21st Century Landscape Sustainability, Development and Transformations: Geographical Perceptions
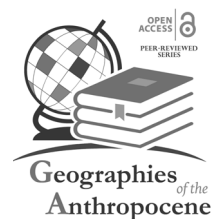
Giovanni Messina, Bresena Kopliku (Eds.)

Preface by Elena dell'Agnese

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Giovanni Messina, Bresena Kopliku

Editors

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Geographies of the Anthropocene

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The choice of digital Open Access format is coherent with the flexible structure of the series, in order to facilitate the direct accessibility and usability by both authors and readers.

Preface

Dealing with the sustainability of cultural landscapes seems to be a challenge today. Cultural landscapes, as Carl Sauer (1925) wrote, are nothing more than the phenomenologically observable expression of the relationship between humanity, understood as a social system, and the context in which it moves, lives, prospers, decays, and dies.

The examples of transformation are innumerable, and it is certainly not easy to account for them, as is attempted in this volume, which articulates its research questions in a series of spatial and transcalar perspectives. Thus, the book begins by considering landscape features as symptoms of decline and change, then moves on to talk about neighborhoods that need to be revalued and capitalized, then to consider regional spaces, and finally it broadens its gaze to global perspectives of contrasts and growth differentials that are in danger of being exacerbated, rather than mitigated, by technological change, which casts sometimes its negative fallout (its waste) on the poorest and most marginal spaces.

Within this articulated framework, the Mediterranean Fair (Palermo) becomes a visible symptom of the crisis in the economy that made it necessary, or at least useful, a crisis made even more explicit by the advent of the pandemic, and also of the end of "a Mediterranean productive dream," as the authors of the contribution write. A similar crisis of a system that wanted to focus on productive development at all costs is manifested in Taranto, again through a landscape of abandonment and ruins. Reinventing functions to the territory, which are expressed through the landscape, or recovering its history, therefore becomes essential. Beyond the urban landscape, which needs to be reinvented or heritagized, the rural landscape also presents significant challenges, which can be addressed, also in this case, by processes of patrimonialization, as it is happening in the rural spaces of the island of Salina, or in the Etna Nord wine "district".

If society changes, and consequently the territory and the landscape that are its expression change, the way of looking at the landscape, framing views of it, and examining and disseminating particular aspects of it can also change. A university degree can certainly play a role in changing your attitude towards changes, as demonstrated in the chapter about students enrolled in different courses a t the University of Turin and their attitude towards climate change. But even the way you look at the landscape can play a role. New media become a way to emphasize certain aspects of daily life (the bakeries), and a tool for "mediatizing" nature. Tourism landscapes may be enhanced

by social media, be revitalized by a process of patrimonialization thanks to them, or simply be discovered/rediscovered (such as the cases of Magna Grecia Park, in Crotone, or of Sicilia Archeologica). Platforms can play a relevant role in changing the urban landscape, as in Tirana, as the digital transition, in general, can do, albeit with a different velocity in different contexts, with the risk of increasing, instead of bridging, geographical gaps (and of producing a big amount of E-waste, which difficult disposal is likely to fall precisely where the benefits of transition are least, and where development and transformