 189,736,785 are rural inhabitants (UN DESA, 2018a, country code 908) compared to 552,911,225 living in urban centres in 2018 (UN DESA, 2018b, country code 908). Rurals were 193,666,746 in 2015 (UN DESA, 2018a, country code 908) and citizens 547,147,213 in the same year (UN DESA, 2018b, country code 908). Forecasts to 2050 indicate a projected rural population of 116,863,987 individuals (UN DESA, 2018a, country code 908), while the urban population is estimated at 598,857,027 people (UN DESA, 2018b, country code 908);
- population is growing further in 'middle' towns or cities worldwide: in 2018, the 55.3% of the world's population lives in urban areas, but it is expected that could further increase to 68.4% by the 2050 (UN DESA, 2018c, country code 900). In Europe, in 2018, the 74.5% of the individuals live in urban areas, but it is expected that could further grow up to 83.7% by the 2050 (UN DESA, 2018c, country code 908). Similarly, this trend is valid also for Italy, in which is estimated a ceaselessly increase from 70.4% in 2018 to 81.1% in 2050 (UN DESA, 2018c, country code 380);
- local community seems more cohesively, but it consists of few elements;
- spatial dispersion of the inhabitants is a fact;
- percentage of population aged 65+ is increasing in the world (UN DESA, 2019a), passing from 8.2 in 2015 to 9.3 in 2020. It is expected that it will reach 15.9 in 2050 (UN DESA, 2019a). Likewise, also the percentage of Italians ages 65 and above is continuously rising during the years. Demographic indicators report the following values as a percentage (%) of

population ages 65 and above as of 1st January: 21.9 (2015), 22.1 (2016), 22.4 (2017), 22.6 (2018), and 22.9 (2019) (ISTAT, n.d.-b); population forecasts for the years 2018-2065 indicate that it could reach 34% in 2050 (ISTAT, n.d.-c); and

- digital tools could help to create a ‘phygital’ network of people (physical and digital) focused and committed to reach a given goal.

The above-listed points further confirm that interaction and connectivity are crucial responses as pillars of resilience. It is better than the sum of every single part because it generates a living tissue, in the same way as a group of cells forms a human body tissue. However, this cooperative effort is influenced in its effectiveness by several determinants, such as historical, social-cultural (e.g. lifestyle, behaviour, and identity), economic (types of economic systems and consequent management of resources) and political factors (or bias), or by climatic ones, for instance, coming from the *status quo*. In that sense, human factors coupled with the context could influence the identification of sustainable future scenarios in planning and development. These have to move in a global framework consisting of lower resources available (in terms of raw materials and money, among others) despite the increase in the magnitude of climate events, which impose several constraints to any development plans (Voghera, 2015). Therefore, organisational challenges are continuously arising, and a resilient approach could help to face them effectively and responsibly (Tainter & Taylor, 2014).

4.2 Landscape: definitions and operational concepts

There seems to be a consensus in the literature that landscape is an asset, a value, a cultural heritage. At the same time, this is the result and the trigger of the interplay between landscape, ecology, community engagement and activism. The landscape represents a cultural component of considerable significance in protecting both the biodiversity in ecosystems and heritage of identity traditions that symbolise the intangible assets for a population (Cimnaghi & Mondini, 2016). Other authors, talks about ecology as instrumental to creating an interplay between culture and nature in landscape projects (Waldheim, 2006; North & Waldheim, 2013), while Kate Orff indicates ecology in landscapes as a mesh between ecology and social cohesion, community activism. Therefore, the landscape is not presented as a luxury good but rather as a necessity, as also stated by João Nunes in an interview in 2016 (Aimar, 2016).

In that sense, the Preamble of the European Landscape Convention (adopted by the Committee of Ministers of the Council of Europe in Florence on October 20, 2000) reaffirms the principle that “… the landscape has an important public interest role in the cultural, ecological, environmental and social fields” (CoE, 2000, p. 1). Even the Italian legislation stated that: “The Cultural Heritage consists of cultural property and landscape assets" (ibid., 2004) at point 1 of Article 2 titled "Cultural Heritage" of the Code of the Cultural and Landscape Heritage (MiBACT, 2004).

Therefore, the UNESCO World Heritage recognition of the serial property entitled "Vineyard Landscape of Piedmont: Langhe-Roero e Monferrato" (UNESCO, 2014a) established a cultural relationship with the landscape, namely the wine-growing landscape.

For the first time, in December 1992, the cultural landscapes were recognised and protected through the UNESCO World Heritage Convention (document WHC-92/CONF.002/12). Precisely, during the 16th session (16 COM), the World Heritage Committee has adopted guidelines regarding their addition to the World Heritage List. Cultural landscapes are living, deeply anthropised territories. And the landscape is the result of a co-evolutionary relationship between society and territory: a physical and symbolic one (Mitchell et al., 2009) at the same time. It, therefore, transforms itself by supporting and expressing the becoming of society since it is society as a whole that creates the landscape and its values. In that context, the quote "the cultural landscape is fashioned out of the natural landscape by a culture group" (Sauer, 1925, p. 343) seems appropriate to clarify the process leading to its mental construction.

The above points to several assumptions that have evolved and are now part of our feeling and knowledge and are also the cornerstones of the European Landscape Convention (2000). A 'humanised landscape', therefore, built by people century after century, generation after generation. As they are a product of human activities, they simultaneously respect the principles of the UNESCO World Heritage Convention (since 1972) and the rules of the European Landscape Convention, which came into force in 2000. In other words, "Culture is the agent, the natural area is the medium, the cultural landscape is the result" (Sauer, 1925, p. 343).

According to literature, the word 'landscape' appears for the first time in the English language in 1603; it derives from the Middle Dutch term 'lantscap' ('lantscep', 'landschap'), which means 'region' (Antrop, 2013, p. 12), the "… German (landschaft) and Old Norse (landskap)" (Lorch, 2002). Therefore, according to this meaning, the landscape has a territorial understanding and the community that inhabits it is an integral part of this syllogism. The relationship between identity and place is a topic debated in the literature, as by Christian Norberg-Schulz that recalls the link between Genius Loci and identity of the place (Norberg-Schulz, 1979), while Michael Hough the identities of regional landscapes (Hough, 1990). However, "The structure of a place is not a fixed, eternal state" (Norberg-Schulz, 1979, p. 18), the same author pointed out the necessity to analyse the relationship between stability with the dynamics of change in a place (*ibidem*), in light of the pressures on socio-ecological systems (Hough, 1990).

Consequently, it is evident how this can be configured as a collective good to be protected in its identity implications during its possible changes, as also recognised by the Resolution of the Regional Council of the Piedmont Region n.87 of 16/03/2010 which is part of the Annexes of the Dossier "The Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a).

Cultural landscapes are the result of centuries of history and, this makes them a unique and priceless heritage. In this framework, they are assessed according to criteria (i) - (vi) for the recognition of Outstanding Universal Value (henceforth OUV) by the International Council on Monuments and Sites (hereafter ICOMOS), with the cooperation of the International Union for Conservation of Nature (henceforward IUCN), about the Operational Guidelines for the Implementation of the World Heritage Convention (UNESCO, 2008b, p. 118). Recognition of the exemplarity of a certain cultural landscape highlights its characteristics to which, consequently, a value is attributed.

4.2.1. UNESCO cultural landscapes

In 1992, during its 16th Convention in Santa Fe, USA, the UNESCO Committee adopted a World Heritage Convention on the Protection of the World Cultural and Natural Heritage that explicitly defined cultural landscapes for the first time. In this session, the guidelines for the Implementation of the World Heritage Convention were revised, adopting their inclusion on the World Heritage List under section XIII.2 denominated "Cultural criteria", point XIII.2.3, p. 55.

The 1994 UNESCO Operational Guidelines first refer to cultural landscapes as "… combined work of nature and man" (UNESCO, 1994, para. 36) in which the evolving nature of human society emerges due to the various interactions between physical living spaces and their natural, socio-economic, and cultural context.

In this framework, the natural component assumes a pivotal relevance as reported in the subsequent Guidelines on the inscription of specific types of properties on the World Heritage List. This relationship is reiterated and explicitly suggested to the reader as listed in its definition: "the term 'cultural landscape' embraces a diversity of manifestations of the interaction between humankind and its natural environment" (UNESCO, 1994, para. 37, p. 14).

According to the "Fieldwork of the Cultural Landscape of Honghe Hani Rice Terraces, China" report (Marlon et al., 2020), as part of Phase III of the IUCN and ICOMOS Connecting Practice project, they are "... alive, adaptive, complex, strategic, multifunctional and currently under threat" (*ibid*., p. 43).

Therefore, assuming these definitions as core concepts, the following point of the Operational Guidelines for the Implementation of the World Heritage Convention (UNESCO, 2019a, point 9) requires specific reflections in their analysis, about which it seems instrumental to conduct a sentence-by-sentence examination:

- "Cultural landscapes often reflect specific techniques of sustainable land-use, considering the characteristics and limits of the natural environment they are established in …" (UNESCO, 2019a, Annex 3, point 9, p. 83).
  This affirmation asks the reader to draw attention to the 'glocal' conditions of the natural context, moving from global to local frames. In that sense, ongoing modification in the Earth climate due to climate change force the observer to face the living limits of the natural areas in which human societies have grown up and still live to date. The warning of risks in a

failure of this balance proves the fragility of this contemporary era, where the menace of limited enjoyment of these properties by future generations is a dramatic legacy to begin to consider. With this in mind, a resilient approach represents an instrumental strategy to mitigate and adapt these areas to the described challenge, with the coveted goal of dynamic conservation;

- "… Protection of cultural landscapes can contribute to modern techniques of sustainable land-use and can maintain or enhance natural values in the landscape. …" (UNESCO, 2019a, Annex 3, point 9, p. 83).
  Through the lens of actively resilient protection, the first part of the sentence seems more related to an arrival condition rather than a continuous situation of a system. It focuses more on outputs than on results, omitting the process as the actual field of investigation. This first part should probably be turned around to understand how new planning techniques and smart technologies could support a robust system in a long-term perspective to build effective resilient thinking. Moreover, the statement also omits the driving role of spatial and landscape planning in coordinating targeted actions as a holistic tool for territorial governance; and
- "… The continued existence of traditional forms of land-use supports biological diversity in many regions of the world. The protection of traditional cultural landscapes is therefore helpful in maintaining biological diversity" (UNESCO, 2019a, Annex 3, point 9, p. 83).
  Despite a commendable intention in the communicative approach, this last part seems to offer an optimistic view of the status quo. In several world sites, their connotation in the global imagination depends largely on a spread of monoculture that supports local economies. Monoculture farming is characterised by an intensive mode of cultivation, without crop rotation, to maximise yields and profits over the years. In other words, it seems more related to a specialisation of places due to rationalisation than to optimisation. This condition risks diminishing the resilience capability in perspective as it increases the fragility of these systems, especially in peri-urban and rural areas.

4.2.2. Landscape concepts in Chinese culture

According to Han (2014), the translation of the notion of the UNESCO cultural landscape into the Chinese context was difficult due to several motivations.

Firstly, in Chinese culture, a landscape is in itself a cultural construct, so the use of the word 'cultural' is considered redundant and reinforces a concept that is already implicit in that of 'landscape'.

Consequently, from the Chinese perspective, a landscape always implies the relationship between people and nature as "… a cultural and social constructive process" (Han, 2014, p. 148).

This meaning seems to have a lot in common with Berque's thought. The French geographer Augustin Berque (1993) clarified that the landscape is not merely the environment. In his view, the environment is the output of the inter-relationship among society-space and nature. According to this postulate, the landscape can be defined as "… the sensible aspect of this relationship" (Berque, 1993, p. 33) underpinned on a collective vision formed by the sum of individual experiences and understandings.

Assuming this standpoint, many similarities are detected in the 1994 UNESCO Operational Guidelines, which designed that the cultural landscape represents the "… combined works of nature and man". Moreover, the 2008 UNESCO Operational Guidelines on the inscription of specific types of properties on the World Heritage List have also reinforced this view, under points 6, 7, 8 and 9 in the Annex 3 (2008b, pp. 85-86). Here follow relevant excerpts from them:

- art. 6: "… They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal." (UNESCO, 2008 b, p. 85);
- art. 7: "They should be selected on the basis both of their outstanding universal value and of their representativity in terms of a clearly defined geo-cultural region and also for their capacity to illustrate the essential and distinct cultural elements of such regions." (UNESCO, 2008 b, p. 86);
- art. 8: "The term 'cultural landscape' embraces a diversity of manifestations of the interaction between humankind and its natural environment." (UNESCO, 2008 b, p. 86); and
- art. 9: "Cultural landscapes often reflect specific techniques of sustainable land-use, considering the characteristics and limits of the natural environment they are established in, and a specific spiritual relation to nature. ..." (UNESCO, 2008 b, p. 86).

Turning to traditional Chinese culture, Han (2014) pointed out that the compound word 'Jiangshan' (江山, river and mountain) could be correctly compared to the German term 'landschaft'. 'Jiangshan' implies two combined aspects, namely the territorial space and the natural geographical features (i.e. rivers and mountains) that are part of it.

Since the fifth century, the scenic values are embedded in the landscape concept owing to the word 'Fengjing' (Han, 2014), which is composed of two characters: 'Feng' and 'Jing'. Both are "sensory" and rely on "intangible natural features" (Han, 2014, p. 149). 'Feng' means air, atmosphere but also implies the cultural sense and order or rules of society; instead, 'Jing' signifies light, but it even indicates the notion of scenario. This concept has evolved to date and includes both the natural environmental sphere and the cultural-humanistic ones (Aimar, 2019).

However, to expand these concepts and go deeper into the different cultural purposes, several scholars have been contacted to receive further explanations reported in the following lines.

All of them have responded to these questions:

- During the century, China shifts from the classical idea of landscape (‘Fengjing’) to a more contemporary concept of landscape (‘Jingguan’). ‘Jingguan’ seems to deal with the Anglo-Saxon concept of landscape, formulated in the 19th century. How it changed the idea of ‘Jingguan’ from this period to nowadays, and in which manner? Does this idea follow a dynamic concept?
- In your opinion, are there similarities and differences in contemporary ideas of landscape between China and the European context?

The scholars who answered these questions have provided their views to construct an adequate understanding of Chinese ideas of the landscape for the use of Western observers. They are as follows:

- *LS1*: Professor at the Honghe University, Director of the Hani Terrace Conservation and Development Center at the Humanities College, Yunnan, China;
- *LS2*: Associate Professor at the School of Tourism and Geography, Yunnan Normal University and at the College of Geography, Beijing Normal University, China;
- *LS3*: Associate Professor at the Kunming Polytechnic University, Yunnan, China; and
- *LS4*: MArch, PhD candidate in the “Architecture. History and Project” programme at the Polytechnic University of Turin, Italy.

The name/surname of the persons listed have been omitted for privacy reasons; therefore, this survey refers to them by assigning a specific code to each one, as well as indicating their professional qualifications. Reporting the data in aggregate, women are prevalent in the group of persons listed above, where the number of males is 1 out of 4 (25%) and females 3 out of 4 overall (75%).

According to *LS4*, ‘Fengjing’ (风景) is a compound word made up of the merging of two terms, namely:

- ‘Feng’ (风) that means flowing air (流动的空气).

In English, it is possible to refer to ‘Feng’ as air, atmosphere (in Chinese it is flowing air because air always flows). Flowing air forms the wind (风) and wind in Chinese can be translated into ‘Feng’ (风) that is also part of ‘Fengjing’.

In recent years, 'Feng' has incorporated more human factors, which is the emotion in the individual and the culture in the group; and

- 'Jing' (景), which signifies light, and it indicates the environment and the notion of scenario.

Moreover, Han (2014) reports that 'Fengjing' also absorbed the Shan Shui concept (山水, mountain and water), which related more to the tangible natural features but under a symbolic idea of it. Its origin could be dated back to Wei Jin, Southern and Northern Dynasties (220–589 CE). In this regard, Han (2014) affirms that this step could be considered pivotal because of the implications related to nature, which "became an independent aesthetic objective" in this idea (p. 149).

Besides, a modern term has emerged recently: 'Jingguan'. 'Jing' (scenery) and 'Guan' (view or sight) correspond to the theoretical idea of landscape derived from the Anglo-Saxon context in the 19th century (Aimar, 2019), precisely from western human geography and landscape architecture (Han, 2014).

As reported by *LS4*, 'Jingguan' (景観) is even a compound word resulting from the union of the following terms:

- 'Jing' (景), which signifies light, and it indicates the environment and the notion of scenario; and
- 'Guan' (観) that indicates view or sight.

However, it seems that the attributable meaning of 'Jingguan' (景观) has considerably changed when considering the initial connotation of 'landscape view', first used during the 18th century (Han, 2014). In all of the above concepts, the perception of nature is relevant where its interpretation through the use of a cultural lens is the fruit of Chinese philosophy that profoundly influenced and shaped the human-nature relationship. Two are considered prominent, and they are the Confucianism (儒家) and Taoism (or Daoism, 道家). On the one hand, in Confucianism, "nature is greatly valued for humanised ethical and moral qualities" (Han, 2014, p. 149). On the other hand, Taoism embodies a different approach, more related to the detachment from human desires to develop a behaviour more in harmony with the varying natural cycles. This philosophical and religious tradition dates back to the 4th century B.C. and "attests that within nature lies the essential ontological values and great beauty. Daoism associated with the recluse, retirement to the mountain, the worship of rural life, the pursuit of spiritual freedom and the romantic personality, and the banishment of all worldly cares and worries, derives the most characteristic charm of Chinese culture, which is the natural and rural ideal of life, art and literature. Nature was an independent aesthetic object in Daoism" (Han, 2014, p. 149).

According to *LS1*, *LS2* and *LS3*, in the literature, some researchers in China expound a real possibility that social factors also influence the idea of 'Jingguan' because they still concern with the concept of 'Yuanlin'. However, the modern landscape is increasingly separated from the traditional garden (‘Yuanlin’) in the Chinese context.

In this perspective, ‘Fengjing’ and ‘Jingguan’ emerge as living and dynamic entities. Consistently, a landscape refers to the complex of land and space and to objects on land at the same time (*LS1*, *LS2* and *LS3*). It is a developed form of modern gardens, and the ‘Fengjing’ (scenery) is both consider as natural scenery and scenery for viewing.

The scenery is more extensive than the landscape. It is more related to tourism in the Chinese language and connects to the experience made by the users. From a tourism point of view, it is possible to highlight several considerations that tend to associate a visual quality with ‘Fengjing’, for example by associating it with the word ‘beautiful’ (*LS1*, *LS2* and *LS3*).

Based on these assumptions, the area of Honghe Hani Rice Terraces in Yunnan, which is officially considered a cultural landscape, refers to the concept of ‘Jingguan’ and not to the cultural setting as expressed by ‘Fengjing’. However, the latter also embodies a scenic area due to a correlation of several similar elements, which ‘Fengjing’ and ‘Jingguan’ had in some cases (*LS1*, *LS2* and *LS3*).

According to *LS1*, *LS2* and *LS3*, the cultural landscape (human-cultural landscape) in China reflects the unique cultural connotation of the region, especially the social, cultural and religious requirements. Therefore, it is a unique landscape that combines with the environment and the effects of the environment. To sum up, one has the impression that the above concept is quite close to the Western idea of landscape, as the latter influences the modern Chinese landscape. However, such a western borrowed concept leads to flaws in local culture and landscape in contemporary urban China (*LS4*).

Consequently, ‘Jingguan’ also seems more related to the professional sphere than ‘Fengjing’ in the Chinese language.

However, after repeated theoretical surveys and consultations with Chinese experts and scholars (*LS1*, *LS2*, *LS3* and *LS4*), It would seem difficult to define the difference and boundaries between ‘Fengjing’ and ‘Jingguan’. Their definition depends more on the specificity of the case study, i.e. where and which.

Lastly, the concept of ‘Jingguan’ also has influenced Japanese culture, which has adopted it under the term ‘Keikan’ (*IC3*).

Below, in **Figure 1**, a scheme in which is proposed a comparison between the eastern idea of landscape, the ‘Jingguan’ and the western concept of landscape in both the UNESCO World Heritage sites selected as case studies, i.e. the “Cultural Landscape of Honghe Hani Rice Terraces” (UNESCO, 2013a) and the “Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato” (UNESCO, 2014a).

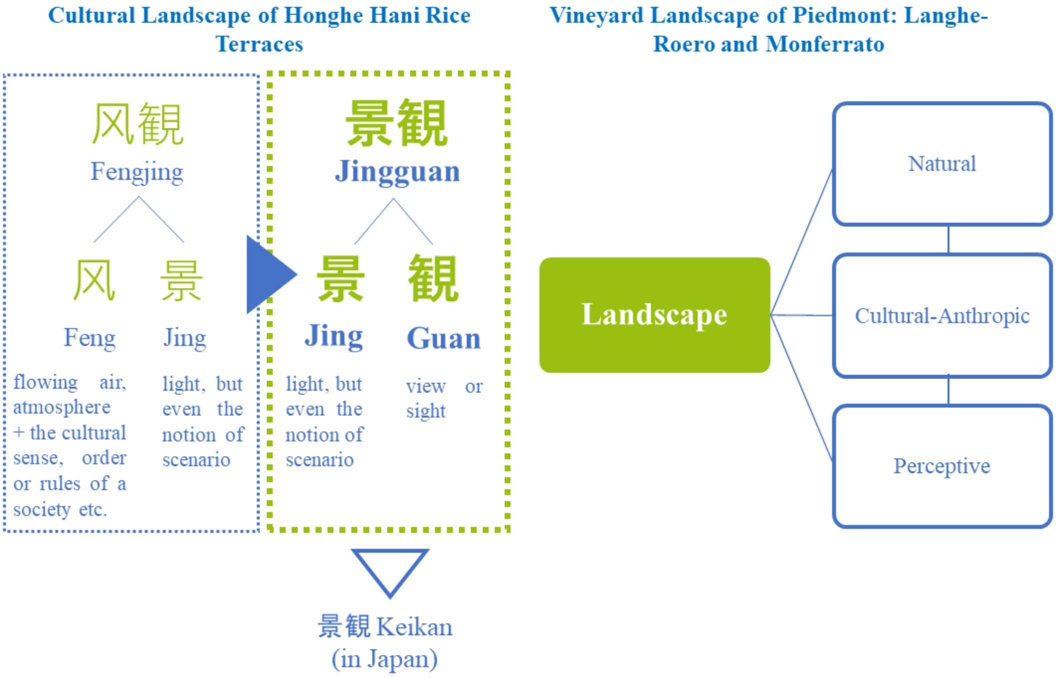
Cultural Landscape of Honghe Hani Rice Terraces
Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato
风観
Fengjing
风
Feng
flowing air, atmosphere + the cultural sense, order or rules of a society etc.
景
Jing
light, but even the notion of scenario
景観
Jingguan
景
Jing
light, but even the notion of scenario
観
Guan
view or sight
景観 Keikan (in Japan)
Landscape
Natural
Cultural-Anthropic
Perceptive

Figure 1 | Left, the concept of landscape in the "Cultural Landscape of Honghe Hani Rice Terraces" (UNESCO, 2013a), from 'Fengjing' to 'Jingguan'. Right: the landscape and its components in the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a) (source: right, Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato, Nomination Format Book 1, Preliminary Remarks, 2. Description, Methodology for Reading and Analysing the Landscape, p. 39. Author's elaboration.).

4.3 The case study: the UNESCO "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato"

4.3.1. Components, features, pros and cons of its landscape

To theoretically frame the research areas, it appears essential to briefly introduce the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" site (UNESCO, 2014a, ref: 1390rev). Inscribed as a cultural landscape on the World Heritage List in 2014 (WHC-14/38.COM/16, Decision: 38 COM 8B.41, pp. 236-237), it is an agricultural landscape. The serial property falls in the (ii) category "organically evolved landscape", specifically in the "continuing landscape" sub-category, according to the UNESCO Operational Guidelines for the Implementation of the World Heritage Convention, Annex 3 (2013b, point 10.ii, p. 88). The World Heritage Property counts of 6 distinct Components (29 districts out of 101, 10,789 hectares) protected by 2 Buffer zones, the A and B (72 districts out of 101, 76,249 hectares). As shown in **Figure 2**, Buffer Zone A states a total area of 59,306 ha safeguarding Components 1390rev-001 to 1390rev-005, which was drawn on the boundaries of 24 Landscape Units of the Piedmont Landscape Plan (UNESCO, 2014a, p. 113).

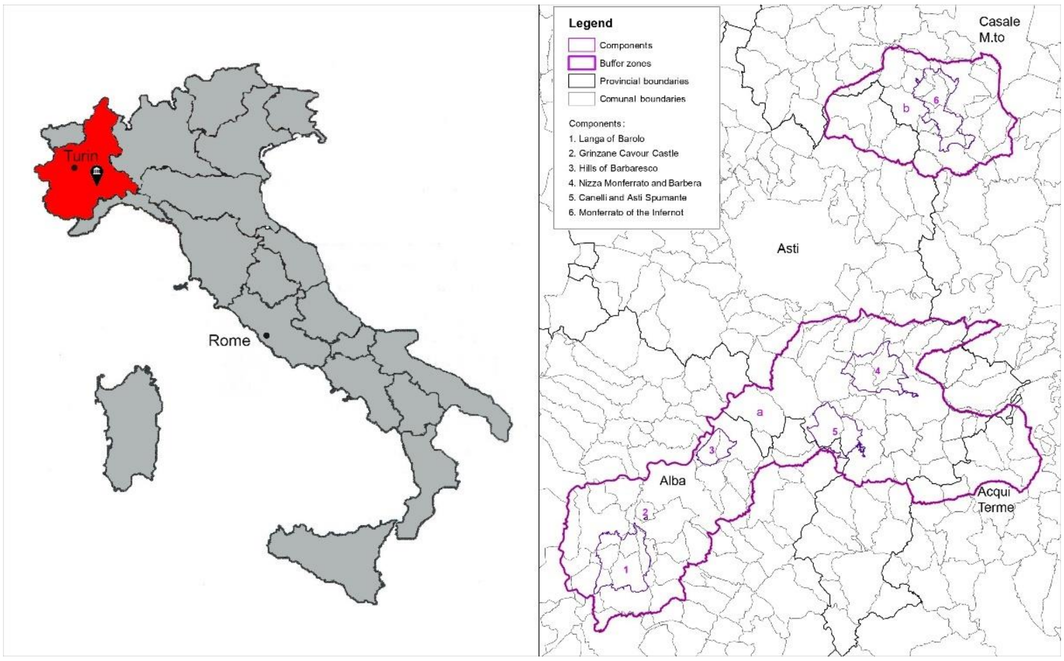
Turin
Rome
Legend
Components
Buffer zones
Provincial boundaries
Comunal boundaries
Components:
1. Langa of Barolo
2. Grinzane Cavour Castle
3. Hills of Barbaresco
4. Nizza Monferrato and Barbera
5. Canelli and Asti Spumante
6. Monferrato of the Infernot
Casale M.to
Asti
Alba
Acqui Terme
a
b
1
2
3
4
5
6

Figure 2 | the territorial framework of the 'Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato' World Heritage site. Left: in red, the Piedmont Region and in black the geotagged UNESCO site (source: https://en.wikipedia.org/wiki/File:Italia_per_regioni.jpg. Author's elaboration.). Right: in magenta and bounded with a continuous line, the map of the World Heritage buffer zones A and B; in violet, the 6 Components: 1390rev-001, 1390rev-002, 1390rev-003, 1390rev-004, 1390rev-005, and 1390rev-006 (source: https://www.regione.piemonte.it/web/sites/default/files/media/documenti/2018-11/paesaggi_vitivinicoli.pdf. Author's rework.).

To describe the characteristics that compose the landscape of the UNESCO Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato World Heritage Site (UNESCO, 2014a), a specific analysis was conducted and reported in the Nomination File. According to the Dossier, the method proposed "… has been tested and shared at the international level" and it is "... capable of presenting the various aspects that concur to its [the landscape, *Ed*.] interpretation" (*ibid*., p. 39). Hence, here follows a scheme of the several components of the landscape (**Table 1**), as reported in the Nomination File (*ibid*., p. 39):

	Components	**System/structure/features**
Landscape	Natural	Geomorphological system
		Hydrogeographic system
		Soil
		Climate
	Cultural-Anthropic	Agrarian/winegrowing system
		Settlement-architectural system
		Social-cultural structure
	Perceptive	Aesthetic visual features

Table 1 | The landscape with its components, system, structure, and features (source: UNESCO, 2014a, Nomination Format Book 1, Preliminary Remarks, 2. Description, Methodology for Reading and Analysing the Landscape, p. 39. Author's elaboration.).

The land mosaic in Langhe-Roero and Monferrato is partially unchanged as it is still possible to detect the presence of fractioned plots. However, the mechanised cultivation techniques have required rows more distant from each other, sometimes with a 'straight slope' arrangement (namely 'ritocchino', in Italian), to facilitate the transit of small tractors (Lajolo, 2014; Aimar et al., 2021).

In its modern meaning, the landscape is depicted as the mirror that reflects the real or imagined identities of the individuals who inhabit and shape it (Sereni, 1961). These are the key elements to understand the local transformations processes, a symbiont of a new but necessary civil development made of dialogue with the territory. In this perspective, territories could be defined as: "a highly complex living subject" (Magnaghi, 2017, p. 32). So, landscape protection is a very topical issue. Moreover, "… In recent years, there has also been a growing awareness in the economic value of the territory, and of all its representative forms, many of them have positive characteristics, others which bear certain critical points ..." (Rosa, 2016, p. 16).

Among the positives, it is possible to list:

- the use of mainly indigenous vegetation, the choice of colour and the use of locally available materials;
- the adoption of an atlas of colours inspired by local soils and vegetation, by seasons;
- the use of native species as a part of the local flora (Devecchi, 2016). For instance, among the shrubs, the blackthorn (*Prunus Spinosa*), the hawthorn (*Crataegus Monogyna*), the spindle (*Euonymus Europeus*) and the dogwood (*Cornus Sanguinea*); among the tree species, the country maple (*Acer Campestre*), the durmast (*Quercus Petraea*), the pedunculate oak (*Quercus Robur*), the white hornbeam (*Carpinus Betulus*) and the black poplar (*Populus Nigra*) (Devecchi, 2016, p. 73); and
- ecological corridors for animal species.

Among the critical issues in the tangible field, there are, instead:

- infrastructures with poor environmental integration;
- buildings located in sensitive landscape areas;
- out-of-scale buildings;
- the proliferation of buildings;
- the hybridisation of shapes and materials;
- the unevenness of vineyard areas in the Components of the serial Property. According to the UNESCO Nomination File, in Component 4 "Nizza Monferrato and Barbera" (UNESCO, 2014a, ref: 1390rev-004) of the

UNESCO Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato World Heritage Site, the area occupied by the vine was only 38.1%, equal to 880 ha out of 2,307 ha total (*ibid*., p. 185). On the contrary, in Component 5 "Canelli and Asti Spumante" (UNESCO, 2014a, ref: 1390rev-005), 1,236 ha out of 1,971 ha of vineyards were mainly cultivated with Moscato, accounting for 62.7% of the total area (*ibid*., p. 215). It signified the centrality of the vine that still characterised the area but, in the first case, already represented a minority element of the landscape when compared to wooded areas. The risky trend could be to move towards a landscape without a precise crop typification;

- regional regression of vineyard areas and increase in coriculture. Although the vine has a historical tradition, the hazelnut has found a certain scope for growth in the five years 2014-2019. The increase, albeit fluctuating, in the price of hazelnuts[1] has been an opportunity in those hilly areas where the vine is economically unprofitable. However, hazelnuts are part of the threats to the traditional historical landscape, centred on the vine. In this regard, it is enough to consider that the productive wine-growing area in Piedmont has progressively decreased, from 52,377 ha in 2006 (ISTAT, n.d.-a) to 41,355 ha in 2018 (ISTAT, n.d.-a). On the other hand, the hazelnut has grown at a significant annual rate, moving from a production area of 9,440 ha in 2006 (ISTAT, n.d.-a) to 23,082 ha in 2018 (ISTAT, n.d.-a); and
- asymmetric regression of wine growing on a provincial basis. The three provinces in which the serial property falls (Alessandria, Asti, and Cuneo) present a general wine-growing regression in the global production area (hectares or ha) in 2006-2018. As far as wine grapes are concerned, the one that shows the most worrying trend is the province of Alessandria: from 14,818 hectares in 2006 to 10,680 hectares in 2018 (ISTAT, n.d.-a). The province of Asti follows with 17,794 hectares in 2006 compared to 14,155 hectares in 2018 (ISTAT, n.d.-a), while the Cuneo province shows the lowest decrease, i.e. from 16,215 hectares in 2006 to 14,548 hectares in 2018 (ISTAT, n.d.-a).

In addition to the above threatens, it is also possible to add criticalities in the intangible field, including:

- landscape perception. The risk is to create two parallel and different landscapes: a 'showcase' landscape based on mere aesthetic perception and a 'deep' one that refers to the prosaic realm of experience. Although past generations of winegrowers did not intentionally create this vineyard landscape to produce an aesthetically pleasing environment, these two

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[1] Camera di Commercio Cuneo, Ingrosso, Alimentari, Dettaglio prodotto: Nocciola tonda gentile trilobata (prezzi alla produzione) – periodo 26/07/2014 – 26/07/2019 (source: http://www.cuneoprezzi.it/ingrosso/ALIMENTARI/index?screen=graph&source=list&listProduct=179974&datefrom=26%2F07%2F2009&dateto=26%2F07%2F2019&submit=Seleziona)

> seemingly contradictory approaches can co-exist as two sides of the same coin. The resulting landscape thus embodies the everyday actions of living, in which the dynamism and sustainable transformation necessary to avert the risk of its 'museumification' are embodied;

which are depriving the different areas of their specific identity, especially in the 2 Buffer Zones (A+B). The risk is that these elements may become disturbing to the hierarchy of presences in those territories built over the centuries. Therefore, it will be necessary to develop specific landscape requalification projects using a unified perspective, flanking a daily sensitivity approach from all the stakeholders having an interest in this site.

4.3.2. Persistence and permanence in the landscape

The territories of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a) remain mainly owned by its producers (Rossetto, 2016) and farmers, who did not abandon it despite economic difficulties caused by insufficient rural incomes until the middle of the last century. The latter are actors in the almost sacred relationship with the land that lies at the heart of the intangible heritage, the scene of myths, legends, and popular religiosity. An ancient vision of the world that, despite the radical changes that have taken place, can still represent the original cultural heritage.

The landscape is constantly changing in an incessant two-way updating process, as society shapes the territory and vice versa. Although these changes are evident, the landscape still retains some significant signs. This territory, in continuous evolution, has been able to preserve the salient identity traits strongly tied to the traditions (UNESCO, 2014a) and traces of a millenary history. These areas are still rich in medieval castles and towers, ancient 'pievi' and churches, villas, and noble residences (dating from the fifteenth to the twentieth century), combined with furnishings and objects preserved in religious buildings and municipal lay museums (Gattoni, 2016).

This set of assets testifies to a territorial evolution that preserves vernacular evidence of a historical-cultural type, such as historic farmsteads, "ciabot" (UNESCO, 2014a, p. 58), "infernot" (*ibid*., p. 78), "crutin" (*ibid*., p. 215), handicrafts or food and wine products typical of this natural and artificial landscape. These vernacular architectures are significant because they are symbolic artefacts and tangible evidence of human labour. They are part of the identity-related heritage belonging to the local community, which is "… the expression of the historical, cultural, natural, morphological and aesthetic values …" that characterises the territory, as reported in the Italian Code of the Cultural and Landscape Heritage (2004, art. 2, point 3, p. 13).

To 'transcribe' the landscape, respecting the historical layering of remains (Gambi, 1964) as permanencies and suggesting beneficial innovations (Mamino, 2006), their in-depth knowledge seems necessary. In particular, it is crucial to identify those elements that constitute the 'supporting structures' of the image of the areas. Therefore, cultural resources cannot be separated from the understanding of the historical characteristics of the territory (UNESCO, 2014a) and likewise, each region cannot be appreciated for its peculiar landscape values, if not under the historical-cultural stratification accumulated over time (Devecchi, 2016).

A stratification process that shows many similarities with the evolution of the landscape, to the historical elaboration of tangible and intangible culture, in which the interaction of these "… components constitute the territorial system's identity" (Brunetta & Caldarice, 2019, p. 1). So, "… landscape has a central function developing collective and individual identities in response to the human need to belong (Egoz, 2012)" (Butler et al., 2019, p. 4).

In that perspective, in the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" site (UNESCO, 2014a), the explanation of these permanencies takes place through a careful analysis of the historical agricultural landscape and its wines, which can be classified as autochthonous. This specificity can be defined as typicality.

Piedmont "shows extraordinary and clearly these historical roots for viticulture, in the continuity of use of the soil and in the deep winemaking culture that has been marking for centuries the sense of identity of its inhabitants" (UNESCO, 2014a, p. 36). The even more minute connections, such as the farm roads, the ditches, the plots with their farmhouses, identify the main stages of their formation up to the primary Roman centuriated landscape (Torretta, 2016). The use of the rootstock, which in certain cases dates to ancient times, was perfected between the 18th and 19th centuries. "The most common layout is the *girapoggio* method ('around the hillock'), i.e. laid out along a hill's contour lines which not only facilitates vineyard maintenance but is also designed to hold back sloping soil, limiting the effect of eroding rain or possible landslides" (UNESCO, 2014a, p. 84).

In this regard, Criterion (v) of the UNESCO nomination precisely discerns and explains what has been said above. The decisions adopted by the World Heritage Committee at its 38th session in Doha, Qatar (2014) report that "The vineyards of Langhe-Roero and Monferrato constitute an outstanding example of man's interaction with his natural environment. Following a long and slow evolution of winegrowing expertise, the best possible adaptation of grape varieties to land with specific soil and climatic components has been carried out … The winegrowing landscape also expresses great aesthetic qualities, making it into an archetype of European vineyards" (UNESCO, 2014b, p. 236).

As described in the Nomination File: "The current landscape is the result of a strong attachment to the land by countless generations of winemakers and centuries of constant hard work, necessary for the implementation of an agrarian transformation of exceptional size" (UNESCO, 2014a, p. 37).

The Components that make up the serial property are described in **Table 2**.

ID (no.)	**Components** (name)	**Area** (ha)	**Buffer Zone** (name)	**Province** (name)	**UNESCO's features**
1 1390rev-001	Langa of Barolo	3,051	A	Cuneo	Grape variety – Nebbiolo
2 1390rev-002	Grinzane Cavour Castle	7		Cuneo	Historical wine cellars
3 1390rev-003	Hills of Barbaresco	891		Cuneo	Grape variety – Nebbiolo
4 1390rev-004	Nizza Monferrato and Barbera	2,307		Asti	Grape variety – Barbera
5 1390rev-005	Canelli and Asti Spumante	1,971		Asti, Cuneo	Grape variety – Moscato Winemaking processes
6 1390rev-006	Monferrato of the Infernot	2,561	B	Alessandria	Historical wine cellars
1+2+3+ 4+5+6	**All those listed**	**10,789**	**-**	**Alessandria, Asti, Cuneo**	**miscellaneous**
A	Zone A	59,306	A	Alessandria, Asti, Cuneo	-
B	Zone B	16,943	B	Alessandria, Asti	-
A+B	**All those listed**	**76,249**	**-**	**Alessandria, Asti, Cuneo**	**-**

Table 2 | The "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a). Above, the six World Heritage Components and their specific features; below, the two Buffer Zones (sources: https://whc.unesco.org/en/list/1390/multiple=1&unique_number=1971; https://whc.unesco.org/uploads/nominations/1390rev.pdf. Author's elaboration.).

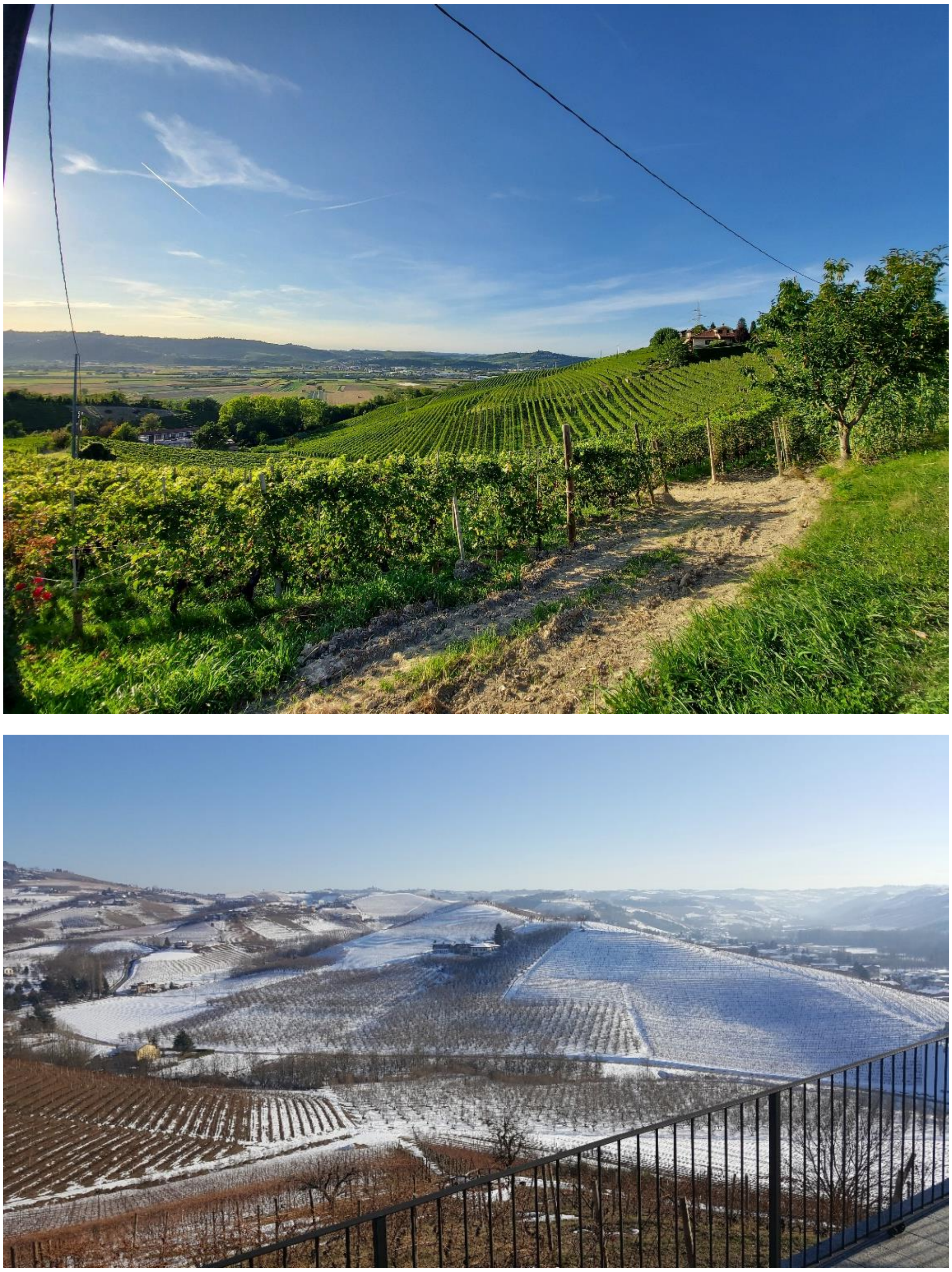


Figure 3 | Above, the vineyard landscape during the summer around the municipality of Grazzano Badoglio, Buffer Zone B (UNESCO, 2014a); in the middle, a view of the hilly landscape during the summer season in Barbaresco, Component 3 - 1390rev-003 (*ibid.*), and below, during the winter season from the viewpoint of the Castle of Grinzane Cavour, Component 2 - 1390rev-002 (*ibid.*). (Source: the author.)

According to Annex 1 to Resolution of Piedmont Regional Council no. 34-6436 dated 30 September 2013, 101 municipalities compose the serial property. A slight predominance of municipalities in the 6 Components belongs to the province of Cuneo (11 out of 29), while a good majority of municipalities in Buffer Zones A and B fall within the administrative boundaries of the province of Asti (32 out of 72; **Table 3**).

ID (no.)	**province of Alessandria** (no. of municipalities)	**province of Asti** (no. of municipalities)	**province of Cuneo** (no. of municipalities)
Properties (1390rev-001; 1390rev-002; 1390rev-003; 1390rev-004; 1390rev-005; 1390rev-006)	09/29	09/29	11/29
Buffer Zones (A+B)	22/72	32/72	18/72

Table 3 | The "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a). The number of municipalities in Components and Buffer Zones (out of overall quantity), divided per each province that compose the serial property (source: Annex 1 to Resolution of Piedmont Regional Council no. 34-6436 dated 30 September 2013 – List of municipalities partially or completely involved in the nomination. Author's elaboration.).

4.3.3. Memory and identity

"… change your leaves, keep intact your roots."
Victor Hugo

The Preamble of the European Landscape Convention (CoE, 2000) underlined that "… the landscape contributes to the formation of local cultures and … is a basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity". Therefore, from this definition, it appears evident that inhabitants modify their landscape by becoming part of it themselves (Raffestin & Butler, 2012). Over the centuries, they have contributed to forming a significant image that we can perceive today, accompanied also by a precise cultural identity. The latter is the result of intense moments of aggregation and historical cohesion (Rolando & Fraternali, 2006).

Moving on from the literature to the site-specific case study, the Nomination File of the "Vineyard Landscape of Piedmont: Langhe-Roero e Monferrato" (UNESCO, 2014a) states that "… the ancient winemaking tradition that marks the territory has generated a multitude of knowledge and practices related to vine and wine that built over the centuries the identity of the people and shaped the landscape through a secular work of observation, experience and innovation" (*ibid*., p. 12). This identity draws its strength from its roots, where specific traditions and technologies are cultural aspects that characterise it. So, "The Vineyard Landscape of Langhe-Roero and Monferrato constitutes a unique testimony of a cultural tradition still powerfully alive ..., resulting from the interaction between man and nature for over two thousand years" (*ibid*., p. 368).

This "agricultural landscape" (UNESCO, 2014a, p. 376) gains, from this perspective, a relevant value of memory and evidence of the ancient "relationship between man and nature" (UNESCO, 2014a, p. 77) in the continuous reinvention of the territory potential (Devecchi, 2016). This memory is to be understood as "the dynamic exercise of remembrance" (Latina, 2018, p. 78) and needs to be continuously fed. In this regard, the Faro Convention, in point a of Section I - Aims, definitions and principles, Article 2 - Definitions, recalls and states that "cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time" (CoE, 2005). Therefore, to fully understand the significant value of these excellences, it appears necessary to relate them to the landscapes, villages, people, and traditions that give life to this overall storyline of the Site. In that sense, "the narrative is then the making of the territory" (Soulier, 2015, p. 1).

In short, all these characteristics form the 'landscape character' of the Langhe-Roero and Monferrato World Heritage Site (UNESCO, 2014a). To summarise, it can be said that 'landscape character' consists of almost stable geophysical features (e.g. ecology, landform, geology, hydrology, climate and soils) and cultural processes that give rise to human interventions that vary over time. These physical elements provide the basic structure of the landscape, while historical, cultural, spiritual, social and economic influences (e.g. settlement, land use and ownership) overlap with the first ones in a changing way both concerning space and to the period considered (Ingold, 1993; Raffestin & Butler, 2012; Lorimer, 2013). The more distinct, recognisable and coherent this mix is, the more it will result in a sense of place. Thus, the landscape can be recognised as such because of a perceptual appreciation of the interactions that, as individuals and/or communities, generations establish with it (Butler et al., 2019). Among the aesthetic factors, the visual component predominates, consisting of shape, pattern, texture, colours (of the agricultural mosaic, for example) and finally the views. A considerable amount of literature has been written on the 'landscape character' by both English and Italian scholars, including Prof. Carlo Socco.

So, talking today about Langhe-Roero and Monferrato as a UNESCO World Heritage Site does not exactly mean referring to a geographical area with a single identity and a common belonging on the part of its inhabitants. Instead, it looks better to refer to sub-regions that describe the three macro-areas of the Property, which is, in fact, a serial site.

From the post-war period to the present day, a brief socio-historical excursus may appear useful to the reader to understand how people's work has maintained and partly transformed these places. The '50s and '70s of the last century experienced the partial abandonment of these rural areas, with significant urbanisation of the population in larger settlements, including the town of Alba. In fact, the latter one rose from 17,567 inhabitants in 1951 (ISTAT, 1960) to 31,372 residents in 1981 (Regione Piemonte, 2018, p. 44).

Most rural properties have always been characterised by the small direct farming one, a patriarchal type, with an average area of about 2.25 hectares (UNESCO, 2014a, p. 51) and a mixed economy composed of vineyards, orchards, arable land, and livestock. These small farms were cultivated as a model of family-centred agriculture, using all available land for self-consumption production distributed throughout the year. The movable and immovable property was handed down from generation to generation, generally in the male line after the disappearance of sharecropping.

The man was engaged in cultivating farmland after the so-called ‘renunciation of sisters’, who often moved to the city after getting married. Rural work was strenuous and unprofitable. Male members of the local community struggled with this situation, which also had an impact on the emotional sphere: women were required to make a significant commitment to the simultaneous roles of housewife, mother and even farmer.

It was immigration that introduced both new women to the Langhe and workers still farming these hills today, first from southern Italy and then from central and eastern European countries. This workforce has almost completely replaced the female labour force, more typical of the family management of the agricultural holding.

In the past, large farms were rarely sold. At the end of the 1950s, the first cooperatives of wine producers were founded on the initiative of some local members of the Catholic Church. They offered to start making wine collectively in larger and more organised wineries, even at a commercial level, while maintaining their own individual company from which the raw material to be made wine came. These include Terre del Barolo (Castiglione Falletto, province of Cuneo, 1958), Produttori del Barbaresco (Barbaresco, province of Cuneo, 1958; **Figure 4**) (UNESCO, 2014, p. 171), Antica Contea di Castelvero (Castel Boglione, province of Asti, 1954), Cantina del Nebbiolo (Vezza d’Alba, province of Cuneo, 1959) and Vinchio and Vaglio winery (Vinchio-Vaglio Serra, province of Asti, 1959), etc. In this way, the farmers redeemed themselves from the grape merchants who are used to underpay the harvest for their hard annual work. This phenomenon effectively opposed the abandonment of the land.

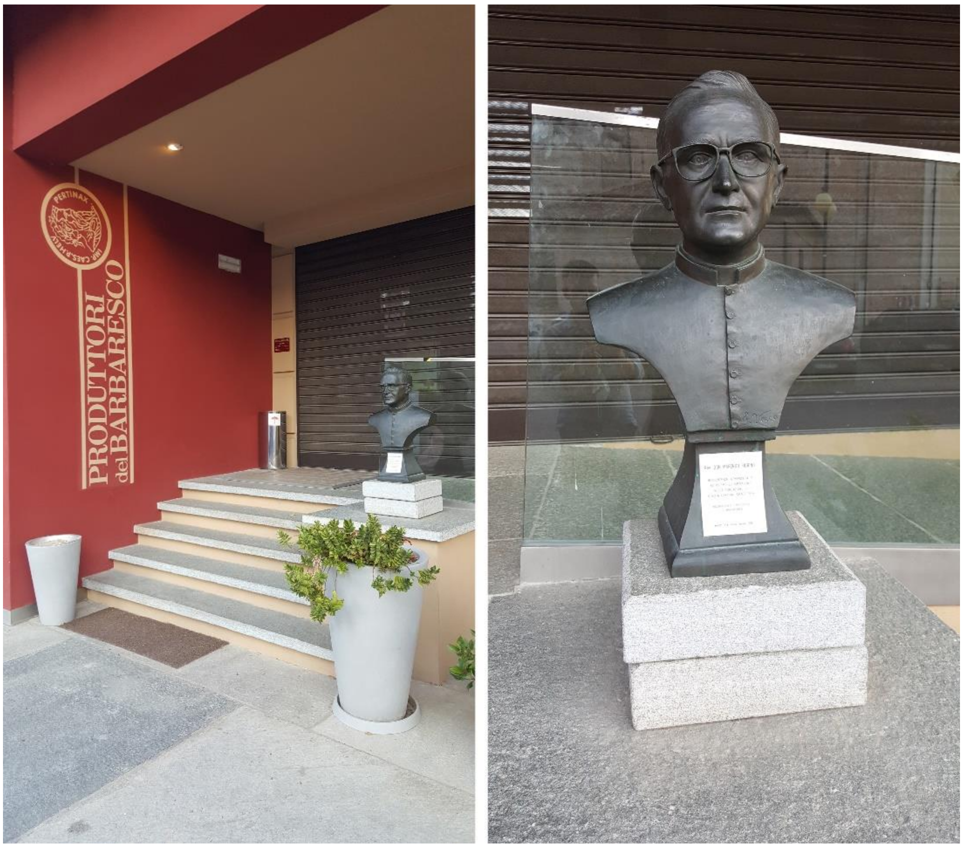


Figure 4 | Left, the entrance to the ‘Produttori del Barbaresco’ winery in Barbaresco, province of Cuneo (UNESCO, 2014a, 1390rev-003); right, the bust of its founder, Don Marengo Fiorino. (Source: the author.)

Moreover, the Ferrero confectionery industry made a substantial contribution to maintaining the agricultural landscape around Alba. Many farmers, not receiving enough income from their crops, instead of leaving the countryside to urbanise, chose to work for the famous confectionery company and then return home at the end of the work shift. Ferrero had a good idea of organising a transport system linking the confectionery factory to the various villages in the Langhe and Roero, facilitating the shift workers who could continue to look after their farms, having half a day off. In this so-called ‘factory-farm’ economy, these workers could remain in their native places and maintain the farms inherited from previous generations, but above all, to preserve a cultivated territory to this day.

The importance of these landscapes is largely due to how the vineyard is cultivated today, which shows clear traces of innovation in cultivation and production. This landscape is shaped by the community that populates it, which carries out an economic activity that has moved from mere self-sufficiency through the self-consumption of the goods produced to their sale on the national and international markets. This has led to social, cultural, and economic changes that affect the wine landscape, whose systematic cultivation is recent and partially entrusted to non-locals paid labours, mainly of North-Macedonian, then Albanian, Moroccan, Romanian and recently also sub-Saharan (Nigeria, Senegal) origins (Pastore et al., 2020, p. 44, **Table 7**).

It is the result of territorial socio-economic criticalities, such as the advanced age of farm owners and the lack of young people willing to take over land management. The demographic trends proposed by the UN DESA World Population Prospects 2019 reveal the growth of the median age of the world population, from 29.6 years in 2015 to 36.2 years in 2050 (UN DESA, 2019b). In Piedmont, instead, the age of the population is already significantly higher and continues to grow, rising from 46.4 years in 2015 (01/01/2016) to 47.3 years in 2019 (01/01/2020) (ISTAT, n.d.-b). In addition, the population aged 65 and over has grown from 24.9% in 2015 (01/01/2016) to 25.9% in 2019 (01/01/2020) of the total in the same Region (*ibid.*). It is coupled with a low birth rate (per thousand inhabitants): on a regional basis, it is 6.5 in 2019 (*ibid.*), lower than the 7.0 in Italy in the same year (*ibid.*). Another critical issue seems to be the management of the working relationship between operators with substantial age differences and different nationalities in the short term. It will also mean a radical transformation in rural populations regarding their (presumed) centuries-old identity.

This phenomenon is due to the different monetary yields of the cultivated vineyards, which lead to evident territorial asymmetries in the areas of the serial property. For example, in some areas of the Alta Langa between the Belbo and Bormida streams, land can be purchased at lower prices per hectare than in other neighbouring agricultural regions (Provincia di Asti, 2019).

As a result, vineyards in such areas are often abandoned and uprooted, impoverishing the integrity and beauty of the land and undermining the identity of rural communities. In addition, there are both other cultural issues and practical risks related to hydrogeology and crop health, including the grapevine flavescence dorée phytoplasma. On the other hand, in recent years, in the areas of "Langa of Barolo" (UNESCO, 2014a, 1390rev-001) and "Hills of Barbaresco" (*ibid.*, 1390rev-003), there has been a process of merging small farms into larger ones. They have reached a considerable size, acquiring the most prestigious crus to produce high-quality wines.

The above shows that the agricultural system is dynamic and unpredictable (*ibid.*), also underlining a close correlation between landscape, economic system and market. Consequently, the agricultural landscape can be defined as an economic product resulting from human labour and destined to decline if it does not provide adequate remuneration. Therefore, it should be necessary to reflect on the fragility of the landscape, as it is not natural but is instead 'built' and ever-changing.

The above was already partially recognised and explained in Weaknesses and Threats, both sections of the SWOT Analysis in the management plan of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a). The acronym SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. In bold, the Weaknesses and Criticalities that most afflict the identity issue in this UNESCO site, feeding negative and iterative feedback phenomena (**Table 4**).

STRENGTHS	WEAKNESSES
• Wine and Food heritage	• System lacks territorial network
• Consolidated international image	• Presence of interference / landscape detractors
• Widespread tradition of fairs and cultural events	• Many local players with difficulties in overall coordination
• Quality of the landscape	• Lack of public transport
• Richness of the architectural heritage	• Season-specific tourism
• Variety of cultivations and landscapes	• Hydrogeological instability
• Excellent private accessibility	**• Increase of elderly population**
• Exceptional concentrations of historical vineyards	
• Entrepreneurship of the local population	
• Presence of a complete winemaking production chain	

OPPORTUNITIES	THREATS
• Territory is attractive for investors	**• Decline of the agricultural sector**
• Ability to attract talents for landscape characteristics	**• Fluctuation and uncertainty for the quality of yearly production of wine with relative variation of prices**
• Growth of public and private attention with regard to the recovery of unused heritage	• Urban and industrial expansion inconsistent with the quality of the landscape
• Approval of the Regional Landscape Plan	**• Poor social inclusion policies**
• Wide network of structures and associations able to produce new culture	
• Tourism growth in the areas of the culture and wine and food sectors	

Table 4 | SWOT analysis and, in bold, site-specific Weaknesses and Threats that undermine site identity. (Source: UNESCO 2014a, management plan, p. 58, fig. 12. Author’s elaboration.)

However, despite the problems listed above, the word ‘resilience’ does not appear in the application dossier submitted in 2014. A few words appear that hint at the potential use of resilience but in an indirect way and related to its approaches, such as “mitigation” (14 times), “adaptation” (23 times) and “adaptive” (twice) in 1,004 pages of the Dossier (**Table 5**).

	Dossier “Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato”
resilience	0
resilient	1
mitigation	14
mitigative	0
adaptation	23
adaption	2
adaptive	0
total pages	1,004
date (year)	2014

Table 5 | A survey in the Nomination file of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" World Heritage Site. Findings reveal a scarce use of resilient-related terms in the Dossier, mostly indirectly related to its approaches (source: UNESCO, 2014a. Author's elaboration.).

4.3.4. New identities

From the previous survey, it emerges that the landscape is a precious value but, at the same time, fragile. Its robustness can come from education and a continuous increase in the collective consciousness, as well as the sharing of its value concerning places. However, the phenomena of attribution of value and recognition of the landscape (Torretta, 2016) follow non-linear processes related to slow and long-term timing as a practical expression of collective cultural change.

From this point of view, it should however be noted that the territories of Langhe-Roero and Monferrato already start from a homogeneous perception of themselves as UNESCO cultural landscape if analysed from the outside, even if different visions coexist between them and the inhabitants. In the landscape, the cultural heritage of an area is offered to a post-industrial society by whose people it is read, interpreted, and felt with results that are a metamorphosis of the traditional concept associated with identity. In that sense, "The meaning of 'landscape' shifts by the context and by the background of the users" (Antrop, 2013, p. 13). That said, there may be different and even opposing opinions among those who locally live in these places, as they represent their intimate landscape (Porter, 1979) embodying its deep components. Consequently, to achieve this unity, it is necessary to overcome the cultural, administrative, and ideological boundaries that have fragmented this territory for centuries, obscuring its common identity.

So, it is evident that these environments, listed on the World Heritage List, "… have been profoundly changed by humankind, who over the centuries has remodelled the natural substrate to favour cultivation" (UNESCO, 2014a, p. 9). Such rural landscapes consist of a historical permanence of a given crop and typically have an average energy demand due to moderate use of mechanisation equipment, extensive irrigation, chemical fertilisers or pesticides and other inputs. These closely bond with the local and economic systems that have produced them. As already noted, they retain many signs of human activities that have shaped them over time (Sereni, 1961), the result of the conscious and systematic anthropogenic dynamics over a specific period.

As a matter of fact, the UNESCO Operational Guidelines for the Implementation of the World Heritage Convention states that: "They [cultural landscapes, e.d.] are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal" (UNESCO, 1994, p. 13, para. 36). The latter have contributed to the creation of these landscapes, both as an image of how they appear today and as the basis of local cultural identity at the same time.

Therefore, considering the above, it is necessary to foster a “proactive conservation” (UNESCO, 2014a, p. 455) of these territories, in which the peculiar features of the landscape and their effective protection represent one of the most important factors of sustainability (*ibid*., p. 447). Sustainability aims to last over time and therefore needs to be designed, aiming to hinge on a common idea of a future shared by local populations. It should include economic, environmental, social and cultural sustainability, as set out in the Guiding Principles for Sustainable Spatial Development of the European Continent issued in the 13th Session of the European Conference of Ministers responsible for Regional/Spatial Planning in Ljubljana, 2003 (CEMAT, 2010, p. 17). These requirements were also reaffirmed in the Convention on the Value of Cultural Heritage for Society (henceforth Faro Convention, 2005), which encourages to “… promote cultural heritage protection as a central factor in the mutually supporting objectives of sustainable development, cultural diversity and contemporary creativity” (CoE, 2005, Section I, Article 5, point e). So, from the above it emerges the union that binds together the cultural landscape with cultural values and sustainability. The relation between sustainability and cultural values was pointed out by other scholars as Labadi (2017, 2018) and Giliberto and Labaldi (2021), among others, and reinforced by “The Hangzhou Declaration: Placing Culture at the Heart of Sustainable Development Policies” (UNESCO, 2013b). The latter suggests “… that culture should be considered to be a fundamental enabler of sustainability, ... a wellspring of creativity and innovation, and a resource to address challenges and find appropriate solutions. The extraordinary power of culture to foster and enable truly sustainable development is especially evident when a people-centred and place-based approach is integrated into development programmes ..." (UNESCO, 2013b, p. 2).

The men and women who shaped these lands have passed on an extraordinary and unique legacy. “The transmission of the knowledge … has been preserved like this, from generation to generation”, creating “a heritage of notions related to the entire process of oenological production …” (UNESCO, 2014a, p. 62) that have formed the identity of this territory. The virtuous expression of tangible and intangible goods qualifies its plural identity, and, in this sense, the wine quality is a cultural element part of those values.

Wine makes it possible to obtain economic yields and, therefore, to maintain the values of those communities. It allows a local economy based on the territory, which also acts in combating instability and depopulation, promoting employment and revitalisation of places (UNESCO, 2014a, p. 61). Its valorisation also passes through establishing an imaginary, transferring to it some intangible values including the beauty of the landscape, the strength of tradition and the capacity for innovation. However, the economic and social systems that created them may be in existential danger or may even have ceased to exist, so there is an urgent need to introduce new initiatives.

The direct and main intention is to pass on to future generations an intact or, at least, not further compromised wine-growing landscape heritage, as underlined by the Faro Convention (CoE, 2005), in Section I, Article 2, point b. So, not only to preserve, as far as possible, the aesthetic and cognitive values transmitted by the past, but also the most proving challenge of building a new landscape, that will be necessarily different but appreciated by future generations at the same time.

In this context, in the final assessment of the UNESCO nomination of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (Decision: 38 COM 8B.41, 2014b), the World Heritage Committee concluded by further recommending to Italy to pay attention to the social values. In point c, it suggested to pay: "… greater attention to the social values that make an important contribution to the management and conservation of the property: winegrowers, companies and workers, wine-growing winemaking trade organisations, the transmission of expertise and know-how, popular traditions, etc." (ICOMOS, 2014, p. 319). This advice was part of the advisory body evaluation report produced by ICOMOS, which also warned to give "more prominence" to "… the intangible social elements that contribute to authenticity" (*ibid*., p. 312). In this sense, "the capacity to preserve the know-how, ordinary maintenance and approaches to protect cultural heritage depends on territorial governance, which leads to the possibility of increasing the intrinsic resilience of a system" (Brunetta et al., 2019, p. 8).

Only with the closest cooperation of the people who live or work in these areas, it will be possible to bring to life and communicate that knowledge and cultural heritage that led to the widespread recognition of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a, ref: 1390rev). Therefore, it is necessary to organise activities aimed at raising awareness and involving the younger generations, especially those born in Italy but with family origins in other European and non-European countries, who have arrived through migrations.

Newcomers also need memories, traditions, and literature to continue to evoke the stories and emotions of the places that will become their living environment. This step assumes a vital significance to ensure the understanding and transmission of the Outstanding Universal Value (OUV) of the site, as the younger generations are the repositories of the future of these areas. They are the forthcoming users, managers and administrators of the territories but need to know this heritage in all its geographical, cultural, and economic aspects to best fulfil these commitments.

So, "The 'identity' aspect of the landscape, made up not only of the resident community but of a much broader society of users, is of fundamental importance to assign a recognised image to the locations, this being necessary to consolidate the local identity" (UNESCO, 2014a, p. 39). Consequently, it seems necessary to provide tools for understanding, awareness, enjoyment, fruition and reading of the entire serial property, stimulating the new generations to look at the territory with different eyes.

In other words, one highlights and reaffirms the responsibility of active intervention of the younger generations in knowing, protecting, preserving, and enhancing these landscapes in its many components, facilitating paths of renewed identity perception. Knowledge of its history, historical agrarian arrangements and demo-ethno-anthropological assets may also provide a favourable breeding ground for young people seeking employment and life opportunities at the local and supra-local levels.

To this end, the ‘horizontal’ transmission (by spatial diffusion) of information (Cavalli-Sforza & Feldman, 1981) has played a relevant role during human cultural evolution. It follows that human societies, while being able to maintain certain organisational principles that define their identity in the medium/long term, change much more rapidly if so-called ‘horizontal’ communication is intensified and extended. It leads to a continuous hybridisation process among the original characteristics of the territorial systems and external contributions due to contacts, exchanges, and migrations (UNESCO, 2014a, p. 26). Nevertheless, this territory continues to stand out from its surroundings for some of its environmental, landscape and socio-cultural features, which have allowed it to maintain a specific identity that is still recognisable, despite the countless transformations and hybridisations.

To understand how this can happen and how it should be done, it seems necessary to keep in mind that the inheritance of cultural characteristics of a local society occurs mainly through imitation and direct transgenerational learning. It relates to the Social Learning Theory, especially in the ‘modelling’ behaviour as postulated by Bandura and Walters (1963) and reinforced by Bandura (1977) itself. These modalities concern linguistic variants, oral stories, symbolic attributions, customs, local knowledge and festivals, among others.

Particularly relevant are the hereditary mechanisms, which imply a local reproduction of the society and its cultural identity. Social-cultural identity is not only the sense of local belonging nourished by the memories of a common past but also, and above all, the ability to reproduce those internal organisational principles that are the result of the co-evolutionary trajectory of a given society over time.

The above is under the Convention for the Safeguarding of the Intangible Cultural Heritage (UNESCO, 2003a), which states: “This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity …” (UNESCO, 2003a, art. 2.1). In this perspective, “the landscape is considered as the testimonial of a culture and a way of life; a deposit for the collective memory and baggage of traditions, habits and customs characteristic of a civilisation” (UNESCO, 2014a, p. 39). It includes both tangible cultural heritage components, movable and immovable such as tools, artworks, buildings, installations, infrastructure and landscapes, and intangible ones.

According to the same article of the abovementioned UNESCO Convention, the latter include: “… practices, representations, expressions, knowledge, skills” (UNESCO, 2003a) and, in this sense, social relations and contextual knowledge, even if impalpable, are territory-specific as the result of a historical accumulation. They are potential vehicles of transgenerational transmission of identity information which, in the case of the UNESCO World Heritage site of Langhe-Roero and Monferrato (UNESCO, 2014a, ref: 1390rev), are deeply linked to the specificity of that agricultural world. In other words, they can be considered as typical and hereditary features of each place, and therefore necessary for the replication of the local cultural diversity (Dematteis, 2006).

Magnaghi (2014) defines the reproduction of the territorial system as the ability to preserve one's own identity, understood in the sense of internal organisation over time. Performing arts, social practices, rituals, and festive events (UNESCO, 2003a), revisited according to the needs of modernity, could become opportunities for aggregation and appreciated by visitors (Repetto & Aimar, 2021). They can also support the recovery of rural memory or local history and the revival of folklore and popular culture.

The growing demand for rural tourism in the Langhe-Roero areas, +7.13% visitors than in 2017 (Regione Piemonte, 2018, p. 29), can encourage the reconstruction of some traits of an ancient identity combining nature and cultural routes, with food and wine and entertainment opportunities. This 'temporary citizen' should be able to feel like a resident of those places, even if only temporarily, thanks to the sharing of the territorial values (UNESCO, 2014a, p. 589).

These forms of conservation/reproduction require continuous change and, therefore, a good capacity for innovation by the local actors. It implies an openness towards the outer stimuli, which can be expressed in horizontal and vertical links with other subjects. From this point of view, the rise of new values appears worthy of note concerning the quality of architectural and cultural heritage, the different aspects of the landscape and the environment, as well as protection and conservation. The art. 9 of the Constitution of the Italian Republic guarantees the right to the protection of the landscape: "The Republic promotes the development of culture and scientific and technical research. It safeguards the natural landscape and the historical and artistic heritage of the Nation" (The Republic of Italy, 1947).

In this sense, to achieve the above objectives, it is necessary to act by welcoming the active territoriality of the people, intended as a dynamic relationship between the social components of the communities (economic, cultural, and political) and what belongs to the tangible/intangible heritage of the territories. These actions need to be based on an autonomous collective initiative, exploiting specific local resources but operating through trans- and supra-local connections. Internationally, the Faro Convention Action Plan (2005) focuses "… on the active role of communities and heritage in the revitalisation process" (CoE, n.d.). A clear example comes from the UNESCO Langhe-Roero and Monferrato site (UNESCO, 2014a, ref: 1390rev). In it, there are specific characteristics based on the territories to be enhanced that differ from area to area but, at the same time, there is a need to coordinate the different aspects within a systemic approach.

In this context, it seems therefore crucial to bring together local forces for an effective overall enhancement of the sites under an integrated project. The purpose is to 'territorialise' the heritage, coordinating all the actors to produce development opportunities. In this perspective, the 'Linking Universal and Local Values: Managing a Sustainable Future for World Heritage' conference, held in Amsterdam on 22/24 May 2003, supported this approach. Findings and recommendations of this conference were:

- "… World Heritage properties are dynamic entities where cultural and social values evolve. … the continuity between the past and future should be integrated into management systems accommodating the possibility for sustainable change …" (de Merode et al., 2003, p. 167, point iv); and
- "… World Heritage is about people as well as place" (de Merode et al., 2003, p. 167, point v).

The set of area-specific potential resources can be considered a true form of capital accumulated in places over time, in the same way as monetary capital. In this sense, one could refer to a "territorial capital" (Perucca, 2013, p. 37). It emerges that this "territorial capital" (*ibid.*) possesses interesting place-related characteristics focusing on the qualitative definition of this concept and leaving aside the specific aspects of econometric and estimative disciplines, such as the:

- rootedness;
- specificity;
- finiteness;
- its long timescales to product and re-product; and
- independence in their making from forcing, pretexts and subjectivity.

The above list seems to be close to what can be called the tangible or intangible heritage of a given place. With this in mind, it is essential to interact with the locals according to the horizontal, vertical, social and relational rationale to enhance it. These dynamics should therefore be included in a local development plan, aimed at creating an international reputation through specific investments in culture by involving communities. These should aim at the rediscovery of local values and traditions (i.e. customs, language and literary practices, among others) as collective expressions of cultural identity.

Consistently, the Faro Convention sees this as a relevant cultural task, calling for and encouraging a participatory and collaborative perspective based on increasing community involvement and widespread democracy (CoE, 2005, Section III, Article 12, points a-c). In this perspective, regional Ecomuseums strive to enhance portions of the territory, landscape, and traditional practices, both tangible and intangible (ICOM, 2016). It is advisable to refer to the academic literature to explore these behaviours, as this dissertation is concerned with local aspects that can potentially be transmitted without specifying the status of the existing regulatory framework.

After all, how can we update the identity values of territory with those of contemporary society? It is worth repeating, once again, that the landscape is never something given. Understandable deep-rooted anxiety often leads the landscape to nostalgic narratives, to a 'false-friend' idea of an idealised landscape. On the contrary, the fragmentation of contemporary society' behaviours and global mobility seem to lead to the atomisation of the landscape experiences.

By its very nature, the landscape is a complex, both culturally and politically, theme. Without a landscape that seems to be more ours than the others, it is not possible to exist; it is only through it that we tell our story that we assume a personal and collective, and therefore relational, identity. The landscape necessarily expresses its memory through the narrative, as it expresses an existential need of man.

Therefore, attempting to offer an operational cue, it is possible to assume from the paraphrase of the insights of Rosenberg (1982). He argues two possible ways of learning, which one is based on experience and defined by himself as spontaneous. It is called 'learning by using' and it is focused on user experience, thanks to which "identity is recognised as being derived from experience and the actions undertaken as a consequence of them (Gecas & Burke, 1995)" (Butler et al., 2019, p. 3). Users become first observers and then new holders of these traditions, handed down by those who already preserve them. On the other hand, the second is the so-called 'learning by doing', in which it is possible to learn specific concepts (in this case, traditions) by actively contributing by oneself.

However, the first transmission mode listed above seems to experience some problems, related to the "Liquid Modernity" (Bauman, 2000) in which we live. Conversation as a carrier of memories, exchange of news and knowledge appears to be an increasingly declining mode, due to the above. Even virtual communication in a horizontal way has its limits, such as relationality and physical aggregation between individuals as learned during the recent Covid-19 pandemic. These people, deprived of a practical confrontation in terms of material and symbolic relations with others, can lose their sense of community belonging. The often-forced choice of a top-down transmission of messages influences the collective discourse, distorting it or making it artificial.

4.3.4.1 Immigration: the state of affairs in Langhe-Roero and Monferrato

To comprehend the immigration rate in the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" World Heritage Site (UNESCO, 2014a, ref: 1390rev), it seems necessary to examine the state of the art of the municipalities' areas that compose these territories. The survey involves all 101 municipalities (i.e. 29 in the six Components plus 72 in the two Buffer Zones), excluding those only partially included in the boundaries of the UNESCO site. This choice is considered necessary to remain close to the official ISTAT database that is specific to the urban centre or the municipality area. It avoids inaccuracies due to subjective interpretations of the boundaries and consequent bias in the data entered by the candidate. In **Table 6**, it follows a full-list investigation, divided according to the 6 Components of the serial property (in light and dark grey: 1390rev-001, 1390rev-002, 1390rev-003, 1390rev-004, 1390rev-005, and 1390rev-006 explained above), and the 2 Buffer Zones (in dark blue, the A; in light blue, the B).

Components	**Buffer Zone**	**Municipality** (by name)	**Province**	**Total Residents** (no.)	**Total Foreigns** (no.)	**Ratio**
1390rev-001 - Langa of Barolo						
1	1	Barolo	CN	690	88	12.8%
1	1	Castiglione Falletto	CN	699	44	6.3%
1	1	Diano d'Alba	CN	3,621	316	8.7%
1	1	La Morra	CN	2,769	422	15.2%
1	1	Monforte d'Alba	CN	1,995	327	16.4%
1	1	Novello	CN	983	89	9.1%
1	1	Serralunga d'Alba	CN	575	131	22.8%
				11,332	**1,417**	**13.0%**
1390rev-002 - Grinzane Cavour Castle						
2	1	Grinzane Cavour Castle	CN	-	-	-
1390rev-003 - Hills of Barbaresco						
3	1	Barbaresco	CN	630	77	12.2%
3	1	Neive	CN	3,456	564	16.3%
				4,086	**641**	**14.3%**
1390rev-004 - Nizza Monferrato and Barbera						
4	1	Agliano Terme	AT	1,592	166	10.4%
4	1	Castelnuovo Calcea	AT	733	62	8.5%
4	1	Mombercelli	AT	2,149	287	13.4%
4	1	Montegrosso d'Asti	AT	2,306	232	10.1%
4	1	Nizza Monferrato	AT	10,290	1,470	14.3%
4	1	Vaglio Serra	AT	287	26	9.1%
4	1	Vinchio	AT	576	20	3.5%
				17,933	**2,263**	**9.9%**
1390rev-005 - Canelli and Asti Spumante						
5	1	Calosso	AT	1,244	177	14.2%
5	1	Canelli	AT	10,411	1,872	17.8%
5	1	Santo Stefano Belbo	CN	4,027	524	13.0%
				15,682	**2,573**	**15.0%**
1390rev-006 - Monferrato of the Infernot						
6	2	Camagna Monferrato	AL	494	26	5.3%
6	2	Cella Monte	AL	499	9	1.8%
6	2	Frassinello Monferrato	AL	1,381	53	3.8%
6	2	Olivola	AL	113	5	4.4%
6	2	Ottiglio	AL	614	77	12.5%
6	2	Ozzano Monferrato	AL	1,402	88	6.3%
6	2	Rosignano Monferrato	AL	1,511	51	3.4%
6	2	Sala Monferrato	AL	334	15	4.5%
6	2	Vignale Monferrato	AL	981	90	9.2%
				7,329	**414**	**5.7%**

Buffer Zone A					
1	Alice Bel Colle	AL	746	79	10.6%
1	Ricaldone	AL	647	133	20.6%
1	Belveglio	AT	325	38	11.7%
1	Calamandrana	AT	1,730	158	9.1%
1	Castagnole Lanze	AT	3,748	403	10.8%
1	Castel Boglione	AT	609	99	16.3%
1	Castel Rocchero	AT	391	49	12.5%
1	Castelletto Molina	AT	156	30	19.2%
1	Coazzolo	AT	279	26	9.3%
1	Cortiglione	AT	551	58	10.5%
1	Costigliole d'Asti	AT	5,771	533	9.2%
1	Fontanile	AT	553	102	18.4%
1	Maranzana	AT	257	35	13.6%
1	Moasca	AT	511	32	6.3%
1	Montabone	AT	326	28	8.6%
1	Montaldo Scarampi	AT	747	41	5.5%
1	Quaranti	AT	170	4	2.4%
1	Rocchetta Palafea	AT	346	26	7.5%
1	S. Marzano Oliveto	AT	1,016	60	5.9%
1	Vigliano d'Asti	AT	793	66	8.3%
1	Alba	CN	31,506	3,779	12.0%
1	Castiglione Tinella	CN	829	125	15.1%
1	Montelupo Albese	CN	485	56	11.5%
1	Neviglie	CN	369	26	7.0%
1	Roddi	CN	1,630	99	6.1%
1	Roddino	CN	413	67	16.2%
1	Rodello	CN	957	79	8.3%
1	Sinio	CN	511	100	19.6%
1	Treiso	CN	776	62	8.0%
1	Trezzo Tinella	CN	309	9	2.9%
1	Verduno	CN	560	57	10.2%
			58,017	**6,459**	**10.7%**

Buffer Zone B					
2	Altavilla Monferrato	AL	430	19	4.4%
2	Cereseto	AL	403	22	5.5%
2	Conzano	AL	966	33	3.4%
2	Terruggia	AL	928	58	6.3%
2	Treville	AL	280	11	3.9%
2	Casorzo	AT	618	49	7.9%
2	Grazzano Badoglio	AT	609	83	13.6%
2	Moncalvo	AT	2,861	306	10.7%
2	Penango	AT	467	25	5.4%
			7,562	**606**	**6.8%**

Table 6 | Total foreign citizens out of the overall inhabitants in the municipalities of the UNESCO Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato, ordered by name. (Source: ISTAT Database, updated to 01/01/2019. List of 29 municipalities in Components and 72 in Buffer Zones, whose area is completely or partially included; based on Annex 1 to D.G.R. n. 34-6436 of 30.09.2013. Author's elaboration.)

N.B. Asti, Acqui Terme, Casale Monferrato, Bergamasco, Bistagno, Cassine, Masio, Occimiano, Strevi, Terzo, Cassinasco, Castelnuovo Belbo, Incisa Scapaccino, Isola d'Asti, Mombaruzzo, Mongardino, Rocca d'Arazzo, Rocchetta Tanaro, Cherasco, Dogliani, Mango, Monchiero, Monticello d'Alba, Narzole, S. Vittoria d'Alba, Castelletto Merli, Cuccaro Monferrato, Lu, Fubine, Ponzano Monferrato, Serralunga di Crea, and Grana are intentionally excluded from this survey, because the boundaries of the UNESCO site only partially include their municipal area.

Particularly, Canelli (part of 1390rev-005 – "Canelli and Asti Spumante", UNESCO, 2014a) records 1,872 foreigners out of a total of 10,411 residents (ISTAT, n.d.-d), more represented by North Macedonian (807), Romanian (327) and Bulgarian (200) people (*ibid.*). The first community constitutes 43.1% of the global number of immigrants in the town, followed by Romanians (17.5%) and Bulgarians (10.7%). This North Macedonian community ranks fifth in Italy in terms of members (**Table 7**), 807 citizens out of 63,561 in the whole of Italy in 2019, preceded only by the cities of Piacenza (1,672), Rome (1,652), Venice (1,459) and Ravenna (1,067) (ISTAT, n.d.-d).

Similarly, Nizza Monferrato (within the 1390rev-004 – "Nizza Monferrato and Barbera", UNESCO, 2014a) shows the second largest North-Macedonian community within this UNESCO site: 532 people out of 1,470 total newcomers and 10,290 inhabitants in 2019 (ISTAT, n.d.-d). As in Canelli, it embodies the most relevant foreign group, equal to 36.2% of the overall number of immigrants that puts it in eighth place nationwide (**Table 7**).

Municipality (by name)	**Total Residents** (no.)	**Total Newcomers** (no.)	**Total N. Macedonians** (no.)	**Ratio n.1** (N. Mac./res.)	**Ratio n.2** (N. Mac./newc.)
Piacenza	103,942	19,915	1,672	1.6%	8.4%
Rome	2,856,133	382,577	1,652	0.06%	0.4%
Venice	260,520	37,554	1,459	0.6%	3.9%
Ravenna	157,663	18,546	1,067	0.7%	5.8%
Canelli	**10,411**	**1,872**	**807**	**7.8%**	**43.1%**
L'Aquila	69,478	5,556	716	1.0%	12.9%
Rimini	150,576	20,007	589	0.4%	2.9%
Nizza Monferrato	**10,290**	**1,470**	**532**	**5.2%**	**36.2%**
Pisa	88,880	12,301	509	0.6%	4.1%
Forlì	117,798	14,446	502	0.4%	3.5%

Table 7 | The most significant communities of North Macedonians settled in Italian municipalities, listed by overall number. Comparisons involve the total inhabitants and newcomers (no.), defining two ratio values in percentage. (Source: total residents report ISTAT data referred to 31/12/2018; global newcomers and total North Macedonians report ISTAT data referred to 01/01/2019. Author's elaboration.)

Many have become sedentary in the municipality, integrating with the local community in civil and working life at various levels. However, the migration phenomenon is ongoing and could claim a revision of the above data. To date, the above trends expose a ratio between foreigners and residents that is higher in the municipalities of the UNESCO Components areas than in the overall province ones:

- "Langa of Barolo" (UNESCO, 2014a, 1390rev-001): 13.0%, higher if compared to 10.4% in the province of Cuneo (**Table 8**);
- "Grinzane Cavour Castle" (UNESCO, 2014a, 1390rev-002): -;

- “Hills of Barbaresco” (UNESCO, 2014a, 1390rev-003): 14.3%, superior to the 10.4% of the province of Cuneo (**Table 8**); and
- “Canelli and Asti Spumante” (UNESCO, 2014a, 1390rev-005): 15.0%, larger if compared to 11.5% in the province of Asti (**Table 8**).

By contrast, the “Monferrato of the Infernot” Component (UNESCO, 2014a, 1390rev-006) shows a percentage of 5.7 that is lower than 11.1% proper of the province of Alessandria; likewise, also the “Nizza Monferrato and Barbera” Component (UNESCO, 2014a, 1390rev-004) highlight a value of 9.9% inferior to the 11.5% of the province of Asti (**Table 8**). Moreover, the three above-reported ratios computing the number of foreigners in the listed Components are also above the Piedmontese average (9.8%) and the Italian one (8.7%).

Locations (name)	**Total Residents** (no.)	**Total Foreigners** (no.)	**Ratio** (%)
province of Alessandria	421,284	46,877	11.1%
province of Asti	214,638	24,787	11.5%
province of Cuneo	587,098	61,094	10.4%
Piedmont	4,356,406	427,911	9.8%
Italy	60,359,546	5,255,503	8.7%

Table 8 | Total of foreigners out of the overall residents (no.) in the three provinces part of the ‘Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato’ World Heritage Site, along with a ratio (%) from these two. (Source: the total number of residents shows ISTAT data as at 31/12/2018; the total number of foreigners shows ISTAT data as at 01/01/2019. Author’s elaboration.)

4.3.5 The North Macedonian communities in Canelli and Nizza Monferrato

To better understand the dynamics of the most relevant newcomer communities in Canelli and Nizza Monferrato, i.e. the North Macedonians, a qualitative and semi-structured interview was carried out with the president of the Cultural Association called: ‘Il Ponte di Pietra’. The cultural association ‘Il Ponte di Pietra’ in Canelli, Asti, was founded in 2011 to support integration processes between North Macedonian members living in Italy and the Italian population, promoting social, cultural, and artistic initiatives. This Association is the most representative at the local level and helps North Macedonians of Canelli to integrate them into social and working life. Moreover, it is the only cultural Association in the Components and Buffer zones, then in Canelli (UNESCO, 2014a, 1390rev-005) and Nizza Monferrato (UNESCO, 2014a, 1390rev-004), established by them.

The interview questions were first submitted by email to the President and then discussed in a 30-minute phone call. In total, seven questions were identified by the author in a qualitative and semi-structured format. Precisely, they were:

- Q1: What year did the first wave of migration into the Langhe and Roero take place?
- Q2: Do the north-Macedonian communities of Canelli and Nizza Monferrato come from the same towns or geographical area in North Macedonia?
- Q3: Why the choice of the north-Macedonian community to settle and create large communities in Canelli and Nizza Monferrato?
- Q4: Can the north-Macedonian labour force on the territory make up for the continuous decrease of the local labour force in agriculture, specifically in wine growing?
- Q5: How would you define the level of integration achieved by the north-Macedonian community?
- Q6: How is the “Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato” perceived by the north-Macedonian community?
- Q7: Is the north-Macedonian community involved in the management processes of the “Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato” World Heritage site?

In the interview with the President (*NM1*), several factors of interest emerged.

Q1 – According to *NM1*, the advent of the first Macedonians in Canelli dates to 1986. Until the 1980s, Macedonian immigration was directed towards central and northern European countries, particularly Germany. After the 1980s, it was harder to reach those countries, and the Macedonians found another outlet, in Italy.

In Canelli, there are almost 800 Macedonians but the real data compared to the statistical one differs as several people opt to apply for Italian citizenship with a consequent change in terms of the Registry Office. Therefore, although the number of Macedonians seems to be decreasing, it is instead constant. In terms of trends, there have been variations over time. There was a growth in numbers until 2010, after which the situation stabilised as migrants now prefer other destinations.

In the 1980s, those who did not have a qualification or workers migrated. Now, it is possible to seek for manual labour in Macedonia, but at a slightly lower wage than in the Langhe-Roero areas. However, those who have a qualification and do not feel fulfilled move to England and Germany, where they can more easily find a job. Similarly, Australia is home to the largest Macedonian community outside North Macedonia of almost 200,000 people.

Q2 - The Macedonian community of Canelli comes almost all from the same area, situated in the east of North Macedonia on the border with Bulgaria. According to *NM1,* migration flows mainly come from 4 towns: Vinica (Виница, 41.8833° N, 22.5081° E), Kochani (Кочани, 41.9168° N, 22.4083° E), Delchevo (Делчево, 41.9709° N, 22.7740° E), and Makedonska Kamenitsa (Македонска Каменица, 42.0214° N, 22.5871° E) (**Figure 5**). During the Communist regime, the area was predominantly agricultural and industrially underdeveloped. When the former Yugoslavia was dissolved (1992), massive emigration (*NM1*) began, as there was no longer a transnational market to sell Macedonian agricultural products.

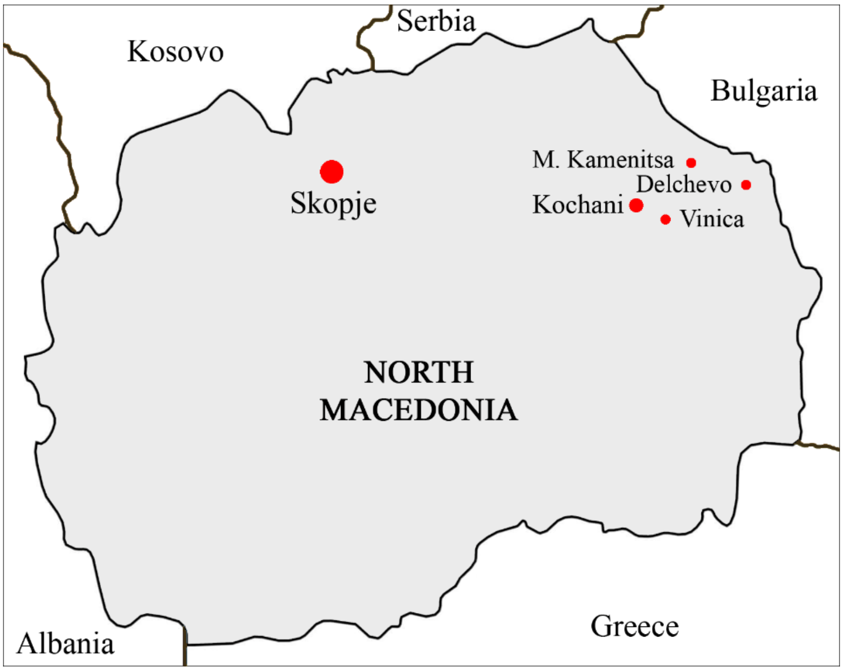


Figure 5 | In light grey, North Macedonia and dotted in red, the four hometowns of the first generation of newcomers in Canelli (UNESCO, 2014a, ref: 1390rev-005) and Nizza Monferrato (UNESCO, 2014a, ref: 1390rev-004): Vinica, Kochani, Delchevo, and Makedonska Kamenitsa. (Author's elaboration.)

Q3 - For many years, only tobacco was grown in these hilly areas. Before tobacco was a wine-growing area, but now tobacco cultivation has also ceased. Therefore, it can be said that it was agriculture that attracted these migrants to the Langhe and Roero, as they were already familiar with agricultural work and, consequently, it was easier to find a job. As in Italy, family ties are relevant for Macedonians, and therefore they tend to call on other family members once they have settled down in a place. For these reasons, communities have grown in number over time.

Q4 - To date, the President (*NM1*) says that few people have bought a farm, rented land, or managed farms. There is no growing trend in this direction. From what emerges, it is the 1st generation that is most dedicated to agriculture, while the 2nd generation is not very interested in continuing that work. Those without qualifications are seeking for employment in factories because this opportunity offers more security than the environmental, climatic, phytosanitary uncertainties of working in vineyards. Instead, those who have attended university want or would like to do other jobs.

Q5 - There are two types of integration to consider. Concerning integration at work, this is evaluated positively by the President (*NM1*), as Macedonians understood the jobs and the work system. Regarding social integration, it seems that the level reached is not satisfactory. It gives the impression that there are not yet many Macedonians in the cultural and voluntary associations such as the Civil Protection and the Red Cross. According to *NM1*, this is not a defect of the local society but rather a lack of awareness of the Macedonian community. *NM1* also complains of little support from the Institutions; this person states that its Cultural Association does not have many tools and that it would need more help from the Italian Institutions.

Moreover, there has never been a representative of the Macedonian community in local institutions, despite the strong numerical presence of members in the territory. *NM1* believes that this could happen when the 2nd generation will vote, although it would be necessary already now. In fact, the 1st generation has already ideas and ways of doing things that belong both to the country they live in (Italy) and to North Macedonia.

Q6 - According to *NM1*, the first generation only aims at work and family subsistence without immediately admiring 'the beauty of the hills'. It is also reflected in the Cultural Association, as the 1st generation is less involved. Therefore, the 1st generation "seeks less integration" (*NM1*). For this group, volunteering is considered secondary. In the 1990s, when they tried to set up a Cultural Association, many people from the Macedonian community replied that they were only interested in working and that, was why they came to Canelli, not for anything else. In Macedonia, associationism is different from Italy; everyone expects to be paid for what they do and, therefore, it is more difficult to involve people.

In the same years, some of them even speculated that they might go back home to Macedonia. The income in Canelli was much higher than in their fatherland at the time, whereas now this gap has narrowed considerably. Only after years, migrants realised they could not return to their homeland despite having earned enough money and settled in the Langhe-Roero area. It was difficult to understand for the 1st generation, which is the most fragile in *NM1* opinion.

Q7 - Regarding the involvement of the Macedonian community in the management of the UNESCO site of Langhe-Roero and Monferrato, *NM1* reports several relevant considerations.

While *NM1* confirms the involvement in the maintenance of green areas, this person declares the "complete exclusion" of the Macedonian community concerning how its members see these territories. The President reiterates that the community of Canelli has never received an offer to contribute to the management.

It is worth mentioning that *NM1* admits limitations in the knowledge of serial property management and "how this management should be done". *NM1* goes on to say that it seems clear "the things that cannot be done", referring directly to the concept of Authenticity, but has no idea "how the site is managed, by whom, in what way". For its part, the Association has spontaneously tried to contribute by inviting people who are part of the international Macedonian network (e.g. from Switzerland in 2019) to the site and to inform them about local history. Otherwise, it would not know how to enhance it.

Finally, in addition to the seven pre-established questions, further considerations emerged to imagining a perspective in 10 years of the Macedonian community on the territories.

NM1 states that possible new migratory flows depend on the political and economic situation of the country of origin. Currently, this seems to be "very heavy", and this condition seems to afflict young people, not from an economic point of view, but as a long-term dynamic. *NM1* states that such problems have been going on for 30 years and young people no longer want to live in such conditions. Therefore, people with more education are now emigrating. However, NM1 doubts there will be a new influx of North Macedonians to these areas in the next ten years.

Macedonians living in the Langhe and Roero areas are likely to continue their agricultural work. As far as young people are concerned, however, there are psychological factors that keep them away from agriculture. According to *NM1*, the farmer was much more appreciated in the past, while now he is seen as a second-class job, the "work of the poor, that nobody wants to do, not very skilled". As a result, young people think about it before doing it because it is no longer considered decent work. However, this generates a detachment from the landscape because those who work in a factory are not aware of the vineyards and their management. For example, pruning vines is a specialised job that requires experience.

In conclusion, *NM1* states that persists a wrong attitude towards people working in agriculture. It should be revalued more as a job, so that young people can feel attracted to it and continue to do it by reversing this approach.

4.3.6 Survey on the relationship between landscape and North Macedonians in the site communities - questionnaire

A survey was conducted to better understand the relationships between the members of North Macedonian communities in the villages and towns that are part of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a, ref: 1390rev) and the landscape. A questionnaire was created, structured with nine closed-ended questions. Voting options were expressed in terms of ratings (from 0 to 10) or multiple choices (e.g. Yes-No-Maybe), as appropriate. The expected compilation time was calculated in 180 seconds (i.e. 3 minutes). All answers given by the voters are in anonymous mode and collected as aggregated data.

Before starting the procedure, several considerations were made regarding the format of the presentation of the questionnaire. In the end, it was decided to prepare it using the Google Forms service on the web. This choice was made in recognition of the potential of the service to generate a web link that can be easily shareable by local NGOs, cultural associations and users, via social media (Facebook, in particular) and instant messaging groups (WhatsApp and Telegram, mainly).

Moreover, such preference would have allowed collecting the answers provided by users automatically and with an appreciable graphic rendering of the histograms generated by the software.

The format was proposed to the members of North Macedonian communities in Canelli and Nizza Monferrato and villages belonging to this UNESCO site, located in the Alessandria, Asti, and Cuneo provinces. Mediation with these communities was provided both by the cultural association “Il Ponte di Pietra”, in Canelli (*NM1*) and by the mayors of several municipalities encompass in the World Heritage site (i.e. Calamandrana, Fontanile, Isola d’Asti, Maranzana, Moasca, Mongardino, Quaranti, Vinchio, and Vaglio Serra).

The questions proposed are as follows:

Q1. How do you like the vineyard landscape of Langhe, Roero, and Monferrato?

Q2. How important do you think agriculture is as a job?

Q3. Would you work in agriculture?

Q4. How much do you feel about the territory you live in belongs to you?

Q5. How do you assess the integration of the Macedonian community in local villages and towns?

Q6. Do you envisage a future for your sons/daughters in the towns, or villages, where you live, in the areas of Langhe, Roero and Monferrato?

Q7. Do the areas where you live (villages or towns, in the Langhe, Roero, and Monferrato) offer job opportunities?

Q8. In the last six years, how much has the vineyard landscape of Langhe, Roero and Monferrato changed?

Q9. In the last six years, has the vineyard landscape of Langhe, Roero, and Monferrato changed for the better or worse?

Potential voting scores ranged from:

- excellent: 10 (highest satisfaction, positive),
- distinguished: 9,
- good: 8,
- discreet: 7,
- sufficient: 6,
- insufficient: 5,
- severely insufficient: 4,
- negative: 1-3, and
- void: 0 (lowest satisfaction, negative),

were assigned to Q1, Q2, Q4, Q5, Q6, Q7, and Q8.

Multiple-choice questions, with answer options of 3, were allocated to Q3 and Q9. Four demographic questions were then inserted, concerning gender (male or female), age group (< 18, 18-25, 25-30, 30-40, 40-50, 50-65, or over 65), the province in which the respondent lives (Alessandria, Asti, or Cuneo) and the qualification he or she holds (middle school diploma, high school diploma, bachelor's degree, or master's degree and PhD).

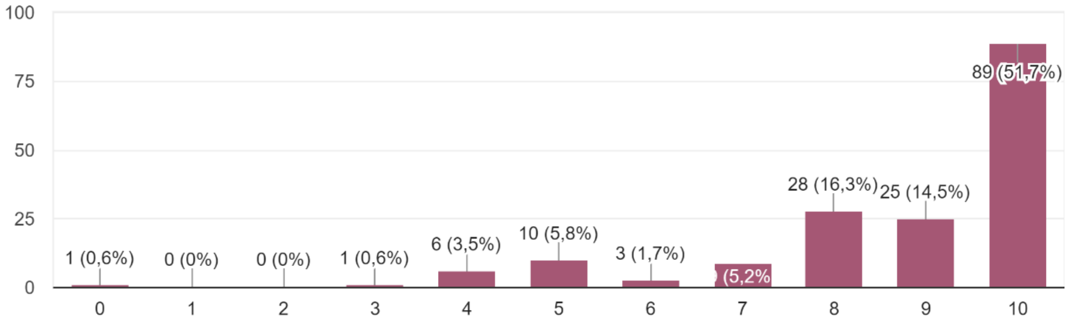
The questionnaire aimed to explore the current situation in the multiple North Macedonian communities in these territories to detect social trends specific to the site. According to NM1, this is the first-ever questionnaire addressed to people of North Macedonian origin (first or second generation) living and/or working in these territories. In particular, the queries were intent to notice the:

- sense of belonging and rootedness (Q1, Q4),
- perception of the local landscape and its modifications (Q8, Q9),
- management of the vineyard landscape as stakeholders (Q2, Q3),
- integration and sense of community (Q5),
- perspectives for the next generation, from the mid to the long run (Q6), and
- perspectives for the present generation, in short terms (Q7).

The questionnaire was launched on 18 May 2020 and ended on 03 July 2020, i.e. 45 days after the launch. During this period, the survey was compiled by 172 voters in total.

The graphics concerning each question have been reported and commented on in the following sections of this chapter.

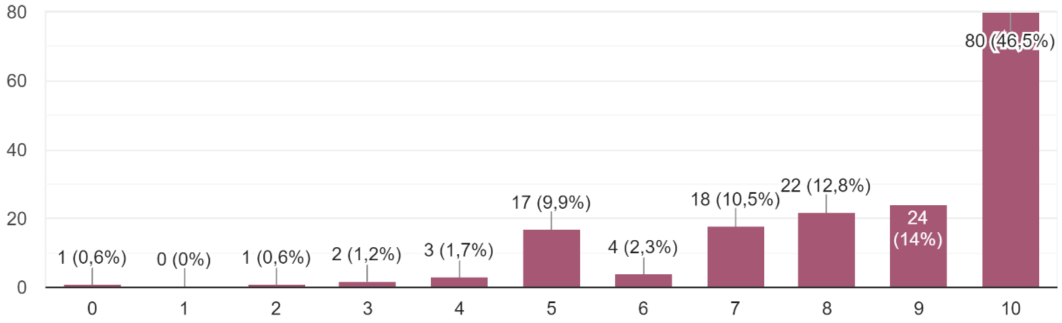
Q1. How do you like the vineyard landscape of Langhe, Roero, and Monferrato?



The graph shows a deep appreciation of the vineyard landscape of Langhe, Roero, and Monferrato among the voters. Considering 6 as the pass rate, only 18 votes out of 172 are below this threshold value, i.e. the 10.5%. Of the positive grades, only 11 were in the range between sufficient and fair (i.e. 6 and 7). Instead, 142 out of 169 people give a very positive assessment, from good (8) to excellent

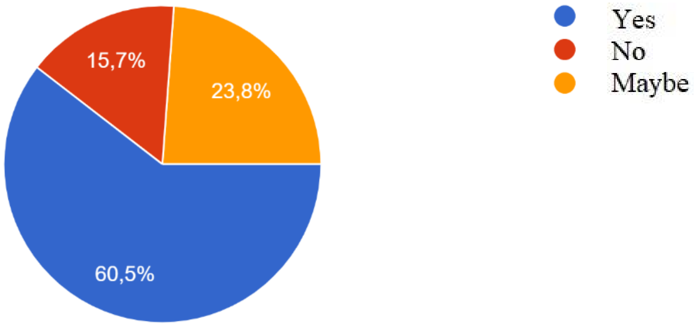
(10). Almost half of the total number of voters indicates in 10 their general appreciation (51.7%). In a general sense, there seems to be a deep commitment of North Macedonian communities in these territories, thus indicating a strong sense of belonging and rootedness. It is worth emphasising that this appreciation is not simply related to the visual component but rather to the experiential one, since the question does not direct voters to a given reference component to examine these landscapes.

Q2. How important do you think agriculture is as a job?



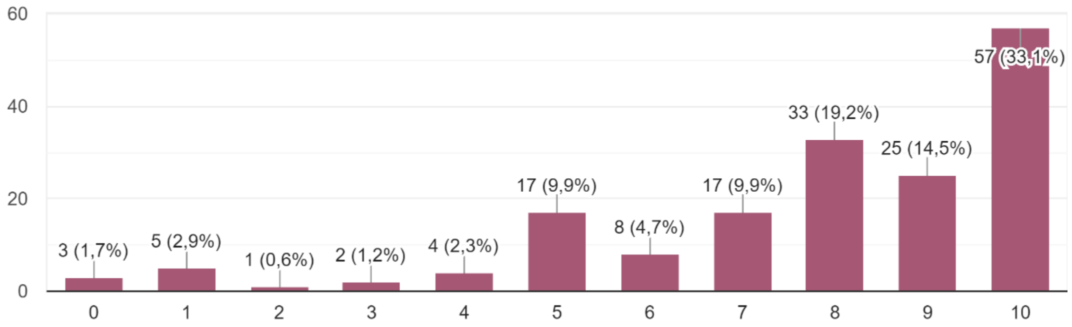
The graph highlights how voters consider working in the agricultural sector to be relevant, in the broadest sense and therefore not directly linked to the territories of Langhe, Roero and Monferrato. Considering 6 as the pass rate, a not insignificant number of voters equal to 24 votes out of 172 are below this threshold value, i.e. the 13.9%. However, most of the negative grades (17, or 9.9%) are in the insufficient range (5). Of the positive marks, only 22 are in the range between sufficient and fair (i.e. 6 and 7). Instead, 126 out of 172 people give a very positive assessment, ranging from good (8) to excellent (10). The 46.5% of the total number of voters indicates in 10 their appreciation of this work sector. Despite the general sense of the question, it is possible to link it to the willingness of voters to continue farming in the Langhe-Roero and Monferrato areas to the medium term. Agriculture is still perceived as pivotal in almost 73.3% of the voters and as moderately relevant in the 12.8%. Presumably, there still seems to be a general interest in such work in that community.

Q3. Would you work in agriculture?



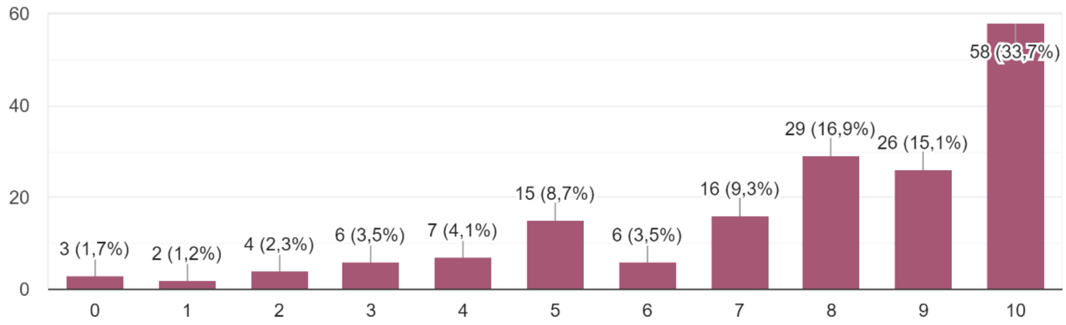
This graph indicates a general inclination of people to carry out farming activities themselves, with the percentage being about 60.5% of the total. 15.7% said they were not willing to work in this field, consistent with the answers and percentage above. Almost one-third of the persons involved have not a specific idea about this possibility, equal to 23.8%. Despite the general sense of the question, it is possible to relate it to the fairly goodwill of voters to continue farming in the Langhe-Roero and Monferrato areas to the medium term. The positive percentage is lower than in the previous report regarding appreciation of agriculture as a job (i.e. 73.3%) but adding the preferences for 'maybe' to 'yes' reaches 84.3% of the total. However, it is worth remembering that the percentage of undecided people is not necessarily inclined towards a choice to engage personally in agriculture; opting to consider about half of the total (i.e. 11.9%), would therefore reach the value of 72.4% that is very close to the value of 73.3% previously detected.

Q4. How much do you feel about the territory you live in belongs to you?



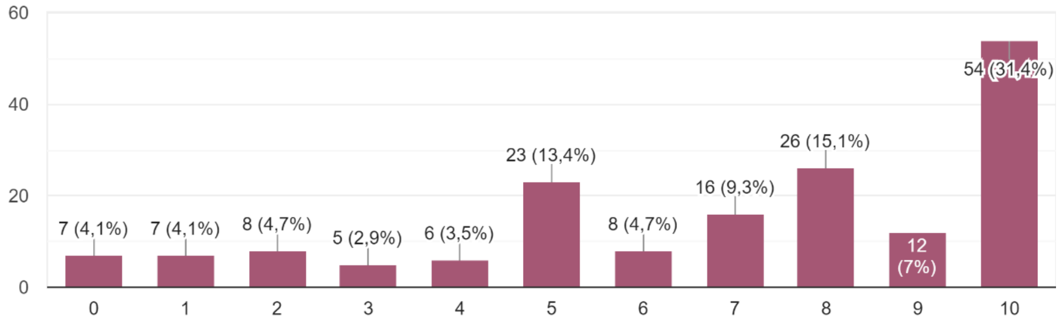
This graph refers to each voter's sense of belonging and rootedness to the territories in which they live, i.e. Langhe, Roero and Monferrato in Piedmont, Italy. It shows preferences in the form of a bar graph on a scale of 0 to 10. Considering 6 as the pass rate, a not insignificant number of voters equal to 32 votes out of 172 are below this threshold value, i.e. the 18.6%. However, most of the negative grades (17, i.e. 9.9%) are in the insufficient (5) range. Among the positive grades, only 25 fall into the sufficient/discreet range with their preferences (i.e. 6 and 7). On the other hand, 115 out of 172 people gave a very good rating, ranging from good (8) to excellent (10). The 33.1% of the total number of voters indicates in 10 their attachment to these areas. Consequently, it is possible to affirm their currently profound connection with these territories, and this trend is likely to remain similar in the medium term. The sense of belonging and rootedness is outlined in almost 66.8% of the voters and as moderately relevant in the 14.6%.

Q5. How do you assess the integration of the Macedonian community in local villages and towns?



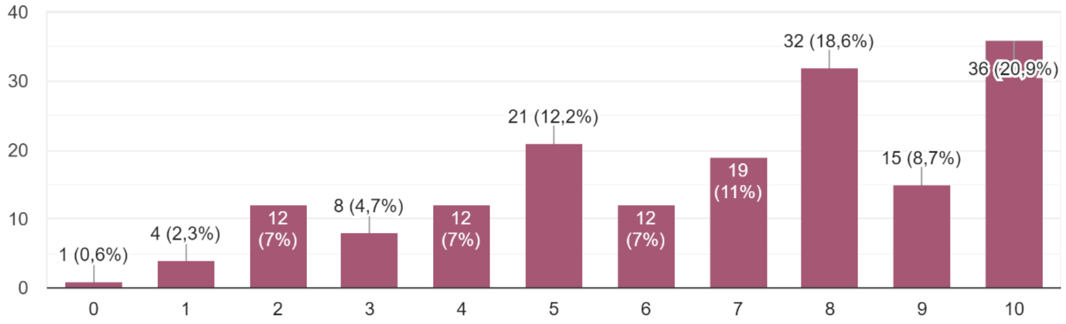
Integration is fundamental for a sense of community, both from the real point of view than the perceived one. In the perceptive realm, this graph allows us to make specific reflections. Considering 6 as the pass rate, a fairly significant number of voters amounting to 37 out of 172 are below this threshold value, i.e. 21.5%. However, most negative rates (15, or 8.7%) are in the insufficient band (5). Alarmingly, 15 people place their judgement in the two columns defined as null (0) and negative (1-3). Only 22 people assign their vote to the sufficient/discreet range (i.e. 6 and 7) regarding positive evaluations. Instead, 113 out of 172 people make a very sound judgment, from good (8) to excellent (10). 33.7% indicated full and satisfactory inclusion. Therefore, only 65.7% of the total perceive an extremely positive integration of the North Macedonian members into the local indigenous communities; this percentage rises to 78.5% if sufficient or discreet satisfaction is considered.

Q6. Do you envisage a future for your sons/daughters in the towns or villages where you live, in the areas of Langhe, Roero, or Monferrato?



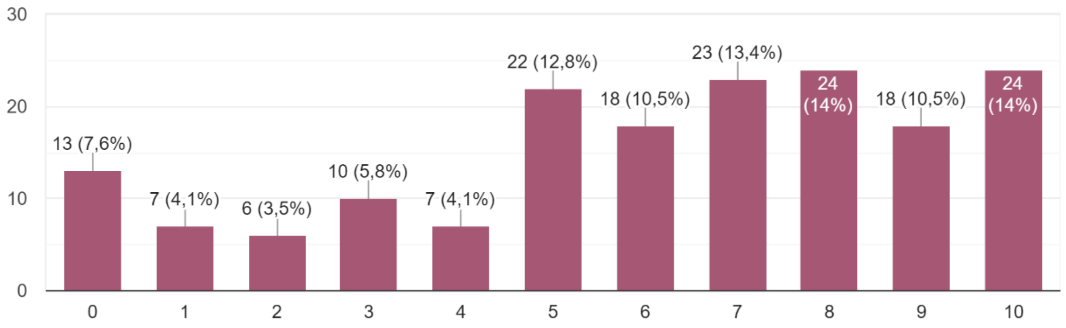
Regarding the perspectives for these territories from the mid to the long run, this graph reports multiple reflections. Considering 6 as the pass rate, a relevant number of voter equal to 56 votes out of 172 are below this threshold value, i.e. the 32.5%. However, most of the negative rates (23, equal to 13.4%) are in the insufficient range (5). Alarmingly, 27 people place their judgment in the 2 bands defined as void (0) and negative (1-3). Moving on to positive assessments instead, only 24 persons are in the sufficient/discreet range (i.e. 6 and 7). Instead, 92 out of 172 people make a very sound judgment regarding future outlooks, from good (8) to excellent (10). 31.4% has a very positive vision for the future. Therefore, only 53.5% of the total share extremely positive hopes for the future for the second and third generations of North Macedonian descent; this percentage rises to 67.5% if sufficient or discreet satisfaction is considered.

Q7. Do the areas where you live (villages or towns in the Langhe, Roero, or Monferrato) offer job opportunities?



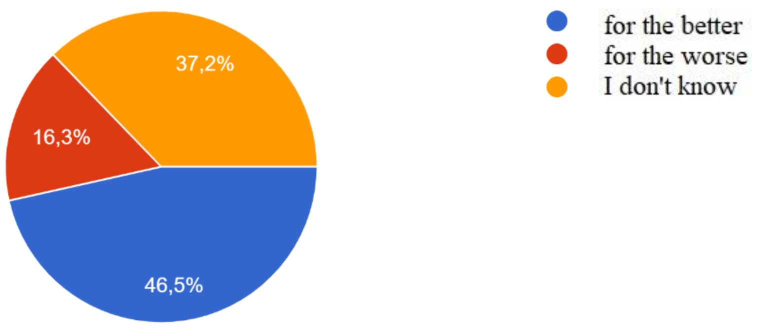
Regarding the perspectives for the present generation in short terms, this graph reports probably the pre-pandemic situation in the areas of Langhe, Roero, and Monferrato. From a general point of view, the framework is quite positive. On the one hand, 58 out of 172 describe an employment perception by individual voters as insufficient or seriously insufficient but, on the other hand, 114 out of 172 are moderately and very satisfied by the job opportunities. Among the positive feedback, 47 out of 172 are very good (27.3%) and excellent (20.9%). Indeed, 31 out of 172 have a sufficient/discreet perception (18%). This vision might even interrelate with the precedent question and influence from mid- to long-term outlooks; in fact, the aggregated percentage of positive votes is over 66.2%, while the previous one is 67.5%.

Q8. In the last 6 years, how much has the vineyard landscape of the Langhe, Roero and Monferrato visually changed?



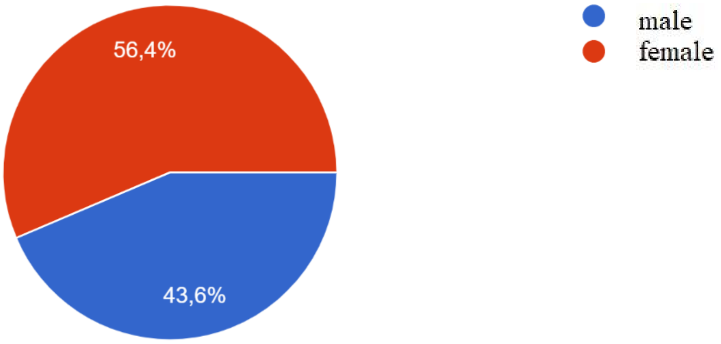
As far as the wine-growing landscape of the Langhe, Roero and Monferrato in Piedmont is concerned, there is no precise understanding of the changes that occurred during this period. Considering 6 as sufficient, there was little or no change in the landscape for 65 out of 172 people (i.e. 37.8%). Among these 65, for 13 people (7.6%), the landscape has been static in the last six years. For the other 23 (i.e. 13.4%), few changes occurred and it is the largest group in the negative macro area. On the other hand, 62.4% recognises moderate, high, and very significant modifications in the landscape. 41 out of 172 discern mild impairments (23.9%), with the discrete range being numerically the most prominent in the graph. The remaining 66 persons pointed out high and considerable shifts. Only 24 voters (14%) indicate the detection of remarkable variations in the landscape.

Q9. In the last 6 years, has the vineyard landscape of the Langhe, Roero and Monferrato changed for the better or worse?



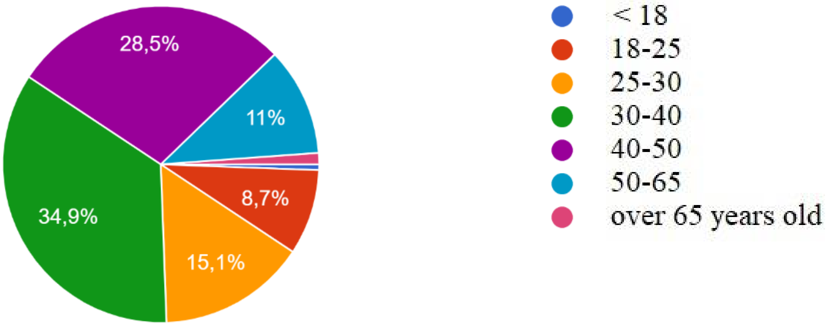
In this pie chart, an attempt was made to understand the perception of the people who make up the North Macedonian community concerning the changes that have occurred in the landscape. Most people recognise that the landscape has changed for the better in the last six years (no. 80; 46.5%), while for others, these changes have worsened the overall landscape quality (no. 28; 16.3%). However, a considerable proportion of voters would not be able to say whether these changes were positive or negative (no. 64; 37.2%). Further fact-finding would be interesting to perform to understand in a non-aggregated way the reasons that prompted these voters to pronounce themselves in this way.

- Gender



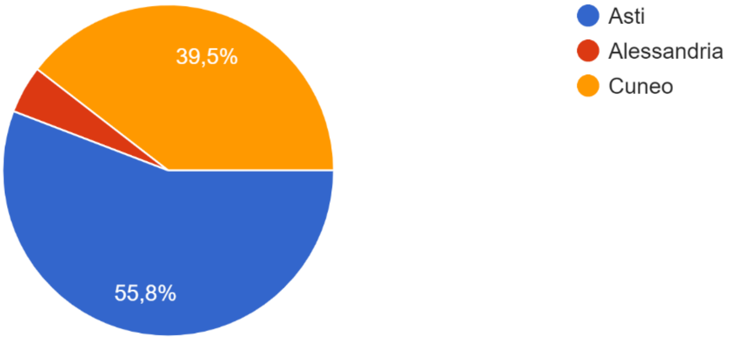
The graph shows in aggregate that the majority of voters are women (i.e. 97 out of 172, or 56.4%), while the others are men (i.e. 75 out of 172, or 43.6%). It means that women felt more involved in this survey, as any participation in the questionnaire is optional and purely on their initiative.

- Age



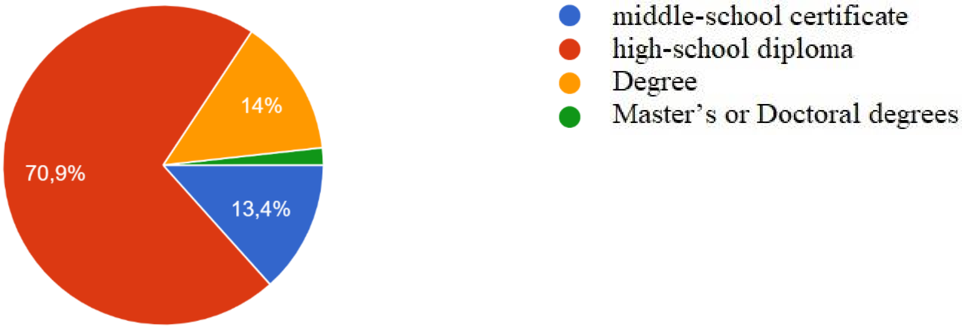
This graph reports the age group of the voters involved in the survey, i.e. < 18 years old, 18-25, 25-30, 30-40, 40-50, 50-65, or over 65 years old. All the groups indicated have actively participated in the questionnaire. The most relevant groups are the 30-40 with 60 people (i.e. 34.9%), the 40-50 one with 49 people (i.e. 28.5%), and the 25-30, consisting of 26 members equal to 15.1%. Positively, the band 18-25 consists of 15 members and corresponds to 8.7%, and the 50-65 range, with 19 people equal to the 11%. Finally, the poles of the survey: the over-65s (2 members, i.e. 1.2% of the total) and the under-18s (only 1 member, i.e. 0.6%).

- In which province of Piedmont do you live?



In particular, the pie chart shows that the province where most members of the North Macedonian community live is Asti (96, or 55.8%), followed by Cuneo (68, or 39.5%). As reported in the previous chapters of this thesis, the province of Asti encompasses the highest number of municipalities in Buffer zones of the serial property, and this may have resulted in a higher percentage of voters residing there. Instead, a small number of newcomers is settled down in the province of Alessandria: 8, i.e. the 4.7% of the total.

- Education



As regards educational qualifications, the majority of members had a high school diploma, i.e. 122 persons or 70.9%. The second relevant one is the range of degrees, with 14% in the pie chart corresponding to 24 members. The third one is composed of the middle-school certificate holders, with 23 persons equal to 13.4%. Positively, 3 members are holding or held master's or doctoral degrees (i.e. 1.7%).

In a general way, the educational level of the respondents to this questionnaire is medium-high level.

To summarise, the graphs shown and commented on above demonstrate different trends in both positive and negative aspects. The second generation is the one that responded most to the questionnaire, proving that the close link between the North Macedonians and the landscape of the Langhe, Roero and Monferrato areas is still alive. The identikit of the average voter of the questionnaire is a woman, in the 30-40 years old age group, in possession of a high school diploma, resident in the province of Asti.

The Q1 bar chart indicates a sound appreciation in experiential terms of these landscapes, not only visual and/or perceptual; Q4 graphs reveals a high sense of belonging and rootedness in the voters, slightly lesser in the absolute peaks than in the first graph.

Uncertainty about the changes that have taken place since UNESCO recognition, concerning the perception of the local landscape and its modifications, can be observed through the answers in bar graph Q8. Although a qualified majority of voters (i.e. more than 50% + 1 of the electorate) implicitly recognise the dynamism of the landscape and its evolution over time, a certain percentage states that it has not changed and has even remained essentially the same. A relative majority of people think there have been positive changes to the landscape (Q9) while a significantly large slice of the pie chart shows that over a third of voters have no opinion on whether these changes have been good or bad.

In the management of the vineyard landscape, North Macedonians are one of the active stakeholders involved. For the absolute majority of people (i.e. 50% + 1 of voters), agriculture is considered a value (Q2). More than 60.5% of the voters stated that they would also apply for a job in this sector (Q3), in addition to the general appreciation of this work. However, the undecided persons are about a quarter of the voters (Q3).

Concerning integration and sense of community, the Q5 bar graph indicates a fairly good perception by North Macedonian members. Although some say this is still insufficient, about 33.7% of the total say it has been fully achieved.

Looking at life and employment perspectives for the next generations in these territories, voters reveal a certain positivity in forecasting a potential future for the third generation (Q6). A third of people imagine a very positive outlook for them, even though this questionnaire was launched during Phase 2 after the Italian lockdown due to the COVID-19 outbreak (18 May to 14 June 2020). Moreover, these areas still seem to offer good job opportunities to the people living there, although about one-third of voters are dissatisfied with the number and nature of job offers (Q7).

4.3.6.1 Additional information from the survey on the relationship between landscape and North Macedonians in the site communities - questionnaire

The results of the interviews were commented on and analysed with some of the mayors of the municipalities previously reported in paragraph 4.3.6, namely Fontanile (*MA1*), Maranzana (*MA2*), Mongardino (*MA3*), Quaranti (*MA4*) and a councillor of the municipality of Vaglio Serra (*MA5*). In addition, a contact person and teacher (*MA6*) for the Provincial Centre for Adult Education (CPIA) in Alessandria was involved in this phase.

The interviews revealed several concerns in different areas.

- *Territorial distribution*.

  Non-homogeneous distribution of North Macedonians is detected on the site. Some municipalities declare that no families live in Quaranti (*MA4*) and Vaglio Serra (*MA5*), while only one in Mongardino (*MA3*), among them.

- *Landscape perception*.

  In the perception of the members of this Balkan community, the landscape has remained the same as it continues to be planted with vines, says *MA2*. However, the situation has worsened as the number of hectares planted with vines has decreased significantly in Maranzana in recent years (*MA2*).

- *Social inclusion*.

  Generally, North Macedonians do not participate in communal festivals in the various villages due to their strong sense of identity (*MA2*), although they are usually invited. Instead, they organise parties among other people of the same nationality.

  Most of the people of this Balkan community in Maranzana have obtained the middle school diploma (no. 17 in total) thanks to the courses organised by the municipality and the CPIA of Asti (*MA2* and *MA6*). Moreover, almost 30 people have applied and obtained a B1 certification in Italian (*MA2*). These two certifications are significant for foreigners because they allow applying for a residence permit and Italian citizenship (*MA6*).

  To date, there are no similar experiences in the municipalities that are part of the same Union of Municipalities of which Maranzana is a member, i.e. the ‘Comunità Collinare Vigne e Vini’ (*MA2* and *MA6*). These municipalities are (**Figure 6**): Bruno, Calamandrana, Castelletto Molina, Castelnuovo Belbo, Cortiglione, Fontanile, Incisa Scapaccino, Maranzana, Mombaruzzo, Nizza Monferrato, and Quaranti. Most of them are part of Buffer Zone A of the serial property (Calamandrana, Castelletto Molina, partially Castelnuovo Belbo, Cortiglione, partially

Fontanile, partially Incisa Scapaccino, partially Maranzana, partially Nizza Monferrato, Quaranti, and Vaglio Serra), while portions of them are included in Components no. 4 “Nizza Monferrato and Barbera” (partially Nizza Monferrato and Vaglio Serra; UNESCO, 2014a, ref: 1390rev-004).

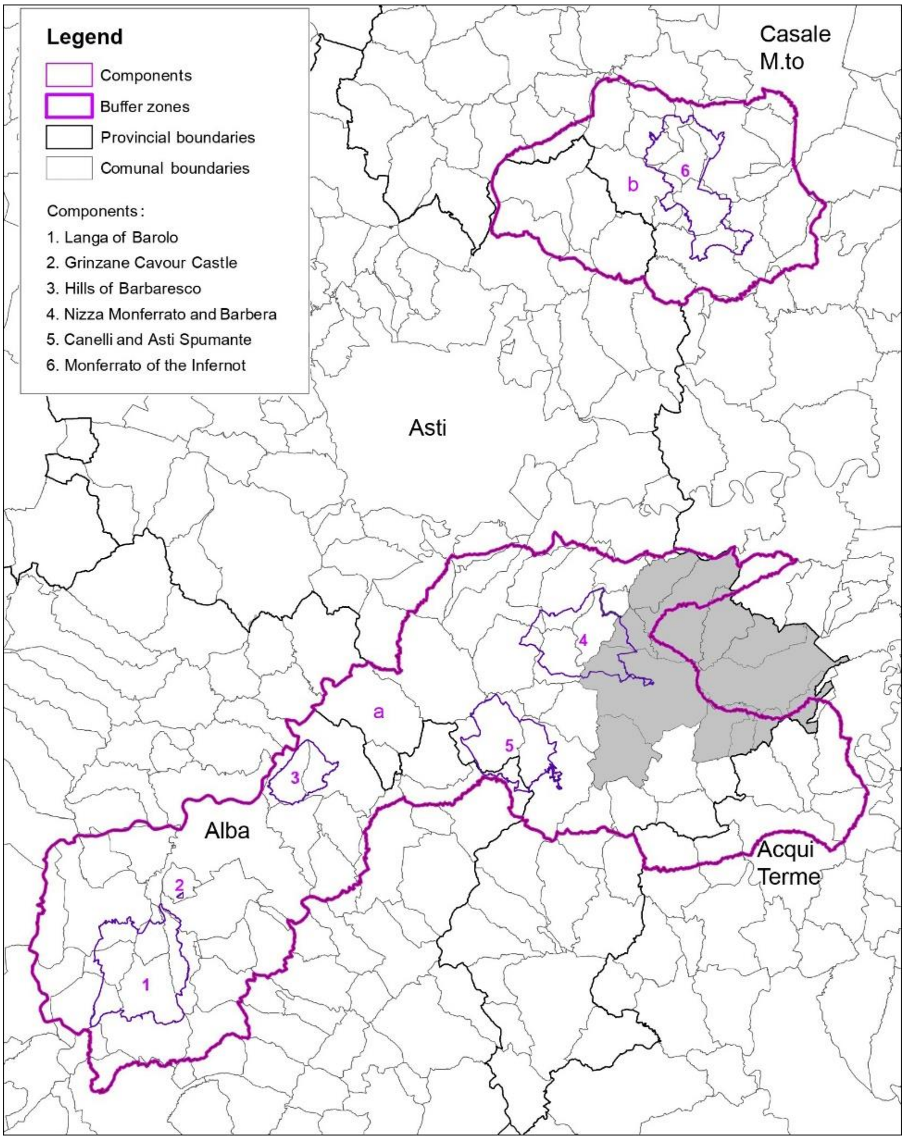

Legend
Components
Buffer zones
Provincial boundaries
Comunal boundaries
Components:
1. Langa of Barolo
2. Grinzane Cavour Castle
3. Hills of Barbaresco
4. Nizza Monferrato and Barbera
5. Canelli and Asti Spumante
6. Monferrato of the Infernot
Casale M.to
b
6
Asti
4
a
5
3
Alba
2
1
Acqui Terme

Figure 6 | In magenta and bounded with a continuous line, the map of the World Heritage buffer zones A and B; in violet, the six Components (UNESCO, 2014a, 1390rev-001, 1390rev-002, 1390rev-003, 1390rev-004, 1390rev-005, and 1390rev-006). In grey, the municipalities reported in the comparison and the serial Components and the Buffer Zones. (Source: https://www.regione.piemonte.it/web/sites/default/files/media/documenti/2018-11/paesaggi_vitivinicoli.pdf. Author’s elaboration.)

- *Job opportunities*.

In villages far from the local towns as Canelli and Nizza Monferrato, there are very few job opportunities (*MA2*). Moreover, the traditional field of interest of North Macedonians suffers from low wages, in

> addition to the already known difficulty in running the vineyard plots and the seasonality of processing (*MA2*). Rare people were employed as full-time permanent workers on some of the larger farms (*MA2*). However, agriculture remains a reservoir of employment potential (*MA2*).
>
> There is a shortage of agricultural workers, 2/3 fewer than before, due to these tough working conditions combined with the effects of the COVID-19 outbreak (from March 2020) (*MA2*). Many North Macedonians obtained Italian citizenship as a basic requirement to then go and work in Switzerland (*MA2*). As said, many have moved and no longer intend to return to the villages of the Langhe (*MA2*).

4.3.7 Survey on the relationship between landscape and locals in the site communities – questionnaire

After the survey launched to better understand the relationships of North-Macedonian communities in the villages and towns part of the World Heritage site "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a, ref: 1390rev) with the landscape, another one was devised. This new questionnaire aimed to see whether the same questions asked of North Macedonians could be answered in the same, similar or different way by local people living in those communities, i.e. who have been living or working there daily for several generations.

Reusing the previous structured questionnaire submitted to the North Macedonians, eight closed questions were presented, except for question Q5 concerning the degree of integration of the community in the local villages and towns. As with its predecessor, voting options were expressed in ratings (0 to 10) or multiple choices (e.g. Yes-No-Maybe). The expected completion time is 160 seconds, i.e. just over 2.5 minutes. Again, all responses provided by voters were guaranteed total anonymity, as was their collection in aggregated data.

Similarly, the method of preparing the questionnaire, using the free Google Forms service on the web, was confirmed. This choice was made in recognition of its potential to generate a web link easily shared by local people and cultural associations through social media channels (Facebook, in particular) and instant messaging apps (WhatsApp and Telegram), using snowball sampling. In addition, this preference allows the collection of answers provided by users automatically and with a fine graphical rendering thanks to the histograms generated automatically by the app.

The format was proposed to the community members of the 101 towns and villages that make up this UNESCO site, located in the Alessandria, Asti and Cuneo provinces. The mayors of several municipalities included in the serial property, such as Calamandrana, Canelli, Fontanile, Isola d'Asti, Maranzana, Moasca, Mongardino, Quaranti, Vinchio, and Vaglio Serra, supported and helped with the dissemination.

As with the questionnaire addressed to the North Macedonians, the questions proposed were the same, apart from Q5. For the sake of scientific correctness, they are listed again for the benefit of the reader:

Q1. How do you like the vineyard landscape of Langhe, Roero, and Monferrato?

Q2. How important do you think agriculture is as a job?

Q3. Would you work in agriculture?

Q4. How much do you feel about the territory you live in belongs to you?

Q6. Do you envisage a future for your sons/daughters in the towns, or villages, where you live, in the areas of Langhe, Roero and Monferrato?

Q7. Do the areas where you live (villages or towns, in the Langhe, Roero, and Monferrato) offer job opportunities?

Q8. In the last six years, how much has the vineyard landscape of Langhe, Roero and Monferrato changed?

Q9. In the last six years, has the vineyard landscape of Langhe, Roero, and Monferrato changed for the better or worse?

Potential voting options ranged from:

- excellent: 10 (highest satisfaction, positive),
- distinguished: 9,
- good: 8,
- discreet: 7,
- sufficient: 6,
- insufficient: 5,
- severely insufficient: 4,
- negative: 1-3, and
- void: 0 (lowest satisfaction, negative).

and were allocated to Q1, Q2, Q4, Q6, Q7, and Q8.

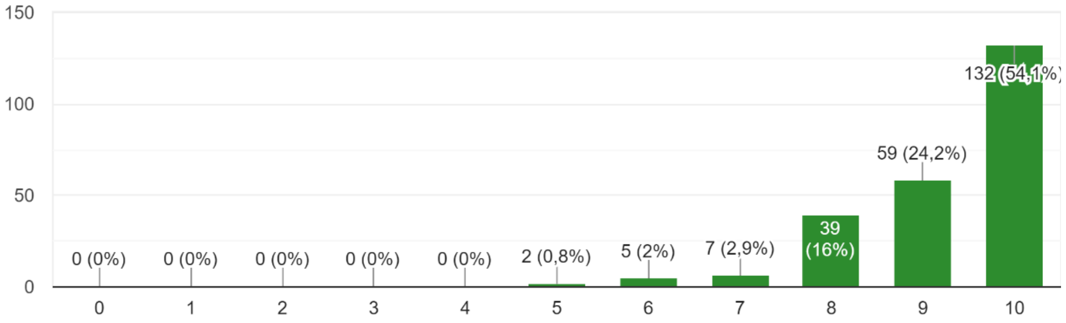
The multiple-choice questions, with three answer options already provided for Q3 and Q9, have been reconfirmed. Similarly, four short demographic questions have been reintroduced for each voter, concerning gender (male, female), age group (< 18, 18-25, 25-30, 30-40, 40-50, 50-65, or over 65), the province in which the person lives (Alessandria, Asti, or Cuneo) and the education (secondary school leaving certificate, high school diploma, secondary school leaving certificate, high school diploma, bachelor’s degree, master’s degree and PhD).

This questionnaire also aimed to explore the current situation of the communities in these territories to detect social trends in the site. In particular, the questions were intended to explore the:

- sense of belonging and rootedness (Q1, Q4),
- perception of the local landscape and its modifications (Q8, Q9),
- management of the vineyard landscape as stakeholders (Q2, Q3),
- perspectives for the next generation, from the mid to the long run (Q6), and
- perspectives for the present generation, in short terms (Q7).

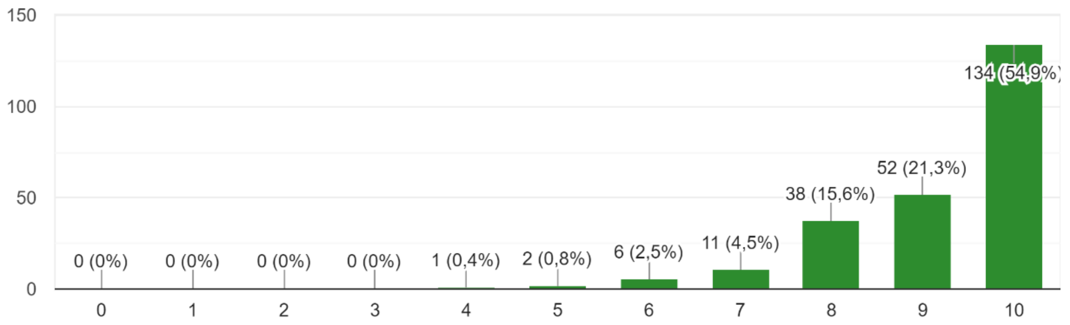
The questionnaire was submitted as of 09 February 2021 and was completed on 24 March 2021, i.e. 45 days after the launch. During this period, a total of 244 voters filled in the survey.
Again, the graphs for each question have been reported and commented on in the following parts of this chapter.

Q1. How do you like the vineyard landscape of Langhe, Roero, and Monferrato?



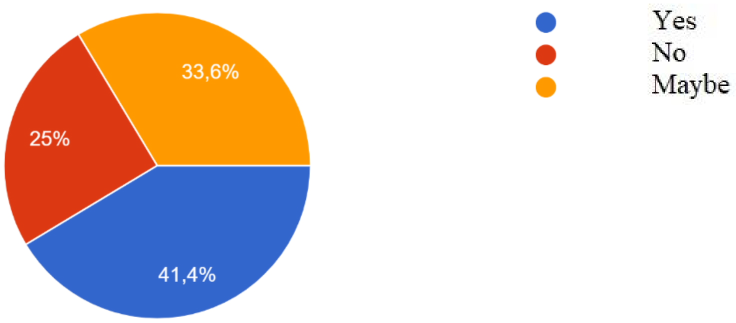
The graph shows a deep appreciation of the vineyard landscape of Langhe, Roero, and Monferrato among voters. Taking 6 as the pass mark, only 2 out of 244 marks are below this threshold, i.e. 0.8%. Only 12 people place their preference in the sufficient/discreet range (i.e. 6 and 7) among the positive votes. On the other hand, 230 out of 244 people expressed a highly positive opinion, ranging from good (8) to excellent (10). More than half of the total number of voters put their overall appreciation at 10 (54.1%). In general, a deep sense of belonging and rootedness in these territories emerges. Again, it should be emphasised that this appreciation is not simply linked to the visual component but rather to the experiential component, as the question does not direct voters to use a specific landscape component as a lens with which to examine these landscapes.

Q2. How important do you think agriculture is as a job?



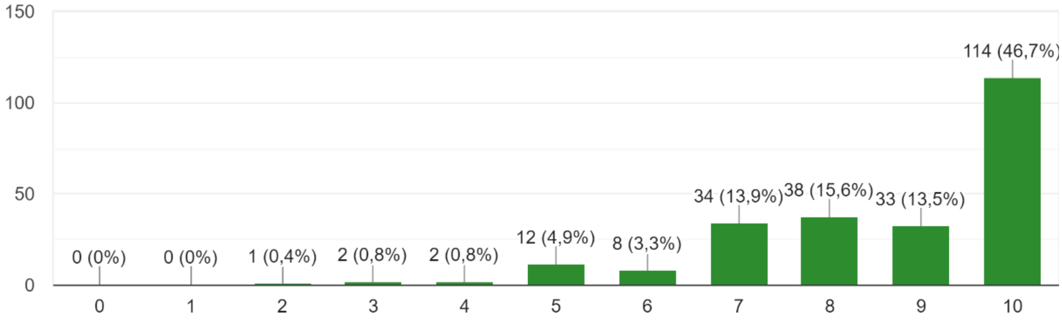
The graph highlights how voters consider work in the agricultural sector as relevant in a broad sense and therefore not directly linked to the territories of Langhe-Roero, and Monferrato. Considering 6 as the passing vote, only a small number of voters equal to 3 votes out of 244 are below this threshold, that is 1.2%. Only 17 people are in the sufficient/discreet range (i.e. 6 and 7) among the positive marks. The remaining 224 out of 244 persons provided a very good rating, ranging from good (8) to excellent (10). As many as 54.9% of voters voted with a 10 to indicate their strong consideration for this working area. Although the question is posed with more general connotations, it is possible to relate it to the willingness of voters to continue farming in the Langhe-Roero and Monferrato areas in the midterm. Agriculture continues to be perceived as central by 91.8% of people and as moderately relevant by only 7%. Presumably, there still seems to be a strong general interest in this type of work in local communities.

Q3. Would you work in agriculture?



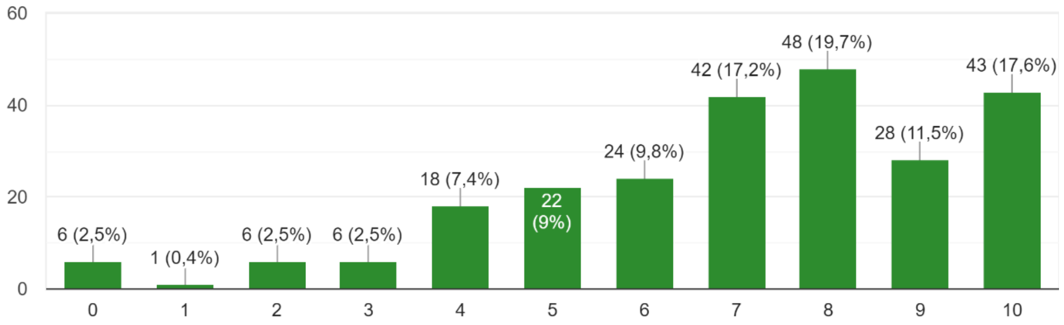
This graph indicates certain indecision of the people to personally carry out agricultural activities, where those who consider themselves willing correspond to a percentage of 41.1% of the total. As many as 25% declare their unwillingness to work in this field, in line with international trends concerning the abandonment and depopulation of rural villages. One-third of the people involved, on the other hand, have no specific idea about this possibility (33.6%). Although the question explores willingness in a general sense, it is nevertheless possible to relate it to the willingness of voters to continue farming in the Langhe-Roero and Monferrato areas in the short and mid-term. Although the positive percentage is about 41%, it is less than half of the positive one found in the previous question on the perception of farming as meaningful work (i.e. 98.8%). However, this percentage could hypothetically increase if we consider a slice of the undecided. Adding the ‘yes’ and ‘maybe’ preferences, the number reaches 75% of the total. However, it is worth remembering that the whole percentage of undecideds might not necessarily be inclined to make a personal commitment to agriculture. Thus, considering about half of the total undecided (i.e. 16.8%), a value of 58.2% would be reached, which still represents the majority of the voters.

Q4. How much do you feel about the territory you live in belongs to you?



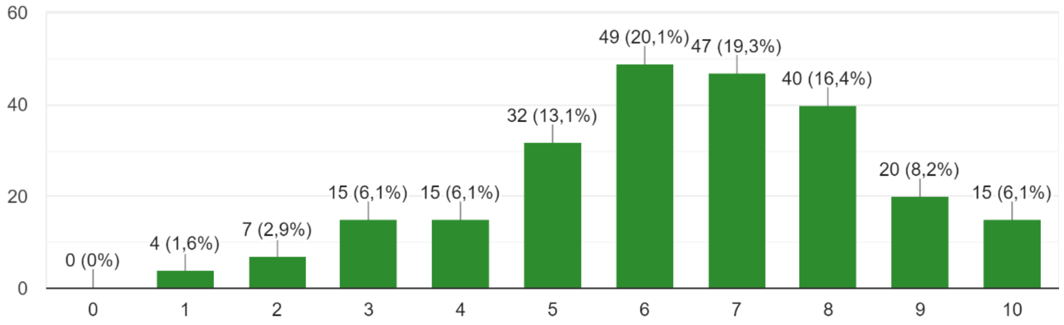
This histogram shows voters’ sense of belonging and rootedness on a scale of 0 to 10. The question is related to the territories where community members live and work, namely Langhe, Roero and Monferrato in Piedmont, Italy. Considering 6 as the sufficiency in the judgments, only 17 out of 244 voters voted below this threshold, i.e. 6.9%. However, most of the negative votes (12, or 4.9% of the total) are in the insufficiency column (5). On the one hand, 42 people are in the sufficient/discreet range (i.e. 6 and 7) among the positive grades. On the other hand, 185 out of 244 people gave a very good rating, ranging from good (8) to excellent (10). As many as 46.7% of the total voters put their attachment to these areas at 10. Consequently, it is possible to affirm their current deep connection to these areas, and this trend should remain similar in the medium term. The sense of belonging and rootedness is indeed strong in 75.8% of voters (i.e. three-quarters of the voters) and moderately relevant in 17.2%.

Q6. Do you envisage a future for your sons/daughters in the towns or villages where you live, in the areas of Langhe, Roero, or Monferrato?



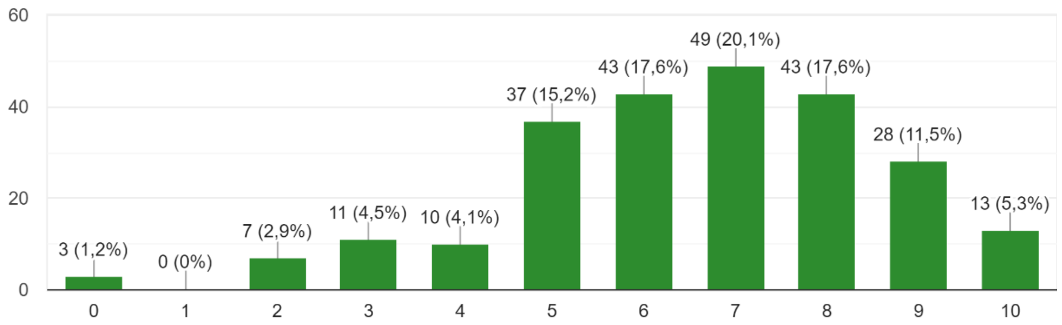
Regarding the medium- to long-term prospects of these territories, this graph contains several reflections. Considering 6 as the number identifying a sufficient vote, a good number of voters, 59 out of 244 i.e. 37.3%, fall below this threshold. However, only 22 of these 59 votes are in the insufficiency column (5), and alarmingly, 19 people place their ratings in the bands defined as null (0) and negative (1-3). On the positive side, 66 people posed themselves in the sufficient/discreet range (i.e. 6 and 7). Most ratings, however, fall in the range from good (8) to excellent (10). 119 out of 244 people give a very positive assessment of the prospects, with a polarisation of votes around good (48 voters, or 19.7%). In short, 27% have a positive outlook of the future and 48.8% share very positive hopes for the times ahead.

Q7. Do the areas where you live (villages or towns in the Langhe, Roero, or Monferrato) offer job opportunities?



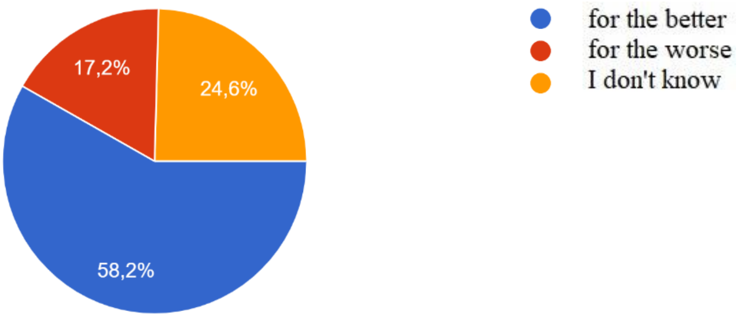
This graph concerns the perception of employment prospects for the current generation in the short term. Unlike the previous survey launched pre-pandemic, this one may include potential uncertainties generated by the ongoing COVID-19 pandemic in the Langhe, Roero, and Monferrato areas. However, from a general analysis, the picture is quite positive. On the one hand, 73 out of 244 voters describe their perception of employment as insufficient or severely insufficient (29.9%), but on the other hand, 171 out of 244 are moderately and very satisfied with the job opportunities available (70.1%). Among the positive feedback, 96 out of 244 fall into the sufficient/discreet category (39.4%) and 75 out of 244 into the very good/distinguished/excellent category (30.7%). This view could interrelate with the previous question and be the litmus test of possible actions as a consequence of the medium- and long-term perspectives commented; in fact, the aggregate percentage of positive votes is over 70.1%, similar to the previous graph of 75.8%.

Q8. In the last 6 years, how much has the vineyard landscape of the Langhe, Roero and Monferrato visually changed?



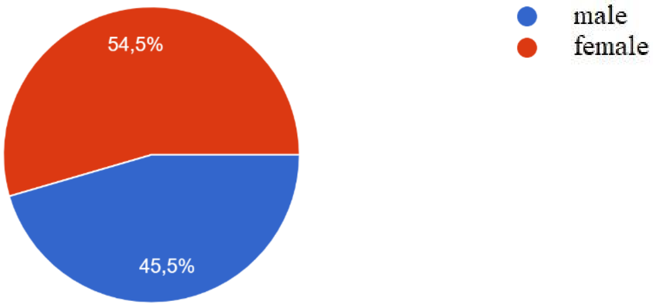
Concerning the vineyard landscape of Piedmont: Langhe-Roero and Monferrato is concerned, there seems to be an understanding on the part of the local people of the changes that have taken place during this period. For 68 out of 244 people (i.e. 27.8%), the landscape has changed little or nothing, taking six as the pass mark. Among them, the landscape has been almost static for the last six years for 21 people, or 8.6% of the total. Little change occurred for the other 47 (i.e. 19.3%), making it the largest group in the negative macro area. On the other hand, 72.1% recognise moderate, high and very significant changes in the landscape. 92 out of 244 distinguish mild impairments (37.7%), and the discrete range is numerically the most prominent in the graph. The remaining 84 people indicated high and substantial changes; of these, only 13 voters (or 5.3%) noticed considerable changes in the landscape.

Q9. In the last 6 years, has the vineyard landscape of the Langhe, Roero and Monferrato changed for the better or worse?



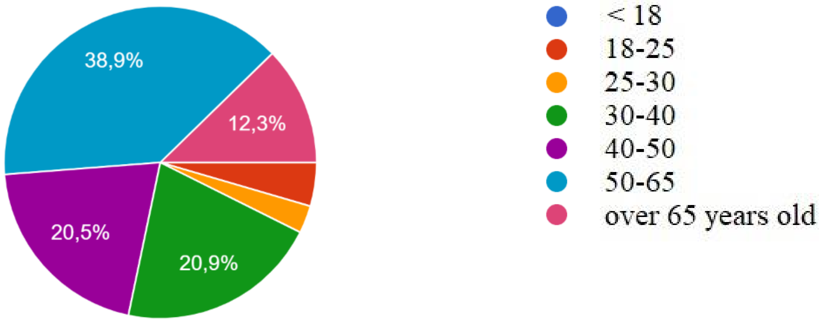
In this pie chart, an attempt has been made to understand how people in the local community perceive changes in the landscape. Most of them acknowledge that the landscape has changed for the better in the last six years (142 or 58.2%), while for others the alterations have worsened its overall quality (42 or 17.2%). However, a substantial proportion of voters could not say whether these changes were positive or negative (60, or 24.6%). It would be interesting to carry out further surveys to understand in a non-aggregated way the reasons that led these voters to express their opinion in the three modes described above.

- Gender



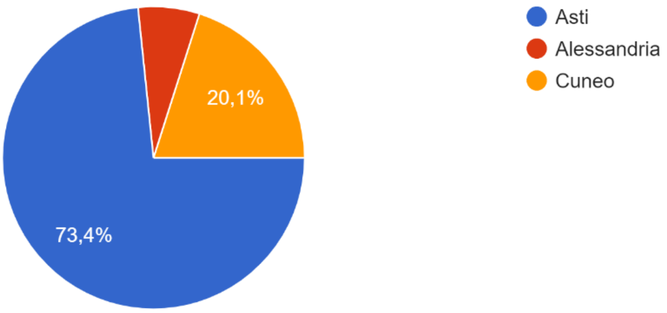
The pie chart shows, in aggregate, that most of the voters were women (i.e. 133, or 54.5%), while the rest were men (i.e. 111, or 45.5%). It means that women probably felt more involved in this survey since participation in the questionnaire is optional and purely voluntary.

- Age



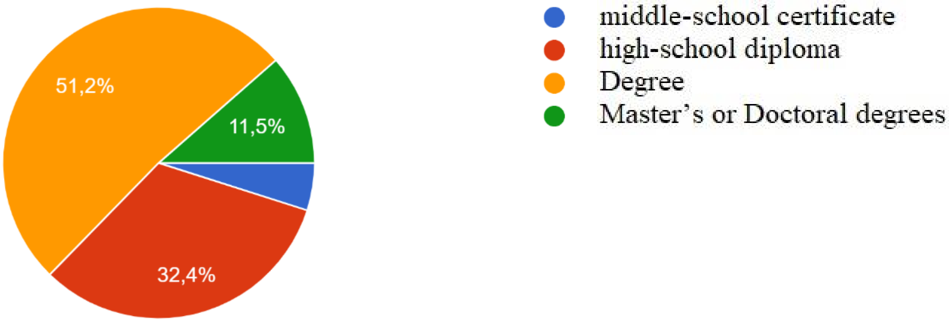
This graph shows the age group of the voters involved in the survey, i.e. < 18 years, 18-25, 25-30, 30-40, 40-50, 50-65, or over 65. All the indicated groups actively participated in the questionnaire, except for the < 18 years old group. The most relevant groups were 50-65 with 95 people (i.e. 38.9%), 30-40 with 51 people (i.e. 20.9%), and 40-50 with 50 members or 20.5%. Positively, the 18-25 bracket is composed of 11 members and corresponds to 4.5%, and the 25-30 bracket, with 7 people or 2.9%. Finally, the two ends of the survey, namely the over-65 bracket, with 30 members or 12.3% of the total, and the <18 band, with no voting members (0%).

- In which province of Piedmont do you live?



This pie chart shows that the province where most members of the voting community reside is Asti (179, or 73.4%), followed by Cuneo (49, or 20.1%). As already reported in the previous section of this thesis regarding the survey of North Macedonians, the province of Asti contains the majority of municipalities in buffer zones of serial ownership. It may have resulted in a higher percentage of voters residing or working there. The smallest number of voters, on the other hand, comes from the province of Alessandria: there are only 16, i.e. 6.6% of the total.

- Education



As regards educational qualifications, the majority of voting members have a university degree, i.e. 125 people or 51.2%. The second-largest in terms of numbers is the group with a high school diploma, comprising 79 members or 32.4% of the total. The third most relevant section of the diagram is the one made up of Doctorate or PhD holders, with 28 people or 11.5%. Lastly, there are 12 members with a secondary school certificate (i.e. 4.9%). What emerges from the survey is that the educational level of the respondents to this questionnaire is high.

To summarise, the graphs shown and commented on above show different trends in both positive and negative aspects. The generation between 18 and 25 years old did not participate in the questionnaire to a large extent, which raises doubts about their actual connection with the landscape of the Langhe, Roero and Monferrato areas. On the other hand, the identikit of the average voter of the questionnaire is female, in the age range 50-65, in possession of a university degree and resident in the province of Asti.

In this questionnaire, the bar graph Q1 also indicates a solid appreciation in experiential terms of these landscapes, not only in visual and/or perceptive terms. Similarly, the Q4 graph reveals a high sense of belonging and rootedness in the voters, slightly lower in absolute peaks than in the first graph.

In terms of perceptions of the local landscape and its changes, there was a more than fair awareness of the shifts that had occurred from UNESCO recognition (22 June 2014) to the launch of the questionnaire (24 March 2021), as depicted in the bar graph Q8. There are still 28% who say that the landscape has not changed significantly or is even unchanged, although the majority of voters (i.e. almost 72% of the electorate) implicitly recognise its dynamism and evolution over time. In this respect, most people think that positive changes have taken place in the landscape (Q9) but, noteworthy, there is about a quarter of voters who have no opinion on the positivity or negativity of these changes.

In managing the vineyard landscape, members of local communities still recognise agriculture as a central value (Q2). However, only 41.4% of voters say they would apply for a job in this sector (Q3), despite the general appreciation of this type of work. Reiterating this ambiguous relationship, the undecided towards this work practice: in the questionnaire, they are about one-third of the voters (Q3).

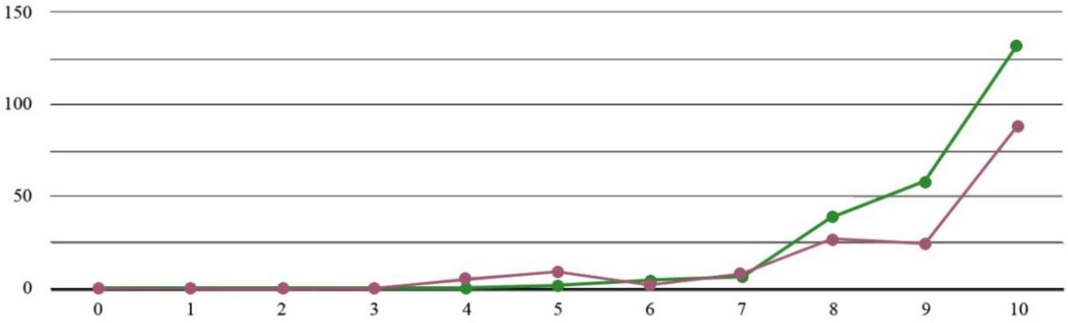
Finally, looking at the life and job prospects for the next generation in these areas, the data reveal a good level of optimism in predicting potential employment and work (Q6). One-third of people imagine an extremely positive outlook for them, even though this questionnaire was launched during the 3rd Italian wave of the COVID-19 epidemic. Moreover, these areas still seem to offer more than decent job opportunities to the people living there, although about one-third of respondents say they are dissatisfied with the number and nature of job offers available (Q7).

4.3.8 Comparison of the results of the questionnaires on the relationship between the landscape and the communities on the site (locals and North Macedonians)

The comparison of the statistical data collected in the above paragraphs showed a different understanding and perception of the landscape by the components of the local communities (people from outside, i.e. North Macedonians, and local people). These differences can be slightly or more evident and will be explained graph by graph. From the histograms previously created, a continuous broken line was drawn for each one, connecting the midpoint at the top to the individual columns making up the histogram. The two plots were then superimposed using Adobe Photoshop software for both graphic operations. The colours used are the same as in the previous paragraphs: green for local people and antique pink for North-Macedonian citizens (newcomers).

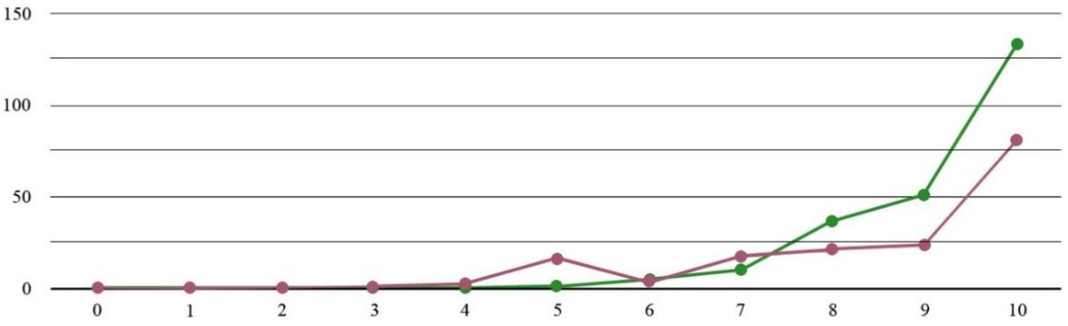
Q1. How do you like the vineyard landscape of Langhe, Roero, and Monferrato?

This question concerns the communities' (local + newcomers) sense of belonging and rootedness in this landscape. The graph shows a very similar trend between the two broken lines, although with different absolute values due to the different number of partial and total respondents. The prevailing value is 10, with a slightly more positive trend from locals (in green). The North Macedonian tendency (in old pink), on the other hand, shows a little more uncertainty, situated around values 5 and 9. In general, however, it can be said that there is a strong attachment to the landscape on both sides of the community, which for people of North Macedonian origin may not be so obvious.



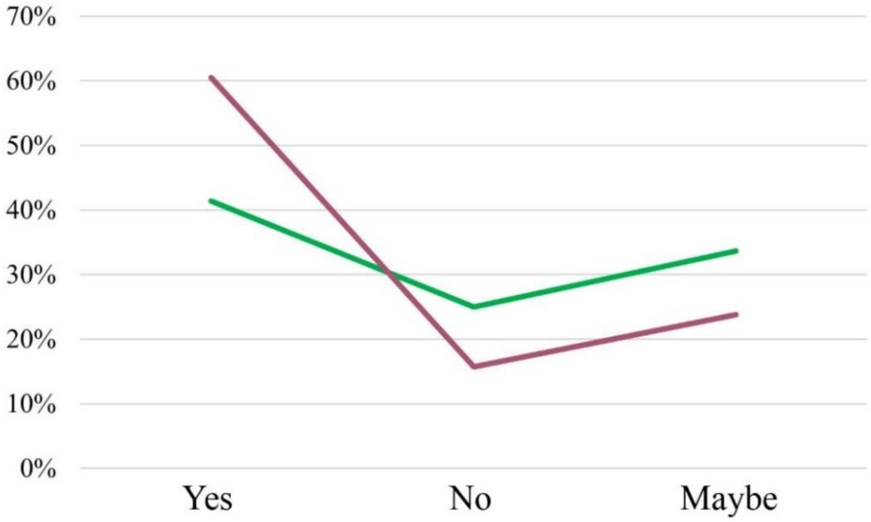
Q2. How important do you think agriculture is as a job?

This question concerns the understanding of the potential engagement of members of the site communities (locals + newcomers) in the management of the vineyard landscape as its custodians. The graph shows a trend of the two broken lines similar to the previous diagram for Q1. Again, the same uncertainties of the North-Macedonian people are evident in points 5 and 9 (in antique pink), with a less strong appreciation than the locals (in green) in points 7-8-9. In general, the two broken lines show the large goodwill of people composing the local communities to be involved in agricultural activities, even if not directly related to those in the UNESCO site territories.



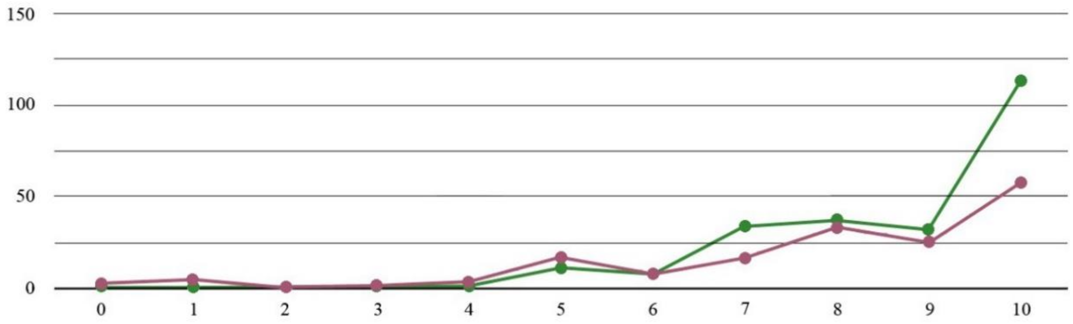
Q3. Would you work in agriculture?

Like question Q2, the query investigates the understanding of the potential engagement of members of the site communities (locals + newcomers) in the vineyard landscape management as its custodians. In addition, it can provide insight into the continuation of these productive landscapes by local populations, even if the question asked is general and not directly linked to the Langhe-Roero and Monferrato UNESCO site. Different wills emerge from the graph. North Macedonians (in old pink) are more likely to work in agriculture than locals (in green), with lower percentages of no and undecided. Thus, locals seem to appreciate the landscape more from an aesthetic, perceptual and experiential point of view, linked to personal or group enjoyment rather than as a place or option for work. This leads to questions about the future management of these landscapes, as there may be a mismatch between their appreciation and the labour of the local people who have lived there for generations. A possible risk in the background is to have people owning vineyard land living in the city and giving the Macedonian people (or other newcomers) to work the vines for mere investment.



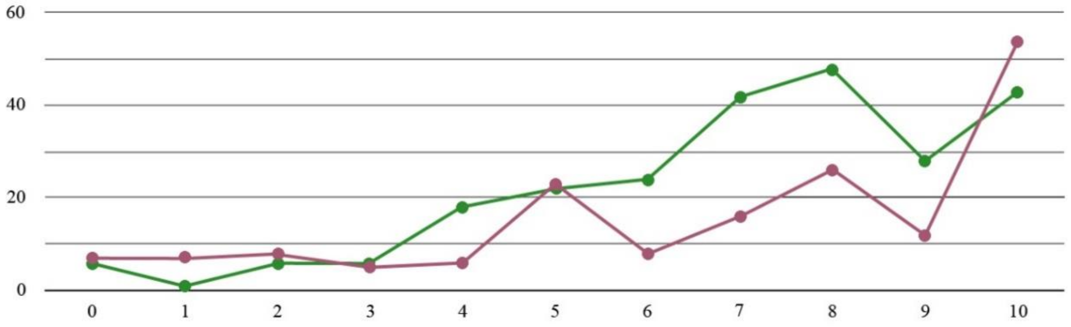
Q4. How much do you feel about the territory you live in belongs to you?

As with question Q1, this query aims to capture the communities' (local + newcomers) sense of belonging and rootedness in this landscape. The graph shows similar trends between the two broken lines, with denser statistical values in the range between 7 and 10. Thus, this reinforces the findings of question Q1, although with some differences between the components of the site communities. North-Macedonian newcomers show some more perplexity (point 5, in old pink) than the locals (in green) and a slightly more moderate sense of strong belonging and rootedness (points 7 and 10). In general, it can be said that the degree of belonging and rootedness is good/very good, and this is a litmus test for possible activities of co-management of these territories, involving and empowering the site communities.



Q6. Do you envisage a future for your sons/daughters in the towns or villages where you live, in the areas of Langhe, Roero, or Monferrato?

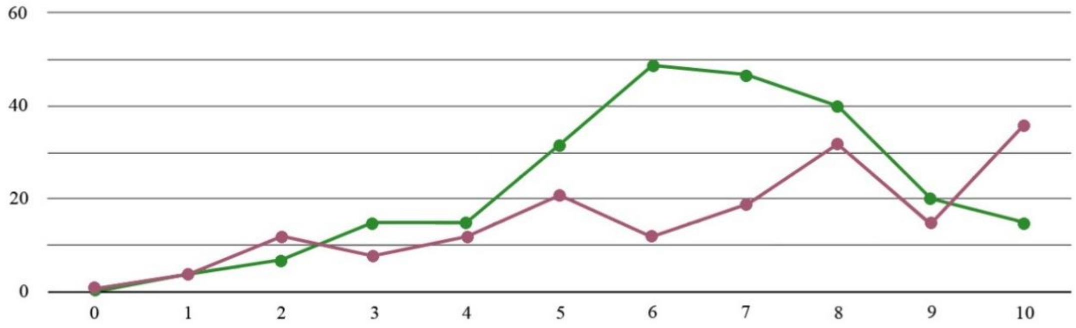
This query is about the perspectives for the next generation, from the mid to the long run. The graph shows some differences between newcomers (in old pink) and locals (in green) in terms of trends and the total number of people involved. Locals seem to have fewer deep doubts than North Macedonians (0-3), but a significant spike at value 4. Moreover, locals show a greater positivity in the transition between insufficient and positively moderate (point 6). For the locals, the highest statistical value is 8, while for the Balkan newcomers it is 10; moreover, in the light of the broken line, the Balkans seem to predict a future at this site. The locals, on the other hand, are somewhat less so. However, it has to be said that this question collects aggregate data and that the different areas of serial ownership, such as buffer zones, present evident asymmetries in terms of economic yield per hectare and consequent labour supply.



Q7. Do the areas where you live (villages or towns in the Langhe, Roero, or Monferrato) offer job opportunities?

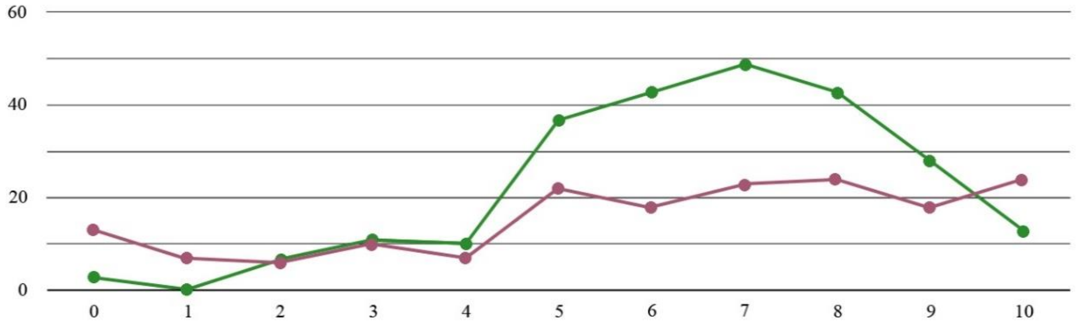
This question is linked to the previous one (Q6) and intends to investigate the working perspectives for the present generation in the short term. The graph shows two somewhat different realities for the same areas. The trend is positive for both, with the locals (in green) stating that it is moderately and fairly easy to find work in the UNESCO site areas, even with some slight difficulties. The trend of North

Macedonians (in old pink), on the other hand, reports a high and very high ease of finding work while reporting some minor difficulties. It probably depends on the sector one wants to work in and on people's aspirations, which are perhaps more varied in clubs. The tendency of these Balkan community, on the other hand, seems to suggest great job opportunities, as they constitute a labour force in demand in the area due to agricultural and mechanical processing linked to the wine industry.



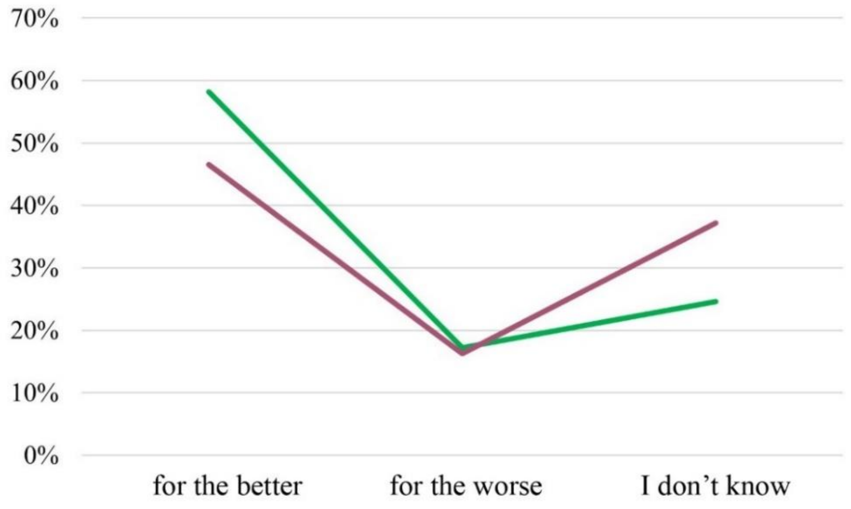
> Q8. In the last 6 years, how much has the vineyard landscape of the Langhe, Roero and Monferrato visually changed?

This question concerns the perception of the local landscape and its changes. The two trends show differences, which open up questions about how members of local communities understand and perceive the landscape. Locals (in green) show a trend that demonstrates their greater understanding of how the landscape is dynamic and changes over time, moderately and more dynamically (from 6 to 8). On the other hand, several state that it has changed little over time (5). North Macedonians, on the other hand, reveal little understanding of the changes that have occurred in the last six years, despite being directly involved in agricultural work. Although they state that it has changed, all values from 5 to 10 are around point 20. Significantly, point 0 is just below the score of 15. In general, both groups state that the landscape has changed moderately and significantly.



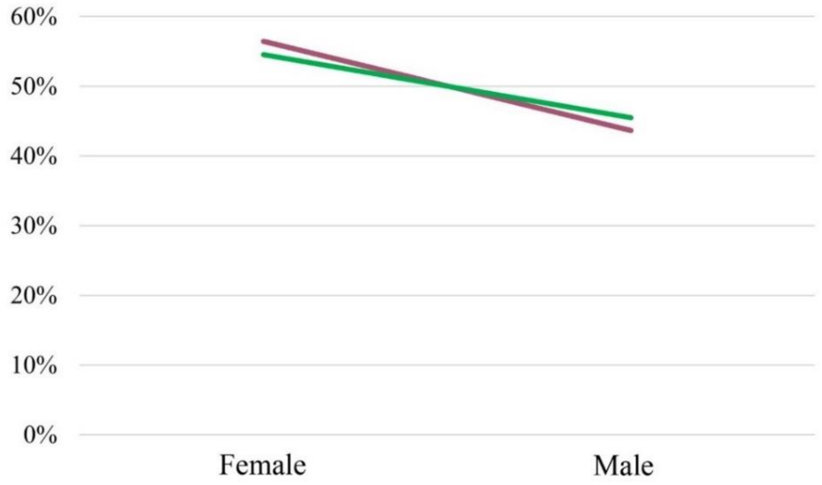
Q9. In the last 6 years, has the vineyard landscape of the Langhe, Roero and Monferrato changed for the better or worse?

This question is closely linked to the previous one (Q8) and intends to investigate the perception of the local landscape and its changes in the members of the site's communities. Although the trends appear similar, that of the locals indicates a greater awareness of the changes in the landscape (for better/worse), with a smaller percentage undecided or with no specific opinion (I do not know). North Macedonians have a significantly higher undecided voters percentage at almost 1/3 (in old pink) while showing a similar dynamic. By contrast, the percentage values of 'for worse' are quite similar in the two community groups.



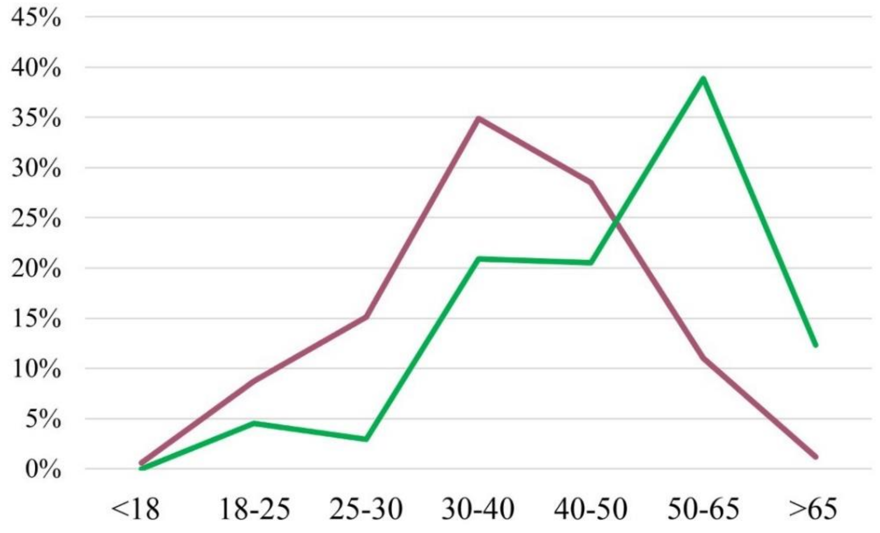
- Gender

The two trends are very similar, with female respondents outnumbering men in both groups. In absolute terms, the highest percentage value in terms of women is shown by the North Macedonian community (in antique pink) compared to the locals (in green).



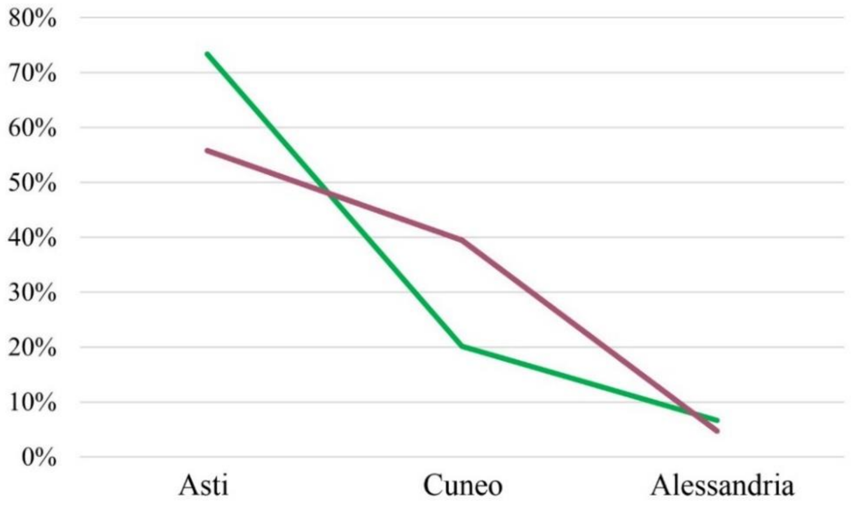
- Age

The graph shows very different trends, which seem to follow closely the demographic ones in the territories of the Langhe-Roero and Monferrato UNESCO site. The local macro-group of the North Macedonian community (in old pink) shows, in fact, a majority percentage of respondents, in its median, in the 30-40 years old group, as well as that of the generation that arrived first in the Langhe-Roero and Monferrato territories (40-50 years old). On the other hand, locals' graph (in green) shows a peak in the 50-65 age group, which is in line with the ageing of the population in these areas already described in the thesis. It can also be read as the second generation of North Macedonians feel involved in the reflections on the wine landscape of Langhe-Roero and Monferrato and are happy to give their opinion on it if requested.



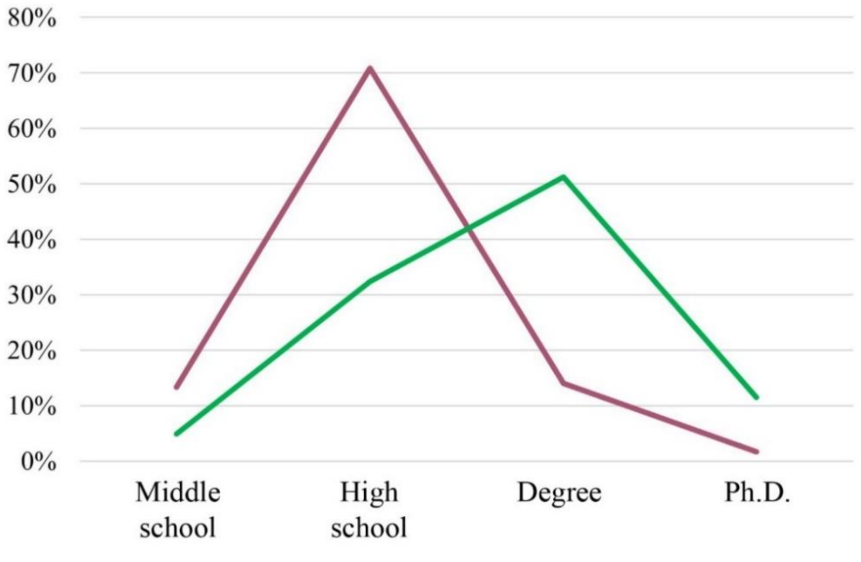
- In which province of Piedmont do you live?

The graph indicates that the voters most involved in the questionnaires are those living in the province of Asti, especially locals (in green). However, there are some differences between locals and these Balkan newcomers. The province of Asti continues to be the most represented in the number of North Macedonian participants in the survey (in old pink), with a higher percentage difference in votes than the province of Cuneo. However, the local voters are greater than the North Macedonians settled in the province of Asti; the situation is reversed if one looks at the province of Cuneo. In both trends, there is very limited involvement of people living in the serial component of the "Monferrato of the Infernot" (UNESCO, 2014a, 1390rev-006), which confirms a geographical disadvantage given by the fact of being geographically detached from most of the serial property (UNESCO, 2014a, 1390rev-001 to 1390rev-005).



- Education

In this last graph, it is the level of school education declared by the respondents. It shows significant differences between the two groups. The North Macedonian one displays a relevant peak referring to high school, while one of the locals shows a more moderate peak in the graduate sector. In the locals' group, the number of people with a PhD is higher than that of persons with a middle school certificate. In the light of these results, the questionnaire filled in by locals risks being somewhat elitist and may have excluded a portion of the population with a lower level of education and therefore not interested in answering such cultural questions.



4.3.9 Strategic objectives

In these territories, strategic guidelines and objectives seem to be working to ensure a 'political' balance between conservation and the search for possible sustainable development, trying to cover all those activities that contribute to the social-economic development and the quality of community life. The above is one of the main goals of the 'Association for the Heritage of the Langhe-Roero and Monferrato Vineyard Landscape', as reported in the management plan (2014a, p. 66). Its actions fit in the statements of the Faro Convention, which intends to "promote an integrated approach to policies concerning cultural, biological, geological and landscape diversity to achieve a balance between these elements" (CoE, 2005, Section II, art. 8.b). In that sense, "resilience promotes changes in the policies and strategies of institutions, organizations …" (Brunetta et al., 2019, p. 10), an approach that can be "related to the understanding of the concept of strong sustainability (Neumayer, 2003; Voghera & Giudice, 2019)" (Voghera & Aimar, 2022, in press).

This includes recently developed participatory and collaborative processes on landscape perceptions. They are becoming central to understand it (Scott et al., 2009) and embody a remarkable legacy of the Nomination process. Nature, people, and culture intertwine synergistically in a unique and large territory, as stated in the Code of Cultural and Landscape Heritage: "... the term landscape is defined as an integral part of the territory whose characteristics are derived from nature, the history of humanity or from their reciprocal interrelationships" (MiBACT, 2004, Third part, Title I, Chapter I, art. 131.1). Therefore, any economic, social, and cultural policy that intends to be effective must address the territory, adopting appropriate tools to positively influence its structure, as well as the landscape, to facilitate its control.

The governance model proposed in the management plan for the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a, ref: 1390rev) aims to find a balance between the preservation of the Outstanding Universal Value of the site and the development of human activities (UNESCO, 2008c). Landscape management is therefore not only an environmental and naturalistic affair but is particularly representative of the "… complex multiple relations between humans and their environment …" (Brunetta et al., 2019, p. 5), typical of cultural and productive identities.

The inscription on the UNESCO World Heritage List qualifies the local areas but placing them within a global imaginary. It amplifies the uniqueness of a serial property concerning the rest of the world (UNESCO, 2014a, p. 83) and, at the same time, receives and is influenced by international views. The latter needs to be elaborated by supra-local institutions and actors during general discussions and debates, such as the different issues related to genuine sustainable development and how to face climate change, for instance. From this point of view, a 'glocal' vision is necessarily the most appropriate, at least as far as UNESCO cultural landscapes are concerned.

In this sense, these territories have different active and passive purposes, including:

- *regulatory objective*: shared decision-making processes on landscape protection rules and regional land use planning. Indeed, the areas of Langhe-

Roero and Monferrato are considered a laboratory on the landscape topic related to spatial planning issues.

In vernacular architecture, the replacement of the traditional labour force by workers holding different skills typically impacts conservation and maintenance works. The impact of so-called 'newcomers' on the cultural landscape may go beyond their socio-political engagement in the new context and may be reflected in different ways of cultivating the land, for example. Regarding this, UNESCO pointed out that modifications in the “traditional systems” in “crop production” is one of the secondary factors affecting the Outstanding Universal Value (OUV) of the World Heritage Properties, under the primary factor titled “Biological resource use/modification” (UNESCO, 2008a)

However, the existence of quality regulations (i.e. PDO, PGI, TGI, CDO and CGDO) that regulate vine cultivation techniques according to the type of variety (e.g. Barolo, Muscat and Barbera, among others) offer precise cultivation methods which cannot be arbitrarily changed. For instance, the “Specifications for the protected designation of origin of the ‘Barolo’ wines” (MIPAAF, n.d.-b) strictly indicates the type of soil (clay, limestone and combinations thereof), the location (exclusively hilly), the altitude (between 170 metres and 540 metres above sea level), the exposure (excluding the northern slope from -45° to +45°), the planting density (number of vines per hectare, calculated on the planting layout, not less than 3,500), but above all the types of training and pruning systems: traditional, with counter-espalier training and Guyot pruning system (art. 4). Similarly, the same prescriptions are applied for the “Specifications for the protected designation of origin of the ‘Barbera d’Asti’ wines” (MIPAAF, n.d.-c), indicates the soils (clayey, loamy, sandy and calcareous, in their combinations), the location (exclusively hilly), the altitude (less than 650 metres above sea level), the exposure (except to the north), the planting density (vines per hectare, calculated on the planting layout, not less than 4,000), and above all the forms of cultivation and pruning systems. The latter must be traditional, with counter-espalier forms of cultivation with assurgent vegetation, while the pruning systems must be traditional Guyot, low spurred cordon and/or other forms that do not negatively affect the quality of the grapes (art. 4).

Instead, it will be necessary to understand how contemporary pressures, such as the ongoing climate change, can affect these crops, requesting for new solutions about altitude (higher), exposures (other than south), methods and techniques of vine breeding. These changes may have potentially dramatic impacts on the image of these landscapes in the mid- to long-term (Aimar & Jigyasu, forthcoming/2022), and consequently in terms of planning. In this perspective, the landscape resources need to be considered as a guiding element in the design choices of the planning process, as the "spatial dimensions" of "… the cultural uses and meanings of land" "… can be addressed through the idea of landscape" (Bloemers et al., 2010, p. 2);

- *identitarian objective*: strengthening the residents' identity and the sense of community around the local culture of wine-growing areas (UNESCO, 2014a, pp. 24-25). The results can be a stimulus for local communities to identify and undertake new development paths, to affirm and enhance their identity more and more. They become living bearers of the place-related identity, contributing to building a pervasive discourse on landscape resilience within the framework of spatial resilience (Brunetta & Caldarice, 2019);
- *cultural objective*: rediscovering and protecting minor local culture through the revival of traditions and typical products, both potential drivers and promoters of sustainable territorial development. Deepening the knowledge of the cultural and landscape heritage that characterises the site, its valorisation, promotion and awareness-raising are among the primary objectives established by the Statute of the 'Association for the Heritage of the Langhe-Roero and Monferrato Vineyard Landscape' (UNESCO, 2014a, pp. 63-79). It is based on the provisions of the Italian Code of the Cultural and Landscape Heritage, which calls for "… disseminating and increasing knowledge about the landscape …" (MiBACT, 2004, Third part, Title I, Chapter I, art. 132.3). They are aimed at deploying new paths to broaden and improve knowledge of the territory and its peculiarities. Tradition means being able to exploit the strengths but constantly renewing the operating methods;
- *aesthetic-perceptive objective*: today, the territory urgently needs new and high levels of quality; consequently, it is considered necessary to stimulate both a renewed education in beauty as a value and in the landscape as a common good. In this sense, landscape restoration policies can be promoted for the benefit of communities and future generations. Beauty is an important asset that deserves the sacrifice of research; and
- *monitoring and inventorial objective*: drawing up an accurate state of affairs of the territories forming part of the site. The spatial transformations monitoring requires special attention as they may alter structural invariants and elements characterising different landscapes. The purpose is to make any necessary corrections to the spatial planning (Devecchi, 2016) actions in due time. This survey will be essential for a precise update of the activities already contained and those that could be included in the management plan.

Another desirable objective is the promotion of the peculiarities and typicality of the places, considered as an asset, by coordinating environmental, cultural, and social activities. With the need to keep together the natural and aesthetic dimensions of the landscape, it seems possible to adopt specific management models for the territory (e.g. Cultural Districts) that enhance the cultural, historical and social dimensions (Gattoni, 2016).

A diagram is elaborated below based on the values and attributes system of a typical UNESCO cultural landscape (**Figure 7**) to appreciate the potential contribution of resilience within an integrated management system.

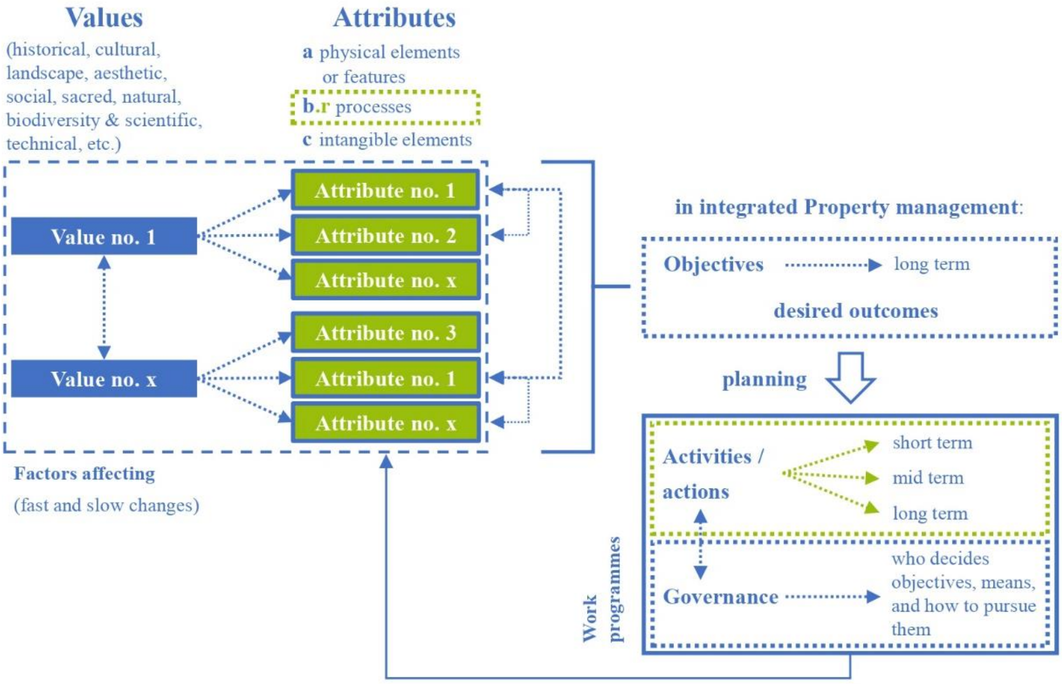

Values
(historical, cultural, landscape, aesthetic, social, sacred, natural, biodiversity & scientific, technical, etc.)
Attributes
a physical elements or features
b.r processes
c intangible elements
Value no. 1
Value no. x
Attribute no. 1
Attribute no. 2
Attribute no. x
Attribute no. 3
Attribute no. 1
Attribute no. x
Factors affecting
(fast and slow changes)
in integrated Property management:
Objectives
long term
desired outcomes
planning
Activities / actions
short term
mid term
long term
Governance
who decides objectives, means, and how to pursue them
Work programmes

Figure 7 | Potential connections in the revising procedure of a management plan of a World Heritage Site. The review makes it possible to integrate the concept of resilience into the activities and actions that are part of the work programmes, as well as into the processes that link them to site attributes (author's elaboration).

Values (e.g. historical, cultural, landscape, aesthetic, social, sacred, natural, biodiversity and scientific, technical, among others) are conveyed by different attributes, which may be interconnected. Similarly, values can also be interrelated. As attributes include physical elements or characteristics, processes and intangible elements, this research has highlighted the possibility of strengthening processes more by using resilience, as resilience works better on the connections between elements rather than on the elements themselves. For an adequate integrated management system, objectives need to be established in a long-term perspective and set to achieve desired results. It is necessary to establish what actions/activities are needed and how they should be carried out to plan effective work programmes. Actions and activities need to be modulated from the short to the long term and are elaborated using the specific resilience supplement in their programmatic lines. They need to relate to supra-local administrative bodies (provincial, regional, and state authorities, and their officers, managers, and politicians) as governance is not site-specific but is place-bound and relates to larger-scale systems. The outcomes of these processes need to be compared with the initial attributes of that landscape to verify whether the results match the previously established management purpose.

If discrepancies are detected, it will be clear which attributes need to be worked on to build the resilience of the landscape.

4.3.9.1 Urban planning

The total area of the "Vineyard Landscape of Monferrato: Langhe-Roero and Monferrato" site (UNESCO 2014a, ref: 1390rev) is subordinated to a series of regional, provincial, and municipal planning and governance tools. They are designed not only to ensure the protection and enhancement of Outstanding Universal Value (OUV) but also to promote the integrated management of the different components of the cultural landscape. It is possible to conceive a new way of protective action that must be active, dynamic, widespread, structural, participatory, concrete, and coherent, abandoning the division between protection and planning. In this sense, planning needs to focus on adopting new tools that address the problems of the humanised setting (Rolfo, 2006).

The World Heritage Nomination has also represented a fundamental stimulus regarding the rethinking and conception of the territorial planning concerning its possible development to define identity to allow continuity with the future. In this framework, "… resilience is a challenge for urban planning and not a fixed attribute of the system" (Brunetta et al., 2019, p. 10).

Considering the recent debates on the landscape, which is seems separated from the concept of territory, both the definition of landscape and the relationship to territory are at the centre of scientific controversy. These two terms are not equivalent or even synonymous. According to Eugenio Turri, the landscape can be considered a "source of information" (Turri, 2001) and a communicative tool to detect the relationships between society and the territory. The latter is considered as a spatial and two-dimensional projection of the environment. However, in a less reductionist vision of the territory, it can be meant as a system of relationships, infrastructures, assets to be protected and enhanced, thus posing as a factor of development, innovation, cultural integration based on the qualities it possesses and makes available.

The territory is, in fact, the forum for the becoming policies. The territorial model of weak metropolisation (Davezies, 2012) has proved to be less exposed to the risks of globalisation and able to capture rather than produce wealth. These areas are characterised by a core territorial offer based on the landscape and qualified services and sectors with low productivity growth. The latter would lead to some increase in employment. The desired objective is to promote them to prevent their homologation, especially in the relationship between territory and landscape.

The protective measures refer to regulations and planning tools at different levels, such as:

- European law on the protection of the environment and the landscape;
- the regulations for the protection of the Cultural and Landscape Heritage, at a national and regional level;

- regional, provincial, and municipal tools of territorial governance. Among the rules given by the regional government, some allow the planting of vineyards only in certain areas with specific altimetric and geographical characteristics (MIPAAF, n.d.-a, n.d.-b, n.d.-c); and
- the production rules for the protection of top-quality wine products. They establish the type and the scheme of planting to provide a landscape harmonisation.

The standards adopted to ensure the protection of the elements characterizing the landscape, directing the urban transformations of the territory towards the redevelopment and reuse of the existing. They introduce perceptual and panoramic elements according to the Components to be considered within the Plan, aiming to protect both the traditional patterns and textures of the rural landscape. As a consequence, in the Langhe-Roero and Monferrato World Heritage Site (2014a, ref: 1390rev), the minimum territorial size should be the Union of Municipalities. It would help to deal correctly with issues such as viewpoints, view cones, ridges and visual relations (Cassatella, 2014, 2015). Consequently, the appropriate scale seems to be the functional regions.

The main practical and theoretical tools of territorial governance affecting the quality of the Italian landscape are the Regional Territorial Plan (PTR, in Italian), the Regional Landscape Plan (PPR, in Italian) (UNESCO, 2014a, p. 452), the Territorial Plan of Provincial Coordination (PTCP, in Italian) (ibid., p. 458), and the Urban Development Plan (PRG, in Italian) (ibid., p. 461), in addition to other implementation tools such as Detailed Plans (PP, in Italian) and Recovery Plans. Contemporary complexity requires a continuous exchange of information to make the tools increasingly consistent with the different local realities and dynamics (Sarà, 2006) to consider the activities and cultures that inhabit them. This is because the methods of interaction with the territory have changed and will presumably change more and more because they are the result of the variable relationship with society.

Therefore, urban planning returns to claim a leading role, in which the concept of "… resilience has now firmly entered debates in planning theory and practice" (Shaw, 2012b, p. 308). It reverses the recent trend in large-area spatial planning, which in past years has only attracted interest in environmental issues. It was also amplified by the uncertain situation of the provinces as managing bodies, almost always already having a Provincial-Territorial Coordination Plan (PTPC) and the need to refer to the contents of the Regional Territorial Plan. In this sense, already visible interests and attentions have strengthened and become prominent in public opinions, such as stopping further soil sealing (Prokop et al., 2011) and landscape care in planning and regulation (Golinelli, 2006). If the goal is to achieve a resilient spatial system, it depends on the actual ability to increase the chances of resisting, or absorbing perturbations, or "… moving toward new trajectories of development (ability to be evolutionary)" (Brunetta & Caldarice, 2019, p. 1), by changing, adapting or transforming (Carpenter et al., 2005).

Accordingly, UNESCO Nomination can become a laboratory working on these issues in a vast territory view rather than confined and timely forecasts. It is becoming increasingly clear that action is needed across a vast area to achieve sound results that integrate local identity inclusively. Consequently, it seems desirable that future regional policies should act even more on the enhancement of territories as growth factors. So, "resilience… emerges from the characteristics of a complex interaction between the system itself and the interaction between society and its governance" (Brunetta et al., 2019, p. 6).

Finally, it looks strategic to implement a transformation process of local authorities that allows responding to the citizens' needs efficiently while retaining the typical features of small rural realities, such as the spirit of belonging to a territory, the strong and frequent human relations and willingness to cooperate. These elements, rarefied in urban areas, represent an added value for small communities. Thus, by combining efficient services with the elements of cultural tradition, it will be possible to offer a quality of life that can attract new residents and encouraging the local population to stay.

So, "the aim that characterizes evolutionary planning is building adaptative governance of territories …" (Brunetta et al., 2019, p. 7), promoting "… politics and practices with incentives to reinforce the community role and the adaptive capacity of systems" (*ibid*.). It will allow maintaining the rural territory, with beneficial effects on many aspects, such as the conservation of the existing building stock, the preservation of the hydrogeological system, and the maintenance and enhancement of quality agricultural products.

4.3.10 Identity and resilience

Even though "… heritage can be used as a pivotal element to improve social resilience" (Brunetta et al., 2019, p. 9), in the texts that compose the Nomination file of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" World Heritage Site (UNESCO, 2014a, ref: 1390rev), as well as in the management plan ones, the term 'resilience' does not appear openly. However, in the second and fourth of the objectives listed in the management plan named "A 'Social Landscape': (Where to live), and an 'Efficient Landscape': (Where to manage)" (UNESCO, 2014a, p. 6), it is possible to base a sound reflection on the potential contribution of resilience. It can concern the topic of updating the identity in the new social components settled in these areas. In this framework, "vulnerabilities and resilience are two key complementary factors that are strongly affected by the co-evolutive interaction between the community and its environment" (Brunetta et al., 2019, p. 8).

Territory and society have always been intertwined by a co-evolutionary relationship that is "… the basic condition of community resilience" (Brunetta et al., 2019, p. 7). Precisely, "… urban and territorial resilience are conceived as the co-evolutive property of a system" (Brunetta et al., 2019, p. 6). It can be defined as a long-lasting historical process, which results in the mutual transformation of people and their living environment, also contributing to biodiversity. The cyclical nature of the seasons characterises the cultivation of the vine and the production of wine, as well as marking the lives of those who cultivate it but it clashes with modernity and its linear time, made up of an eternal present composed of a succession of short moments. The time in the countryside is instead slow, the osmosis between man and the earth, in which time is an eternal return to the natural cycle. The same concept can be applied to human cultural evolution and its geographical diversification, although the mechanisms and time scales of cultural evolution are very different from those of biological evolution (Dematteis, 2006).

So-called inland territories (also called intermediate or in-between) such as the "Vineyard Landscape of Langhe-Roero and Monferrato" (UNESCO, 2014a) present some vulnerabilities. They are usually fragile and need to maintain their spatial quality intact (Rolando, 2016). The continuous variation of the anthropogenic component makes the quality of the landscape unstable and therefore any attention needs to be focused on maintaining the level of quality and trying to improve it (Torretta, 2016). Cultural globalisation and the behavioural standardisation of consumption patterns are also reflected in the transformation of the landscape, simplifying it and compromising the legibility of the signs of the past (Plieninger & Bieling, 2012).

Such dynamics risk bringing these UNESCO landscapes into a precarious state and in extreme cases to a progressive disappearance (Devecchi, 2016). Specifically, potential dangers could afflict both cultural properties and natural ones, according to the UNESCO World Heritage Convention (1972). These threaten, "… which could have deleterious effects on its inherent characteristics" (UNESCO, 2019a, para. 179.b-180.b), could be led to the inscription on the List of World Heritage in Danger by the Committee. The Operational Guidelines report a list of criteria regarding the "Potential Danger" (*ibid.*); among them, two seems potentially seem likely to relate to the "Vineyard of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a):

- for cultural properties: "lack of conservation policy" (UNESCO, 2019, para. 179.b, point ii); and
- for natural properties: "the management plan or management system is lacking or inadequate, or not fully implemented" (*ibid.*, para. 180.b, point iv).

To this end, it seems necessary to stimulate more and more in the marginal areas also a substantial recovery of the aesthetic and cultural component, because "resilience is a process that depends on endogenous community resources" (Brunetta et al., 2019, p. 7). This need is also affirmed at the national legislative level in the Italian Code of the Cultural and Landscape Heritage: "… The protection and the enhancement of the landscape shall safeguard the values which it expresses in terms of perceptible identifying manifestations" (MiBACT, 2004, Third part, Title I, Chapter I, art. 131.2). Moreover, it suggests the restoration as an operative tool to ensure "… the protection and the transmission of its cultural values" (*ibid.*).

From these points of view, landscape resilience appears to be a driver for the territorial innovation called for by Brunetta and Voghera (2008, p. 72). Once again, the latter fits in the abovementioned Code under the art. 132, point 2 that purse "… the aims of safeguarding and re-integrating the values of the landscape environment, with a view to sustainable development as well" (MiBACT, 2004). For this reason, the relationship between territorial innovation and landscape is an issue that concerns both those who live the territory daily (the stakeholders) and those who live it only occasionally (people from outside) (Rolando, 2016).

Physical networks are the real hardware of the territory, complemented by intangible ones. Those material ones constitute a powerful contemporary software supporting the economy and the territories, integrating cultural activities and elements of the historical tradition promoted by the inhabitants and the associations. In that sense: "The cultural and linguistic dimension of resilience … is a complex dynamic process that leads the community to recognise its environment, acknowledging the memory and heritage of previous generations, enriching the present" (Brunetta et al., 2019, p. 5). In this perspective, intangible networks are increasingly essential and indispensable for a clear understanding of the territory. "From this view, cultural and natural heritage are pivotal to maintaining the memory of the community and its sense of belonging and, therefore its maintenance or valuation deeply increases the cohesion and resilience of a community" (*ibid*., pp. 7-8). A necessarily complementary relationship, which is not antithetical in favouring sentimental positions on the one hand or desires for endless growth on the other hand.

As a result, "the integration of co-evolution in planning is, therefore, crucial and is based on two emergent conditions: the preservation of memory and the evolution capacity considering robustness, adaptive ability and vulnerability reduction" (*ibid*., p. 7). This wish is part of the actions to encourage the resilience of the system, i.e. the ability to reconsider the territory also facing realities affected by an inexorable process of ageing of the agricultural population and by an inadequate contribution of new young peoples. These scenarios are already underway and are leading to a gradual transition to new territorial management models.

Therefore, this transition must be faced and managed to plan responses (such as resilient tools or strategies) useful to deal with possible peaks of criticality (Scanavino, 2016). In that sense, "preservation is applied through a dynamic process to define new values allowing people to recognise the object as heritage" (Brunetta et al., 2019, p. 9). Consequently, these issues need to be discussed at the local level to stimulate more incisive and targeted actions because UNESCO World Heritage sites, more than other territories, have to be examples of excellence.

The Faro Convention refers that landscape protection is first and foremost the responsibility of the individual (CoE, 2005, section I, art. 1.b and art. 4.b), of communities (*ibid*., section II, art. 8.c) and not just of the institutions. Above all, caring for territories is an individual effort of small daily acts, which involves economic, intellectual, organisational, and human resources. It is because the appreciation of the environmental good, not being as easy to protect as an isolated building, requires a greater sharing of interests. In this perspective, the UNESCO nomination adds a further degree of sensitivity in heritage protection; this increases its focus on future planning of potential interventions to enhance the local wine economy within the global scenario.

A UNESCO cultural landscape benefits from a global position that makes it widely known; therefore, it is necessary to reflect on the scalarity and ethics of the locally made choices since these measures will be perceived by a final recipient who is instead global. Likewise, the question of ethics is underlined by the Faro Convention, which "encourage(s) reflection on the ethics and methods of presentation of the cultural heritage …" (CoE, 2005, section II, art. 7, point a).

Finally, it is necessary to create and grow a widespread sense of citizenship, which commits the citizen to protect and improve the landscape in the long-term for the benefit of all. "This process arises through a multi-level and multi-sectorial vision of the responsibility of adaptive and flexible governance and of planning solutions in a medium-long perspective" (Brunetta et al., 2019, p. 10). In that sense, "the relationship between the intention of a community and co-evolution are key aspects of the concept of responsibility" (*ibid*., p. 11).

4.4 Visiting research period at ICCROM, Rome

A visiting research period has been carried out at the International Centre for the Study of the Preservation and Restoration of Cultural Property (hereinafter ICCROM), in Rome, from February 3rd to 28th, 2020, to perfect several concepts to support the investigations.

Along with the International Council on Monuments and Sites (ICOMOS) and the International Union for Conservation of Nature (IUCN), ICCROM is the advisory body of the World Heritage Committee and has official institutional partnerships with other international bodies such as UNESCO.

Relating to the World Heritage Convention, ICCROM is the international organisation recognised as the leading partner responsible for conservation training in the cultural heritage field. Moreover, it usually monitors the State of Conservation (SoC) of the Properties on the World Heritage List, examining demands for International Assistance presented by States Parties, doing research, and offering responses and assistance for capacity-building endeavours (advocacy, or preparedness).

Multiple consultations have been regularly carried out by the candidate with the officers are serving in ICCROM during this visiting period to feed up the current research. The people involved are multiple and, in detail:

- *IC1*, World Heritage Leadership Programme Coordinator, Programme Unit;
- *IC2*, First Aid Resilience Project Manager, Programme Unit;
- *IC3*, Project Manager in Conservation of Historic Sites and Landscapes, Programme Unit; Officer at ACA - Japanese Agency for Cultural Affairs;

- *IC4*, Project Manager in Urban Heritage, Climate Change & Disaster Risk Management, Programme Unit; former Vice President of ICOMOS (International), past President of ICOMOS India, and ex-UNESCO Chair Professor at the Ritsumeikan University, Kyoto, Japan;
- *IC5*, Director, Programme Unit;
- *IC6*, Director, Partnership and Communication Unit; former Director of the Sites Unit;
- *IC7*, Liaison Officer Cooperation with Italy, Office of the Director-General; and
- *IC8*, Director-General.

The name and surname of the listed persons have been omitted due to privacy implications, reporting them only through their professional qualifications. There is gender equality in the group of people listed above, where the males are 4 out of 8 (50%) and females are 4 out of 8 overall (50%).

To detect a potential lack of proactive tools in the management plans of the World Heritage site related to newcomers, *IC4* has suggested a pervasive survey of the existing World Heritage properties under the State of Conservation (SoC, hereinafter) reports updated to February 2020.

To put the survey in context, the IUCN and ICOMOS Connecting Practice Programme Dossier - Phase II states that “Since 2000, an average of 147 SoC reports have been discussed per year. A statistical analysis published in 2014 showed that management and institutional factors are the most often identified issues in SoC reports, affecting 77% of the properties considered …. Of these, cultural properties are particularly affected, with 92% of the SoC reports referring to inappropriate management activities, 77% involving legal framework issues, and 65% related to management systems/management plans issues …” (Leitão et al., 2017, p. 6).

In detail, the current PhD investigation reveals that there are 28 World Heritage agricultural landscapes worldwide as of 2019, according to the State of Conservation of World Heritage properties. Below is the list of these landscapes, sorted alphabetically:

1. **Agave Landscape and Ancient Industrial Facilities of Tequila**.
   Located in Mexico (20°51'47.0"N 103°46'43.0"W), they were inscribed on the World Heritage List in 2006 under the criteria (ii), (iv), (v) and (vi). The Property consists of two Components covering an area of 35,018.852 ha, while the Buffer zone an area of 51,261.334 hectares (UNESCO, 2006, ref: 1209);
2. **Agricultural Landscape of Southern Öland**.
   Located in Sweden (56°19'30.0"N 16°28'60.0"E), it was inscribed on the World Heritage List in 2000 under the criteria (iv) and (v). The Property covers a surface of 56,323 ha, while the Buffer zone an area of 6,069 ha (UNESCO, 2000a, ref: 968);

3. **Alto Douro Wine Region**.
   Located in Portugal (41°06'06.0"N 7°47'56.0"W), it was inscribed on the World Heritage List in 2001 under the criteria (iii), (iv) and (v). The Property covers a surface of 24,600 ha, while the Buffer zone an area of 225,400 ha (UNESCO, 2001a, ref: 1046);

4. **Archaeological Landscape of the First Coffee Plantations in the South-East of Cuba**.
   Located in Cuba (20°01'48.0"N 75°23'29.0"W), it was inscribed on the World Heritage List in 2000 under the criteria (iii) and (iv). The Property is composed by seven Components that cover an overall surface of 81,475 ha, with no Buffer zone (UNESCO, 2000b, ref: 1008);

5. **Bassari Country: Bassari, Fula and Bedik Cultural Landscapes**.
   Located in Senegal (12°35'36.0"N 12°50'45.0"W), they were inscribed on the World Heritage List in 2012 under the criteria (iii), (v) and (vi). The Property is composed by three Components that cover a total surface of 50,309 ha, while the three Buffer zones an overall area of 240,756 ha (UNESCO, 2012a, ref: 1407);

6. **Coffee Cultural Landscape of Colombia**.
   Located in Colombia (5°28'18.0"N 75°40'54.0"W), it was inscribed on the World Heritage List in 2011 under the criteria (v) and (vi). The Property is composed by six Components that cover an overall surface of 141,120 ha, while the six Buffer zones a global area of 207,000 ha (UNESCO, 2011a, ref: 1121);

7. **Costiera Amalfitana**.
   Located in Italy (40°38'00.0"N 14°36'10.0"E), it was inscribed on the World Heritage List in 1997 under the criteria (ii), (iv) and (v). The Property covers a surface of 11,231 ha, while no Buffer zone is defined (UNESCO, 1997a, ref: 830);

8. **Cultural Landscape of Bali Province: the Subak System as a Manifestation of the Tri Hita Karana Philosophy**.
   Located in Indonesia (8°15'33.0"S 115°24'10.0"E), it was inscribed on the World Heritage List in 2012 under the criteria (ii), (iii), (v) and (vi). The Property is composed by five Components that cover an aggregate surface of 19,519.9 ha, while the five Buffer zones a cumulative area of 1,454.8 ha (UNESCO, 2012b, ref: 1194rev);

9. **Cultural Landscape of Honghe Hani Rice Terraces**.
   Located in China (23°05'35.8"N 102°46'47.9"E), it was inscribed on the World Heritage List in 2013 under the criteria (iii) and (v). The Property covers a surface of 16,603.22 ha, while the Buffer zone an area 29,501.01 ha (UNESCO, 2013a, ref: 1111);

10. **Cultural Landscape of the Serra de Tramuntana**.

Located in Spain (39°43'51.0"N 2°41'41.0"E), it was inscribed on the World Heritage List in 2011 under the criteria (ii), (iv) and (v). The Property covers a surface of 30,745 ha, while the Buffer zone an area of 78,617 ha (UNESCO, 2011b, ref: 1371);

11. **Jurisdiction of Saint-Emilion**.
    Located in France (44°53'41.0"N 0°09'19.0"E), it was inscribed on the World Heritage List in 1999 under the criteria (iii) and (iv). The Property covers a surface of 7,847 ha, while the Buffer zone an area of 5,101 ha (UNESCO, 1999a, ref: 932);
12. **Konso Cultural Landscape**.
    Located in Ethiopia (5°18'00.0"N 37°24'00.0"E), it was inscribed on the World Heritage List in 2011 under the criteria (iii) and (v). The Property covers a surface of 23,000 ha, while no Buffer zone is defined (UNESCO, 2011c, ref: 1333rev);
13. **Kuk Early Agricultural Site**.
    Located in Papua New Guinea (5°47'01.4"S 144°19'54.2"E), it was inscribed on the World Heritage List in 2008 under the criteria (iii) and (iv). The Property covers a surface of 116 ha, while the Buffer zone an area of 195 ha (UNESCO, 2008d, ref: 887);
14. **Landscape of Grand Pré**.
    Located in Canada (45°07'06.0"N 64°18'26.0"W), it was inscribed on the World Heritage List in 2012 under the criteria (v) and (vi). The Property covers a surface of 1,323.24 ha, while the Buffer zone an area of 5,865 ha (UNESCO, 2012c, ref: 1404);
15. **Landscape of the Pico Island Vineyard Culture**.
    Located in Portugal (38°30'48.4"N 28°32'28.2"W), it was inscribed on the World Heritage List in 2004 under the criteria (iii) and (v). The Property is composed by two Components, and it covers a surface of 987 ha, while the three Buffer zones an overall area of 1,924 ha (UNESCO, 2004, ref: 1117rev);
16. **Lavaux, Vineyard Terraces**.
    Located in Switzerland (46°29'31.0"N 6°44'46.0"E), they were inscribed on the World Heritage List in 2007 under the criteria (iii), (iv) and (v). The Property covers a surface of 898 ha, while the Buffer zone an area of 1,408 ha (UNESCO, 2007, ref: 1243);
17. **Palestine: Land of Olives and Vines – Cultural Landscape of Southern Jerusalem, Battir.**
    Located in Palestine (31°43'11.0"N 35°07'50.0"E), it was inscribed on the World Heritage List in 2014 under the criteria (iv) and (v). The Property is composed by two Components, and it covers a surface of 348.83 ha, while the Buffer zone an aggregate area of 623.88 ha (UNESCO, 2014d, ref: 1492);

18. **Portovenere, Cinque Terre, and the Islands (Palmaria, Tino and Tinetto)**.
    Located in Italy (44°06'25.0"N 9°43'45.0"E), they were inscribed on the World Heritage List in 1997 under the criteria (ii), (iv) and (v). The Property is composed by four Components, and it encompasses a surface of 4,689.25 ha, while no Buffer zone is defined (UNESCO, 1997b, ref: 826);
19. **Rice Terraces of the Philippine Cordilleras**.
    Located in the Philippines (16°56'02.0"N 121°08'12.0"E), they were inscribed on the World Heritage List in 1995 under the criteria (iii), (iv) and (v). The Property is composed by five Components, but no data are provided neither for the Property Components nor for the Buffer Zone in terms of aggregated areas (UNESCO, 1995, ref: 722);
20. **Stari Grad Plain**.
    Located in Croatia (43°10'54.0"N 16°38'19.0"E), it was inscribed on the World Heritage List in 2008 under the criteria (ii), (iii) and (v). The Property covers a surface of 1,376.53 ha, while the Buffer zone an area 6,403.13 ha (UNESCO, 2008e, ref: 1240);
21. **The Causses and the Cévennes, Mediterranean agro-pastoral Cultural Landscape**.
    Located in France (44°13'13.0"N 3°28'23.0"E), it was inscribed on the World Heritage List in 2011 under the criteria (iii) and (v). The Property covers a surface of 302,319 ha, while the Buffer zone an area of 312,425 ha (UNESCO, 2011d, ref: 1153rev);
22. **The Climats, terroirs of Burgundy**.
    Located in France (47°03'29.0"N 4°51'52.0"E), it was inscribed on the World Heritage List in 2015 under the criteria (iii) and (v). The Property is composed by two Components, and it covers a total surface of 13,219 ha, while the Buffer zone an aggregated area of 50,011 ha (UNESCO, 2015a, ref: 1425);
23. **Tokaj Wine Region Historic Cultural Landscape**.
    Located in Hungary (48°09'00.0"N 21°21'00.0"E), it was inscribed on the World Heritage List in 2002 under the criteria (iii) and (v). The Property is composed by seven Components, and it covers a global surface of 13,255 ha, while the Buffer zone an area of 74,879 ha (UNESCO, 2002a, ref: 1063);
24. **Viñales Valley**.
    Located in Cuba (22°37'00.0"N 83°43'00.0"W), it was inscribed on the World Heritage List in 1999 under the criterion (iv). No data are provided neither for the Property Components nor for the Buffer Zone (UNESCO, 1999b, ref: 840rev);
25. **Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato**.
    Located in Italy (44°36'31.0"N 7°57'49.0"E), it was inscribed on the World Heritage List in 2014 under the criteria (iii) and (v). The Property is

composed by six Components and covers a surface of 10,789 ha, while the two Buffer zones an overall area of 76,249 ha (UNESCO, 2014a, ref: 1390rev);

26. **Wachau Cultural Landscape**.
    Located in Austria (48°21'52.0"N 15°26'03.0"E), it was inscribed on the World Heritage List in 2000 under the criteria (ii)(iv). The Property covers a surface of 18,387 ha, while the Buffer zone an area of 2,942 ha (UNESCO, 2000c, ref: 970);
27. **Kujataa Greenland: Norse and Inuit Farming at the Edge of the Ice Cap**.
    Located in Denmark (61°09'52.0"N 45°35'53.0"W), it was inscribed on the World Heritage List in 2017 under the criterion (v). The Property is composed by five Components, and it covers an overall surface of 34.892 ha, while the two Buffer zones an aggregated area of 57.227 ha (UNESCO, 2017, ref: 1536); and
28. **Le Colline del Prosecco di Conegliano e Valdobbiadene**.
    Located in Italy (45°57'10.9"N 12°13'34.0"E), it was inscribed on the World Heritage List in 2019 under the criterion (v). The Property covers a surface of 20,334.2 ha, while the Buffer zone an area of 43,988.2 ha (UNESCO, 2019c, ref: 1571rev).

In this qualitative survey, it emerges that most of the above landscapes are suffering from primary and secondary factors of change, which are affecting these World Heritage properties.

The primary factors include the variation in “social/cultural uses of heritage” (UNESCO, 2008a) in 11 of the 28 landscapes covered by this exploration; two secondary factors are also related.

Precisely, they are listed as follow:

2. **Agricultural Landscape of Southern Öland** (UNESCO, 2000a, ref: 968);
3. **Alto Douro Wine Region** (UNESCO, 2001a, ref: 1046);
8. **Cultural Landscape of Bali Province: the Subak System as a Manifestation of the Tri Hita Karana Philosophy** (UNESCO, 2012b, ref: 1194rev);
9. **Cultural Landscape of Honghe Hani Rice Terraces** (UNESCO, 2013a, ref: 1111);
11. **Jurisdiction of Saint-Emilion** (UNESCO, 1999a, ref: 932);
15. **Landscape of the Pico Island Vineyard Culture** (UNESCO, 2004, ref: 1117rev);
16. **Lavaux, Vineyard Terraces** (UNESCO, 2007, ref: 1243);

17. **Palestine: Land of Olives and Vines – Cultural Landscape of Southern Jerusalem, Battir** (UNESCO, 2014d, ref: 1492);
18. **Portovenere, Cinque Terre, and the Islands (Palmaria, Tino and Tinetto)** (UNESCO, 1997b, ref: 826);
19. **Rice Terraces of the Philippine Cordilleras** (UNESCO, 1995, ref: 722); and
20. **Stari Grad Plain** (UNESCO, 2008e, ref: 1240).

The first one among the secondary factors of change is the "identity, social cohesion, changes in local population and community" (UNESCO, 2008a), detected both in the State of Conservation (SoC) reports and in the Periodic Reports in 7 out of 11 Properties.
Precisely, they are listed as follow:

2. **Agricultural Landscape of Southern Öland** (UNESCO, 2000a, ref: 968), according to the 2013 Periodical Reporting, (Cycle 2) Section II;
3. **Alto Douro Wine Region** (UNESCO, 2001a, ref: 1046),
   according to the 2014 Periodical Reporting, (Cycle 2) Section II, which affect the criteria (iii), (iv) and (v);
8. **Cultural Landscape of Bali Province: the Subak System as a Manifestation of the Tri Hita Karana Philosophy** (UNESCO, 2012b, ref: 1194rev);
   according to the 2014, 2015, 2017 and 2019 State of Conservation (SoC) reports;
11. **Jurisdiction of Saint-Emilion** (UNESCO, 1999a, ref: 932),
   according with 2014 Periodic Reporting, (Cycle 2) Section II;
16. **Lavaux, Vineyard Terraces** (UNESCO, 2007, ref: 1243),
   according with 2013 Periodic Reporting, (Cycle 2) Section II;
17. **Palestine: Land of Olives and Vines – Cultural Landscape of Southern Jerusalem, Battir** (UNESCO, 2014d, ref: 1492),
   according with 2015, 2016, 2017, 2018 and 2019 State of Conservation (SoC) reports; and
18. **Portovenere, Cinque Terre, and the Islands (Palmaria, Tino and Tinetto)** (UNESCO, 1997b, ref: 826),
   according with 2014 Periodic Reporting, (Cycle 2) Section II, which affect the criteria (ii), (iv) and (v).

The second one among the secondary factors of change is: "Changes in traditional ways of life and knowledge system" (UNESCO, 2008a), detected both in the State of Conservation (SoC) reports and in the Periodic Reports in 5 out of 11 Properties. Precisely, they are listed below:

8. **Cultural Landscape of Bali Province: The Subak System as a Manifestation of the Tri Hita Karana Philosophy** (UNESCO, 2012b, ref: 1194rev),
   according to the 2014, 2017 and 2019 State of Conservation (SoC) reports;
17. **Palestine: Land of Olives and Vines – Cultural Landscape of Southern Jerusalem, Battir** (UNESCO, 2014d, ref: 1492),
   according with 2015, 2016, 2017 and 2018 State of Conservation (SoC) reports;
18. **Portovenere, Cinque Terre, and the Islands (Palmaria, Tino and Tinetto)** (UNESCO, 1997b, ref: 826),
   according with 2014 Periodic Reporting, (Cycle 2) Section II, which affect the criteria (ii), (iv) and (v);
19. **Rice Terraces of the Philippine Cordilleras** (UNESCO, 1995, ref: 722),
   according with 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2014, 2016 and 2018 State of Conservation (SoC) reports; and
20. **Stari Grad Plain** (UNESCO, 2008e, ref: 1240),
   according with 2014 Periodic Reporting, (Cycle 2) Section II; which affect the criterion (ii).

According to this survey, the need to integrate resilience tools into the management planning process to build effective landscape resilience by stimulating the social component emerges as relevant. In this perspective, a management plan is useful to "describe and assess" an established management system, and it may demonstrate "how a State Party is going to maintain the OUV of a Property" (ICCROM et al., 2013, p. 122). It has to include cultural values and changes in territorial proximity to the Property that can affect it in a time range. An inclusive approach is a basic requirement, fostering a "great community involvement" for sustainable development (*ibid*., p. 122).

As denoted by the Appendix A of the Managing Cultural World Heritage manual by ICCROM, ICOMOS, IUCN and UNESCO World Heritage Centre (2013), the core goal of the management planning process is the general protection of cultural heritage sites in the long run (*ibid*., p. 123). A management plan was developed to describe the system adopted to "manage change" and enable decision-making processes in this respect (*ibid*.). This guidance document is composed of appropriate strategies, goals, and actions to manage the cultural heritage Property. The manual defines it as "an important tool for all phases of the management cycle (planning, implementation, monitoring)" (*ibid*.) and it highlights that it "needs to be periodically reviewed and renewed" (*ibid*.). The possible connections between the different phases of the potential revision of a World Heritage Site management plan are schematised in **Figure 8**.

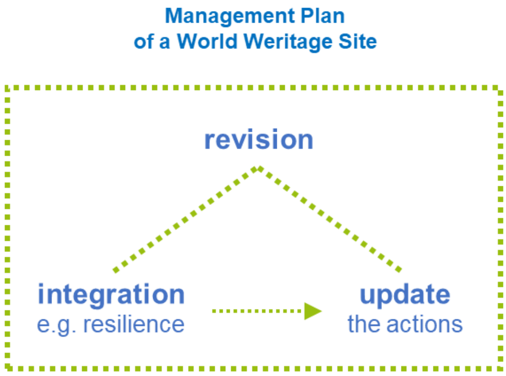


Figure 8 | Potential connections in the review process of a World Heritage Site management plan. A review would allow the integration of resilience into the listed actions and their update in the plan (author's elaboration).

As the management plan is an appropriate mean to fully consider and balances all the needs in the cultural heritage perspective, users and the private/public bodies' requirements have to be considered to guarantee "a collective and participatory approach" (ICCROM et al., 2013, p. 124).

According to Appendix A, the management plan should provide "a framework to make informed decisions and to manage change" (*ibid*., p. 125). Several people-centred points are below reported, among the others, to make it happen:

- the involvement of all the stakeholders, i.e. "local people, indigenous people, property owners and managers, governments at all levels, commercial interests including tourism, and NGOs" (*ibid*., p. 124) "from the time of the preparation of the Nomination" (*ibid*., p. 125);
- all the stakeholders need to have a full understanding of the concept of World Heritage (ibid., p. 125) concerning the nominated Property;
- all the stakeholders need to comprehend "the current management system" including the "management structures and approaches" (*ibid*., p. 125) and how the "existing system… can be improved" (*ibid*., p. 124);
- individual and collective stakeholder's responsibility in making practical the management of the Property through planned actions (*ibid*., p. 125);
- a pervasive focus on the positive and negative factors that may impact the attributes, as well as Authenticity and Integrity criteria;
- a collective outlook of the Property "in the next 20-30 years" to plan its management in the long term (*ibid*., p. 124);
- several usually five-yearly policies and objectives to catch up the core strategy (*ibid*., p. 124);
- defining a potential implementation strategy through monitoring and reviewing (*ibid*., p. 124) through an inclusive approach (*ibid*., p. 125); and
- establishing different and integrative plans or systems (*ibid*., p. 124).

It emerges that the outputs and the outcomes are the practical tools of the management plan (*ibid*., p. 125). As it is a dynamic document (ibid., p. 128), it permits to maintain “a dialogue with stakeholders and for continuously reviewing the protection of the OUV” (*ibid*., p. 127). Consequently, to plan a revision of an existing management plan, initial steps have to exhaustively assess the “successes, failures and weaknesses of the existing plan(s)” (*ibid*.). Decisions have to involve the stakeholders, even new ones (*ibid*., p. 144), fostering an inclusive and participatory approach. Furthermore, it implies a regular review which may be annual, biennial and up to five years (*ibid*., pp. 128, 144) due to the close and cyclical relationship with the other phases of the planning process. Major revisions due to specific and pressing trends may be included in supplementary reviews, such as in emergency scenarios.

Starting from the assumptions in Figure 3 in Annex 3 on the “Nature of the Planning Process” (*ibid*., p. 128), it is possible to determine the specific contribution of resilience to 4.r (developing responses/proposals) and 5.r (implementation and monitoring). See **Figure 9** for a graphical explanation.

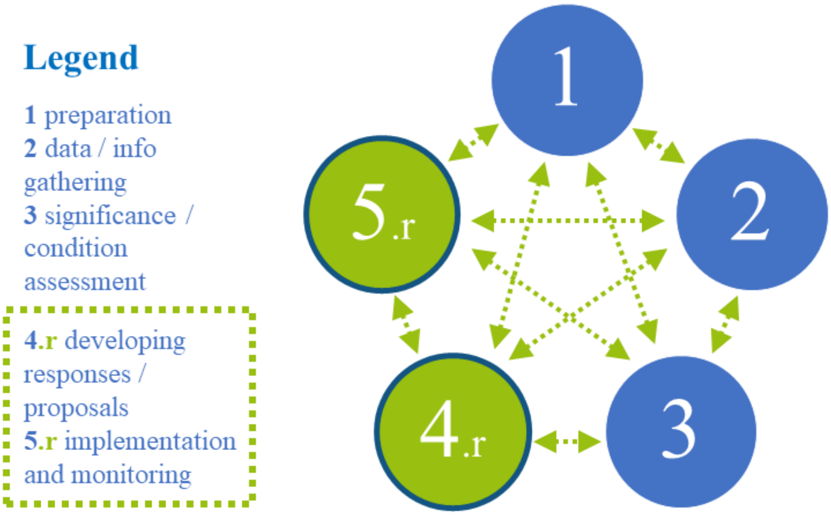

Legend
1 preparation
2 data / info gathering
3 significance / condition assessment
4.r developing responses / proposals
5.r implementation and monitoring
1
2
3
4.r
5.r

Figure 9 | The potential contribution of resilience (.r and all connecting arrows in green) in the nature of the planning process (source: ICCROM et al., 2013, p. 128, diagram 22. Author’s rework).

On the other hand, the management plan does not set time limits in terms of expiration. The Advisory Bodies (the International Council on Monuments and Sites - ICOMOS, the International Union for Conservation of Nature - IUCN, and the International Centre for the Study of the Preservation and Restoration of Cultural Property - ICCROM) when they are informed from various sources including:

- information from States Parties;
- information received through networks of Advisory Bodies or World Heritage Centre and UNESCO Field Offices;
- missions by World Heritage Centre and Abs; and

- other sources of information including specialised non-governmental organisations, individuals, press, other States Parties, etc.;

may demand the World Heritage Committee to ask the State Parties responsible for this specific site to define a new management system. However, it is not possible to know what trends or actions are taking place at this site if the State of Conservation (SoC) report does not refer to any critical issues. In a nutshell, there is no indication concerning the procedure of the revision of the management plan, even if it is outdated. The only occasion that the committee asks the revision is when the state party is not doing well with the site.

But how can we assure that management or conservation efforts are truly benefiting the people?

Although this research is qualitative and therefore does not make use of quantitative procedures, it is still possible to link it to the Toolkit for the Indicator of Resilience in Socio-ecological Production Landscapes and Seascapes (SEPLS, forthcoming). The toolkit was jointly developed in 2014 by the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS), the Bioversity International, the Institute for Global Environmental Strategies (IGES) and the United Nations Development Programme (UNDP) under the International Partnership for the Satoyama Initiative (IPSI). The general aim was to engage "… local communities in adaptive management of the landscapes and seascapes in which they live. By using the tested methods presented in this toolkit, communities can increase their capacity to respond to social, economic, and environmental pressures and shocks, to improve their environmental and economic conditions, thus increasing the social and ecological resilience of their landscapes ..." (UNU-IAS et al., 2014, p. 7).

In particular, 6 of the 20 indicators in the set seem to relate directly to the considerations raised by this doctoral survey, even though they are not used from a site assessment perspective. Reported in Chapter 2 of the Toolkit, pp. 19-27, in the numerical order they are:

- "(9) Traditional knowledge related to biodiversity.
  Question for scoring: are local knowledge and cultural traditions related to biodiversity transmitted from elders and parents to young people in the community?" (UNU-IAS et al., 2014, p. 22);
- "(11) Women's knowledge.
  Question for scoring: are women's knowledge, experiences and skills recognised and respected at household, community and landscape levels?" (*ibid.*, p. 23);
- "(13) Community-based landscape/seascape governance.
  Question for scoring: is there a multistakeholder landscape/seascape platform or institution able to effectively plan and manage landscape resources?

Discussion questions: does agreement exist about the boundaries of natural resources in terms of access and use? Is the policy and legal environment supportive or not?" (*ibid*., p. 24);

- "(14) Social capital in the form of cooperation across the landscape/seascape.
  Question for scoring: is there connection, coordination and cooperation within and between communities for the management of natural resources?
  Discussion question: is the level of out-migration low?" (*ibid*., p. 24);
- "(18) Income diversity.
  Question for scoring: are households in the community involved in a variety of sustainable, income-generating activities?
  Discussion question: what activities generate income in the landscape or seascape?" (*ibid*., p. 26); and
- "(20) Socio-ecological mobility.
  Question for scoring: are households and communities able to move around between different production activities and locations as necessary?
  Discussion question: are there agreed rules and regulations for effectively doing so?" (*ibid*., p. 27).

Other 7 indicators out of 20 in the set relate indirectly to the community theme, but the consequences of the topics they indicate can severely impact the image of the landscape. Reported in Chapter 2 of the Toolkit, pp. 19-27, in the numerical order they are:

- "(4) Recovery and regeneration of the landscape/seascape.
  Question for scoring: does the landscape or seascape have the ability to recover and regenerate after extreme environmental shocks?
  Discussion question: what was the community's response to recent shocks and stresses?" (UNU-IAS et al., 2014, p. 20);
- "(6) Maintenance and use of local crop varieties and animal breeds.
  Question for scoring: are different local crops, varieties and animal breeds conserved and used in the community?
  Discussion questions: is the quality of seeds and breeds maintained? Do invasive species replace local ones or is this not taking place?" (*ibid*., p. 21);
- "(7) Sustainable management of common resources.
  Question for scoring: are common resources managed sustainably?
  Discussion question: what is the status of exploitation of common resources (forests, fisheries, grasslands)?" (*ibid*., p. 21);
- "(8) Innovation in agriculture and conservation practices.
  Question for scoring: does the community develop, improve and adopt new agricultural, fisheries, forestry, and conservation practices and/or revitalise traditional ones to adapt to changing conditions, including climate change?
  Discussion question: which innovative practices are used in managing agriculture, fisheries and forestry?" (*ibid*., p. 22);

- "(15) Social equity (including gender equity).
  Question for scoring: is access to opportunities and resources fair and equitable for all community members, including women, at household, community and landscape level?
  Discussion question: is decision-making fair and equitable for all community members, including women, at all levels?" (*ibid*., p. 25);
- "(16) Socio-economic infrastructure.
  Question for scoring: is the socioeconomic infrastructure adequate for the needs of the community?" (*ibid*., p. 26); and
- "(19) Biodiversity-based livelihoods.
  Question for scoring: does the community develop innovative use of the local biodiversity for its livelihoods?" (*ibid*., p. 27).

In addition, the "Assessing Landscape Resilience: Best Practices and Lessons Learned from the COMDEKS Programme" (UNDP, 2018) is another relevant initiative that could be linked to the SEPLS work to apply what has been theorised and suggested by the Indicators of Resilience in Socio-ecological Landscapes and Seascapes. Although the former includes several world states (i.e. Bhutan, Brazil, Cambodia, Cameroon, Costa Rica, Ecuador, El Salvador, Ethiopia, Fiji, Ghana, India, Indonesia, Kyrgyzstan, Malawi, Mongolia, Namibia, Nepal, Niger, and Turkey), it does not include Italy or China. Moreover, assessing resilience is not among the objectives of this thesis and, therefore, this part has not been explored in depth. However, this correlation can be seen as promising for future research investigations in the coming years.

In brief, it is clear from the above that considering preservation as a self-goal is a very elitist view. On the contrary, it is relevant to preserve two fundamental aspects:

- to improve the quality of life of the people living in those places, i.e. the well-being. The well-being is not simply concerned with people's mental and physical health, but also their social wellness and satisfaction with their lives; and
- to adopt development models that are more sustainable and people-centred or human/centred as well.

Furthermore, it follows that the current idea of the relationship between permanence/memory and dynamic changes should be revised. As the history of humankind has demonstrated during the millennia, it is better to discuss potential trajectories between these two elements rather than equilibrium points or a ratio. A single point is static if we do not consider movement, like a film frame without its duration; on the other hand, an action always moves along a dynamic trajectory in terms of time and space.

Consequently, it seems possible to introduce two features that are part of this idea, as follow:

- a dynamic balance of the main objective, which may however change over time. Grey dots are specific points along a dynamic orbit or trajectory, with many different intermediate states represented by white dots. They move continuously along this black path over time. The main target is the macroscopic black spot in the centre (**Figure 10**); and

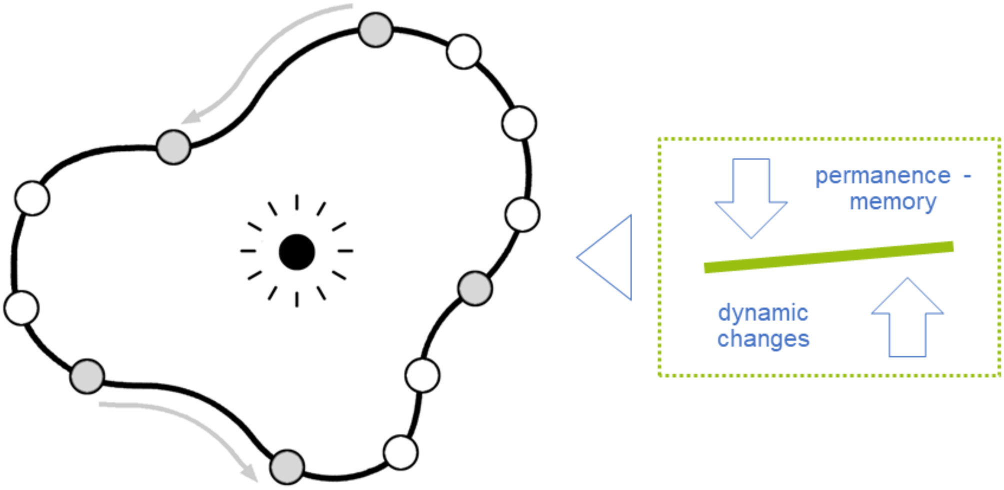


Figure 10 | The transition from a relationship between permanence-memory and dynamic changes to one with ever-changing trajectories depending on the many different intermediate states of the system (author's elaboration.).

- trends, from the past until today and how these tendencies have affected and still disturb the landscape to date (**Figure 11**).

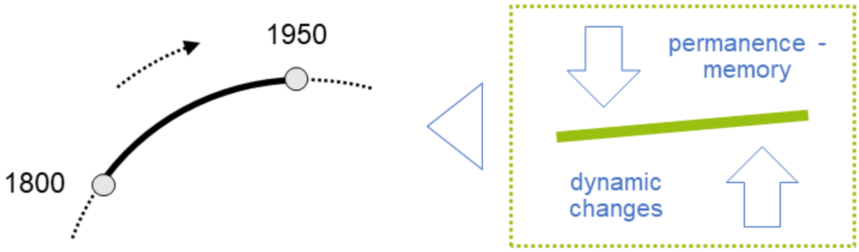


Figure 11 | The shift from a ratio between permanence-memory and dynamic changes to many different intermediate states of the system along trends and tendencies (author's elaboration.)

In the same way, this modification of our vision from a state of place (*Ubi*?, in Latin) to a place motion (*Quo*?, in Latin) seems to lead to consider memory as a dynamic construct. Trajectories determine acceptable limits of change that separate external dynamic forces from memory (dynamics) and internal forces. J-esime driving forces of change are usually pervading the systems, creating random turbulences, and modifying the mentioned paths establishing temporary equilibrium (x-steps, j-esime steps). The z-steps are the states of equilibrium of the investigated system, which may differ in a time range (from minutes to century) and under several interrelated circumstances (spatial, social, economic, climatic, among others) (**Figure 12**).

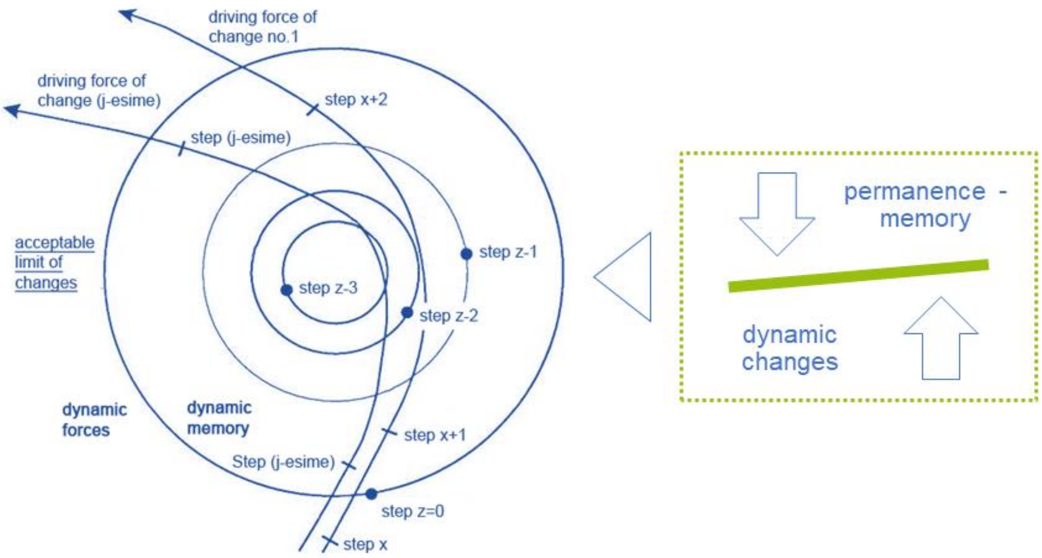


Figure 12 | The shift from the idea of a relationship between permanence-memory and dynamic changes to that given by different trajectories representing the acceptable limit of changes by the community. These separate the dynamic forces of change from the internal memory of the system. The j-esime driving forces of change pervade this system, creating random turbulences and modifying the trajectories even in temporary equilibrium. The z-steps are the varying states of equilibrium of the system, which may differ over time and under several circumstances. (Source: left, the Voyager trajectories through the Jupiter system, NASA, 1979. Left: author's rework, right: author's elaboration.)

Therefore, it seems better to talk about place-based heritage because it relates to a territorial context (social, environmental, among others) and consequently, one cannot refer to it as something isolated.

Heritage needs to be more connected to the people that live in these places because they are the holders. Their connection to the local geography, the natural resources, the climate, and spirituality, for instance, are part of a collective understanding of the multiple inter-relationships that have evolved. Looking at them as a whole explains insiders' attachment or association to the place, their daily being. Different meanings are understandable only when the observer starts to approach the comprehension of these relationships.

Consequently, this approach impacts the definition of heritage provided by experts (outsiders) and insiders, which may differ if related to the predominant narrative about values. And that may create some issues if we are not trying to address a place in a holistic way where heritage is connected to different sections of communities.

It is preferable to refer to multiple communities rather than to only one because a community is a set of multiple ones. Some people are part of minorities, even within the same community, who are marginalised at times. And there, heritage has not been recognised.

The latent trends introduced above need to be discussed in terms of their extent, i.e. within what limit is potentially considered acceptable by local populations. In this sense, some possible questions need to be answered to detect the state of affairs in those territories; they are listed below:

- what mechanisms have been established?
- what mechanisms are acceptable to the people living in those places?
    - build capacities, as a response,
    - developing soft skills to speak and to interpret better their beliefs, needs and requirements,
    - connect more the outsiders to the local narratives,
    - involve more the local narratives into management decisions deemed ad necessary for these territories, and
    - a more pervasive explanation of what heritage is and what benefits it brings in terms of values and relationships.

Coherently, it is not possible to think about a bounce-back in resilience because of the dynamism of the multiple factors affecting that heritage, both intrinsic and extrinsic. In **Figure 13**, a potential scheme in which the contribution of social resilience is reported as a part of a more pervasive discourse on systemic resilience. Local capacity building is one of the possible actions to promote dynamic conservation able to help local communities to self-detect the acceptable limit between dynamic changes (coming both from inside and outside) and the active memory (owned from the inside).

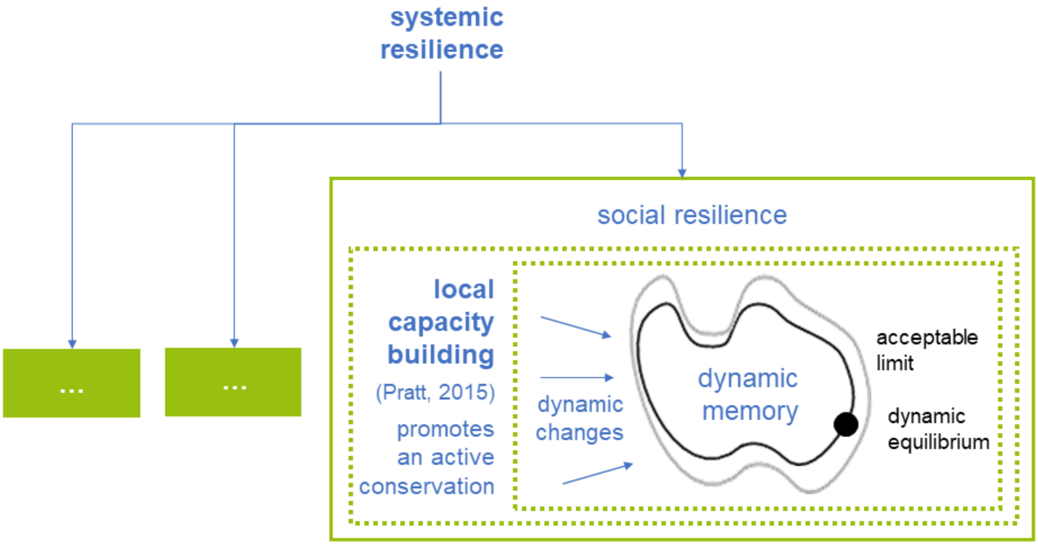


Figure 13 | Social resilience is a part of systemic resilience. It is based on local capacity building to promote active conservation. This capacity helps define an acceptable limit between dynamic changes and memory, considering this boundary as a curved trajectory that can shrink

accordingly with the inner system. Consequently, every equilibrium point moves continuously along this boundary under the insiders' needs and requirements. (Author's elaboration.)

However, in the so-called cultural landscapes, the landscape has allowed the social resilience of these places and vice versa until today. In this view, the close relationship landscape-community is circular and self-sustained, where one mutually feeds the other. Community is the basis of any cultural landscape: without the daily activities of people, which aim at survival, such landscapes would not exist. However, it is believed that this condition is not sufficient to address the threats/weaknesses mentioned above and to provide dynamic responses to the ever-changing pressures in the territories. The landscape improves people's quality of life, but it is never an end-in-itself goal. Consequently, other and more pervasive solutions need to be considered.

There seems to be a potential gap between the landscape and its community, which could be bridged with the help of the concept of social resilience and its implications. This contribution can improve the general resilience of the system as a part of it (**Figure 14**).

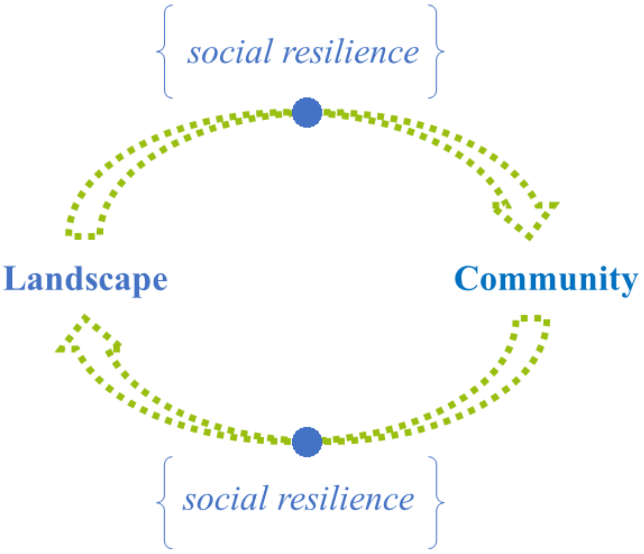


Figure 14 | The circular relationship between landscape and community; the contribution of the social resilience is reputed as essential to fill the gap between them and strengthen their link. Without this contribution, only this circular path seems not stable because weakened by the threats/weaknesses proper of the driving forces of changes and for the system static. (Author's elaboration.)

In UNESCO cultural landscapes, it is appropriate to present different policies related to resilience under several temporary constraints. Policies can be from short to long term depending on the objective to be pursued, as shown in **Figure 15**. For instance, long-term policies need to be related to themes that will remain the same in a given context and multiple scenarios in the long run, as climate change. It is important to remember that all policies contribute to the final objective consistent with the needs for which they are designed.

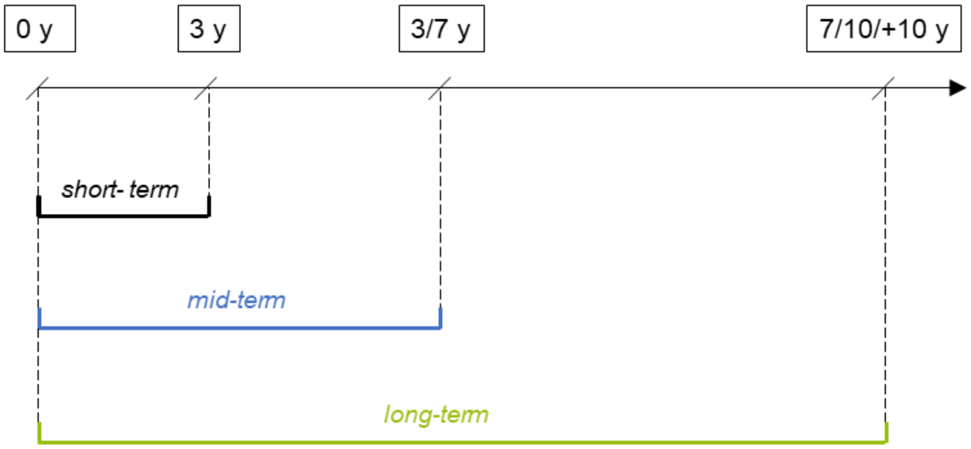


Figure 15 | Short-, mid- and long-term policies in terms of years related to specific targets. (Author's elaboration.)

Therefore, it is relevant to establish what the true primary objective of these landscapes is. In the case of the cultural landscapes analysed in this doctoral thesis, the questions to be answered are these:

- is the objective to maintain the wine system?
- is the objective the community resilience?
- what community for what landscape?

In an ever-changing society, some heritage elements may not have value anymore, although some of the traditions or values carried from our past probably make nowadays society more variable and thus resilient. Even when thinking about the traditional knowledge that people have evolved, the options are different: some have been transformed, some have evolved further while others have left because no longer helpful. It will be possible to discard a romantic vision of heritage having a balanced view. Clarity will help to identify specific responses to achieve this goal, such as strategies and actions.

Concerning newcomers, it is relevant to remember that the history of the human race bears witnesses to the fact that it is not possible to limit the dynamic exchange and mixing of peoples. Continuous modifications and displacements of persons have occurred over a long timescale of events, pushing people to search for the best living conditions. This narrative communicates that there has always been a social influence between the various groups of people that make up society in a given place, as determined by a set of active rather than passive approaches. Therefore, a question arises: how is social robustness created by mixing these groups?

Accordingly, the material component requires to also consider the intangible sphere in the analysis of the cultural landscape without disconnecting from each other (**Figure 16**). It is not possible to look at or refer to tangible or intangible aspects as isolated because they are very much interconnected.

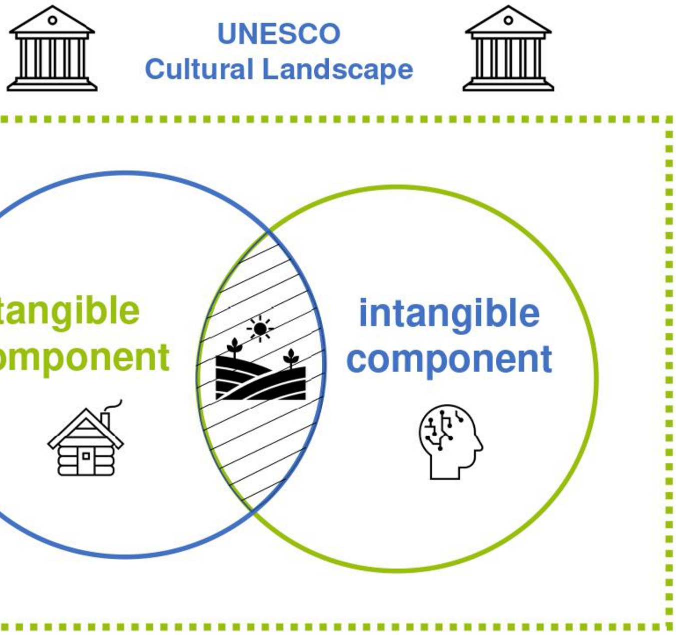


Figure 16 | Tangible and the intangible components in the cultural landscapes: their overlapping is pivotal to analyse and comprehend these sites. (Author's elaboration.)

From what emerges, UNESCO seems more interested in maintaining the physical aspects of the landscape, which could therefore be equated with permanence. But assuming the cultural landscape as a sum of several components, the concept of community that has produced and cared for this landscape overtime needs to be further strengthened, and this approach is fundamental. Therefore, if the social context that has shaped such globally relevant landscapes were to change, it would seem vital to ask what would happen. Probably, it would risk having a World Heritage Site decontextualised from a social point of view. It is essential to start considering the community as an attribute of these properties, linking more intangible and tangible aspects in the landscape for the future to preserve the landscape in both its components. Also in the management plan, attributes must be reported and implemented to meet an operational need.

But then other questions would also arise about the impact that such newcomers have on these landscapes in different fields. Among them, a list below under some bullet points:

- Technical issues.
    - Relating to the agricultural techniques, could the newcomers lead to changes in the processing of vineyards or rice fields? If yes, with what level of intensity?
- Looking at the landscapes.

Newcomers arriving from outside in these landscapes usually do not have a clear or preconceived image of these places.

  - So, how do newcomers look at these landscapes?
  - Are there overlapping/differences if compared the newcomers' perspective with the locals' viewpoints?
  - What are the objectives for building a correct relationship with the environment in a landscape where a person arrives as a newcomer?

- Perceiving the landscapes.
  - How do newcomers perceive these landscapes?
  - Are there overlapping/differences if compared the newcomers' perspective with the locals' viewpoints?
- Identity and inclusiveness.
  - Are we able to produce mechanisms capable of building an identity and being inclusive?
  - Are our current systems able to assimilate this shift in the landscape?
  - How to create a common identity? Does it make sense to talk about it, or would it be better to focus on multiple identities?

According to these questions, relating to the daily experience of these groups seems preferable to referring to perception alone. The experience combines two factors: the visual appreciation of the landscape and the interior judgment of this landscape made by each user (insiders, outsiders, stakeholders and rightsholders). This way of experiencing the landscape is based on personal background, consisting of appropriate knowledge, culture, lifestyle, prejudices related to age, gender, spirituality, political beliefs, among others.

Regarding identity and inclusiveness, each person has multiple identities as a human being. The sum of different identities does not necessarily lead to the building of a spontaneous and genuine collective identity. Trying to shape a collective identity through the generation of shared memories is not enough as identity is the culmination of a process due to the addition of several factors. Nationalistic narratives are often de-adherent from the spectrum where you are creating the so-called national construct. And the most relevant part of any narrative cannot be constructed by outsiders. In addition, the process of recreating a mutual identity through external intervention might marginalise communities or increase conflicts between them. It seeks to recognise that communities have multiple histories, and it is preferable to avoid one story being emphasised or made predominant over the others. The truth is that every story is equally relevant to every part of a community, which may not be as powerful as the overall picture but prevents reducing everything to a simplistic predominant narrative. Consequently, such a polyvocality will make it possible to look at a place aware of the need to recognise multiple associations based on values and perspectives. Even talking of narratives within a society, there may be multiple understandings of the same thing. So, it is not possible to set the common identity as a predetermined target, as further discussions may be relevant to what types of memories to include and the best modalities/mechanisms for such inclusion. A narrative has meaning only when it comes from a very much within the society, in the form of multiple stories. It is a long-term process, which is difficult to achieve because of the volatile society in this contemporary era. As pointed out by Plieninger & Bieling (2012), these transformations risk limiting the interpretation of the distinctive features of the territories, in particular their permanencies (architectural or crops-related), along with the loss of meaning (Rackham, 1986).

To embrace all these considerations, an inclusive and compelling idea of approaching this territorial management has to consider and adopt the adaptive capacity to define future perspectives. For newcomers, a potential strategy would seem to be to come, adapt and then build. It is an informal way to adapt themselves to these territories, in front of a lack of action of the formal systems. In this perspective, these systems need to permit other narratives of these landscapes, using conservation as a means to reach new models of development. In addition, it is also necessary to move from defining 'resilience practices' as desired outcomes to building effective landscape resilience without falling into the vortex of procedural issues.

Nowadays, it seems not possible to think to analyse these cultural landscapes without the lens of social resilience. However, these concepts conflict with each other because UNESCO seems to promote a static idea of conservation, while resilience promotes coping. In this perspective, it seems that UNESCO needs to integrate the contribution of social resilience to investigate the cultural landscapes. As reported in the Operational Guidelines for the Implementation of the World Heritage Convention, "The Operational Guidelines are periodically revised to reflect the decisions of the World Heritage Committee" (UNESCO, 2019a, p. 2), and new revisions may accept a broader discourse on resilience, even in its social sense. The Outstanding Universal Value (OUV) need to contain social resilience as a concept, and the latter has to create a relationship with the OUV as it represents its final destination.

To summarise, the above considerations have led to the assertion that heritage has to be considered part of a broader context rather than an isolated object. Heritage is part of a larger territorial system and, consequently, is affected by the same threats or weaknesses as the area (e.g. climate change, or human-induced threats, among others).

If the "preservation of each area's landscape values is associated with the survival of cultural models that have left their mark on the territory" (CoE, 2006, p. 64), potential short-term strategies need to:

- contemplate the "No-Heritage-is-an-Island" approach;
- move from the idea of a "site-based heritage" to a "place-related heritage", modifying the scale of analysis in future investigations;

- consider resilience as a pervasive discourse for monitoring and managing heritage rather than a silos-thinking approach, in the long run (i.e. climate-change mitigation or adaptation, risk assessment, disaster reduction, security, among others; Davoudi et al., 2013);
- embrace the polyvocality to expand the variability, avoiding a compartmentalised approach that tends to reduce it;
- ponder trajectories rather than the ratio between permanence-memory and changes; and
- deem memory as a dynamic entity.

Mid-term possible approaches have to:

- build and reinforce knowledge for managing change and continuity;
- raise the awareness in the mainstream community about the close link of nature and culture for a correct management of heritage places;
- involve more the local communities;
- foster more people-centred approaches to conserve cultural landscapes for the personal and community well-being of the insiders and improve their quality of life;
- build capacity in newcomers for positive inclusion in the social-economic sector (advocacy);
- favour the knowledge sharing and exchange between people (locals, newcomers) and places;
- connecting more intangible and tangible aspects in the landscape;
- reshape the idea to look at the landscape' features as a commodity for consumption; and
- start a regional Landscape Observatory to foster and promote together social resilience, landscape, and newcomers proactively.

Long-run potential strategies need to:

- explore and adopt inclusive, integrated, and sustainable approaches in the cultural heritage management;
- creating bridges between sustainability and resilience concepts; and
- avoid social decontextualisation of the heritage due to 'gentrification' or 'touristification'.

4.5 The case study: the UNESCO "Cultural Landscape of Honghe Hani Rice Terraces"

4.5.1 A brief introduction to Yunnan

Yunnan is one of the 23 provinces composing China, located in the southwest of the country (25°03′N 101°52′E). It covers an area of 394,100 km^2, equal to 4.11% of the entire land of China. In 2018, the resident population of Yunnan is 48.30 million inhabitants (National Bureau of Statistics of China - NBS). The capital of the province is the prefecture-level city of Kunming (25°02′47″N 102°42′34″E).

It borders the Chinese provinces of Guangxi, Guizhou, Sichuan and the Tibet Autonomous Region, and the countries of Myanmar, Laos, and Vietnam. Today, there are eight municipalities and as many prefectures (among them, the Honghe) under the jurisdiction of the Yunnan province (NBS, n.d.). The province governs a total of 129 counties, cities and districts, including 29 ethnic autonomous ones.

As a mountainous highland province, Yunnan is composed of mountains and highlands in 94% of its territory. It is crossed by several notable rivers, such as the Yangtze in the North, the Zhujiang (i.e. the Pearl River) in the East, and the transboundary Mekong river in the South.

As of 2019, there were five World Heritage Sites in the province, namely: the "Three Parallel Rivers of Yunnan Protected Areas" (UNESCO, 2003b, 2010, ref: 1083bis), the "South China Karst" (UNESCO, 2014c, ref: 1248bis), the "Chengjiang Fossil Site" (UNESCO, 2012d, ref: 1388), the "Old Town of Lijiang" (UNESCO, 2012e, ref: 811bis) and the "Cultural Landscape of Honghe Hani Rice Terraces" (UNESCO, 2013a, ref: 1111). The first three are listed as Natural Sites and the remaining ones as Cultural Sites. These five represent 9% of the 55 Chinese World Heritage Sites in 2019.

The ethnic variety of Yunnan is unparalleled in China. Aside from the Han people (67%), there are 25 minority ethnic groups, including 15 Yunnan-exclusive ones of Hani (3.4%), Bai, Dai, Lisu, Va, Lahu, Naxi, Jingpo, Blang, Achang, Pumi, Deang, Nu, Jinuo, and Derung. Consequently, almost 1/3 of the entire population in the province is composed of ethnic minorities and, in addition, there are "… 4.5 million believers in 7 different religions" (Li et al., 2020, p. 3).

In recent years, Yunnan's socio-economic development has maintained rapid growth. In 2018, the province's economic growth rate was 8.9% (NBS, n.d.). In the first three quarters of 2019, the economic growth rate is 8.8% (*ibid.*), ranking first place in the Nation. The 2018 Gross Regional Product is equal to CNY 2.088 trillion, i.e. € 270.70 billion (*ibid.*); in particular, the value-added of the primary industry is CNY 249.86 billion, i.e. € 32.40 billion (*ibid.*). This trend has recorder a constant increase in the last years, moving from CNY 219.51 billion or € 28.46 billion in 2016 (*ibid.*). The 2018 index of value-added in primary industry is 6.3%, which has been steadily increasing year on year since 2016 (5.6% in 2016, 6.1% in 2017 and 6.3% in 2018; NBS, n.d.).

As previously reported, the resident population of Yunnan is 48.30 million in 2018 (*ibid.*), most of them are rural and equivalent to 25.21 million (52.2%; *ibid.*).

The male population is the majority, equal to 20.523 million (*ibid.*). Gross Regional Product per capita is 43,366 yuan/person, equivalent to 5,623.27 euro (*ibid.*), with a dramatic increase from the 31,093 yuan/person in 2016 (*ibid.*).

The general sown area of rice is continuously decreasing, moving from 909,290 ha in 2015 to 849,550 ha in 2018 (NBS, n.d.). In detail, the sown area of middle-season rice and single-cropping late rice has recorded a steady regression in quantities, moving from 838,930 ha in 2015 to 780,480 ha in 2018 (*ibid.*). Similarly, the area sown of early rice and the area sown of late double-cropped rice show slight decreases over a period from 2015 to 2018, from 39,660 ha to 39,150 ha in the former case, and from 30,710 ha to 29,910 ha in the latter (*ibid.*). The abovementioned data are reported in **Figure 17**.

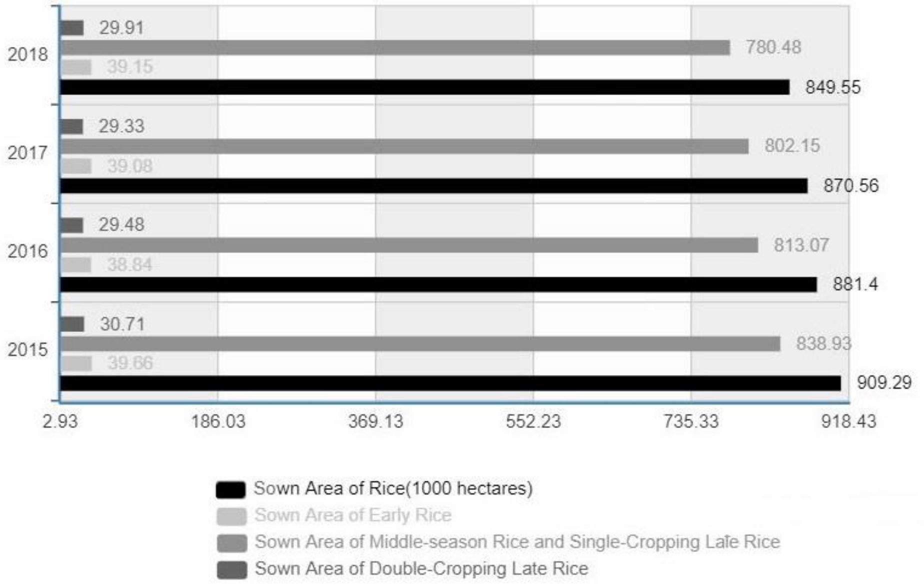


Figure 17 | The bar chart depicting sown areas (1,000 ha) in Yunnan, China, by crop type of cultivated rice (source: the National Bureau of Statistics of China - NBS. Author's rework).

The global output of rice presents stable values, moving from 5,28 million tons in 2015 to 5,27 million tons in 2018. In detail, the output of early rice is slightly declining, passing from 210,700 tons in 2015 to 219,000 tons in 2018 (NBS, n.d.). Similarly, the output of middle-season rice and single-cropping late rice re-affirm this trend, moving from 4,93 million tons in 2015 to 4,91 million tons in 2018 (*ibid.*). On the other hand, the output of double-cropping late rice is slightly off-trend, as it goes from 140,600 tons in 2015 to 144,000 tons in 2018 (*ibid.*). The abovementioned data are reported in **Figure 18**.

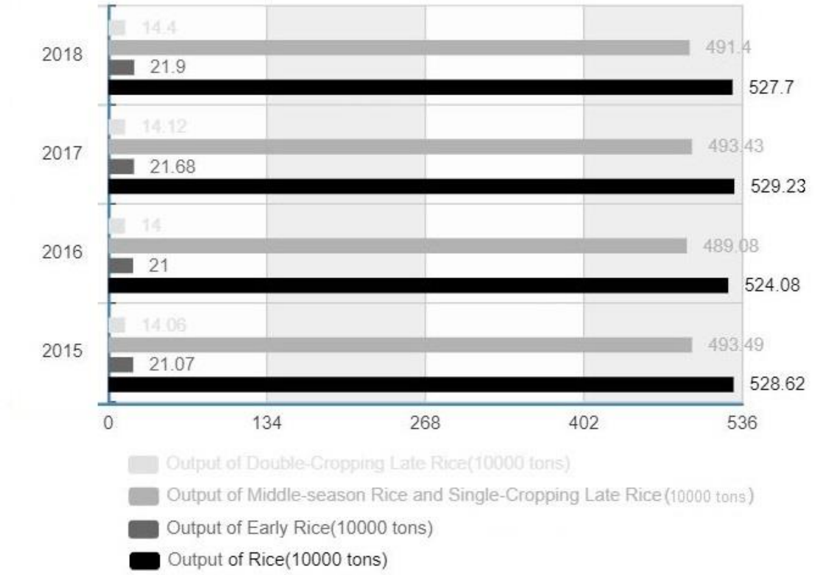


Figure 18 | The bar chart on rice production (10,000 tonnes) in Yunnan, China, sorted by type of rice grown (source: the National Bureau of Statistics of China - NBS. Author's elaboration).

The aggregated output of rice per hectare is 6,211.52 kg/hectare in 2018, constantly increasing compared to 5,813.52 kg/hectare in 2015 (NBS, n.d.).

4.5.2 The World Heritage site

The Honghe Hani & Yi Autonomous State is an autonomous prefecture in the southeast of the Yunnan province, with an area of 32,931 square kilometres. The capital is the city of Mengzi (23°22'00.0"N 103°24'00.0"E), one of the four cities and nine counties under its administration. The total population amounts to 4.6 million, with a remarkable cultural diversity emphasised by eleven ethnic minority groups in its population.

The "Cultural Landscape of Honghe Hani Rice Terraces" (23°05'00.0"N 102°46'00.0"E) is located in the Yuanyang County, although the Hani cultivate rice terraces in 3 other Counties: Honghe, Luchun, and Jinping. This county has more than 442,000 people, within which seven different ethnic groups live together (Li et al., 2020). Among them, the Hani minority is the most (i.e. 54.97%), followed by Yi (23.46%); the Han majority reach only 10.68%, according to 2017 population censuses (Li et al., 2020).

It is crossed by several rivers, four of which are in the Property (i.e. the Malizhai, Dawazhe, Geta and Amengkong rivers) and others in the Buffer Zone (i.e. the Bibo, Niuluo and Xiou rivers). 90.94% of the entire County is committed to agricultural works (Li et al., 2020) and livestock herding (Hua & Zhou, 2015), which is the key economic sector together with the agro-commercial industries and tourism. In the site area, 8,866.82 ha are terraced fields cultivated with rice (Hua et al., 2018).

According to the UNESCO website, the Property covers an area of 16,603.22 ha (166.03 Km^2) and the Buffer zone has a total area of 29,501.01 ha (295.01 km^2; **Figure 19**).

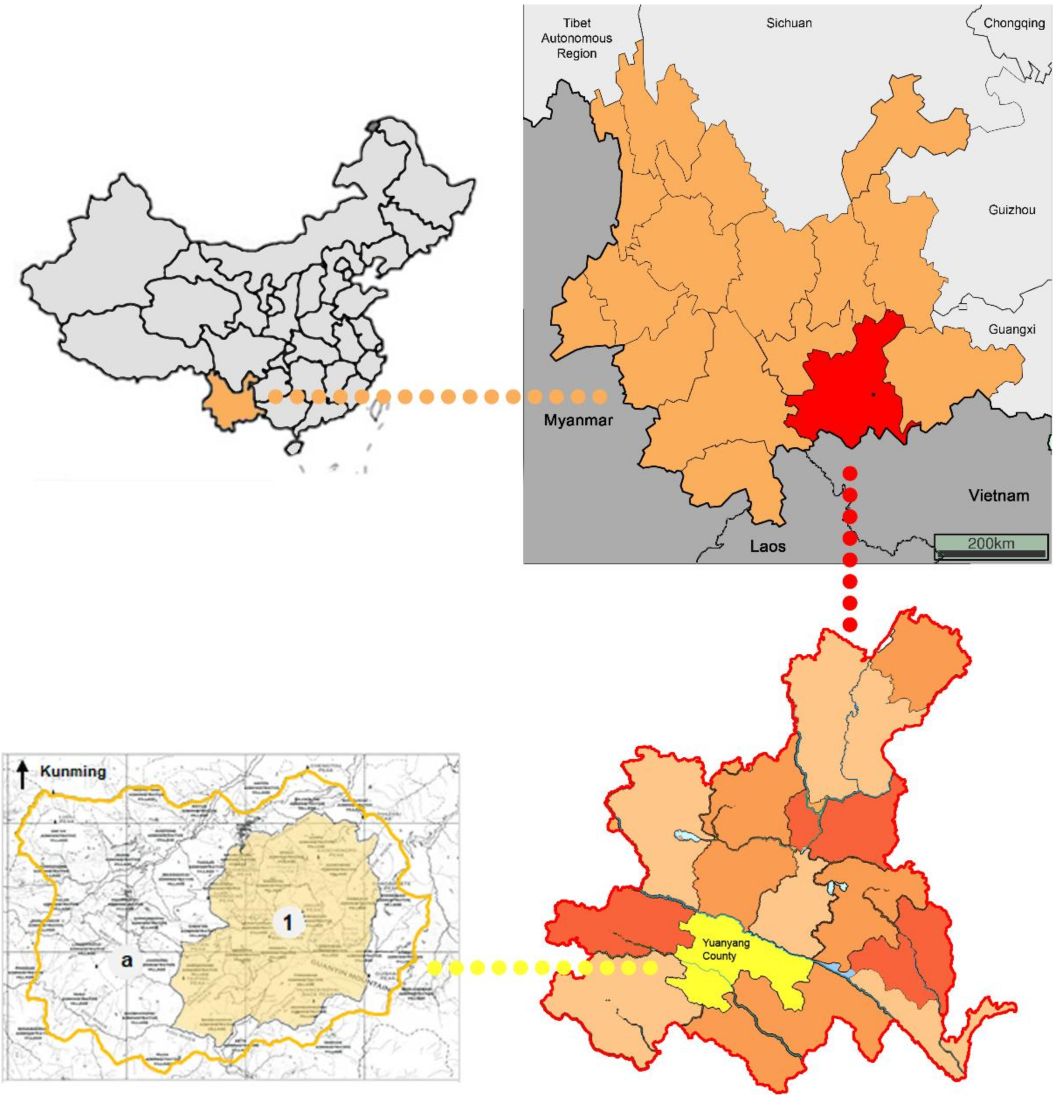


Figure 19 | Above left, in grey the provinces that make up China and in orange Yunnan; above right, in orange the Yunnan province and red, the ‘Honghe Hani & Yi Autonomous State’ prefecture. Below right are the different counties that compose the ‘Honghe Hani & Yi Autonomous State’ prefecture and in yellow, the Yuanyang County where the Honghe Hani Rice Terraces are located. Bottom left, in dark yellow, is the Property area (1) and the Buffer zone (a) of the “Cultural Landscape of Honghe Hani Rice Terraces”. (Source: UNESCO, 2013a. Author’s elaboration.)

The area is composed of 82 villages and one town located between the mountaintop forests and the rice terraces. Five villages on the site were identified as the most representative in the application file: Azheke Village, Niuluopu Village, Shangzhulu Old Village, Quanfuzhuang Middle Village, and Yakou Village. The villages feature traditional thatched mushroom houses, composed of 2 floors and half in elevation.

The site is the second terraced cultural landscape worldwide (Hua et al., 2018), nominated in 2013 after the Rice Terraces of the Philippine Cordilleras (UNESCO, 1995, ref: 722). In 2010, it was previously designated as Globally Important Agricultural Heritage Systems (GIAHS) by the Food and Agriculture Organization (FAO) of the United Nations. FAO’s GIAHS lists “Remarkable Land Use Systems and landscapes which are rich in biological diversity evolving from the ingenious and dynamic adaptation of a community/population to its environment and the needs and aspirations for sustainable development.” (FAO, 2002). As of June 2021, there are 62 systems in 22 countries that have been designated as GIAHS by FAO, including 40 in the Asia-Pacific macro-region alone. China has 15 designated sites, two of which are in Yunnan province: the “Hani Rice Terraces” (FAO, 2010) and the “Pu’er Traditional Tea Agrosystem” (FAO, 2012).

Figure 20 reports the two symbols that bear witness to the inscription of the village of Azheke village (24.976240° N, 101.481600° E), one of the five settlements of excellence in the Property.

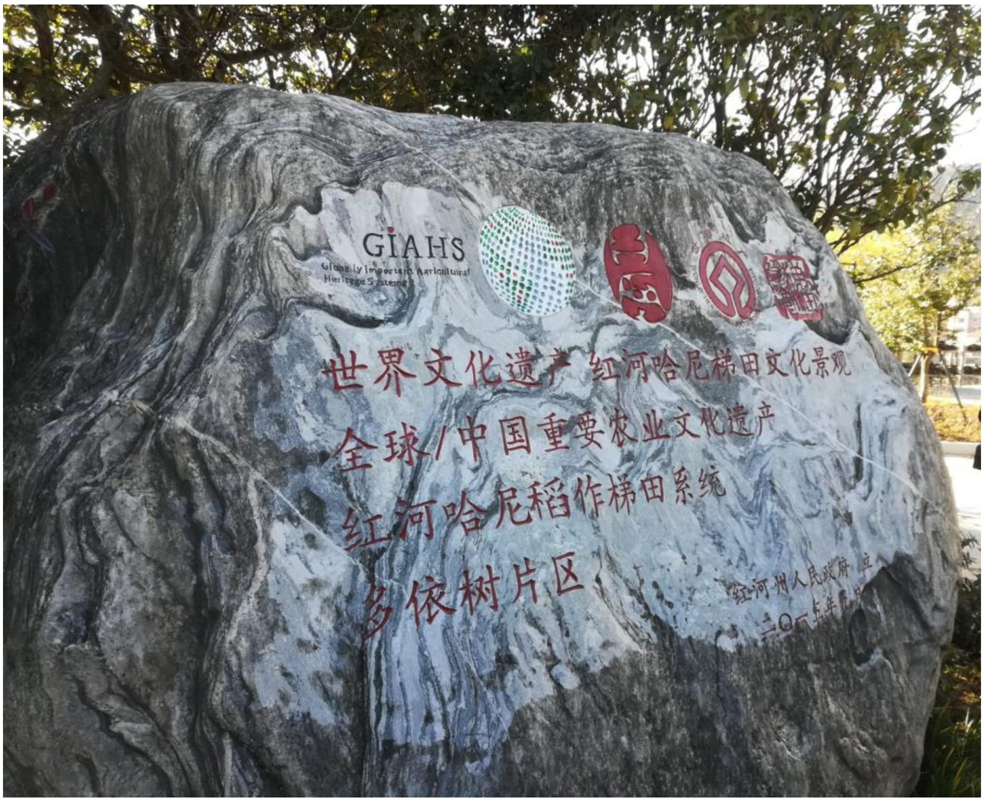

GIAHS
Globally Important Agricultural Heritage Systems
世界文化遗产 红河哈尼梯田文化景观
全球/中国重要农业文化遗产
红河哈尼稻作梯田系统
多依树片区
红河州人民政府 立

Figure 20 | GIAHS and UNESCO symbols at the entrance to Azheke Village, included in the Component of the “Cultural Landscape of Honghe Hani Rice Terraces” (UNESCO, 2013a). (Source: *CH13*, as indicated in paragraph 4.5.7.)

For the past 1,400 years, terraces and associated wet rice farming have been permanent features of the landscape in this area, which cascades down the slopes of the Ailao Mountains to an altitude of about 300 m above the level of the Honghe River in the north-east. In this context, the Hani minority have carved a complex system of channels to bring water from the forested mountaintops to the rice terraces for agricultural purposes. In addition, they have established an integrated farming system that involves raising buffaloes, cattle, ducks, fish and eels to support the production of red rice, the area’s predominant crop over the centuries.

According to the OUV of this listed World Heritage site, the Brief synthesis reported on the UNESCO website indicates the composition of the Property and its geophysical features. It affirms that it is composed of "Three areas of terraces, Bada, Duoyishu and Laohuzui, within three river basins, Malizhai, Dawazhe and Amengkong-Geta, reflect differing underlying geological characteristics. The gradient of the terraces in Bada is gentle, in Douyishu steeper, and in Laohuzui very steep". Zhan and Jin (2015) refer that "… the forested mountainous area above 2,000 m accounts for almost 40% of the World Heritage property" (p. 658).

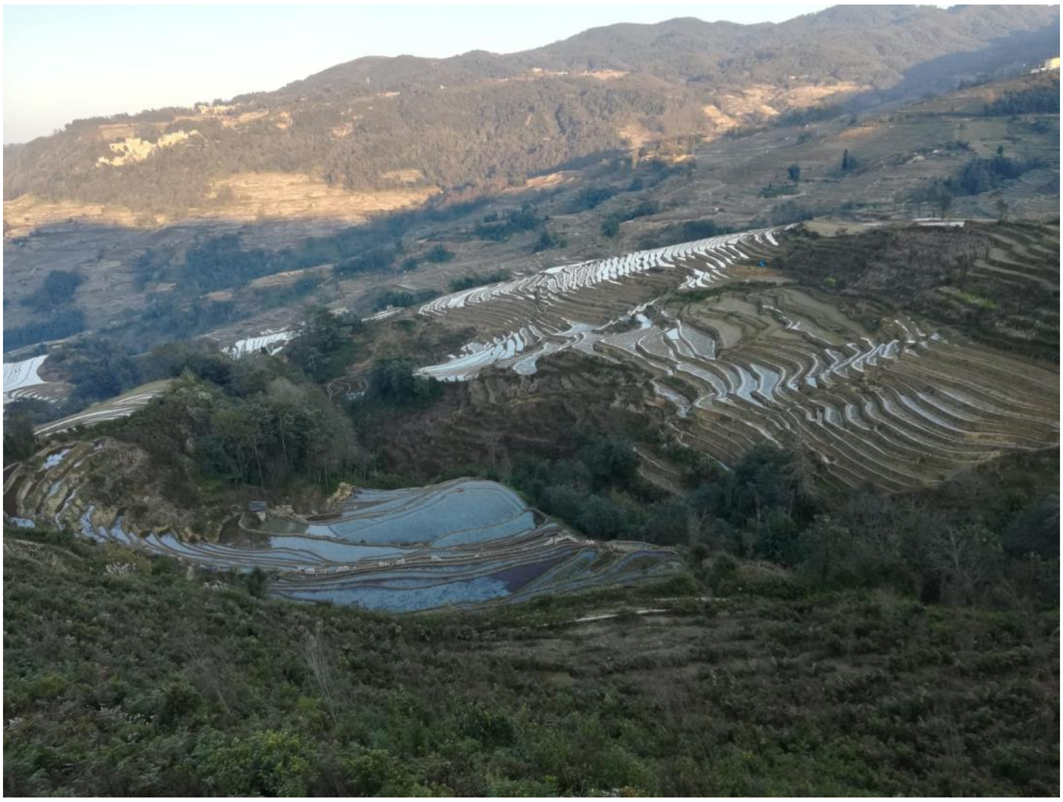
The OUV also specifies the composition of the landscapes and their characteristics, with emphasis on the circular route linking the forests to the terraces. It states: "The landscape reflects an integrated four-fold system of forests, water supply, terraces and houses. The mountain top forests are the lifeblood of the terraces in capturing and sustaining the water needed for irrigation. There are four types of forests, i.e. the ancient 'water recharge' forest, the sacred forest, the consolidation forest, and village forest for the provision of timber for building, food and firewood" (UNESCO, 2013a).

Moreover, the contribution of water and the rainfalls are pivotal to that end, as pointed out in the following phrases: "Clefts in the rocks channel the rain, and sandstone beneath the granite mountains traps the water and then later releases it as springs. A complex system of channels has been developed to spread this water around the terraces in and between different valleys. Four trunk canals and 392 branch ditches which in length total 445.83 km are maintained communally." (*ibid*.).

As introduced before, the people in this area live in "Eighty-two relatively small villages with between 50 and 100 households are constructed above the terraces just below the mountain top forests." (*ibid*.).

According to the OUV statements, all the communities' members are involved in the direct maintenance of the rising landscape, combining agriculture and breeding as follow: "Each household farms one or two 'plots' of the rice terraces. Red rice is produced on the basis of a complex and integrated farming and breeding system involving buffalos, cattle, ducks, fish and eels." (*ibid*.).

Below are some images of the village of Azheke and the steep rice terraces that characterise the surrounding landscape (**Figure 21**).



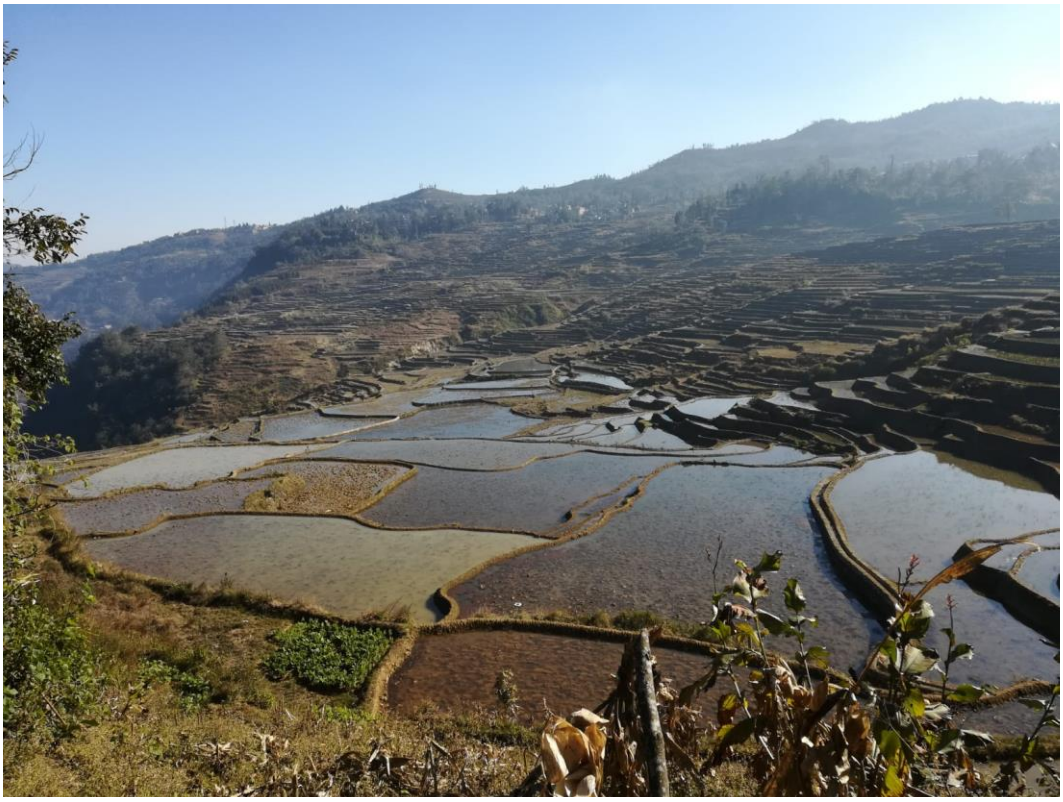


Figure 21 | The first two images refer to the typical buildings of the rural village Azheke and the paddy fields nearby it. The last two describe the agricultural landscape of the rice terraces near the village (source: *CH13*, as indicated in paragraph 4.5.7).

The abovementioned concepts are further detailed under the criteria (iii) and (v) of the OUV statement. In both, the integrated farming and breeding system is better described concerning the socio-economic-religious systems, as a circular path based on the close relationship people-nature in the farming and managing systems. All of them are retrieved and reported below:

- Criterion (iii): “The Honghe-Hani terraces are an outstanding reflection of elaborate and finely tuned agricultural, forestry and water distribution systems that are reinforced by long-standing and distinctive socio-economic-religious systems.

  Red rice, the main crop of the terraces is farmed on the basis of a complex, integrated farming and breeding system within which ducks fertilise the young rice plants, while chickens and pigs contribute fertiliser to more mature plants, water buffalo slough the fields for the next year’s planting and snails growing in the water of the terraces consume various pests.

  The rice growing process is sustained by elaborate socio-economic-religious systems that strengthen peoples’ relationship with the environment, through obligations to both their own lands and to the wider community and affirm the sacredness of nature. This system of dual interdependence known as the ‘Man-God Unity social system’ and its physical manifestation in the shape of the terraces together form an exceptional still living cultural tradition.”.
- Criterion (v): “The Honghe Hani Rice terraced landscape reflects in an exceptional way a specific interaction with the environment mediated by integrated farming and water management systems and underpinned by socio-economic-religious systems that express the dual relationship between people and gods and between individuals and community, a system that has persisted for at least a millennium, as can be shown by extensive archival sources.”.

Integrity in the OUV Statement highlights the relevance of the system in terms of attributes and integrity, even referring to this complex integrated system as a climate-proof model against vulnerability.

It follows:

“The overall boundary encompasses a large area within which the overall terraced system can be appreciated and all its attributes, forests, water system, villages and terraces are present to a sufficient degree. None of the key physical attributes are under threat and the traditional farming system is currently robust and well protected. The buffer zone protects the watersheds and the visual setting and contains enough space to allow for coordinated social and economic development.

The terraces are said to have high resilience against climate change and drought – as has been demonstrated during the major drought of 2005. They are however vulnerable to landslides as on average the terraces are constructed on 25% slopes” (ICOMOS, 2013, p. 85).

Furthermore, regarding the Authenticity in the OUV Statement, it affirms that “The terraced landscape has maintained its authenticity in relation to the traditional form of the landscape elements, continuity of landscape function, practices and traditional knowledge, and continuity of rituals, beliefs and customs" (ICOMOS, 2013, p. 85).

However, some criticalities exist, most of them connected to the social component of the landscape, i.e. the communities and their members, and the potential impacts on it after the nomination, i.e. the tourism management.

In 2013 evaluation report for the nomination to the World Heritage Committee, ICOMOS states that though "… the traditional system is currently robust and well protected", "… the way that the traditional system adapts itself to modern demands, which are already drawing people away from the villages, and the impact of tourism could lead to difficult tensions" (ICOMOS, 2013, p. 79).

Moreover, it recognises the vulnerability of traditional practices "… to the desire for improved lifestyles amongst the farmers and to the potential impact of tourism which currently does not have an overall defined strategy to ensure its sustainable development" (*ibid.*).

The report concludes the paragraph, entitled "Integrity and authenticity", with this final judgement: "ICOMOS considers that the condition of and authenticity and integrity are met but it considers that the authenticity is vulnerable to increasing expectations which draw people away from the villages, and to the impacts of tourism, which needs to be subject to an overall sustainable tourism strategy" (*ibid.*).

In detail, the same ICOMOS report pointed out that "… more and more people, both men and women, are taking work outside the villages." (p. 81) caused by "… the overall vulnerability of the integrated farming and forestry system in relation to how far they are capable of providing an adequate living for farmers that will allow them to remain on the land" (*ibid.*, p. 81).

Lastly, it exhorts to clarify how local people are engaged in the decision-making process "… at the macro level in terms of public projects, tourism policies and infrastructure development that are dealt with by village cadres." (*ibid.*, p. 83), as part of the management process.

The report concludes with some recommendations, as follows:

"There is an overall vulnerability of the integrated farming and forestry system in relation to how far they are capable of providing an adequate living for farmers that will allow them to remain on the land. The overall farming system is also vulnerable to fluctuations in the price of red rice, but there are strategies in place to increase the price of organic agricultural products.

Currently, there are no adverse impacts from tourism as this is only just beginning and some of the villages are currently off the tourist trails. But tourist numbers are increasing rapidly, and it is acknowledged that the provision of tourism facilities and overall tourism management are challenges for the property in order that the villages are not overwhelmed by the more damaging impacts of tourism."

Therefore, to better understand the current concerns of this site, both a review of existing literature and interviews with cultural heritage scholars and experts are provided in the following sections.

Despite the social vulnerabilities mentioned, and the fact that “The cultural landscape is a testimony of the successful human adaptation of the terrain” (ICOMOS & IUCN, 2020, p. 8), the term ‘resilience’ does not appear when looking for it in both the Dossier and the Site management plan submitted in 2013.

A few words appear that hint at the potential use of resilience but in an indirect way and related to its approaches, such as ‘mitigation’ (7 times), ‘adaptation’ (7 times) and ‘adaption’ (3 times) in 1,439 pages of the Dossier (**Table 9**).

	Dossier “Cultural Landscape of Honghe Hani Rice Terraces”
resilience	0
resilient	0
mitigation	7
mitigative	0
adaptation	7
adaption	3
adaptive	0
total pages	1,439
date (year)	2013

Table 9 | A survey of the nomination file of the “Cultural Landscape of the Honghe Hani Rice Terraces” (UNESCO, 2013a). Findings reveal a scarce use of resilient-related terms in the Dossier, mostly indirectly related to its approaches. (Source: UNESCO, 2013a. Author’s elaboration.)

However, under the “Protection and management requirements” section, several hierarchical indications to manage and protect the World Heritage site are indicated and adopted. They provide a national and local framework in which actions should be planned and thus also potential problems to be addressed in the next scenario. Here they follow, as excerpts:

“The property is protected by law as a State Priority Protected Site designated by the State Council of China. The property was also designated in 2008 as a protected historic site by Yuanyang County People’s government. Along with all inscribed properties in China the property is protected within the Measures for Conservation and Management of World Cultural Heritage Sites, issued by the Ministry of Culture, and the supreme legislation issued by the national authority of China. This legal instrument, along with conservation and management plans, special local laws and regulations, and village rules, are combined to constitute a complete system for identification, conservation, management and monitoring of World Heritage sites. ...

The local government has issued the Measures for Protection and Management of the Villages and Residences of the Cultural Landscape of Honghe Hani Rice

Terraces and Guidelines for Conservation, Renovation and Environmental Treatment of Traditional Hani Residences in Honghe. ... They cover the rice terraces, forests, irrigation systems, traditional villages and residences, and the traditional culture in the region. These measures are ways of delivering the obligations of the national protection for World Heritage. ... Each of the villages is under the administration of village committees. ... As the basic unit of Hani People society, each village has developed a series of customary laws for managing natural resources and solving the inner discords of villagers and exterior grievances against other villages.

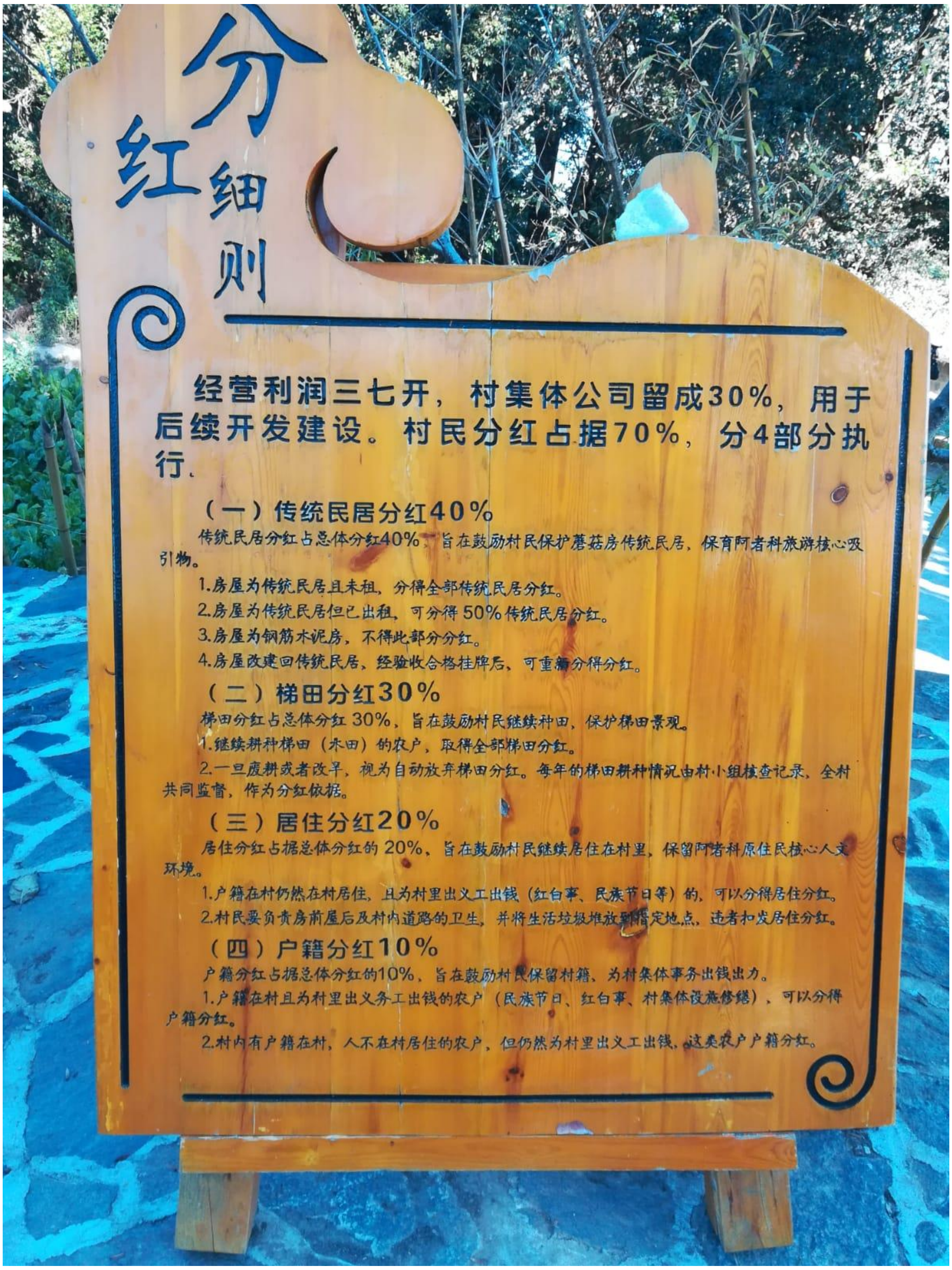
A management plan has been written for the property. ... The plan runs from 2011 to 2030, and is divided into short term, from 2011 to 2012, medium term from 2013 to 2020, and long term from 2021 to 2030, aims. The Hani Rice Terraces Cultural Heritage Protection and Development Management Committee is responsible for implementing the Plan. ... The Hani Terraces Administration of Honghe Prefecture set up in 2007 with 12 staff members services the Committee, oversees the day-to-day administration carried out at County level and liaises with local stakeholders.

Local authorities are formulating specific plans for tourism management and development of the region ... So as to ensure there is a clear understanding of what is being sustained and how tourists can support the overall management process, it would be desirable if the management plan could be supported by a detailed Sustainable Eco-Tourism Strategy for the property and its buffer zone and by an Interpretation Strategy that allows understanding of the complex farming and water management systems and the distinctive social-economic and religious systems of the Hani communities."

According to Li (2017), since 2013, the preservation and the management of this cultural landscape at the prefectural level is the mission of the World Heritage Management Administration Office. This managing body even coordinates supra-counties projects that involve the other management offices of Honghe, Jinping, Luchum, and Yuanyang counties for heritage preservation. Moreover, "… the County Terraces Management Offices are entrusted to implement daily conservation actions on site and administrative work." (p. 8), involving farmers in the daily management.

In the same year (2017), the State party, i.e. China, revised the Measures on the Protection and Management of World Cultural Heritage to integrate the 2017 revision of the national Law on the Protection of Cultural Relics.

4.5.3 The management system



分红细则

经营利润三七开，村集体公司留成30%，用于后续开发建设。村民分红占据70%，分4部分执行。

（一）传统民居分红40%

传统民居分红占总体分红40%，旨在鼓励村民保护蘑菇房传统民居，保育阿者科旅游核心吸引物。

1.房屋为传统民居且未租，分得全部传统民居分红。

2.房屋为传统民居但已出租，可分得50%传统民居分红。

3.房屋为钢筋水泥房，不得此部分分红。

4.房屋改建回传统民居，经验收合格挂牌后，可重新分得分红。

（二）梯田分红30%

梯田分红占总体分红30%，旨在鼓励村民继续种田，保护梯田景观。

1.继续耕种梯田（水田）的农户，取得全部梯田分红。

2.一旦废耕或者改旱，视为自动放弃梯田分红。每年的梯田耕种情况由村小组核查记录，全村共同监督，作为分红依据。

（三）居住分红20%

居住分红占据总体分红的20%，旨在鼓励村民继续居住在村里，保留阿者科原住民核心人文环境。

1.户籍在村仍然在村居住，且为村里出义工出钱（红白事、民族节日等）的，可以分得居住分红。

2.村民要负责房前屋后及村内道路的卫生，并将生活垃圾堆放到指定地点，违者扣发居住分红。

（四）户籍分红10%

户籍分红占据总体分红的10%，旨在鼓励村民保留村籍，为村集体事务出钱出力。

1.户籍在村且为村里出义务工出钱的农户（民族节日、红白事、村集体设施修缮），可以分得户籍分红。

2.村内有户籍在村，人不在村居住的农户，但仍然为村里出义工出钱，这类农户户籍分红。

Figure 22 | The management system of the "Cultural Landscape of Honghe Hani Rice Terraces" (UNESCO, 2013a). The descriptive table with specific percentages of dividends placed at the entrance of the Azheke village, in December 2019 (source: *CH13*, as indicated in paragraph 4.5.7).

The nomination dossier of this site refers that, in the Property, "about 16,241.78-hectare land is owned by the collective, accounting for about 97.82%; while the remaining 361.44 hectares is owned by the People's Republic of China, accounting for about 2.18%. The land taken by highways, national forests, rivers and so forth is owned by the People's Republic of China. The land taken by terraces, villages, ditches and collective forests is collectively owned. … In the buffer zone, about 26,314.62-hectare land is owned by the collective, accounting for about 89.20%; while the remaining 3,186.39 hectares are owned by the state, accounting for about 10.80%" (UNESCO, 2013a, p. 193). This classification was made following the provisions of the Land Administration Law of the People's Republic of China.

The Management rules concerning the economic dividends (in percentages) for the villages in the Property are publicly exposed to the inhabitants and tourists. In **Figure 22**, one can see the table placed at the entrance of the Azheke village (24.976240° N, 101.481600° E), one of the five settlements of excellence in the Property. The photo of the summary has been shot during an on-ground survey by *CH13* in December 2019 and translated by a native-speaker person into the Italian language.

In this one, the operating profits are divided into specific percentages, as follow. The village collective society retains 30%, while the dividends to the villagers account for 70% and are divided into four parts:

- *40% to traditional houses*.

The aim is to encourage the villagers to protect the original houses from generation to generation and to maintain the basic competitiveness of the village.

> 1. a house is defined as a traditional house and if it is not rented out, dividends are paid to the owners.;
>
> 2. it is stipulated that the traditional house that has been rented can receive 50% of the dividends;
>
> 3. if the house is made of concrete and bricks, i.e. not of traditional material or features, it is excluded from the division of dividends; and
>
> 4. the house that turns into a traditional house can still access the dividend division.

- *30% to the terraces*.

The goal is to encourage residents to continue farming and protect the landscape, as follow:

> 1. Farmers on rice terraces who continue to plough can access the dividend division; and
>
> 2. Once grown and modified, consider giving up the dividends from the sample field. The lack of annual seed in the field is checked and recorded by the lady of the village. A total of 2 supervisory committees report on dividends.

- *20% remaining dividend*.

The intention is to encourage residents to continue living in the village while maintaining the human and cultural environment.

1. Those who reside and live in the country and contribute to and support weddings, funerals and relevant events in the country can access the dividend distribution; and

2. The inhabitants are responsible for cleaning the streets and areas close to their homes. Violation of this rule shall result in exclusion from dividend distribution.

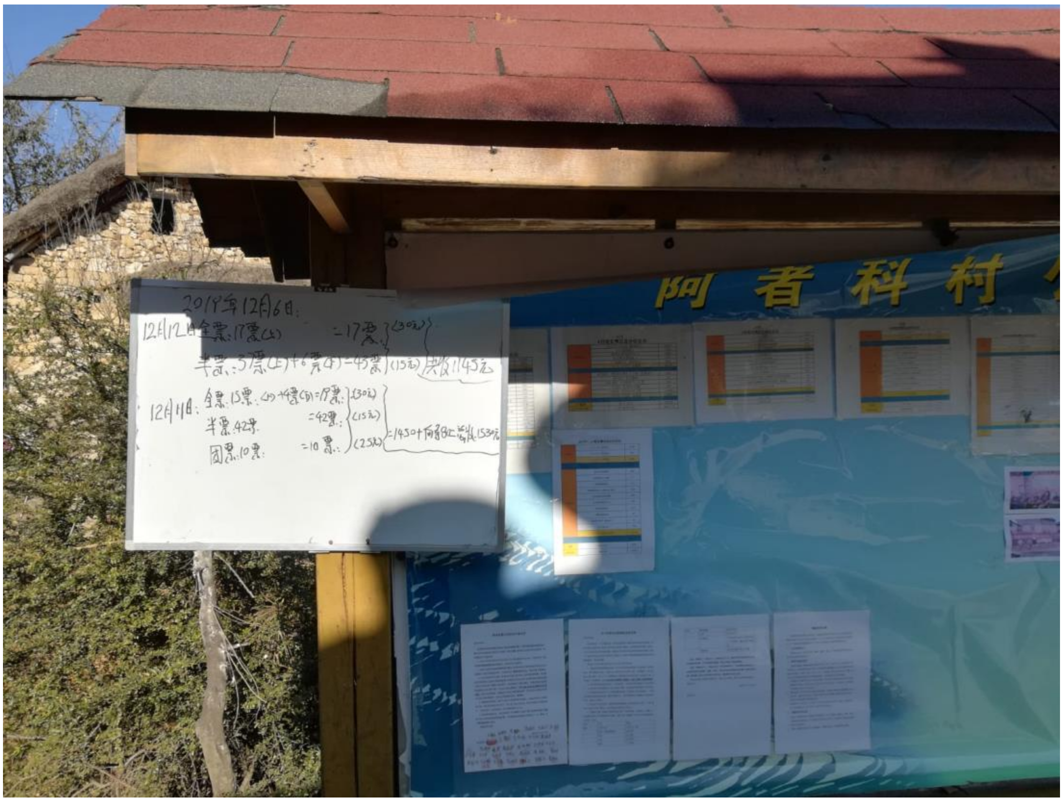
- *10% to the families*.

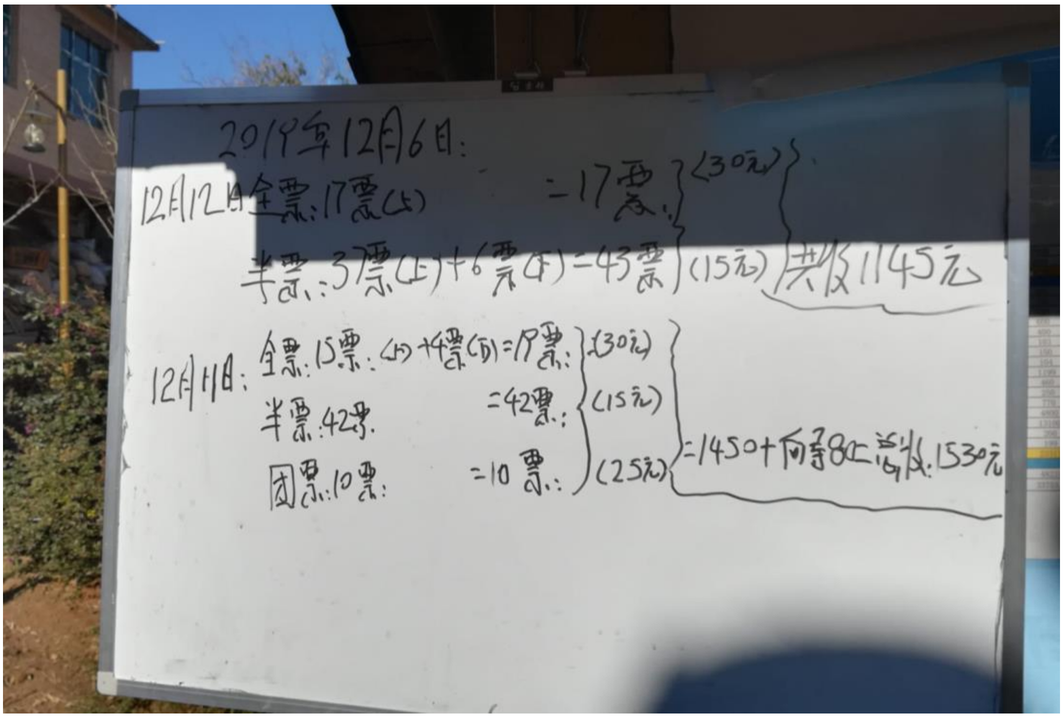
Dividends are intended to encourage residents to maintain their residence in the village and contribute to collective affairs. It is allocated as follows:

1. to farmers who have their residences in the village and have volunteered for the village (for weddings, funerals and relevant events in the village, restoration work and repair of the village infrastructures) can receive them in the division; and

2. both farmers living in the village and those who do not live in the village, but have volunteered for the village, are eligible for dividend sharing.

In addition, a series of notices posted on the notice board at the beginning of the village accurately describes the income paid to the inhabitants, as well as the announcement of the 5th Village People's Congress countersigned by each family. The writing on the board is dated December 06, 2019 (**Figure 23**).


2019年12月6日:
12月12日 全票:17票(上) =17票 (30元)
半票:3票(上)+6票(下)=45票 (15元)
12月11日: 全票:15票(上)+4票(下)=19票 (30元)
半票:42票 =42票 (15元)
团票:10票 =10票 (25元)
阿者科村



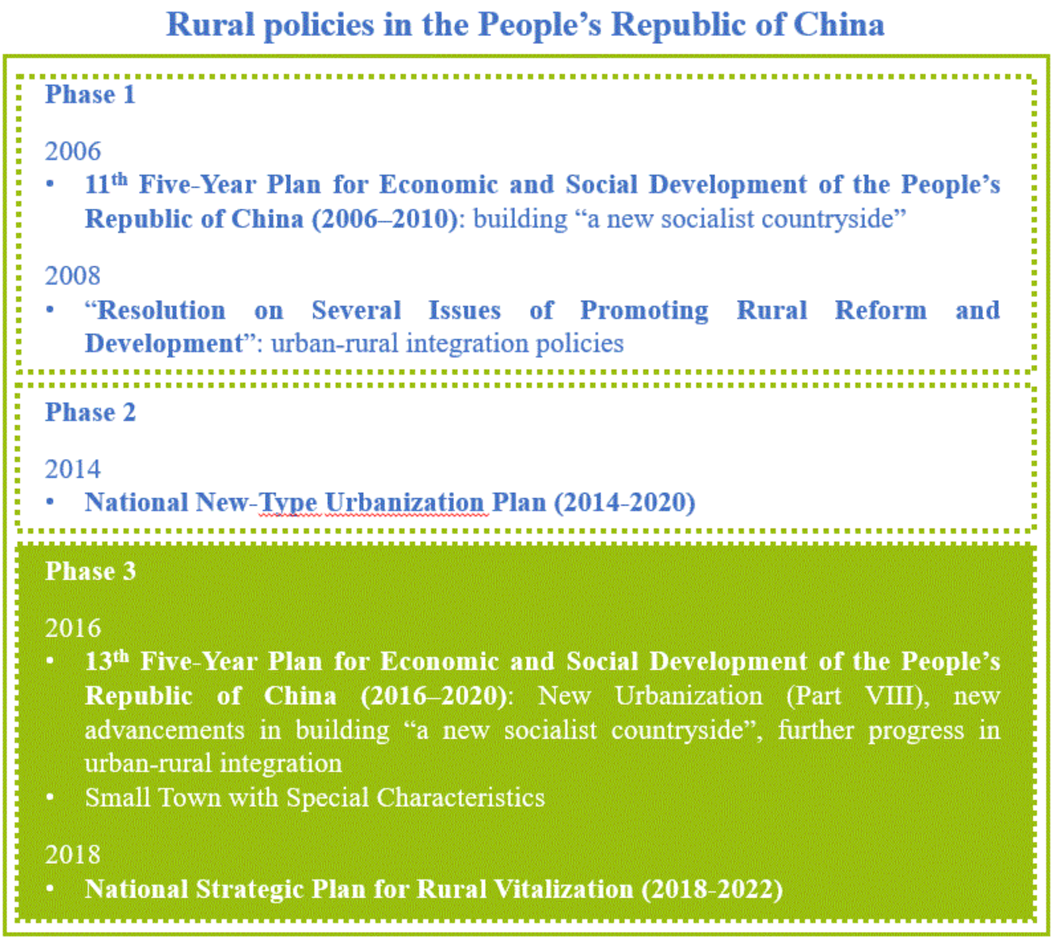
2019年12月6日:
12月12日 全票:17票(上) =17票:}(30元)
半票:37票(上)+6票(下)=43票}(15元) 共收1145元
12月11日: 全票:15票:(上)+4票(下)=19票:}(30元)
半票:42票. =42票:}(15元)
团票:10票: =10票:}(25元) =1450+向导80 总收:1530元

Figure 23 | The management system of the "Cultural Landscape of Honghe Hani Rice Terraces" (UNESCO, 2013a). Above, the series of amounts paid to the inhabitants and the communications to the inhabitants. Below is the descriptive table with specific amounts divided according to the percentages of dividends placed at the entrance to Azheke village as in Fig. 17, dated 06 December 2019. (Source: *CH13*, as indicated in paragraph 4.5.7.)

4.5.4 The National Strategy for Rural Vitalisation (2018-2022) - literature review

Over the past 40 years, China has been experiencing a gigantic change in its society, moving from an agricultural to an industrial society (UNESCO, 2019b). The growth of cities has prompted the creation of "city-centric policies" (UNESCO, 2019b, p. 9), with a lack of intervention in rural areas. To resolve this situation, the 16th National Congress of the Chinese Communist Party launched the "Building a Socialist New Countryside" policy in 2006, considered pivotal in the rural development of the Nation (UNESCO, 2019b). After that, plans and strategies targeted to rural areas have been established under the social-economic, agrarian, and cultural-heritage components. Twelve years later, the 19th National Congress of the Chinese Communist Party launched the Rural Revitalisation Strategy intending to build "a moderately prosperous society" (UNESCO, 2019b, p. 9). The 2018–2022 National Rural Revitalization Plan was introduced by the Rural Affairs Office of the Central Government based on the 2019 national strategy. Hierarchically, regional, and local governing bodies have established proper measures to reach the objective imposed by the national strategies.

Initiatives in the social-economic sector have moved since three different Phases, as reported in **Figure 24**. Moving from Phase 1, which aimed to increase the agricultural productivity and infrastructures, as well as persons' income/wages, Phase 3 is more connected to the local features of the rural settings, including identity as a part of a more pervasive discourse on culture (UNESCO, 2019b).



Rural policies in the People's Republic of China

Phase 1

2006
- **11th Five-Year Plan for Economic and Social Development of the People's Republic of China (2006–2010)**: building "a new socialist countryside"

2008
- **"Resolution on Several Issues of Promoting Rural Reform and Development"**: urban-rural integration policies

Phase 2

2014
- **National New-Type Urbanization Plan (2014-2020)**

Phase 3

2016
- **13th Five-Year Plan for Economic and Social Development of the People's Republic of China (2016–2020)**: New Urbanization (Part VIII), new advancements in building "a new socialist countryside", further progress in urban-rural integration
- Small Town with Special Characteristics

2018
- **National Strategic Plan for Rural Vitalization (2018-2022)**

Figure 24 | Rural policies in the People's Republic of China. The three Phases and the most relevant policies in each of them. (Source: UNESCO, 2019b, p. 10. Author's elaboration.)

Building on Phase 1, the 11th Five-Year Plan for Economic and Social Development (2006-2010) (CGPRC, 2006) issued specific guidelines that set several objectives that are also relevant to future rural-oriented policies. To build "a new socialist countryside" (China's National People's Congress, 2006), here follow some points of interest excerpted from the Guidelines that are in line with the current research:

- "Development of Modern Agriculture" (China's National People's Congress, 2006, Chapter 4);
- "Increase peasants' income" (*ibid.*, Chapter 5);
- "Improve Agricultural Appearance" (*ibid.*, Chapter 6);
    - "… protect the characteristic rural building style and features." (*ibid.*,); and
    - "Improve rural birth control service system and implement the rural birth control family incentive and support system ..." (*ibid.*).
- "Train New Type Peasants" (*ibid.*, Chapter 7);

    - “Accelerate the development of rural education, skill training and cultural causes and train the new type peasants who have culture, know techniques and can operate” (*ibid.*,); and
    - “Guide cultural workers to go deep into the countryside and satisfy the peasants’ need of spiritual culture. Support rural amateur cultural team and encourage peasants to initiate cultural industry” (*ibid.*).
- “Increase Agricultural and Rural Investment” (*ibid.*, Chapter 8);
- “Implement the Overall Regional Development Strategy” (*ibid.*, Chapter 19):
    - “Increase financial transfer payment strength and financial investment strength and support the … minority nationality regions and border areas to accelerate their development” (*ibid.*,);
    - “Support development ethnical characteristic industry, ethnical urgently needed commodities, ethnical medical industry and other superior industries” (*ibid.*); and
    - “Preferably resolve the poverty problem of extremely poor minorities, support the economic and social development of ethnical groups with relatively a small population and push forward the action of booming the border area and enriching the people” (*ibid.*).
- “Promote the Sound Development of Urbanization” (*ibid.*, Chapter 21):
    - “Encourage rural population to settle down in medium and small cities and small towns ...” (*ibid.*).
- “Push Forward the Strategy of Reinvigorating China through Human Resource Development” (*ibid.*, Chapter 29):
    - “Strengthen rural practical talent training” (*ibid.*).
- “Improve the People’s Living Standard” (*ibid.*, Chapter 39):
    - “Increase the income level of urban and rural residents and reinforce the consumption capacity of residents and especial rural residents and urban low-income people” (*ibid.*).
- “Strengthen the Socialist Democratic and Political Construction” (*ibid.*, Chapter 43):
    - “Ensure that autonomous minority nationality areas legally exercise their power of autonomy, consolidate and enhance socialist ethnic relations of equality, solidarity and mutual assistance and promote common prosperity and progress for all our ethnic groups” (*ibid.*).
- “Strengthen the Socialist cultural Construction” (*ibid.*, Chapter 44):
    - “Strengthen the protection of cultural and natural heritage and ethnical and folk culture” (*ibid.*); and
    - “Expand international cultural exchange” (*ibid.*).
- “Adjust and Improve Economic Policy” (Chapter 47):
    - “The preferred fields of public finance budget arrangement are: ... rural science and technology transfer, ... rural labour force training,

> ... poverty reduction, ... disaster prevention and reduction, ... basic science and leading-edge technology, as well as social welfare technological research, ... pollution prevention and control, ecological protection, ... etc. the key supported regions are: ... Central and West Regions and especially ... minority nationality regions, border areas, poverty-stricken areas" (*ibid.*).

Consequently, some of the actions above mentioned impacted both positively and negatively. According to the data launched by the National Bureau of Statistics of the People's Republic of China (NBS), the rural income after this Five-year Plan was equal to US$1,175 in 2011, almost double the US$675 declared in 2005 (UNESCO, 2019b, p. 12). Generally, minorities and their living conditions received attention in several aspects. By contrast, the abandonment of rural areas is promoted, resulting in the depopulation of these areas.

In Phase 2, the New Type National Urbanisation Plan (2014-2020) sets further targets in the field of housing and reinforces the leading role of cities in the country's development as well. Thirteen ministerial agencies, including the Ministry of Housing and Urban-Rural Development (MOHURD), have contributed to its writing. It is recognised that 100 million rural people will move to the cities becoming migrant workers by 2020. Therefore, some of the stated objectives are having an impact on the dynamics of the case study areas of the site, for example by increasing depopulation trends of rural centres in favour of larger urban centres. For the sake of clarity, a few of them are excerpted and reported below from the article "China's urbanization plan 2014-2020" published by China Daily in 2014:

- "By 2020, permanent urban residents should reach 60 percent of the populace ..." (China Daily, 2014);
- "The leading role of major cities will be emphasised, while increasing the number of small and medium cities" (*ibid.*); and
- "The systems of household registration, land management, social security, taxation and general administration will be improved" (*ibid.*).

In Phase 3, the 13th Five-Year Plan for Economic and Social Development (2016-2020) have integrated the precedent 2 acts in its Guidelines. Some of them have been strengthened (e.g. fight poverty, care and protection of ethnic minorities), and new ones have been established to increase the impact of the current Plan (e.g. Internet + programme, e-commerce, fibreoptic networks, climate change issues and adaptation). Below, some of the points of interest listed in the Plan, which are pivotal to understand the specific trends in the Honghe Hani Rice Terraces site:

- "Establish a Modern Property Rights System" (China's National People's Congress, 2016, Chapter 12):
  - "We will improve the functions of rural collective property rights and complete, in all rural areas nationwide, the determination, registration, and certification of contracted land rights, rural home

    land rights, rural housing property rights, and rights for collectively owned land designated for construction" (*ibid.*).

- "Strengthen Capacity for Ensuring Safety of Agricultural Products" (*ibid.*, Chapter 18):
    - "... the restoration of rural land ..." (*ibid.*).
- "Establish a Modern Agricultural Operations System" (*ibid.*, Chapter 19):
    - "We will strengthen the development of distribution facilities and markets for agricultural products, work to improve rural logistics and comprehensive service networks, encourage the development of e-commerce in rural areas ..." (*ibid.*).
- "Improve Systems for Providing Support and Protection for Agriculture" (*ibid.*, Chapter 21):
    - "… promoting increases in rural incomes, and achieving sustainable agricultural development, we will improve policy support aimed at strengthening agriculture, benefiting farmers, and raising rural living standards and raise our level of support and protection for agriculture" (*ibid.*);
    - "Develop a national system for the collection, storage, and research of germplasm resources" (*ibid.*);
    - "Strengthen research and development of key technologies for ... high- efficiency seed production, and fine and deep processing of seeds" (*ibid.*);
    - "Spread the application of water-efficient irrigation and promote water-efficient projects, crop breeds, agronomy, and management" (*ibid.*);
    - "Accelerate the implementation of regional scaled high-efficiency water-saving irrigation projects, using water-conserving methods to ... reduce waste water discharge in the south" (*ibid.*);
    - "Make breakthroughs in mechanizing the transplanting of rice seedlings ..." (*ibid.*);
    - "Promote the use of ... light, durable, and lower-power small and medium plowing, planting, and harvesting machines and crop protection machines" (*ibid.*);
    - "See that mechanization of the ploughing, planting, and harvesting of major farm crops reaches approximately 70%" (*ibid.*);
    - "Introduce "Internet +" modern agriculture, facilitate the adoption of the Internet of Things in field planting, ... participating in the development of e-commerce platforms for farmers, rural areas, and agriculture" (*ibid.*);
    - "Establish monitoring, analysis, and early-warning systems based on agricultural information" (*ibid.*);
    - "Make a serious push to reduce pesticide and chemical fertilizer use in the production of agricultural products" (*ibid.*);

    - “Develop ... agricultural products using geographical indications” (*ibid*.);
    - “Develop demonstration family farms, demonstration agricultural cooperatives …” (*ibid*.); and
    - “Implement the “100 counties, 1,000 townships, 10,000 villages” pilot demonstration project to promote the integrated development of the primary, secondary, and tertiary industries in rural areas” (*ibid*.).
- “Build Ubiquitous, Efficient Information Networks” (*ibid*., Chapter 25):
    - “... for rural areas, we will work to make sure that 98% of administrative villages are linked up to fibreoptic networks, 100 Mbps or higher access service capabilities are available in areas where conditions permit ...” (*ibid*.).
- “Promote Coordinated Urban and Rural Development” (*ibid*., Chapter 36):
    - “... take comprehensive measures to improve rural living environments, redouble efforts to protect traditional villages, houses, and towns and villages with unique ethnic features, ensure rural civility is passed on to new generations ...” (*ibid*.).
- “Support the Development of Special Regions” (*ibid*., Chapter 40):
    - “We will increase support … areas … with concentrations of ethnic minorities, border areas, and poor areas, implement the talent support plan for border areas, remote areas, poor areas, areas with concentrations of ethnic minorities close to the border, ... and work to quicken the pace of economic development in these areas to considerably raise the living standards of the people” (*ibid*.);
    - “We will attach greater strategic importance to accelerating the development of ethnic minorities and the areas where they reside, ensuring that such areas see an increase in government investment and financial support ... We will support these areas in developing distinctive regional economies ... We will promote the development of ethnic minority undertakings, support the development of ethnic minorities with smaller populations and the production of special products needed by ethnic minorities, and help protect and pass on the traditions and culture of ethnic minorities. We will expand efforts to create ethnic unity and … promote communication, exchange, and blending between ethnic groups” (*ibid*.); and
    - “Implement projects to protect and develop the distinctive villages and towns of ethnic minorities and focus on developing distinctive and traditional ethnic minority villages and towns” (*ibid*.).
- “Respond to Global Climate Change” (*ibid*., Chapter 46):
    - “We will take climate change into full consideration in economic and social development efforts such as rural-urban development planning ... We will formulate and adjust technical standards in this

regard at an appropriate time and put into effect an action plan for adapting to climate change" (*ibid.*).

- "Support Accelerated Development of Poor Areas" (*ibid.*, Chapter 57):
    - "In the battle against poverty, we will focus our efforts on ... areas with concentrations of ethnic minorities, border areas, and contiguous poor areas; ...; strengthen the ability of poor areas to tap into their development potential; and ensure that the per capita disposable income of farmers in these areas increases faster than the national average ..." (*ibid.*).
- "Improve Poverty Reduction Systems" (*ibid.*, Chapter 58):
    - "Put into action the "Internet +" industry-based poverty reduction initiative" (*ibid.*); and
    - "Promote the development of e-business-based, ... and rural tourism-based poverty alleviation ..." (*ibid.*).
- "Strengthen Civic Development" (*ibid.*, Chapter 67):
    - "We will establish systems for carrying on the fine cultural traditions of China and ensure that traditional culture is creatively adapted and developed. ... We will strengthen the protection and utilization of sites and items of cultural significance, putting an end to destructive development and improper business operations. We will step up the protection and carrying on of intangible cultural heritage, revitalize traditional craftsmanship ... We will develop ethnic and folk culture and support folk culture organizations" (*ibid.*).

The last step of Phase 3 is the Rural Vitalization Strategic Plan (2018-2022). As reported by China Daily in 2018, some points of interest have an impact on this research. In the article, Han Jun, chief of the Office of the Central Rural Work Leading Group, declared that:

- "In villages with a long history and rich natural and cultural resources, development must be done along with protection" (China Daily, 2018).

In addition, the article also contained other objectives, some of which were already listed in the aforementioned 13th Five-Year Plan for Economic and Social Development (2016-2020). Among them are the followings:

- "More capital will be channelled to rural areas through steadily rising public finance inputs, broadened financing ..." (China Daily, 2018); and
- "The package of policies also includes better rural governance, ... and reforms on land use and collective property rights" (China Daily, 2018).

Remarkable, the article ended with the phrase that recalls the relevance of the agricultural sector in national development:

- “This is the 15th year in a row that the ‘No 1 central document’ has been devoted to agriculture, farmers and rural areas” (China Daily, 2018).

In addition, the article “China in 2018: Headway made in vitalizing rural areas” published by CGTN in 2018 stated that:

- “As around 70 percent of the country’s tourism resources are in rural areas, China has also introduced guidelines on sustainable development of rural tourism ...” (CGTN, 2018).

Assuming this info, UNESCO (2019b) also adds an important point for the current research. In particular, it refers to boundaries between protection and change and potential trajectories that can be deemed acceptable. Safeguarding the heritage means also preserving the cultural landscape of a specific territorial context, boosting tourism to alleviate poverty in these rural areas:

- “… For these villages the crucial issue is how to balance protection, exploitation and development. The safeguarding of cultural heritage will not only focus on historic sites and monuments, but also on their traditional layout, cultural landscape …” (UNESCO, 2019b, p. 37); and
- “The establishment of different types of museums, such as ... ecomuseums, ... and museums of the socio-economic history of rural areas are also encouraged, and several major projects concerned with increasing the cultural prosperity of rural areas, most of which are closely related to cultural heritage, are included” (*ibid.*).

4.5.5 The integration of intangible cultural heritage into national and local policies

Parallel to this, other initiatives to integrate intangible cultural heritage into local policies have been reported, according to the UNESCO report (UNESCO, 2019b, p. 22).

The ‘one village one brand’ goal was established by State Council on rural tourism, launching the First Document of the Central Government in 2007. It included advertising unique local products or tourist locations (*ibid.*, p. 32).

On February 25, 2011, the Intangible Cultural Heritage Law of the People’s Republic of China was released and came into force on June 1, 2011.

On this basis, five additions of an official shortlists designating ‘Chinese Traditional Villages’ or CTVs (中国 传统 村落) have been occurred since 2012. Consequently, on 6 June 2019, 6,819 villages have been formally enlisted in the national register (MoHURD, 2019) in order to be conserved and also for touristic purposes. In the Yunnan province, a specific investigation of the five batches released since 2012 carried out for this research indicates that there are 708 Chinese Traditional Villages among the total number of CTVs above introduced. In the Honghe Hani and Yi Autonomous Prefecture, there are 124 CTVs and, in the

Yuanyang county where the UNESCO site exists, there are 7 CTVs altogether (**Figure 25**).

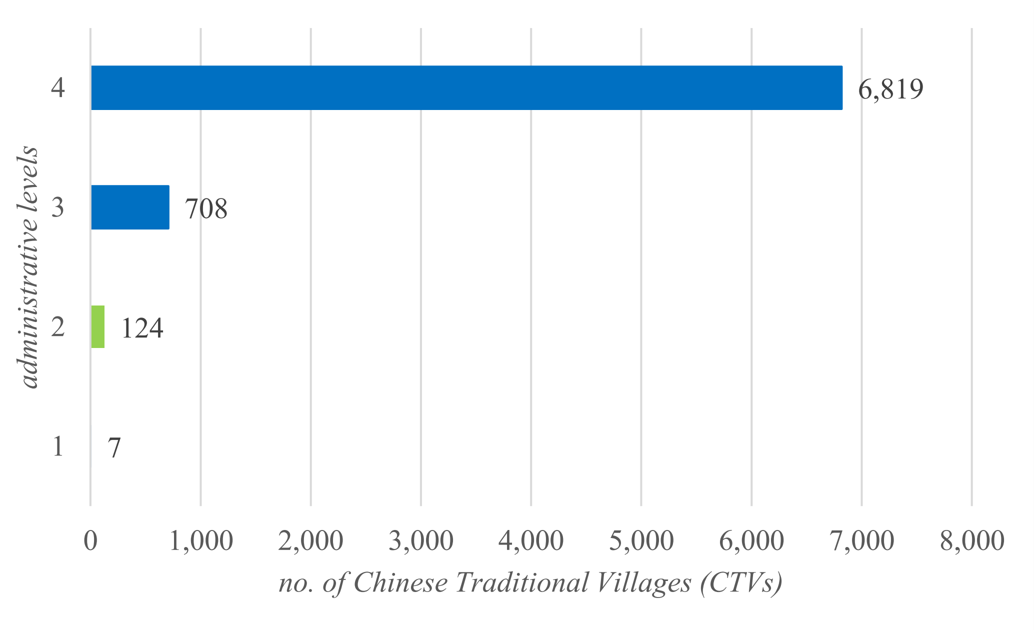


Figure 25 | Chinese Traditional Villages (CTVs) in the People's Republic of China. The bar charts report the overall number of CTVs in China (4), in the Yunnan province (3), in the Honghe Hani and Yi Autonomous Prefecture (2), and in the Yuanyang county (1). (Author's elaboration.)

Below is the aggregate number of CTVs for each batch in the above province, prefecture and county above mentioned:

- the first batch (December 17, 2012): in total, 62 villages in Yunnan are designated as Chinese Traditional Villages. Among them, 6 are in the Honghe and 0 in the Yuanyang;
- the second batch (August 26, 2013): overall, 232 villages in Yunnan are listed as Chinese Traditional Villages. Among them, 10 are in the Honghe and 0 in the Yuanyang;
- the third batch (November 25, 2014): in sum, 208 villages in Yunnan are defined as Chinese Traditional Villages. 51 are in the Honghe and, among them, 3 are in the Yuanyang;
- the fourth batch (December 09, 2016): in total, 113 villages in Yunnan are listed as Chinese Traditional villages. 40 are in the Honghe and, among them, 2 are in the Yuanyang; and
- the fifth batch (January 20, 2019): altogether, 93 villages in Yunnan are labelled as Chinese Traditional Villages. 17 are in the Honghe and, among them, 2 are in the Yuanyang.

As reported in the previous list, in Yuanyang county there are 7 CTVs, as enumerated below:

1. Azheke Village, Aichun Village Committee, Xinjie Town (third batch);
2. Qingkou Village, Tuguozhai Village Committee, Xinjie Town (third batch);
3. Yakou Village, Yiwanshui Village Committee, Panzhihua Township (third batch);
4. Dayutang Village, Xinjie Town (fourth batch);
5. Taiyangzhaicun Village, Daping Township (fourth batch);
6. Quanzhuang Village, Quanfuzhuang Village, Xinjie Town (fifth batch); and
7. Guoqi Village, Dashunzhai Village, Niujiaozhai Town (fifth batch).

Numbers 6 and 7 listed a combined reference of two villages for each point; the first village name refers to the 'administrative village' that manages several natural villages, while the second is the natural village that has been named in the list. Numbers 1, 2, 3, 4 and 6 of the listed CTVs villages are part of the World Heritage Site property entitled "Honghe Hani Rice Terraces Cultural Landscape" (UNESCO, 2013a, ref: 1111) and are inhabited by the Hani ethnic minority.

In January 2016, the 'No. 1 Central Document' was issued by the Central Committee of the Communist Party of China and the State Council. This policy document specifically indicates some key addresses, as reported on the website of the State Council Information Office of the People's Republic of China:

- "At least 53 million hectares of high-quality farmland will be created by 2020, which will be highly productive to ensure stable yields, be cultivated in an environmentally-friendly manner and able to withstand floods and droughts" (CCCPC & the State Council, 2016);
- "Training for farmers, increased investment in technology, modernization of the seed sector and diverse business entities and models will increase the pace of change" (*ibid.*);
- "China will ... guarantee that land dedicated to farming never shrinks to less than 120 million hectares" (*ibid.*); and
- "By 2020, woodland coverage will be above 23 percent ... More farmland will be turned into forests or pastures" (*ibid.*).

4.5.6 The current condition of the site – literature review

To determine the current trends in this World Heritage Site and their potential evolution since the 2013 Nomination File, a specific literature review was conducted. A total of 17 scientific articles in journals were analysed, covering a period from 3 years after entry on the World Heritage List (2016) to 2020. Below, the most relevant papers in terms of analyses and description of the situation of the Component and the Buffer Zone of the "Cultural Landscape of Honghe Hani Rice Terraces" (UNESCO, 2013a, ref: 1111).

Hua and Zhou (2015) clarify the ethnic minorities settled in a part of the Property area of the World Heritage site. According to the authors, within the basin of the Malizhai River: "… the Zhulu, Malizhai and Quanfuzhuang villages are all Hani nationality, while residents of both Yi and Hani nationality live in Luopu, Xinjie, Shuipulong and Tuguozai. The residents of Anfen are of Yi nationality. Residents of both Yi and Zhuang nationality live in Bajiaoling" (Hua & Zhou 2015, p. 10740). At lower altitudes than 300 metres above Malizhai river level, the Dai ethnic group has developed a different socio-environmental relationship to that established by Hani (*ibid*., p. 10743).

They interestingly refer that due to the population growth in the Hani areas, new terraces have been created, but far from the villages; it follows that the latter ones: "… are be less convenient and require higher labor intensity" (*ibid*., p. 10741). In each of them, there is a responsible-in-chief for the correct work of the ditches and the water allocation as a sharable resource with other neighbouring villages (*ibid*., pp. 10741, 10742).

These adaptive practices still concur to maintain a balanced equilibrium in the site management (*ibid*., p. 10742). Moreover, the authors indicate family kinship and a food production system based on win-win interactions for the "budding" of new Hani villages in the site area (*ibid*., p. 10746).

However, they also point out that there are some asymmetries if one compares the Property with the Buffer Zone, which can compromise both the sustainability and the integrity of this cultural landscape (*ibid*., p. 10749). In the Property, the local government "… prohibit setting fires in the fields, abandoning them or planting dry crops on them" (*ibid*.), but more changes are happening in the Buffer Zone. Firstly, "… parts of the ditches of some downstream villages were destroyed and abandoned" and, secondly, "… villages are increasing planting dry crops instead rice-terraces" (*ibid*.).

Chan et al. (2016) state that gentrification phenomena are ongoing at this site, driven by both gentrifiers and the State. These are coupled with a significant level of outward migration of young native people, i.e. Hani and Yi ethnic minority persons, to other nearby cities (Chan et al., 2016, p. 2) to work or study (*ibid*., p. 8).

All of them are connected with the increment of tourism pressure, which might compromise the site under different points: the image of its rice landscape due to lack of paddy fields farmers, the handing down of know-know and expertise, as well as the replacement of traditional activities into a market-oriented guesthouse or restaurants (*ibid*., pp. 9, 10).

Furthermore, the "… increasing property prices and living costs in touristic areas" may push villagers to "… relocate to less expensive and calmer zones" (*ibid*., p. 5), also to take advantage of the stable income from renting private homes to newcomers (*ibid*., p. 10).

Since tourists want to find in those places the same services offered in cities by modernity, the need to provide them to implement tourism can be an additional problem (*ibid*., p. 10).

In addition, a complex integration between these minorities and the Han majority seems to persist (*ibid*., p. 9). Consequently, the degradation of rice terraces due to lack of maintenance (*ibid*., p. 10) and the seasonal emptying of villages ('ghost villages'; *ibid*., p. 10) can severely compromise the heritage and its OUV in terms of authenticity and integrity, turning it into an unsustainable scenario.

On the other hand, touristic fluxes could embody a potential of supporting local revenues and help in revitalising the cultural heritage in these places (*ibid*., p. 5), although most of the companies working in this sector are led by Han entrepreneurs (*ibid*., p. 6).

According to Gao (2016), poverty alleviation is one of the goals of Yunnan province, as a sizable mass of people is engaged in agricultural work.

Two villages in the core zone of the World Heritage site were analysed: Azheke and Qingkou. The former has a significant number of traditional houses due to the remoteness of the urban centre (Gao, 2016, p. 4). They are built with mud bricks, based directly on the ground (*ibid*., p. 5), with a thatched roof. Qingkou has 185 families with 900 people overall, with only three distinct surnames: Li, Zhang, and Lu (*ibid*., p. 8). Each clan has specific cultural practices and rituals.

However, some changes are taking place: there are brick houses with reinforced concrete structures and TV installations (*ibid*., p. 8). They are the result of the improved local living conditions due to the migrants' revenues and the Governmental policies, which built a school, a museum, and infrastructures in the village (*ibid*., p. 9). Community decisions include locals to determine specific actions in the management in Qingkou (*ibid*., p. 15), and the contribution of external experts is relevant to evaluate new construction options in real estate.

Thanks to this mixed contribution, the right balance between modernity and tradition (*ibid*., p. 15) can help detect what can be changed and what is deemed to be preserved in the tangible/intangible culture (*ibid*., p. 18).

Li (2017) affirms that the Yakou village was affected by water scarcity in 2010-2013, causing repercussions on crops and agricultural land.

Consequently, "… traditional sacred activities, related to water management regimes, began to disappear" (Li, 2017, p. 8). However, these negative trends were reversed by ensuring proper management of the water drainage system and sacred water-related activities with the appointment of a new Migu (i.e. the spiritual leader of the village).

However, modernisation and globalisation are among the contemporary drivers of change, along with ageing landowners and depopulation, "… unordered construction, chemical fertilizers, and plastic pollution" (*ibid*., p. 9), touristisation and lack of cultural transmission to new generations.

In addition, the author declares that conservation plans are incomplete, and specific laws and regulations to difficult integrate tangible and intangible heritage.

Sun et al. (2017) refer to the disaster risk cognition in this World Heritage site.

In the three villages investigated in the Honghe Hani Rice Terraces, local people generally perceive the terraces as the most at risk of hazards. Only one village that usually experiences a touristic flux is aware of the pressures of extreme events on the management of these paddy fields (Sun et al., 2017, p. 543). Tourism also contributes to an increased understanding of the risks that affect the landscape as a whole, as a "forest-village-land-river" (*ibid*., p. 543), and the willingness to mitigate them (*ibid*., p. 549).

The paper continues by showing how more people are dependant on the agricultural exploitation of the terraces more are the concerns regarding potential disasters that can decrease productivity and incomes. Landslides are among them because of the variation of their frequency (*ibid*., p. 547) and magnitude, both incremented by climate change (*ibid*., p. 548).

Moreover, all factors above mentioned impacting the image of the landscape and its attractivity (*ibid*., p. 543), also burdened by the fact that younger people give up working in agriculture (*ibid*., p. 549).

On the other hand, diversified sources of income can reduce associated losses (*ibid*., p. 543), as tourism migrants and revenues.

Hua et al. (2018) state that the massive increase in tourism has produced significant alterations in the site's landscape (Hua et al., 2018, p. 3).

In the hamlet of Shengun, Xinjie Town, "… urbanization driven by tourism" (*ibid*., p. 8) has led to the building of accommodation, restaurants, and hotels for a global surface of 34,222 m^2 (*ibid*., p. 9), in a period from 2005 to 2015 (*ibid*., p. 8).

Unfortunately, the terraced areas close to the northern part of the hamlet have turned into drylands for 25.93 hectares in the same period. Rice has been replaced by dry terrace crops such as maize, cedar and black cardamom plantations (*ibid*., p. 9); family pig farming is present in the area (*ibid*., p. 9). Moreover, this trend was increased by "… persons have given up farming" (*ibid*., p. 8) in the area.

According to the authors, "In the last 10 years, water resources have become insufficient, resulting in a water crisis and multiple conflicts. … fights occurred because local farmers believed that the water used by some of the hotels resulted in reduced water for their terrace irrigation, and they argued that these hotels should not use water from the Mipumozuo gully" (*ibid*., p. 8). This impediment should be compulsory in the annual period from January to April when rice seedlings are transplanted (*ibid*., p. 10).

This practice seems to infringe "… the collective water rights of residents" (*ibid*., p. 10), but the research led by the authors demonstrated that the decrease of the rain falls and the replacement of forests with black cardamom plantations were the true causes of the water shortage in the 2005-2015 (*ibid*., p. 13). Simultaneously, it has to be said that the management of these channels was not so accurate and, therefore, "… some of them were damaged" (*ibid*., p. 12).

Min and Zhang (2019) introduce the necessity of adaptation of the management system as a part of the dynamic preservation of this Chinese World Heritage site, accordingly to FAO purposes.

To accomplish these goals, "… benefit-sharing, multi-stakeholder mechanisms, legally guaranteed incentive mechanisms, government-leading, multi-financing mechanisms, and multi-disciplinary scientific support mechanisms …" (Min & Zhang, 2019, p. 1) are considered essentials.

Benefits from this approach can impact multiple levels: environmental, economic, socio-cultural, and educational (*ibid.*, p. 3). In the ecological ones, promoting the genetic variety of cultures is an operative option (*ibid.*, p. 3) to adapt agriculture to the new-normal conditions (*ibid.*, p. 4). It also invests in the economic sector. Similarly, the contribution of modern technology in these agricultural activities can boost the farmers' incomes.

Cultural values are attached to the terraced landscape modelled through the centuries, and its preservation allows the survival of them and ensures the stay of locals in their native places (*ibid.*, p. 3).

The World Heritage administration of Honghe Hani and Yi Autonomous Prefecture is the responsible body for the sustainable manage the site (*ibid.*, p. 5). It preserves tangible and intangible heritage (*ibid.*, p. 6) as it is attached to places and the various elements that make them up (*ibid.*, p. 7). Moreover, it suggests the payment for ecological services to properly maintain the agricultural heritage (*ibid.*, p. 7).

However, seasonal depopulation and migrations are affecting the maintenance of this ricescape and its image, despite the increasing eco-tourism (*ibid.*, p. 9).

Taylor (2019) recalls the several aspects of the Chinese rural vitalisation strategy, which involves social-cultural, economic, and political dimensions (Taylor, 2019, p. 50).

It aims to increase food production for the domestic market, alleviate poverty in specific areas, ensure the rural-urban transition of newcomers, support rural rejuvenation programmes in villages and increase cultural relevance to improve the quality of life, including through implemented tourism revenues (*ibid.*, p. 51).

Terms such as neo-traditionalism, revival and revamping are used in the article both to describe this process (ibid., p. 51) and to describe the interrelated link between heritage, culture, and national identity in the Chinese context (*ibid.*, pp. 54, 57). It reflects that landscape values are different from the European/Western ones, as a place for spiritual purposes, poetry inspirations, and travelling as enjoyment (*ibid.*, p. 54).

In this sense, among China, there are distinctions between the meanings associated with the landscape by the Han majority and the other minorities (8% of the total population; *ibid.*, p. 55). Minorities believe in a spiritual connection between people and places, with sacred objects and places, which is continually renewed through traditional celebrations (*ibid.*, p. 55).

However, this strategy was not completely able to contain the loss of some 900,000 villages across the country due to migration from 2000 to 2013 (*ibid.*, p. 52).

Consequently, the author also asks the public what changes are acceptable in a local community and what the potential limits might be in this transition (*ibid.*, p. 55).

Zhang et al. (2019) report that terraced systems are the most resilient in coping with climate change and related extreme events (Zhang et al., 2019, p. 42), but under the condition of constant maintenance particularly if in mountainous areas (*ibid*., p. 43).

As their complete restoration is expensive in terms of costs, considerations need to be made regarding the rate of abandonment in rural areas in southwest China, which ranges from 5% to 45% (*ibid*., p. 43). Thus, multifunctional development has been pursued to provide additional benefits in appropriate terrace management (*ibid*., p. 43).

Generally, the terraces are cultivated with different crops, such as rice, potatoes, vegetables, and other crops, plus livestock farming.

Tourism also plays a leading role in this win-win system (*ibid*., p. 43), boosting the local revenues and creating new jobs as carrying luggage for visitors (*ibid*., p. 47) or turning local houses into restaurants or hotels (*ibid*., p. 49).

Increasing economic gains is crucial to ensure proper landscape conservation (*ibid*., p. 48). In this perspective, the revenue from entrance fees in Dazhai village provides extra compensation that is proportional to the size of each terraced property (*ibid*., p. 49).

Gao et al. (2020) remind us that in China, the land is property of the state and not owned by single citizens (Gao et al., 2020, p. 2) which can "… legally seize or expropriate land with compensation out of public funds" (*ibid*., p. 10). Moreover, it seems domestic laws are vague in defining the rights of local communities in the active involvement in tourist development (*ibid*., pp. 2, 12).

In the areas where minorities live, local authorities and Han entrepreneurs seem to rule the scene regarding the tourism exploitation, whereas local villagers are mostly in the background and not actively involved in the management (*ibid*., p. 4).

Some of the 82 villages composing the Honghe Hani Rice Terraces UNESCO World Heritage site are off the current touristic routes while Qingkou, Dayutang, and Pugaolaozhai are the most visited ones in the area (*ibid*., p. 6). They propose accommodations, restaurants, and inns to visitors.

In 2014-2015, the net annual income per person in Pugaolaozhai was from 256 to 384 euro, which was the cause of inward migrations of 90% of young people (*ibid*., p. 11) towards other cities (*ibid*., p. 6). Migration flows begun in the 1990s and gained relevance since the 2000s (*ibid*., p. 11) and, consequently, if the migrants are not able to come back for the harvesting season, "… others hire labor to do that for them" (*ibid*., p. 11).

To protect the traditional houses "as they are" (*ibid*., art. 6, p. 11), the original layout of the village and its features, the Village Residential Houses Protection and Management Regulation for Honghe Hani Terrace Cultural Landscape have been established (*ibid*., p. 9). Art. 25 of these Regulations impedes to abandonment or damage of the terraces (*ibid*., p. 11) and building materials useful to repair local homes could be excavated or taken only in certain areas delimited by the county government (*ibid*., p. 11). New roads have been built by the government (*ibid*., p. 10).

However, it seems that the intangible aspect of this cultural heritage is less recognised in the daily practices (*ibid*., p. 9) than its physical one (*ibid*., p. 10).

Even in these villages, the Company that co-manages them with the State has introduced a ticket fee to raise money with touristic fluxes since 2009; however, only 10% of the year revenue goes to the local community (*ibid*., p. 10).

Furthermore, there are also housing problems in the villages (*ibid*., p. 12) because "Any new building, rebuilding or building extension must be approved by the county government" (*ibid*., p. 13) and "... each household can only have one housing site ..." (*ibid*., p. 13). If local houses do not have the traditional form defined as "mushroom house" (*ibid*., p. 13), "... governmental subsistence allowances will be gone, all governmental compensation will be gone" (*ibid*., p. 13). This procedure does not meet the traditional local uses, as building new homes when a brother leaves the family to stay on his own or renting homes for touristic purposes (*ibid*., p. 14).

To compensate for these social-economic losses, the local government promised to assign new lots to households that cannot compromise the scenic view but "… this commitment lasted for years and never came into practice, leading to growing discontent among villagers" (*ibid*., p. 14).

In addition, a water shortage has been detected in Pugaolaozhai, due to new inns (*ibid*., p. 15), which hampered the rice plantation and limited its production "for tens mu (1 mu = 0.067 ha)" (*ibid*., p. 15).

The authors conclude with this forecast: "The absence of indigenous people in decision making, and the wane of their traditional culture along with the intrusion of modernization, accelerated by tourism, would likely threaten the future of the 'living' cultural landscape" (*ibid*., p. 16).

Li et al. (2020) point out that, on a global level, the poorer areas are often also those with the linguistic heritage most at risk, according to UNESCO (Li et al., 2020, p. 1).

Learning and using majoritarian languages in schools can expand possibilities in trading and tourism in natives (*ibid*., p. 2), such as the Southwestern Mandarin, which is the language spoken by the Han Chinese majority (*ibid*., p. 3).

Hani speakers are only 760,000, subdivided into four different countries: China, Vietnam, Laos, and Myanmar (*ibid*., p. 3). In China, the Hani dialect is not officially taught in primary and secondary schools (*ibid*., p. 4) and is mostly spoken by people aged between 41-50 and over 60 (*ibid*., p. 4, Figure 10).

They stress out the maintenance of native languages as an indicator of the integrity of the landscape/heritage (*ibid*., p. 2) and it generally embodies a social-economic capital (*ibid*., p. 4) also for the future.

Additionally, the authors ask how to convert the multi-language capital into the economic one (*ibid*., p. 5). In some areas of touristic interest, signs even report the translation in Japanese and French, because of "… red rice processing factory ... had received investment from Japanese or French investors years ago" (*ibid*., p. 11), but both English and Hani missing (*ibid*., p. 12).

On the other hand, English as a language needs to be studied more to implement the income from tourism in these places. It could also help in vending rice by putting an appropriate description on the packaging (*ibid*., p. 11).

Lastly, the "Fieldwork Report on the Cultural Landscape of Honghe Hani Rice Terraces" (Marlon et al., 2020), as part of the ICOMOS-IUCN Connecting Practice Project Phase III programme, reports both strengths and critical issues that complement those previously described by other authors.

As far as agricultural production is concerned, the site possesses rich biodiversity in its main crop, rice. In fact, in this World Heritage Site "Nearly fifty varieties of the traditional rice are still being planted …" (*ibid*., p. 29), but another part of the dossier specifies and clarifies that "According to a field survey, there used to be 195 varieties of local rice, among which 48 of them are still cultivated" (*ibid*., p. 36). These varieties are a good example of the adaptation of crops to this extreme environment, as they "… can withstand extremely cold and dry conditions in mountainous environments" (*ibid*., p. 29). Moreover, "The terraces growing the traditional varieties themselves serve as seed banks as does an informal exchange between village communities" (*ibid*., p. 29).

Therefore, from the report, it emerges that the crop-growing diversity of the landscape can increase the robustness and thus its resilience, in the following terms: "… locals believe that maintaining diversified land-use strengthens the overall stability of the landscape" (*ibid*., p. 27).

However, some problems were noted by the survey and reported here, as follows. First, there appears to be no information available "… on policies or efforts related to the setting up or operation of formal seed banks for conserving the agricultural biodiversity" (*ibid*., p. 29).

Secondly, the fieldwork dossier reports that there also seems to be some non-native crops growing there. Precisely, "… banana patches and other orchards may not seem traditional as these cater to the modern market economy. The banana orchards due to the distinct leaf form have changed the aesthetic quality of the overall scene" (*ibid*., p. 27).

Additionally, maintaining paddy fields and the associate landscape is intense and hard work that may not match contemporary aspirations and the will of younger generations.

Finally, it also warns against unilateral crop modification to increase productivity and biodiversity "… without adequate base work or knowledge of possible impact …", as "… they can work to the detriment of the landscape" (*ibid*., p. 30).

Tourism seems to be the key concern in terms of potential damage to the image of the landscape. In this regard, the report states that: "… the 'tourist villages,' hotels and resorts that seem to emulate the village typology but ... [they, A/N] impact on the environment and in the excess utilisation of local resources. ... these tourist enclaves are an added, … with a definite impact on the traditional lifeways of the people and both the cultural and natural environments" (*ibid*., p. 27). This condition seems exacerbated by the desire to cater to the taste of a mainly Western global tourism market, as such "Resorts and hotels are being constructed with touches of traditional and western architecture" (*ibid*., p. 33).

In addition, tourism can also increase the amount of waste produced by visitors, including organic waste, raising questions about sustainable disposal.

Consequently, the dossier stresses the importance of how "... the planning and implementation of tourism activities need to always adhere to heritage guidelines so as not to compromise authenticity and integrity of the landscape as defined by existing guidelines … and other policy documents relevant to its protection and continuity" (*ibid*., p. 27).

Furthermore, tourism seems to exacerbate the revamp of cultural traditions as a response to it. In this regard, the dossier cautions of the risk that "any change or loss in the system will either endanger the continuity of these cultural traditions or lead them to evolve to adapt to a different cultural context, such as tourism" (*ibid*., p. 31).

4.5.7 The current condition of the site - interviews

Qualitative and semi-structured interviews were used to better understand the ongoing dynamics of the "Cultural Landscape of Honghe Hani Rice Terraces" World Heritage Site (UNESCO, 2013a). This procedure was deemed necessary because the Nomination File for this UNESCO site dates back to 2013 and the last update on the webpage for this property is for a summary of the State of Conservation (SoC) Report of the State Party formulated by ICOMOS in 2015.

Due to the worldwide pandemic situation caused by the COVID-19 outbreak, multiple interviews were planned remote. A digital questionnaire was prepared in written form and sent by email to the people selected for their knowledge and experience of this specific site. The expected duration for answering the questions is in the range of 15'-30'. All persons were involved in the interviews during March and April 2020.

The questions proposed to this group of selected interviewees are four in total, as follow:

- Q1: Are the areas that are part of the "Cultural Landscape of Honghe Hani Rice Terraces" World Heritage Site subject to depopulation and/or abandonment of rural villages? If yes, to what extent?
- Q2: According to your experience, has there been an abandonment of rice terraces in the areas composing the "Cultural Landscape of Honghe Hani Rice Terraces"? If so, to what extent? Is there a difference before and after UNESCO recognition?
- Q3: Are there any migratory phenomena to the areas within the "Cultural Landscape of Honghe Hani Rice Terraces"? Are these phenomena internal to China, or do these areas also attract people from other countries (e.g. Laos and Vietnam)?
- Q4: Have newcomers brought with them new crops or rice cultivation techniques/methods to the areas of the "Cultural Landscape of Honghe Hani Rice Terraces"? If so, have these changes had an impact on the landscape?

As introduced, the interviewees are selected for their expertise in the area of interest, i.e. the "Cultural Landscape of Honghe Hani Rice Terraces" (UNESCO, 2013a), among the experts, scholars (Doctors of Philosophy, researchers, Professors), managing body members of the World Heritage site, as follows:

- *CH1*, Professor of Kunming Institute of Botany in Kunming, China, and Principal Scientist and Regional Coordinator of the World Agroforestry Centre, East & Central Region, Kunming, China;
- *CH2*, Research Assistant of the China World Cultural Heritage Center, Chinese Academy of Cultural Heritage, based in Beijing, China. The person has close relationships also with ICOMOS China and the site after the involvement in the nomination process. Moreover, the individual pursues a research project on the sustainable development of the terraced system and different views of stakeholders;
- *CH3*, Professor at the Honghe University, Director of the Hani Terrace Conservation and Development Center at the Humanities College, Yunnan, China. The person was the initiator of the Hani Rice Terraces nomination process and the former site manager at the Bureau of Word Heritage of Honghe Prefecture;
- *CH4*, Emeritus Professor and Honorary Professor of the Centre for Heritage & Museum Studies, Research School of Humanities and the Arts at the Australian National University, Canberra ACT, Australia and Visiting Professor at the Silpakorn University, Bangkok, Thailand. The fields of interest are the changing outlooks in the heritagisation procedure globally and with a specific significance to Southeast Asia and China; the process related to the cultural heritage; the theory and practice of the cultural heritage management, in particular in the cultural landscapes, as well as the World Heritage challenges and policies;
- *CH5*, Research Assistant Professor of Atmospheric Environment Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Hong Kong, China. This person studied the Yuanyang county, i.e. the core zone of the World Heritage Site, for the doctoral thesis;
- *CH6*, Chairman of the Commission of Experts on the World Cultural Heritage of China, Head of the ICOMOS International Conservation Center in Xi’an, former vice-president of ICOMOS International from 2005 to 2014, former Senior Commissioner and Senior Researcher at the Department of Cultural Heritage Protection of the State Administration of Cultural Heritage (SACH), China;
- *CH7*, Senior Researcher at the Department of Architecture and Planning of the Faculty of Architecture and Design, NTNU Norwegian University of Science and Technology, Norway. This person researches the growing urbanisation and its impacts on urban inhabitants in China, heritage conservation and urban resilience. Moreover, the Senior Researcher also

holds a part-time position at the international affairs division at the rector's office for NTNU-China cooperation;

- *CH8*, Assistant Professor at the Department of Landscape Architecture at the College of Architecture and Urban Planning, Tongji University, Shanghai; expert member of CIPA Heritage Documentation; contributing member of ICOMOS-IFLA International Scientific Committee on Cultural Landscapes; Deputy Secretary-General of the Chinese Society of Landscape Architecture Cultural Landscape Committee, China;
- *CH9*, Landscape Architect, Secretary-General of ICOMOS International Scientific Committee for Cultural Landscapes, formerly responsible for the ICOMOS-IUCN "Connecting Practice" programme in the Honghe Hani Rice Terraces in 2019;
- *CH10,* Reader in Architecture and Departmental Lead in Teaching & Learning at the Department of Architecture and 3D Design, University of Huddersfield, Queensgate, Huddersfield, UK. This person held a Visiting Professorship at Yunnan Arts University in China and was awarded the title of Distinguished Professor at Chongqing Jiaotong University. This author's literature includes a book on the architecture of the Dai nationality in Yunnan, China, published by Beijing University Press;
- *CH11,* Professor of Institute of Geographic Sciences and Natural Resources Research (IGSNRR) at the Chinese Academy of Sciences (CAS) and Co-chair of the Scientific Advisory Group for Globally Important Agricultural Heritage Systems (GIAHS) initiative of UN FAO, Beijing, China;
- *CH12,* School of Architecture and Urban Planning, Kunming University of Technology, Kunming, China;
- *CH13,* Head of Cultural Heritage & Regional-urban Development at LINKS Foundation, Turin, Italy. He visited the "Cultural Landscape of Honghe Hani Rice Terraces" as an additional member of the delegation of the Piedmont Region on an official visit in December 2019;
- *CH14*, Associate Professor in Horticulture, Landscape and Urban ecology / Department of Agronomy, Forestry and Food Sciences, University of Torino; Director of the Study Centre for Rural Hill Development, University of Turin, Italy. This person was part of the governmental team of the Piedmont Region that visited this UNESCO site on 10-15 December 2019;
- *CH15,* post-doctoral at the School of Tourism and Management, Sun Yat-sen University, Guangzhou, China;
- *CH16*, a doctoral candidate at the School of Tourism and Management, Sun Yat-sen University, Guangzhou, China. As a part of a larger research group, the person is researching the Yuanyang Hani Terrace, titled the "Azheke Plan";

- *CH17*, a doctoral candidate at the School of Tourism and Management, Sun Yat-sen University, Guangzhou, China. This person was part of a social experiment in a small village in the Hani terraces carried out by the academic tutor, which aims to reduce poverty by helping those villagers to develop tourism. So, this person had lived in that village for 14 months to do practical assistance and the PhD research works;
- *CH18,* Professor at the School of International Education, Kunming University of Science and Technology, Kunming, Yunnan, China; and
- *CH19*, an undergraduate student at the School of Tourism and Management, Sun Yat-Sen University, Guangzhou, China. This person is the representative of the students working in the Azheke Village, Yuanyang.

The name/surname of the interviewees have been omitted due to privacy implications, and it is possible to report only them in aggregated data. The number of male people is 10 out of 19 (53%), and the female ones are 9 out of 19 (47%).

4.5.8 Findings from the interviews

In 2020, the population in the Property was 62,716 while that in the Buffer Zone is 81,749, according to *CH2*. As a whole, the population in the UNESCO site is increasing in number (*CH2*). This statistical survey was launched by China's World Cultural Heritage Monitoring Platform provided by the Chinese Academy of Cultural Heritage and the World Cultural Heritage Center of China (*CH2*, https://www.wochmoc.org.cn/home//html/1//46/index.html).

Here follow the main findings from the answers of the remote interviews to experts before identified, numerically listed in six main points related to the four questions before introduced:

1. *Depopulation.*

The Honghe Hani is one of China's 56 Ethnic Minority Areas subject to specific political/economic/social factors (*CH4*). *CH2* and *CH3* pointed out that the Honghe Hani Rice Terraces have been cultivating and maintaining not only by the Hani people but retained mainly by the Hani people for hundreds of years. At least nine different ethnic minorities live in the same area, sharing a common culture and playing different roles. In this agricultural system, the Hani people created the agricultural culture and they are the majority who perfectly and integrally inherited all activities and spirits of the rice terraces, coordinating in harmony with other minorities. For example, Hani people (living on the hillside) and Dai people (living in the valley) foster buffalos together in different seasons; Yi people also hold large, terraced fields, farming and intermarrying with Hani people.

Consequently, it emerges that *CH2* and *CH3* suggest that one has to consider this system as a whole. Thus, if the Hani are still the majority who cultivate terraces and conserve them, the information in the ICOMOS advisory body's assessment that "'Where there are Hani people, there are terraces; where there are terraces, there are Hani people'. In reality some 50% of Hani people farm terraces" (ICOMOS, 2013, p. 78) does not seem to be a problem (*CH2* and *CH3*).

The declining population trend is not evident (*CH16* and *CH19*), and both *CH17* and *CH19* confirm that the total number of inhabitants has not decreased. While *CH12* states that the natural population growth rate in recent years should be relatively stable, on the contrary, the population is increasing and even exceeding the carrying capacity of the land due to uncontrolled births in villages (*CH16*). In this area, *CH19* refers that the number of residents and registered families is increasing because every family in the site villages generates an average of 3-4 children. On the other hand, there is also the phenomenon of abandonment of terraced field cultivation, mainly located in villages with healthy economic development (*CH16*). However, *CH16* cannot determine the specific extent of abandoned cultivation but affirms that residents can have other economic revenues besides agricultural production in these settlements.

On the one hand, the question might be how many people cultivate and maintain terraces in this area and whether indigenous Hani knowledge still contributes to sustaining this agricultural system (*CH2* and *CH3*). *CH5* and *CH10* indicated that some villages "were observed hollowed" and that this extent differs among them. *CH1* specifies that in some settlements, the depopulation is quite severe, and it could be up to 30~50%; this percentage is confirmed by *CH12*, which refers to 40%. These percentages are confirmed and even adjusted upwards by *CH8*, which reports that the proportion of villagers working outside can vary from 1/3 to 2/3. It is because many young generations left for urban cities (*CH1*, *CH7*, *CH8*, *CH9*, *CH10*, *CH11*, *CH15*, *CH17* and *CH18*) for schooling and then working after graduating from universities (*CH11* and *CH18*), for doing business or migrant work (*CH11* and *CH17*) also on east coasts (*CH1*). However, all respondents do not have precise data on depopulation to fuel further reflection on this ongoing trend. *CH12* suggests that it is necessary to check the statistical yearbook of Xinjie town if the number of original inhabitants in Honghe Hani terrace heritage area is reduced; on the other hand, *CH6* declares that none of the issues mentioned in the query "never happened" in the site until now.

In a broad sense, the depopulation issue is also present in other ethnic areas (*CH4*) and rural zones in China (*CH4* and *CH10*). According to *CH4* declarations, Chinese government departments are aware of this trend and are implementing policies to address the factors causing it. However, it would seem that some tensions have arisen, not least in that there are different opinions and approaches with the departments (*CH4*).

On the other hand, the statistics show a permanence of the residents (*CH2*, *CH3*, and *CH15*). Young and middle-aged workers (*CH19*) go to the cities, and a large proportion of people, i.e. women, older people, teenagers as students, for example, still stay at home (*CH11*, *CH18*, and *CH19*). Some women with a background education will also leave to work with their husbands, and if the children are too young, they will go with them (*CH19*). It is a fact that China and particularly this area are experiencing urbanisation, and jobs in cities such as Kunming (*CH14*) or towns in the neighbourhood of Honghe or Yunnan province (*CH17*) are attractive (*CH2* and *CH3*). Those farmers-turned migrant workers cannot go far away from their hometown because of low literate education level, language barrier, and strong family bond (*CH17*). Consequently, people who leave to work as migrants usually leave their hometown seasonally (*CH11* and *CH17*).

In traditional culture, however, homeland and terraces mean a lot to the Hani (*CH2*, *CH3*, *CH8*, and *CH17*). If they abandoned farming, they would feel guilty for their ancestors who created terraces thousands of years ago (*CH17*). Except for transplanting and harvesting seasons, the work in the other time is not that heavy (*CH2* and *CH3*). What is needed is just maintaining (*CH8*), and these activities are carried out by the elderly (*CH2*, *CH3*, *CH8*, and *CH15*). Many young people come back to work for families in the busy growing seasons (*CH2*, *CH3*, *CH17*, and *CH18*) and harvest season (*CH18*) as a kind of custom. If they fail to go back, they ask for help from their relatives and friends (*CH15* and *CH18*).

2. *Abandonment of rural villages.*

According to the field studies carried out by *CH2*, *CH3*, *CH6*, *CH8*, *CH10*, *CH11*, *CH14*, *CH15*, and *CH18* in these years, this situation does not happen yet. The locations of villages and decisions of building them were selected by the ancestors and wiseman (the man who knows history and knowledge best of their people and ethnic groups). Villages are comprised of many elements, including glory things. They are considered to be protected by mysterious powers. So, the abandonment of villages is considered very serious by the people. Unless all the people are dead, *CH2* and *CH3* do not think the villagers could consider their abandonment. In that sense, *CH12* affirms that the scope of house building and land use is expanding year by year. According to the experience of *CH15* and *CH18*, most old inhabitants choose to stay in their hometown and insist on growing rice even if their offspring lead a good life in cities.

However, some villages are becoming less populated, people gather in others and towns, but they still own the terraces. In modern times, in the opinion of *CH2*, some settlements in very remote areas and out of the way will disappear. *CH5*, *CH8*, and *CH11* report that the abandonment of rural villages was rarely seen, but the usage of the term ‘rarely’ hints at possible negative cases which, however, has not been indicated. Nevertheless, *CH8* denies ever hearing of villages being abandoned. It seems noteworthy to report that *CH2* regards this potential trend as logical, as: “after all, people need to develop”.

By contrast, Yunnan is one of the Chinese provinces with the highest growth of GDP in percentage (*CH13*). Assuming this, *CH13* declares that this trend will attract many people, and the general population will grow in the long run. Tourism will be a driver of development, and tourism-related facilities are likely to be built near the buffer zone; an international airport is planned to be built near the site (*CH13*). *CH18* says there is a growing interest in visiting the terraces from guests from all over the world. However, this perspective is affected by the global uncertainty surrounding tourism due to the COVID-19 outbreak (*CH13*).

3. *Abandonment of rice terraces.*

In the knowledge of *CH6*, *CH11*, *CH13*, and *CH15*, no households have abandoned rice terraces so far. *CH18* states that UNESCO has a clear set of rules on world heritage preservation and therefore believes that all rice terraces are obliged to cultivate rice traditionally. Consistent with this view, *CH13* reports that the rice terraces on the Property were in excellent condition. By contrast, *CH7* instead refers that the Chinese news reports consulted show that it has a part of this site area which is abandoned. *CH1* and *CH16* confirm that there is a phenomenon of giving up terraced fields. This process could be due to the building material used because the rice terraces are not reinforced and made entirely of mud (*CH9*); so, when some of them were seen in poor condition, it was evident that there had been abandoned (*CH9*).

However, *CH7*, *CH8*, and *CH14* mention that the percentage of abandoned terraces looks very small. It is also possible that there are many more terraces that may have been abandoned, but as landscape maintenance is a community activity, many of these are retained by others (*CH9*). In this sense, *CH1* reveals that this percentage is pretty high, amounting to 10~20% of the total. For example, Tiger Mouth Terrace, one of the three main viewpoints of the World Heritage Site, has become a dry land due to abandoned farming and replanting problems (*CH19*). Therefore, *CH17* comments that there is no large abandoned area because farmers continue to plant also dry crops, thus indirectly endorsing *CH1*'s statement. Moreover, *CH1* and *CH16* state that UNESCO recognition could slow down the process, mainly due to some management regulations launched by the government (*CH16*). Nevertheless, these measures do not revise these trends (*CH1*).

On the one hand, local communities believe that the rice terraces are their property and inherited from their ancestors, so they cannot be abandoned (*CH8*, *CH10*, and *CH15*); on the other hand, they also realise that terraces have tourism value and can bring benefits (*CH8* and *CH10*). Therefore, most locals attach importance to the management and maintenance of terraces (*CH8* and *CH18*) and hold kinds of rituals for a good harvest (*CH18*). Even if they go out to work, they will entrust the terraces to relatives (*CH8*), neighbours, other villagers, or some organisations such as farmers' cooperation (*CH18*) to manage, cultivate and use rice as compensation (*CH8*). Overall, the traditional belief and understanding of terraces are still playing an important role today (*CH8* and *CH10*), and these cultural actions attract more people to recognise and respect rice terrace culture (*CH18*).

According to *CH8*, *CH11*, *CH13*, and *CH19*' statements, there is no noticeable difference before and after the World Heritage nomination. Villagers in the heritage area have not reaped the immediate benefits of the tourism development model driven by World Heritage recognition, and their primary source of income is still rural labour (*CH19*). Most local people are not sensitive to the title of World

Heritage, and they do not know clearly what the Outstanding Universal Value is (*CH8* and *CH13*). Most do not know the year it was inscribed on the World Heritage List or the site's boundaries, nor whether any plaques are indicating that it is a UNESCO site (*CH13*). Terraces and the entire landscape are considered more as assets or family heritage (*CH8* and *CH13*). So, the local people did not change their attitude towards terraces after the site was inscribed (*CH8*).

Meanwhile, *CH7* makes an interesting reference to the threat of climate change, according to which part of the earth suffers from a lack of water and is forced to convert from 'water land' to 'dry land'. *CH13* confirms this trend because some locals have been told that climate change is making the water supply harder and that the global phenomena are impacting the local terraces. People reported to *CH13* that terraces at altitudes above 1,000 m are at risk of drought at certain times of the year, amounting to 30-40% of the total. Assuming the central role of water in rice cultivation practices (*CH19*), *CH13* suggests that perhaps considerations could be made for the use of water pumps as compensatory systems to flood them. Water scarcity is also confirmed by *CH8*, and *CH19* refers to frequent droughts and water shortages in recent years. On the other hand, even a minor part of the terraces is collapsed due to storms, according to *CH11*.

In response "to the hard life of the Honghe Hani terraces and financial pressures and poor earnings form the landscape" (*CH9*), the launched Priority Poverty Alleviation Program in China has got the achieved results there (*CH15*). In this regard, *CH5* and *CH15* call for considering that the local government has been implementing "rural rejuvenation" and "poverty alleviation" programmes following the national strategy. The traditional rural village committee under the county's Housing and Rural-Urban Development department is relevant in implementing these policies (*CH5*). The local governments "organise villagers to participated in the tourism of Scenic Spots, management of hotels, agricultural products and traditional crafts etc." in the site and "to work outside" as well (*CH15*). By contrast, *CH19* states that the government has not issued a sound policy to control and monitor the activities of farmers in terraced fields. Because of the difficulty of agriculture in recent years, the government has recently given subsidies and established preferential policies (*CH19*).

4. *Migration and newcomers.*

Overall, *CH7* introduces the fact that the permanent population is decreasing according to the consulted bulletin, a trend also confirmed by *CH8* and *CH19*. As presented at point 2 of these findings, *CH1*, *CH2*, and *CH3* pointed out that the migration of population is more going out than coming in. This tendency involves people that are mainly internal to China and seasonal (*CH2*, *CH3*, and *CH12*), but in a "very small number" (*CH1*, *CH13*, and *CH19*). *CH10*, *CH12*, and *CH16* also confirm that not many people migrated to the local villages, perhaps because of geographical difficulties in reaching them (*CH13*). In one village of the Property investigated by *CH10*, new members include two or three women who married local villagers and a couple of families who started small businesses in the village. Some young people return to their villages trying to earn money from tourism, but this number is not significant (*CH9*). They are all internal to China (*CH10*). In the view of *CH13*, the presence of such a deep-rooted ethnic minority on the territory could turn out to be an obstacle to the arrival of potential newcomers.

CH4 confirms that in some cases, there is inward migration into the areas like Honghe and gentrification by insiders and outsiders who move in to cash in on improved economic opportunities. *CH5*, *CH11*, and *CH15* validated this view, stating that some foreigners (within China) invested in hostels and stayed in Yuanyang within a year (*CH5*). Most of them are from another part of the region of Yunnan (*CH15*). Other reasons are for photographic and study purposes (*CH11*). Moreover, *CH8* reiterates that inner immigrants from China went to operate local homestays in the heritage area. Chinese nationals usually stay there for a much extended period, ranging from 1 to 5 years (*CH2* and *CH3*).

As far as *CH8* is aware, the new migrants are mainly engaged in homestay activities and have not brought any impact on traditional rice cultivation or the landscape (*CH8*, *CH13*, *CH15*, *CH16*, and *CH19*). According to *CH15*, newcomers are engaged in the service and tourism industry (*CH12*), focusing only on running new industries (e.g. restaurants and inns), as well as renting out the homes of local farmers for commercial operations (*CH19*). However, there is not a pillar industry that can accommodate large numbers of employees (*CH19*).

Besides, only a few citizens from other countries settled down permanently in these UNESCO areas (*CH2*, *CH3*, and *CH11*) even though *CH5*, *CH9*, *CH14*, *CH15*, *CH17*, and *CH18* affirm that any foreign citizen is living in Yuanyang according to their knowledge. There is not any attraction for people from Laos and Vietnam so far (*CH1* and *CH11*). In this perspective, *CH4* reports that immigration is a highly political matter, and the related policy is strict (*CH11*) owing to the management of nationality (*CH17*); in addition, *CH4* suggests consulting the Chinese policy on foreign nationals. *CH5* supposes that there are no statistics on this subject; the Yuanyang County Statistics Bureau and Tourism Bureau may have county-level data, which cannot be applied to the World Heritage Site. *CH6* declares that none of the issues mentioned in the question “never happened” on the site until now.

Conversely, there is a sharp increase in tourists (*CH12*). In particular, there are more fixed-term tourists, i.e. those who spend their holidays for a short period (*CH8*, *CH9*, and *CH16*) ranging from a few days to a few months, and then return to their towns (*CH2* and *CH3*). The majority are Chinese from other parts of the Country (*CH14*) or Southeast Asia (*CH9* and *CH12*). It has been reported to *CH14* that almost 400,000 tourists visit the inscribed villages during a year. Concerning overseas tourism, a relevant part of visitors come from the United States and Europe (*CH12*), among which French people are the most (*CH2*, *CH3*, and *CH12*). However, they might have had an impact on the landscape due to the building of new roads or houses, as well as covering some terraces. Latter happens but in a very limited way, less than 1% (*CH11*).

5. New crops or new techniques/methods of rice cultivation.

According to *CH8*, *CH12*, *CH14*, and *CH19*, the local cultivation shows a historical permanence of some crops, especially rice and corn. As far as *CH18* knows, rice is the only crop permitted to grow in these paddy fields. The traditional rice varieties still account for a large part of the proportion (*CH11* and *CH16*), and at present, there is no new rice planting introduction (*CH12*). Each of the families cultivating the terraces changes seeds during a period so that the rice terraces keep the original gene (*CH15*).

Some other rice varieties are planted according to natural conditions in different regions (*CH8*), such as glutinous rice. However, *CH7* refers that the news shows that this area has turned its habit of only growing the rice to some more categories of crops, which will increase the income of local farmers. In addition, new types of rice have been introduced in the area, mainly related to high-yielding red rice (*CH7* and *CH11*).

Local rice cultivation is primarily determined by the villagers. Varieties are selected according to income, which has an impact on the diversity of local rice varieties (*CH8*). In 1980, there were 195 rural rice and 47 wild rice local varieties (*CH8*). In 2008, there were only 48 records in total (*CH8*). As Yuanyang County is one of the 50 poorest counties in China (*CH8* and *CH22*), to solve the living problems related to the low income from terrace cultivation (*CH12*), local people decide to grow hybrid white rice more efficiently (*CH8* and *CH11*) and some farmers even switch to seeking higher economic incomes (*CH8*).

In addition, to alleviate poverty, a multifunctional system consisting of a circular 'rice-fish-duck' approach is encouraged (*CH14*). In addition, the cost of the red rice is considerably higher than the plain one (*CH14* and *CH18*), i.e. the plain one is only sold at ¥ 3-4 per kilogram while the red rice is ¥ 5-8 per kilogram (*CH18*). It presupposes limited production in terms of quantity (*CH13*). On the other hand, *CH13* refers that no rice retailing was seen in the villages of the site; the start of some rice stores can take advantage of the tourist flows to provide new economic incomes to the villagers. Generally, it seems a lack of private initiative in this business (*CH13*); if villagers try to process and pack red rice, they will enjoy higher prices and considerable gains (*CH18*).

Villagers also grow other crops (such as corns, garden peas, and some common vegetables) in the dry field near their houses as their ancestors do so (*CH18*). It is worth noting that in the last decade or so, there has been a phenomenon of paddy fields changing to dry soils (*CH8* and *CH11*) in some areas, especially at lower altitudes (*CH17*). Due to the shortage of water resources and to grow cash crops, wet lots have been actively converted into dry land to cultivate bananas (*CH8* and *CH9*), cassava (*CH17*), and corns (*CH11*). It was done to increase economic returns (*CH8* and *CH16*) as they can be more productive than rice (*CH17*). Thus, a dryland farming landscape replaced the water landscape (*CH17*). Bananas (*CH8* and *CH14*) and flowers (*CH14*) are grown in the warm river valley area, along with rice, corn (*CH8*), and tea (*CH9* and *CH14*). All have been in the site area for a long time, so they were not brought in by immigrants (*CH8*).

According to *CH18*, some people attempted to introduce new techniques. At present, some small agricultural machinery has been used by farmers whose terraces are on the gentle incline of mountains (*CH11*). However, the situation and structure of the rice terraces make it problematic to promote the use of machinery or other practices and, therefore, traditional cultivation is still a general practice (*CH18*). *CH1* claims that there are government-driven projects for supporting both innovations in crop germplasm and scientific technology. These changes mostly have a positive impact on the landscape as increasing agricultural diversity in the paddy field system, water quality, and the sanitation of rural landscapes (*CH1*).

On the other hand, some rural household projects seem to negatively impact traditional cultural landscapes (*CH1*) without specifying which ones. In this regard, few pesticides and herbicides are also used by farmers to cultivate hybrid rice in low terraces, as reported by *CH11*. In this perspective, professionals try to find out new resolutions on killing insects, among others (*CH18*). However, these chemical inputs and machinery used seem not to change the whole terraced landscape as far (*CH11* and *CH18*), partly because it looks like that "every new action and measure need to be demonstrated to certain world heritage administration units" (*CH18*).

Alarmingly, *CH9* pointed out that the banana plantations are distinctly visible even at long distances in some sections. It is due to the size and consistency of the plant and leaves, as well as the difference in appearance compared to rice. Therefore, this use change has led to an entirely new landscape aesthetic and production system in a cultural landscape known for its red rice heritage (*CH9*). However, *CH6* declares that none of the potential issues mentioned in the question "never happened" on the site until now.

6. *Integrity and authenticity.*

Referring to integrity, reflections by *CH2* and *CH3* invite to stay close to the Outstanding Universal Value (OUV) and the attributes. In this perspective and according to *CH5,* the integrity, as a part of the criteria qualifying this UNESCO World Heritage Site, primarily concerns Yuanyang's terraced fields and the traditional structure of the village. However, one has to consider that the farming arrangement and social-economic-religious systems are the main attributes of Honghe Hani Rice Terraces, and people are the central focus (*CH2* and *CH3*).

So, in *CH2* and *CH3* opinions, the point is the authenticity of the indigenous culture and the agricultural organisation. As introduced in paragraph no. 1 above mentioned, there is a multi-ethnic minority composition with a proper demographic structure and forms of social organisations. If Hani and other long-standing ethnic minorities' population declined, it is worried that no one would inherit the heritage, and the integrity would be affected (*CH2* and *CH3*). If it happens, depopulation will for sure harm such integrity also for *CH5*. Furthermore, migration of communities away from the landscape and subsequent abandonment of terraces are a dangerous precedent to the long-term stability and sustainability of the cultural landscape (*CH9*). These have already created a serious challenge to continue farming in the rice terraces, which is the key to maintaining this landscape (*CH7*). In this perspective, *CH17* pointed out that marginal areas in the site have more dry land or wasteland, probably because the government does not regard them so importantly, comparing to the core area where the landscape is spectacular.

Corresponding to *CH2*, *CH3*, and *CH14*' knowledge, the ongoing strategies carried out by the local government are developing agricultural industries and tourism. The traditional farming ecosystem provides food and related products. Besides, by applicating an e-commerce platform, these products are selling to other cities (*CH2* and *CH3*). Through developing publicity and relating more heritage with tourism, the combination of these factors locally increases the farmers' income, creating more working opportunities (*CH2* and *CH3*). Some villages have better tourism (*CH8*), but in others that have fewer tourists and consequently resources, depopulation phenomena are more evident. Tourism appeals to people to come back and stay there to work, to live and to keep farming (*CH2*, *CH3*, and *CH8*), including local and people from other places (*CH2* and *CH3*) since the society is also running other systems than cultural heritage (*CH5*).

Consequently, many villages in the heritage area have undergone a modernisation process (*CH8*). The real challenge is how to protect the historical characteristics of the settlement and at the same time meet the needs of modern people, as pointed out by *CH8*. *CH6* instead declares that none of the issues mentioned in the question "never happened" on the site until now.

It is interesting to mention that to encourage the transmission of cultural heritage, the local government also subsidises and funds the inheritors of intangible heritage, recording and presenting folk songs and dances to the public in new ways (*CH2* and *CH3*). They also promote traditional knowledge so that it is incorporated into the official education system and therefore taught (*CH2* and *CH3*).

4.6 Potential resilient actions to be implemented for integrated management and governance

To hinder and limit the extent of the risks affecting these cultural landscapes, potential actions and practical arrangements must be multilevel, interconnected and planned along a timeline. Effective, proactive, and reactive management needs to include short, medium and long-term objectives. For example, the changing climate has a significant impact on the way land is experienced and cultivated. Therefore, it contributes to the mutation of the landscape and its image in a medium to long term perspective.

Therefore, the Connecting Practice programme of ICOMOS (International Council on Monuments and Sites) and IUCN (International Union for the Conservation of Nature) is reported to better connect theory to practice in selected cultural landscapes. As described in the Connecting Practice Dossier - Phase II (Leitão et al., 2017), the project aims to achieve two main objectives, as follow:

- "a. exploring, defining and adapting management effectiveness methodologies that apply to both cultural and natural sites and recognise the interconnected biocultural character of their natural, cultural and social values" (Leitão et al., 2017, p. 3); and
- "b. strengthening policy frameworks and management arrangements for the protection of highly significant landscapes ... that will achieve a more genuinely integrated consideration of natural and cultural heritage" (*ibid*., p. 3).

First of all, there should be more clarity on what management and governance mean, starting already with the UNESCO Operational Guidelines for the Implementation of the World Heritage Convention. As Phase II of the Connecting Practice programme is already highlighted concerning 2016, this continues to be lacking in 2019. When conducting an indexed search of the terms 'management' and 'governance', the former word appears 208 times, while the latter only once. Therefore, it is evident that more focus is needed on the meaning and implementation of effective site governance.

Since resilience can be considered as an umbrella term that includes the elements mentioned in section "4.1 Resilience: a co-evolutionary concept" of this thesis, as well as the interrelationships between the values assigned to each attribute in the property is a fact, once again the relevance of adopting an integrated, "focused, stepwise" (Leitão et al., 2017, Annexe 1, p. 3) management approach is confirmed.

Consequently, resilience seems necessary to understand how they "... add value to their long-term care" (Buckley et al., 2019, p. 11) "including the empowerment of local communities, indigenous peoples, diaspora communities and site managers" (ibid., p. 12).

In the following diagram (**Figure 26**), the potential contribution of resilience is provided by the author concerning the concepts of "context, planning, inputs, processes, outputs and outcomes". They are parts of the integrated management system, as reported in the Connecting Practice - Phase II project dossier by Leitão et al. (2017, p. 19), which in turn is based on the IUCN-WCPA Dossier "Evaluating Effectiveness - A framework for assessing management effectiveness of protected areas" by Hockings et al. (2006).

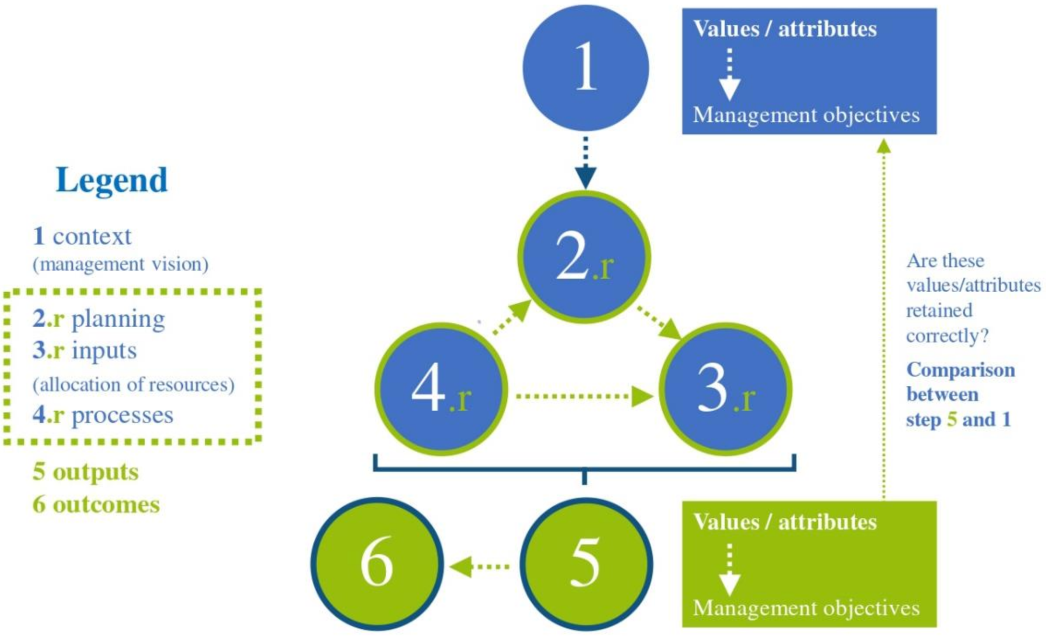

Legend
1 context
(management vision)
2.r planning
3.r inputs
(allocation of resources)
4.r processes
5 outputs
6 outcomes
1
2.r
3.r
4.r
5
6
Values / attributes
Management objectives
Are these values/attributes retained correctly?
Comparison between step 5 and 1
Values / attributes
Management objectives

Figure 26 | The potential contribution of resilience (.r and all parts in green) in the ICOMOS and IUCN Connecting Practice programme, Phase II. (Source: Leitão et al., 2017, p. 19. Author's rework.)

Nevertheless, the programme still calls for the adaptation of "… existing tools and guidance that currently promote different approaches to natural and cultural heritage …" (Leitão et al., 2017, p. 5) and "… that potential changes could focus on adapting the individual tools" (*ibid*., p. 7). What is recommended in the quote was already prepared and illustrated in Figure 9 of this thesis, where resilience can complement existing management tools (point 5.r). Therefore, it follows that governance is an evolutionary concept, as pointed out by the ICOMOS and IUCN Connecting Practice programme.

The specific contribution of resilience at each stage of the integrated management process in cultural landscapes is shown in **Figure 27**, as reported in the manuscript by Buckley et al. (2019) regarding the third and final phase of the Connecting Practice project. Resilience can supplement the inputs (3.r) provided in defining proper planning (2.r), as well as the processes (4.r) that descent from the planning guiding role (2.r). The resulting outputs from this approach (5) will determine values and attributes that directly influence the management objectives. These outputs (5) should be compared with the original values and attributes expressed by the initial management vision of the site (1), as well as its management objectives (1).

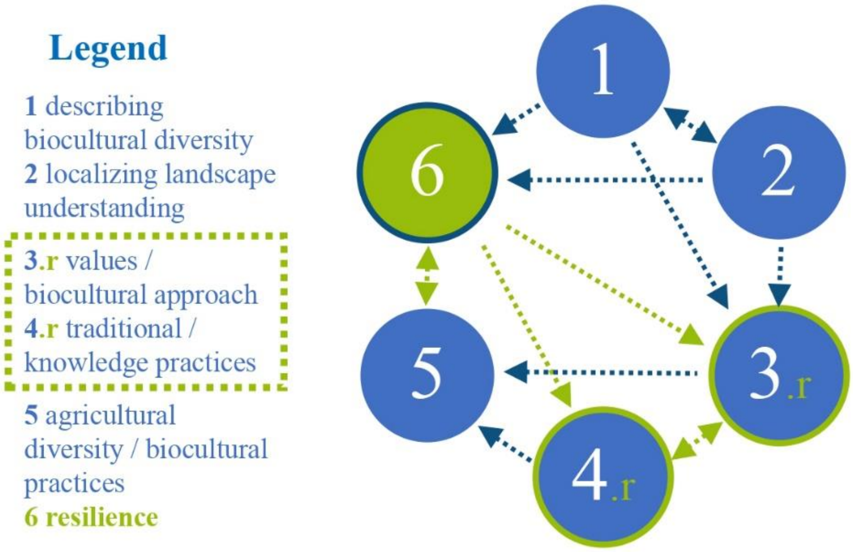

Legend
1 describing biocultural diversity
2 localizing landscape understanding
3.r values / biocultural approach
4.r traditional / knowledge practices
5 agricultural diversity / biocultural practices
6 resilience
1
2
3.r
4.r
5
6

Figure 27 | The potential contribution of resilience (.r and all parts in green) in the IUCN and ICOMOS Connecting Practice programme, Phase III. (Source: Buckley et al., 2019, pp. 12-13. Author's rework.)

To further support this perspective, other modalities have been taken as examples. Diversity, redundancy, network connectivity, modularity and adaptability are central elements of resilience to support decision-making to preserve, maintain and enhance cultural landscapes, as outlined by Beagan and Dolan (2015). These five points seem relevant to set up a pervasive discourse on how to make the concept of resilience practical in the productive landscapes selected in this survey (**Figure 28**).

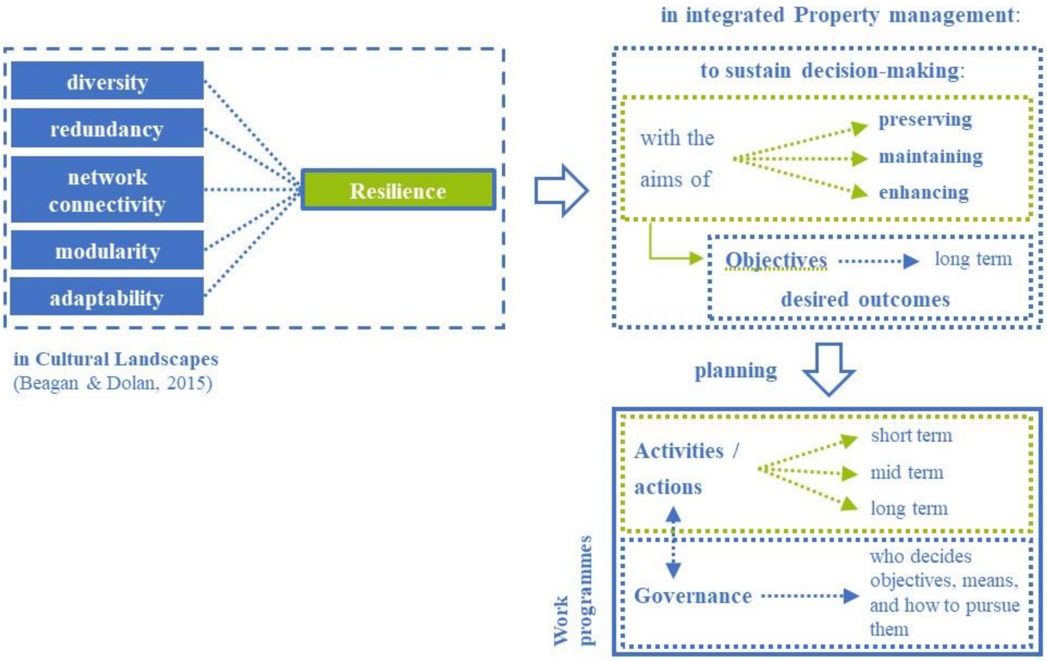

diversity
redundancy
network connectivity
modularity
adaptability
Resilience
in Cultural Landscapes
(Beagan & Dolan, 2015)
in integrated Property management:
to sustain decision-making:
with the aims of
preserving
maintaining
enhancing
Objectives
long term
desired outcomes
planning
Activities / actions
short term
mid term
long term
Governance
who decides objectives, means, and how to pursue them
Work programmes

Figure 28 | The five pillars of resilience in cultural landscapes as outlined by Beagan and Dolan (2015) and their contribution in preserving, maintaining, and enhancing them. This image implements and expands what already reported in Figure 7. (Author's rework.)

To translate theory into practice on the ground, unpacking the abovementioned five concepts seems necessary for the benefit of potential decision-makers, managers and other players as stakeholders interested in the process. The following list of recommendations/actions come as a methodological proposal from the candidate to fill the existing gap between theory and its consequent applications. The latter is based on the literature, the previous candidate's experience, and on some best practices already tested in these areas by third parties as applied research or for professional purposes. The list would create a summary of potential actions and activities that need to be further developed in detail before transferring them into practice. Then, after a validation process that should be shared, transparent and participated throughout the involvement of all the interested parties to be used to settle conflicts in advance and converge towards a shared perspective. Those actions can then be tested in these productive landscapes and their results monitored. Outcomes can be constantly measured to reactively manage such landscapes with the aim to calibrate, or even iteratively adjust, different actions and strategies in the mid- to long-term.

Consequently, to discuss more on the aforementioned point 'diversity' (Beagan & Dolan, 2015), it is essential to consider how the multiplicity of options in the management and different perspectives in the governance can increase the resiliency of the landscape as a system.

Therefore, strengthening 'diversity' at a general level will contribute to augmenting the:

- social, cultural, and natural interlinkages.
  Linking the social more closely to the natural is an operational priority to strengthen the cultural pillar and support the transmission of heritage to future generations in a more inclusive perspective. Based on what was highlighted by Buckley et al. (2019, p. 3) in commenting on the IUCN and ICOMOS Connecting Practice programme – Phase III, some relevant points emerged as follow:
    - reversing the process of determining cultural and natural values, which should be more community-based. These processes have to take into account the "management frameworks, ... the dynamic evolution of biocultural practices, and ... levels of acceptable change" (Buckley et al., 2019, p. 5);
    - continuing to pass on the use of dialect terms concerning the landscape to ensure understanding of the different nuances that those terms bring to the description of a place. In particular, archaic cultures are transmitted more through the oral component, the

    disappearance of which therefore risks profoundly affecting the maintenance of traditional knowledge;
  - adopting people-centred and rights-based approaches;
  - focusing on "… the landforms, natural resources and ecosystem services in the diversity of culture and quality of life for people …" (Buckley et al., 2019, p. 9); and
  - operationalizing "concepts of resilience in the landscapes of food production, including agriculture ..." because they are "... not consistently recognized in concepts of agrobiodiversity" (*ibid.*);
- locals-centred narrative of the heritage.
  Communities possess a different heritage narrative from the academic or mainstream views, which is usually undervalued in classical narratives and needs to be more culturally supported by governmental institutions. Consequently, cultural transfer to new generations needs to be better funded and promoted. Once the key figures for this transmission have been identified, workshops and courses, local language courses, traditional festivals and local beliefs can be established or strengthened.
  The use of a local language or dialect in a site/territory could be considered and analysed as an indicator of integrity and authenticity. Such a set can increase symbolic identity, sense of belonging, and cultural distinctiveness, contributing to making more robust the social-cultural component of the landscape. However, they are not to be considered as "… defensive reactions against the impositions of global disorder and uncontrollable, fast-paced change" (Castells, 1997, p. 64), but a carrier to place the local within the global discourse (place-related narrative of the heritage);
- integration of top-down and bottom-up processes.
  Social debates and decision-making procedures need to be more inclusive, involving the manifold perceptions and the decisions of all stakeholders and rightsholders, as identified by Sherry R. Arnstein in her paper titled "A Ladder Of Citizen Participation" (1969). It is also based on the Connecting Practice project dossier, Phase II, which recommends that: "... effective and lasting conservation of such places depends on better integration of philosophies and procedures regarding their governance and management" (Leitão et al., 2017, p. 3).
- increasing diversity in types of cultivation.
  It can create benefits both to the ecosystems and to the social-economic system due to:
  - new crop hybrids.
    For example, new hybrids of indigenous and non-indigenous vines can mitigate the alcohol problem in the vineyard and also have higher acidity. Moreover, new cultivations necessities push to research hybrids able to resist drought, with late-ripening, or

    varieties that accumulate less sugar in their berries. This point meets the UN requirements under Target 2.5 of the SDGs: "By 2020, maintain the genetic diversity of seeds, cultivated plants …" (UN, 2015) (diversity increases resilience);

  - polyculture rather than monoculture farming.
    Monoculture agriculture is the product of specialisation. Although it represents an advantage in better cost-effectiveness and resource rationalisation, it is rather fragile in the face of sudden shocks due to the lack of suitable alternatives. Moreover, it also reduces the amount of chemical fertiliser used in cultivation thanks to the possibility of letting the land rest (polyculture increases resilience); and

  - integrated win-win cultivation system.
    It enables higher crop yields and better-growing conditions, both in terms of "… pest control, nutrient replenishment, aeration, and food sustainability ensuring income generation" (Marlon et al., 2020, p. 28) (an integrated cultivation system increases resilience).

- increasing the biodiversity to address climate-change issues and phytosanitary diseases.
  Having soil rich in organic matter and complexity is the answer to make a soil/life more reactive to climate extremes. Biodiversity is also the answer to drought and erosion, as soils with more grasses and roots will be more difficult to erode. In addition, there are fewer problems with phytosanitary diseases, such as the grapevine flavescence dorée phytoplasma, in a vineyard with more biodiversity. This point meets the UN requirements under Target 2.4 of the SDGs: "By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality" (UN, 2015) (biodiversity increases resilience).

Similarly, trying to decompress the term 'redundancy' (Beagan & Dolan, 2015), it is essential to consider how increasing the number of elements capable of performing the same function can improve the system's responsiveness and thus its resilience. In this case, the landscape is the system under investigation.

Therefore, the strengthening of systemic 'redundancy' may contribute to increasing the:

- social, cultural and natural interlinkages.
  Linking the social more closely to the natural is an operational priority to strengthen the cultural pillar. It will enable the transmission of heritage to future generations to be supported more robustly by increasing the number

of those who pass on such traditional knowledge. From the literature, relevant points that emerged are as follows:

  - making aware the local peasants of their fundamental role as caretakers of these landscapes (Marlon et al., 2020).
    Increasing the number of local people who are aware of the uniqueness of living in world-class landscapes and how much the continuation of these landscapes over time depends on them could stem the migration of people to cities, building stronger local communities through a renewed sense of belonging; and
  - the significance of the 'learning by doing' approach was confirmed. The paper reiterates the need to create "… a continuing 'community of practice' and innovation" (Buckley et al., 2019, p. 6);

- innovation and technology transfer.
  They are means of implementing traditional agricultural practices with state-of-the-art technologies and thus adding technical expertise to the local business chain.

Continuing, to better articulate the point of 'network connectivity' (Beagan & Dolan, 2015), a proactive, more engaged, and empowered local community is essential. It is necessary as "Local farmers are the creators of this heritage, the main force behind conservation and in turn beneficiaries of conservation actions" (Marlon et al., 2020, p. 42).

The increase in 'network connectivity' will strengthen and expand the:

- social equity and rights.
  Offering the same opportunities both to locals and newcomers is a necessity to shape robust societies (e.g. respect of workers' rights, the conclusion of labour contracts, repression of undeclared work and its exploitation, equitable distribution of water, cooperative contracts for the management of water as a limited resource, among others). Moreover, the "… equitable distribution of benefits …" (Leitão et. al., 2017, Annexe 2, p. 6) can be considered a priority for achieving successful sustainable development;
- social, cultural and natural interlinkages.
  Linking the social more closely to the natural is an operational priority to strengthen the cultural pillar and support the transmission of heritage to future generations. This necessity to operationalise "… concepts and strategies for integrating natural and cultural heritage in the World Heritage Convention" is highlighted by Buckley et al. (2019, p. 3) as part of IUCN and ICOMOS Connecting Practice programme – Phase III. According to it, some relevant points emerged, as follow:
  - building interdisciplinary teams in terms of expertise, whose members can work together to improve the "heritage … management frameworks" (Buckley et al., 2019, p. 3). In addition,

Bloemers et al. (2010) and Aimar et al. (2021) also agree with the perspective of an interdisciplinary approach;

    - building shared and collaborative approaches (*ibid.*);
    - deepening the "… understanding of the interconnected character of their natural, cultural and social values could help strengthen policy frameworks and management arrangements" (*ibid.*, p. 4);
    - putting in practice strategies and actions that work at a landscape scale, because of enlarging the investigation area is necessary to take into account the "… wider associations that give a place its meaning" (*ibid.*);
    - understanding which attributes convey the Outstanding Universal Value of a continuous cultural landscape and then "… as these are managed and monitored to ensure that the OUV is maintained over time" (*ibid.*, p. 8);
    - "… agricultural processes, social arrangements or cultural practices that have shaped distinctive landscapes" are "attributes of a landscape" (*ibid.*);
    - the co-evolution of nature and culture involves "… natural, cultural, linguistic and spiritual" perspectives (*ibid.*, p. 9);
    - biocultural diversity and processes have to embrace "… geodiversity, biodiversity and cultural diversity" to create significance (*ibid.*);
    - linking more cultural landscapes with the UN Sustainable Development Goal 2: "End hunger, achieve food security and improved nutrition and promote sustainable agriculture" (UN, 2015); and
    - "… ensuring alignment between FAO's GIAHS program and the World Heritage system" (Buckley et al., 2019, p. 10);

- tangible and intangible interrelationships.
  Reconnecting the tangible components (e.g. environmental, urban, infrastructural) more closely with the intangible components (e.g. milieu, social capital, productive, artistic, contextual knowledge) of the landscape is an operational priority. It is instrumental in strengthening the cultural pillar and ensuring the transmission of heritage to future generations. From this perspective, it is crucial to emphasise "… the centrality of traditional knowledge systems" (Buckley et al., 2019, p. 9);
- guaranteeing the continuity in formal and informal inter-relationships among the different stakeholders.
  Informal ones are the legacy of past social agreements in a community, while formal ones are the product of the decision-making processes (e.g.

laws and guidelines, among others) (mixed formal-informal decision-making system);

- learning and then disseminating.
  First, novel agrarian practices or cutting-edge approaches need to be taught by experts/professionals to the local communities adopting local pilot cases or via workshops (i.e. 'Research-led Practice' approach). Then, disseminating what is learned among locals through a 'learning by doing' approach may be the right way to better include all local actors;
- social interactions and organisations.
  It helps to consolidate the sense of community by strengthening individual, social and work links between:
    - the different members of villages or stakeholders, creating new synergies (e.g. women and youth entrepreneurship and apprenticeship courses, among others) and opportunities in the "… food processing industry, biological resources industry, agro-products processing industry, cultural industry, leisure agriculture, agritourism …" (Marlon et al., 2020, p. 44), as well as consolidating the existing collaborations (e.g. agricultural cooperatives); and
    - the various villages composing the site, as natural resources are interdependent and need to be regulated through cooperation between them (e.g. in the management of water as a resource);
- site managers should work more together.
  One potential action for the future would be to create more synergies between the 28 productive landscapes mentioned in "Section 4 - Framing of the research topic", chapter "4.4 Visiting research period at ICCROM, Rome". This macro-group could be divided into subgroups according to the type of culture, such as 'wine cultural landscapes' or 'rice cultural landscapes'.
  A potential grouping of sites (13 in all) that stand out for their wine landscapes are:
    - the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato", Italy (UNESCO, 2014a, ref: 1390rev);
    - the "Le Colline del Prosecco di Conegliano e Valdobbiadene", Italy (UNESCO, 2019c, ref: 1571rev);
    - the "Portovenere, Cinque Terre, and the Islands (Palmaria, Tino and Tinetto)", Italy (UNESCO, 1997b, ref: 826);
    - the "Tokaj Wine Region Historic Cultural Landscape", Hungary (UNESCO, 2002a, ref: 1063);
    - the "Fertö/Neusiedlersee Cultural Landscape", Hungary (UNESCO, 2001b, ref: 772rev);
    - the "Champagne Hillsides, Houses and Cellars", France (UNESCO, 2015b, ref: 1465);

  - the “The Climats, terroirs of Burgundy”, France (UNESCO, 2015a, ref: 1425);
  - the “Jurisdiction of Saint-Emilion”, France (UNESCO, 1999a, ref: 932);
  - the “Upper Middle Rhine Valley”, Germany (UNESCO, 2002b, ref: 1066);
  - the “Alto Douro Wine Region”, Portugal (UNESCO, 2001a, ref: 1046);
  - the “Landscape of the Pico Island Vineyard Culture”, Portugal (UNESCO, 2004, ref: 1117rev);
  - the “Lavaux, Vineyard Terraces”, Switzerland (UNESCO, 2007, ref: 1243); and
  - the “Wachau Cultural Landscape”, Austria (UNESCO, 2000c, ref: 970).

  A hypothetical grouping of sites (5 in total) that stand out for their rice landscapes are:
  - the “Cultural Landscape of Honghe Hani Rice Terraces”, China (UNESCO, 2013a, ref: 1111);
  - the “Rice Terraces of the Philippine Cordilleras”, Philippines (UNESCO, 1995, ref: 722);
  - the “Cultural Landscape of Bali Province: the Subak System as a Manifestation of the Tri Hita Karana Philosophy”, Indonesia (UNESCO, 2012b, ref: 1194rev);
  - the “Manas Wildlife Sanctuary”, India (UNESCO, 1985, ref: 338); and
  - the “Trang An Landscape Complex”, Viet Nam (UNESCO, 2014e, ref: 1438bis).

  Regular meetings could help them to share experiences and good practices for addressing local problems. Individual sites experiences would then become the shared legacy of the two mentioned subgroups and of the 28 sites. A broad collection of solutions to draw on, therefore, rejecting one-size-fits-all solutions and favouring site-specific ones.

Unpacking the term ‘modularity’ (Beagan & Dolan, 2015) concerning the landscape is a necessity under different perspectives. Specifically, it is necessary that future strategies need to meet the:

- Policy Incentive Mechanism
  “‘Policy Incentive Mechanism’ or innovative economic incentivisation with ‘Eco-Cultural Compensation’” (Marlon et al., 2020, p. 44) are pivotal to stimulate the growth of specific parts (or subsystems) composing the landscape as a system; and
- ensuring a multiple landscape benefit approach for “protecting, improving, enhancing and reconstructing” actions, seeking for sites as “the tops of hills

> to help manage rising watertables or along watercourses to improve water quality” (Central West Local Land Services, 2016, p. 22).

Unpacking the term ‘adaptability’ (Beagan & Dolan, 2015) concerning landscape is a need from several perspectives. In a post-COVID-19 era, it is possible to have a reduction of investments in the agricultural sector, owing to a general decrease in cash flows. Consequently, making resilience practical could permit both to optimise resources and allocate them better. Specifically, it is necessary that future strategies need to meet the:

- implementation of the perception of both risks and changes.
  It is necessary to set a proactive approach that can understand, recognise, and circumscribe damages, limiting losses in potential, multiple scenarios (risk reduction);
- capacity-building activities.
  According to Leitão et al. (2017), pondering “… how traditional knowledge and practices contribute to the significance and conservation of the landscape” is relevant, while also updating how “… these concepts are being maintained and transmitted” (p. 8). While in the past, the transmission of agricultural knowledge was mainly oral and direct, and also through practical learning, today this process may be interrupted due to depopulation and the lack of generational change in villages. Therefore, newcomers could use digital technologies to acquire specific knowledge by establishing a digital community in which to exchange agricultural knowledge (e.g. video tutorials). In addition, the essential learning-by-doing process could also take place digitally, with tutors available for online video calls to guide operational needs. It can work in terms of advocacy for individuals/groups, and preparedness as learning capacity of the system (Davoudi et al., 2013) (digital and physical capacity building approaches);
- planning and design processes in the agricultural sector.
  Flexibility and adaptation are recommended in the decision-making process, e.g. changing working hours in agricultural activities to avoid excessively hot/cold daily hours that are hazardous to health due to climate change. They are instrumental for adjusting, updating or implementing existing trajectories in the agricultural calendar, for example, where recognising changes is a crucial starting point;
- updating the farming methods.
  There is a need to integrate traditional and contemporary management practices to continue these cultural landscapes, implementing scientific research to farmers' experience. From an agricultural perspective, some actions seem to be crucial and inevitable, such as the:
  - varying plant management in crops.
    In Nebbiolo vineyards, it is possible to act on the leaf wall to better protect the bunches from overexposure to solar radiation due to

climate change, for example. Possible solutions are to reduce pruning and roll the shoots further along the highest thread of the row without trimming them. Preferring old leaves over new ones helps the vine not to absorb too much solar radiation. These approaches can limit the accumulation of sugars in the berries, which the sun already accentuates. In addition, to reduce the increase in photosynthetic activity, total or partial shading of the foliage using nets could be implemented, as is the case in some regions in southern Italy. By implementing this last option, shading of the bunch band could help to contain overheating and thus preserve a higher percentage of malic acid, essential for the vinification of sparkling and semi-sparkling wines. Furthermore, it is suggested the use of graft holders that go deeper into the ground (mitigation approaches);

- changing in the management of cultivated plots.
  In the vineyard, different exposures, agreements for lower plant density per row and higher productivity per vine, higher altitudes to lower local temperatures, and late varieties are potential actions to be implemented. In addition, limiting soil erosion is a necessity, as this also affects nutrient loss; for example, spreading grass instead of cutting it so as not to stimulate it to absorb too much water into the soil is a potential action. Another initiative, already in use in some areas of Piedmont, is the use of pastures composed of sheep to graze the grass between the rows of vines, to avoid the use of machinery and reduce pollutants in the vineyard (herbicides) (adapting approaches);
- state-of-art precision-farming technologies for on-demand interventions and digital agriculture.
  Sustainability is closely related to technology. It encompasses the use of Wi-Fi, sensors, remote sensing, GPS, drones, telemetry, data collecting and analyses. The aim is to have real-time data that help to detect trends and tendencies in a widespread, widespread or continuous manner. It allows comprehending how and when to intervene to address specific problems or enhance a given situation (e.g. understand if and when a specific type of fertilisation is needed, where and how to dose it), using mobile devices to update the farmer incessantly. For example, drone technology makes it possible to conduct fertility and vegetative condition analyses, such as those carried out by the iXem laboratories of the Polytechnic of Turin. The iXem Wine platform helps multiple stakeholders to share their data to establish site-specific forecasting models. Reducing the number of hours of a worker in the vineyard, the number of chemicals used, and the necessary activities (i.e. fewer tractors, therefore less use of oil and soil compression by these mechanical means) are practical consequences (adapting approaches);

- using natural remedies to counteract crops problems rather than chemical products (e.g. sulphur and copper).

  In a vineyard landscape, natural antagonists of insects as the Scaphoideus Titanus can remedy the grapevine flavescence dorée phytoplasma (i.e. PHYP64), limiting it; using mushrooms such as Ampelomyces Quisqualis fight powdery mildew. Pheromones or Bacillus Thuringiensis are used to combat the moth, while insects such as Cryptolaemus should be released for the cicada in both May and June. Other beneficial animals to limit the invasion of vine-damaging pests (insects) are, for example, ducks, which are released in Australian vineyards to eat insects and snails. Similarly, hens and roosters can play a role in the soil fertility system in the vineyard, also regulating the growth of grasses.

  In a rice landscape, certain animal species can protect crops from damage by pests because they are higher up in the food pyramid. For example, fish and snails in rice paddies can regulate excessive pests just as ducks can reduce the number of slugs and weeds, as is already the case in the Honghe Hani rice terraces. In addition, they can help to fertilise crops naturally instead of using chemical fertilisers (adapting approaches – integrated ecological approach);

- reusing and rationalisation of water resources.

  To compensate for the increasing reduction in water supply due to climate change, it will become increasingly necessary to reuse and recycle water after treatment. It will make it possible to minimise the demand for water in the face of ever-decreasing quantities available, limiting management waste and, at the same time, optimising it in times of scarcity. In the case of vine cultivation, other actions are possible and necessary. These include drip (or foot) irrigation systems, intending to control and rationalise water use, improving soil composition by providing more organic matter, and limiting soil erosion using cover systems between vine rows. (adapting approaches);

- vocational training for winegrowers and rice growers.

  They need to be helped to understand the scale of change in the sector and to familiarise themselves with new ways of farming, which can either improve existing ones, complement them or even change them altogether. Involvement in local research, field days and training is relevant here (adapting approaches); and

- reaffirming the importance of the biocultural diversity.

  This theoretical and operational necessity is also based on the evident "… continuing co-evolution and adaptation between biological and cultural diversities" at these sites (Buckley et al., 2019, p. 8).

- rebalancing the role of tourism in the sites:
    - detecting the acceptable limit between preservation and a massive tourist exploitation of the heritage.
      With the end of the COVID-19 pandemic, it is conceivable to think of a so-called tourism rebound effect, i.e. a renewed demand for the use of places already known to tourist itineraries, especially those of excellence. Therefore, each community/village/municipality in the sites should avoid a one-size-fits-all approach (dynamic equilibrium between continuation and change); and
    - establishing or perfecting the tourism management plan for the heritage sites (tourist load capacity).
- adaptive management in allocating the resources.
  Identifying which mechanisms are sustainable and which are not in asset management is essential for rationalising and optimising the allocation of resources.
  As advised by Buckley et al. (2019), it is necessary "… identifying priorities for allocation of resources in order to strengthen resilience" (p. 11). In particular, it is crucial to ensure:
    - the redistribution of natural resources.
      The focus should be on the water distribution system to continuously optimise it and ensure dynamic protection. Potential actions would include, for example, having a single operator instead of several operators by 2030, improving the performance of waterworks, replacing damaged or old pipes, for instance. It will be of increasing importance in the medium term, including in the case studies analysed in this research where vines and rice are grown intensively (adaptive impact reduction);
    - the continuation of services.
      Ensuring the continuation of infrastructure over time, e.g. the road maintenance, and the territorial services for local communities, e.g. adopting the optical fiber, maintaining postal services, bank counter, and essential goods shops (allocation of economic resources); and
    - what value needs to be protected at what time.
      Prioritising among the values proper to these landscapes could be useful in management and governance because, according to Leitão et al. (2017), it does not seem to be "… possible to protect all of the values equally at all times. In certain circumstances, it might be necessary to set priorities among different values while continuing to maintain an understanding of the whole property …" (p. 15).
- ensuring food security.
  It is considered a priority to meet the UN SDG 2: "End hunger, achieve food security and improved nutrition and promote sustainable agriculture" (UN,

2015). In particular, in a long-term perspective, it needs to consider the combined action of:

  - climate change and related feedback phenomena; and
  - "… contemporary land use systems, agricultural practices, and incentives …" (Leitão et al., 2017, p. 7), to understand how they work.

- feedback-based approach and a continuous monitoring system.
  Innovations and adjustments to tools (i.e. indicators) and practices increasingly require feedback from users/workers, which are crucial to feeding into an ongoing discourse on the management of these sites. Therefore, it is recommended to "identify existing toolkits that can be adjusted or retrofitted to embrace biocultural diversity, particularly in relation to the crafting and implementation of management systems." (Buckley et al., 2019, p. 7); and
- reactive monitoring.
  The monitoring process should be continuous and permanent in the management cycle rather than performed at the end of it. Depending on the needs emerging from the territorial surveys, this process may modify or adjust some actions and/or means of the management objectives, likewise the allocation of resources, due to its dynamic nature.

Section 5

Conclusions

5.1 Discussion

Research shows that building landscape resilience is an integrated approach to management, design and planning that aims to take into account the environmental dimensions of global pressures and changes (e.g. climate change) and translates community expectations into practice. It pays attention to design issues at the local scale, placing community values at the centre. In UNESCO cultural landscapes, it moves from heritage conservation (natural + cultural) to action. It aims to emphasise the legitimate aspirations of the inhabitants to determine a certain characterisation of the landscape, to be combined with the economic and developmental aspirations of the site. From this, it emerges the need to interpret resilience in an operational key, in an approach that can be defined as active conservation, made of a mix of preservation, innovation and project (Gambino & Peano, 2015). It is never about intangibility but rather about the importance of ensuring a balanced transformation by assessing the 'price' of such choices.

Creative and recombinant approaches put local knowledge back into play by hybridising it with contemporary knowledge, in a role of collective learning of those who live in that landscape. Coaching communities are therefore essential to stimulate collective learning processes between local people and those from outside.

However, one wonders whether it can have its autonomy as a concept, recognising the need for more studies to define it specifically. Some attempts have been made by the author in this research, including as co-author of a chapter entitled "Towards a definition of landscape resilience: the proactive role of communities in reinforcing the intrinsic resilience of landscapes" (Voghera & Aimar, 2022, in press) among others.

In this sense, this doctoral research focused on some relationships and potential actions in the landscape following the apparent dichotomies of permanence-innovation and project conservation.

The analyses carried out in this research offered several answers to the research questions set out in section 2, paragraph 2.3, detailed below.

- **In the selected UNESCO World Heritage sites listed as cultural landscapes, what are the different ideas of landscape and related features to focus on?**

As the landscape is polysemic and complex, many factors contribute to the subjective and objective considerations in its study by scholars. Cultural influence has changed and evolved the meaning(s) of the landscape during the time, in a co-evolutive approach with human society. In both the countries in which the two case studies selected are (i.e. Italy and China), intangible cultural aspects are deeply related to the physical components of their landscapes, both natural and anthropic. They are rooted in the local communities that shaped them during the centuries, with external influences of a more general idea of landscape on a macro-area or at the national level giving by spirituality (e.g. Taoism, Catholicism) and economic systems (e.g. capitalism, communism, or degrowth theories) among others. They have contributed and continue to provide a significant contribution to looking at, interpreting, and giving meaning to them. Although the differences between national and continental cultures, the cultural interpretation of nature related to the human activities is present in both the notions of landscape. The Italian Nomination File refers to the cultural-anthropic component as part of the three pillars of landscape (natural, perceptive, and cultural-anthropic components; UNESCO, 2014, p. 39), within which the social-cultural structure of a community/society falls. Similarly, the ideas associated with the compound words ‘Fengjing’ and ‘Jingguan’ include the cultural sense and the orders or rules of a society (‘Feng’) coupled with the notion of scenario (‘Jing’) in the Chinese culture. As society changes, the attributes associated with the values of a specific landscape also vary with it, resulting in slow and fast but both relevant impacts on its overall image. Consequently, this PhD research has confirmed that social modifications in a community risk to undermine landscapes (and productive landscapes, in particular) during time, simplifying them and diminishing their cultural and economic value, to a greater or lesser extent.

- **What is the relationship between resilience and identity?**

This PhD research has detected the relevance of identity in UNESCO cultural landscapes, despite the complexity and multiplicity of identity as a term. It is strong and relevant to communities, so much so that it forms the basis of both nomination processes investigated in the selected case studies, i.e. the “Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato” in Italy (UNESCO, 2014a) and the “Cultural Landscape of Honghe Hani Rice Terraces” in China (UNESCO, 2013a). The historical background has created a common sense of belonging among the people living in these Italian wine-growing landscapes, which do not follow administrative boundaries but have shaped an agricultural macro-community based on the cultivation of the same type of crop (the vine). Similarly, the Chinese site is home of another typifying crop type (rice) but being a cultural minority with a unique connotation helps to reinforce their social cohesion. Findings reinforce Rogers's analysis (2017), which refers that resilience can be understood as "… a proactive approach that expands on the greater potential of resilience to foster a deeper socialisation" (p. 14). However, it can vary according to multiple factors that are site-specific, such as "… (3) inherent properties of the perturbed system, (4) disturbance regimes (type, duration, frequency, and intensity); and (5) potential for multiple interacting disturbances with synergistic or additive effects …" (Keane et al., 2018, p. 2). It follows that resilience, in this research, deals with individuals and groups in local and foreign communities (i.e. newcomers) as an approach to building a shared sense of identity, which will be continuously redefined as the various social components change and the boundary conditions.

- **What is the limit between persistence and change to achieve both the systemic robustness that UNESCO calls for and, together, to cope with dynamic modifications for a community-led 'active protection'?**

It emerged that there is no equal limit for each case study in this report, as it is mainly motivated by two intertwined factors. Firstly, the boundaries between conservation and change in the socio-ecological system can be modulated in increasing amplitude (therefore in a phase of increased preservation of the system, where permanence is much relevant than the possibility of modifications) or decreasing (vice versa). Secondly, they vary according to the trajectory of that specific dynamic, with always different equilibrium points as this boundary is protean. In concrete terms, the surveys showed that the various Core Zones/Components and the individual villages that make a World Heritage site up have specific needs due to the different characteristics they possess. Therefore, this limit has to be evaluated case by case, from the local to the supra-local scale, always involving the communities in its definition if the goal is an integrated management system.

Concerning potential changes introduced to date by newcomers, interviews and existing academic literature revealed that these are actually minimal. Despite the continuing influx of newcomers from abroad (i.e. North Macedonians) or intra-country flows of people (i.e. Han ethnic entrepreneurs), UNESCO recognition helps build a different, so-called 'community of purpose', whose members are bound together by the collective management of these productive landscapes. These shifts seem to be more about sociality than about places, i.e. how they experience them and their degree of involvement in the administration. In both cultural landscapes, it emerges that most individuals of these groups do not actively participate in the community life of the villages/towns in terms of sociability (e.g. festivals, voluntary associations membership) and politics (administration). They seem more prone to collecting the benefits of the economic exploitation of these landscapes, from work in the fields (more so in the Italian site and to a lesser extent in the Chinese one) to accommodation and catering (more so in the Chinese site than in the Italian one). The landscapes have been most affected by the impacts of exogenous modifying phenomena, including the shift from manual to mechanised cultivation since the 1960s in the Italian site (Aimar et al., 2021), while in the Chinese site, these effects are affecting the cultivation of rice terraces in recent years. Other external factors such as climate change significantly impact their image in the mid- to long-term (2030-2050), also leading to assessments of whether they will continue over time and in what form (Aimar & Jigyasu, forthcoming/2022). While the persistence of the tangible and intangible components of heritage, combined with the increasing adaptability of the landscape as a system of systems, seem to be currently accepted by the population when asked to manage these changes, strong questions concern the degree of transformability of the landscape and the capacity of communities to accept it.

Among these, climate change has to be accepted by communities, unfortunately, which increasingly have to deal with its dramatic outcomes in terms of territorial impacts. Many sectors are and will increasingly be affected, with implications for the economy, the maintenance of the social structure, sociality, public participation and how the sites will be experienced. These could lead to an extensive areal reduction until the disappearance of these landscapes, which could be replaced by other productive landscapes (hopefully polycultural) until their possible abandonment, as a mirror of the changing society (Sereni, 1961).

In this perspective, the way a community changes is related to the integrity of the cultural landscape.

- **What will be the main objectives to maintain the identity of the selected cultural landscapes?**

  As noted before, and according to what reported by Di Fazio and Modica (2018), "… a widespread awareness of local identity and distinctiveness" "… can play as a driving force of development" (p. 2) only "… if its cultural content is fully understood, interpreted and communicated" (*ibid.*). Continuation is another objective that is linked to the community role and their sense of attachment to these productive places. It emerges that a shared identity is constituted by different identities (individual, persons, larger or smaller groups), which compose a society. The thesis highlights the relevance to have a common cultural substratum for a proactive and dynamic conservation approach. Moreover, it highlights how the landscape builds the community which in turn builds the landscape. Involvement, engagement, empowerment, and training the community members, traditional and e-learning by doing methods, reinterpreting the traditional know-how are among the potential actions associated to reinforce a sense of identity. If one invests in community and new tools to reinforce its role of caretaker of these landscapes, it is probable that the outcomes are a renew sense of cohesion and belonging, especially in new generations. On the other hand, detected threats risk to deform the way we know these sites, transforming them into a jeopardise landscape, or a non-productive one, affecting the continuation. If these impacts are not faced seriously, major transformations could alter them, causing impacts on integrity as a criterion. Therefore, resilience could help in their continuation, proposing an integrated management plan able to allocate the resources properly, working on processes of each attribute of the landscape and also among them, and planning. It can contribute to developing responses or proposals, implementing the monitoring of the bio-cultural heritage. Five pillars for building landscape resilience have been adopted from the literature, namely diversity, redundancy, network connectivity, modularity, and adaptability; for each of them, this research have been proposed specific actions to support decision-making for preserving, maintaining and enhancing the cultural landscapes selected as case studies.

- **Building landscape resilience: what are the resilient solutions in territorial systems to deal with changes in the socio-cultural component of the landscape (e.g. ageing and depopulation, the inclusion of newcomers, and foraging for landscape identity)?**

  As pointed out by Fröhlich and Hassink, “When conceptualizing resilience in terms of a region’s capacity to develop new growth paths, the evolutionary approach tends to distinguish between adaptation and adaptability” (Fröhlich & Hassink, 2018, p. 1765) where the choice between one of the two or a mix of them depends on the state of the system. In fact, “Adaptation concerns changes within preconceived paths, while adaptability is about developing new pathways” (*ibid.*), so the first seems more related to a bounce-back better approach rather than the second. Embracing resilience as a travelling concept (Rogers, 2017, p. 13), the dynamism of the landscape suggests more emphasis on the concept of adaptability, as a prodrome for a bounce-forward approach in integrated landscape management. Consequently, “… the safeguarding of landscape should be redefined as a project and a program of actions” (Brunetta & Voghera, 2008, p. 72). As mitigation seems to be associated with the defence of the *status quo* (Aimar & Jigyasu, forthcoming/2022), adaptation and transformation (or adaptability) are the common thread linking the various actions proposed in chapter 4.6 of this PhD thesis. In this section, 5 pillars to build the resilience of a cultural landscape are proposed (i.e. diversity,

> redundancy, network connectivity, modularity and adaptability), from Beagan and Dolan (2015). Starting from these theoretical speculations, 5 points and 8 sub-points are proposed for diversity, 2 points and 2 sub-points for redundancy, 7 points and 10 sub-points for network connectivity, 2 points for modularity, and 8 points and 12 sub-points are proposed for the adaptability.

On the one hand, this doctoral research has some limitations. Starting from the "Vineyard Landscape of Piedmont: Langhe-Roero & Monferrato" World Heritage Site (UNESCO, 2014a), the group of newcomers targeted by the study is only the North Macedonians, who are numerous in terms of members in these territories. Nevertheless, other groups are present, although in a smaller proportion and depending on the area. In the same areas as the North Macedonians, one finds Romanians and Bulgarians, while in the municipalities near Alba also Albanians and sub-Saharan Africans (Pastore et al., 2020). Therefore, for an even more pervasive study of how newcomers perceive and experience the territory of the Italian UNESCO site, the surveys carried out in Chapter 4.3.6 could be repeated for these groups as well. The results obtained would allow potential comparisons to see any differences in perception and understanding of the landscape between the various groups, supporting possible ad hoc actions.

Concerning China, the strict immigration policies adopted by the central government and the strong statehood of policies have however allowed catching an overview of ongoing trends that are significant for their supra-local origin and for the impacts they produce on the image of the landscape. For a more pervasive study, further phases of work could include the launch of surveys to analyse the understanding of the landscape between the local population group (ethnic Hani) and the migrant group (ethnic Han). Specific requests for such surveys will need to be coordinated with the local and regional government to obtain any necessary permits.

Furthermore, this research has not extensively investigated the term 'identity' regarding its multiple meanings and deep, multilevel implications, as this is not the purpose of this thesis. However, an interdisciplinary study with psychologists and sociologists could help to better understand it to refine and better calibrate the landscape design with respect to the specific needs and deficiencies of the community.

On the other hand, this PhD research has several opportunities in terms of research. Among them, there is the export and reproducibility of this survey in other UNESCO cultural landscapes, preferably productive ones, since some of the ongoing dynamics of change detected in the two case studies are related to supra-local pushes. Potential investigations in the same geographical context as a homogeneous region (e.g. the European continent including North America or the China-Korea-Japan macro-region) from a socio-cultural point of view make the results more comparable. However, new cultural bridges need to be created in order to better connect different cultures with each other.

In addition, further theoretical investigations can be undertaken to enrich and deepen the promising definition of 'landscape resilience' (Voghera & Aimar, 2022, in press; Schmidt, 2022, in press) and the related contributions composing this umbrella concept. In particular, more connections between resilience and landscape planning could be explored, as well as the contribution of resilience in the processes regulating landscape projects on different scales.

5.2 Capitalising on the findings of the UNESCO case studies survey and replicating the approach in ordinary landscapes

What does it mean to respond to the building of resilience of the non-UNESCO landscape, therefore considered as ordinary?

To this end, the experience of studying and analysing these UNESCO case studies has made it possible to highlight several methodological and planning attentions that are useful to field potential responses for the management of these ordinary territories.

For the purpose of a holistic, integrated management system, the following criteria can be indicated for rural and periurban everyday landscapes:

- a complexity in terms of landscape features, e.g. soil and different crops types, polyculture and mosaic farm, ecological corridors and native habitats (Central West Local Land Services, 2016);
- a living and satisfactory biocultural diversity, in biological, cultural, and linguistic sectors, "which are interrelated (and possibly coevolved) within a complex socio-ecological adaptive system" (Maffi, 2007, p. 269);
- the identity factor by the local communities as an outcome of the attachment to their everyday landscape;
- a living heritage approach (Poulios, 2014; ICCROM, 2015);
- a site-specific but place-related approach, i.e. being 'glocal' considering the local site in the regards a wider supralocal context;
- a community-based and individual-centred approaches (Brunetta & Voghera, 2014), as individuals create groups of people, and the sum of these groups create a community, because their voice matters;
- centred on achieving individual and community-based wellbeing;
- capable of considering slow burns (e.g. climate change) and fast change variables (e.g. systemic shocks) with respect to community needs;
- capable of pondering socio-economic vulnerabilities as inputs for site-specific actions (preparedness and ability to respond to disturbances, pressures and driving forces of change);
- able to combine traditional plus cutting-edge management methods and techniques (i.e. integrating autochthonous to scientific knowledge supporting the creation of multifunctional farms, among others); and

- empowerment of people living in such ordinary landscapes.

These criteria can determine a design and planning approach, especially when looking at the scale of the plan, which relates to the embryonic concept of landscape resilience studied by the author of this thesis.

As previously mentioned, it emerges that the theme of identity in UNESCO cultural landscapes is powerful and central to communities, so much so that it forms the basis of the candidacy process. In ordinary landscapes, on the other hand, the topic of identity seems weaker and less connotative of a social group concerning the geographical area in which it is located. It is, therefore, necessary to understand how it can be built and put into play for the benefit of the communities themselves.

Attempts such as those conceptualised through the projects linked to the Fifth Landscape as a concept (Repetto & Aimar, 2021) can contribute to building identity through image, using artistic performances on a large territorial scale. They do not draw from popular culture but rather come from an experienced and external body capable of stimulating these processes. Such artistic experiences can be considered on a par with seeds but in a figurative sense, where the memory of that common experience can also be used by future generations to strengthen community ties. In these types of experiences, however, the scale of the event (such as Christo and Jeanne-Claude’s The Floating Piers, 2016) triggers community processes not only on a territorial level but also among an internationally dispersed community of individuals interested in the artistic theme.

Future trajectories in terms of management strategies and actions have to be considered in relation with time and space scales, to set congruent and achievable objectives (Keane et al., 2018).

Section 7

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7.1 Theoretical background references

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Section 9

Appendix A

The “Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato” (UNESCO, 2014a, ref: 1390rev) site is an emblematic example of “… harmony, and the balance between the aesthetic qualities of its landscapes, the architectural and historical diversity of the built elements associated with the wine production activities and an authentic and ancient art of winemaking” (UNESCO, n.d.-b). Additionally, it reflects “… a slowly developed association between a diverse range of soils, grape varieties that are often native, and suitable winemaking processes” (*ibid.*). In such a specific territory, “all the variables that determine it are not only an added value but a real intrinsic value of quality production” (Ferretti, 2006, p. 26). Therefore, these rural landscapes testify that the land is the most valuable economic asset for those who cultivate them; in the Piedmontese dialect spoken in Langhe-Roero and Monferrato, nature and the environment are called ‘countryside’. This term, however, has a dual meaning: the first one as a place of work but the second one as annual produce, therefore the income (Lajolo, 2014, p. 46).

Each wine-growing area is defined by a specific soil to which a grape variety is related. As reported in the criterion (v) of the Nomination File: “In general, these soils ... are poor in organic material but rich in mineral elements” (UNESCO, 2014a, p. 42). For example, the geological nature of the soils of the Barbaresco Hills involves sedimentary rocks from the Tertiary period but, as pointed out in the Nomination File: “the different percentages of clay and the more or less extended veins of sand define unique microgeological characteristics for every vine-covered slope, which contribute to the production of wines with a very personal imprint” (*ibid.*, p. 164).

The vines grown in these areas are often native or autochthonous, such as Nebbiolo, Barbera and Moscato (*ibid.*, p. 14). These vines were planted in close rows and, in the narrow space between them, vegetables were sown. Canes and willow branches were used to support the growth of the shoots, while wood was collected from coppice forests to make the head posts for the rows of plants; fruit trees were planted around the perimeter of the vineyards (Lajolo, 2014, p. 25). Vineyards were also rooted in areas geographically distant from each other and the farm, following the curve of solar radiation in the choice of sunny hillsides for planting, while the shadier ones were destined for coriculture and coppicing (*ibid.*, p. 26).

From that ancestral world, several traces remain in the current landscape, both material and immaterial; the latter is rooted in the imagination and psyche of the peasantry, primarily land ownership (Lajolo, 2014, p. 26).

However, a superficial glance may inspire an aesthetic appreciation, leading the observer to set the residence of beauty in the landscape (Devecchi, 2016). Nonetheless, it seems necessary to reiterate here that it is not only "a mere cosmetic, but rather an ethical value, shaped by the matter that nature has given us and by the cultural capacity to know how to transform it" as stated by João Nunes in 2016 (Aimar, 2016).

The nomination of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a) is the consecration of a centuries-old journey, both cultural and experiential, carried out by entire generations of men and women aimed at designing and shaping that landscape. This wine landscape was built up over the centuries when work and living habits were intertwined in the small peasant estate.

This serial property consists of a total of 101 municipalities, listed in the Additional Information of the Nomination File; located in the southern part of Piedmont, they are characterised by a "cultivar-cultural tradition" (UNESCO, 2014a, p. 36). It is worth noting that the etymology of the above terms has the same common root, namely the Latin verb 'colere', which means to cultivate (Merriam-Webster, n.d.-a). This relationship, therefore, includes both material elements, based on the soil and its products, as well as symbolic components.

Factually, these areas are bound together by common history of almost seven centuries, the ancient Marca Aleramica (Enciclopedia Treccani, n.d.) first and the Marquisate of Montferrat (Oxford Reference, n.d.) later. It seems to represent a common identity basis for those territories part of the UNESCO site of the "Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato" (UNESCO, 2014a). The perimeter conformation of the 6 Components constituting the property and of the 2 Buffer Zones is due to the territorial evolution of the Marquisate of Montferrat, over a period that goes from 967 to 1573, and of the Duchy of Monferrato, from 1573 to 1708. The possessions of the Marquisate expanded to include important territorial centres such as Acqui Terme, Alba, Casale Monferrato, Moncalvo, and Chivasso. To gain an adequate understanding of this, it is possible to superimpose a historical map of the Aleramic family's holdings with the current UNESCO protected areas, thus revealing an almost complete overlap.

It has resulted in strong and lasting links among these internal areas, with different signs still alive today. On the other hand, the annexation of the Marquisate to the Kingdom of Sardinia in 1708 (definitive in 1814) pushed these lands into a condition of marginality and, therefore, poverty. This led to a significant emigration of its inhabitants to countries such as France, Argentina, and the USA between the end of the 19th century and the first decades of the 20th century.

For the future, this relationship must be nurtured by observation, research, and patience: three values that together lead to the constitution of a body of interdependent assets that are fundamental to the development of local culture. Culture results from a history that begins in the past and will continue into the foreseeable future. Contemporaneity, therefore, is part of a millennial dialogue initiated by our ancestors and continuously updated in our daily lives.

It also refers to and evokes the places where these wines are produced, their history and the life of those which is representative of experienced reality. The above is recognised in Criterion (iii) of the UNESCO nomination of such territories. It states: "The cultural landscapes of the Piedmont vineyards provide outstanding living testimony to winegrowing and winemaking traditions that stem from a long history, continuously improved and adapted up to the present day. They bear witness to an extremely comprehensive social, rural and urban realm ..." (UNESCO, 2014b, p. 236).

Here, in these areas of southern Piedmont, "The ecosystem and the various combinations of climate have made a suitable environment for the development of vines indissolubly associated with these territories" (UNESCO, 2014a, p. 36). In this sense, most components indicate an association with a particular wine (Barolo, Barbaresco, Barbera, and Spumante) in the name given. Next follows a list with the main characteristics of each Component and the related municipalities:

Component 1: "Langa of Barolo" (UNESCO, 2014a, 1390rev-001).

This component has an overall area of 3,051 hectares. Here grows the Nebbiolo grape variety from which one the renowned Barolo wines are produced. This area includes the municipalities of Barolo, Castiglione Falletto, Diano D'Alba, La Morra, Monforte d'Alba, Novello, and Serralunga d'Alba. As reported in the Nomination File, "The landscape of the 'Langa of Barolo' is characterised by an agricultural mosaic consisting virtually of a single crop… the binomial of castle and vineyard designs a unique landscape, in which defensive architectures stand out like landmarks against the hills ..." (UNESCO, 2014a, p. 116) along with the historic wineries.

Component 2: "Grinzane Cavour Castle" (UNESCO, 2014a, 1390rev-002).

This component has a general area of 7 hectares. "The vineyard below the castle is an important centre of research and experimentation on the ampelographic heritage of Piedmont and presents one the most extensive collections of grape varieties in Europe" (UNESCO, 2014a, p. 150).

Component 3: "Hills of Barbaresco" (UNESCO, 2014a, 1390rev-003).

This component has a whole area of 891 hectares. Here grows the Nebbiolo grape variety from which one the Barbaresco wine is produced. This area includes the municipalities of Barbaresco and Neive, historical hill medieval settlements.

Component 4: "Nizza Monferrato and Barbera" (UNESCO, 2014a,1390rev-004).

With an overall surface of 2,307 ha, the Component includes areas of the municipalities of Agliano Terme, Castelnuovo Calcea, Mombercelli, Montegrosso, Nizza Monferrato, Vaglio Serra, and Vinchio. "The selected area is the historical territory of the Barbera grape variety, cultivated in Piedmont for over 500 years ..." (UNESCO, 2014a, p. 185). The area is characterised by an evident rural and wine culture, as evidenced by the Bersano Museum of Contadinerie and Prints on wine.

Component 5: “Canelli and Asti Spumante” (UNESCO, 2014a, 1390rev-005).

This component has a total area of 1,971 hectares. It includes the municipalities of Calosso, Canelli, and Santo Stefano Belbo. The whitish soil, mixed with limestone, sandstone, and marl, is particularly suitable for growing white Muscat grapes. In this component, vernacular architecture is closely linked to wine culture, such as the *crutin* in Calosso and the so-called ‘underground cathedrals’ in Canelli for storing wine bottles.

Component 6: “Monferrato of the Infernot” (UNESCO, 2014a, 1390rev-006).

With an overall surface of 2,561 hectares, the Component comprehends the municipalities of Camagna Monferrato, Cella Monte, Frassinello Monferrato, Olivola, Ottiglio, Ozzano Monferrato, Rosignano Monferrato, Sala Monferrato, and Vignale Monferrato. As in the previous one, here are the most beautiful examples of vernacular architecture: the *infernot*, i.e. “underground rooms dug below the level of normal houses and used for the conservation of wine bottles” (UNESCO, 2014a, p. 242).

In this regard, it is interesting to recall just how the English term ‘man’ is transliterated as “homo” (Merriam-Webster, n.d.-b) in Latin and the latter derives from the Latin word “humus” (Merriam-Webster, n.d.-c), i.e. ‘produced from the earth’.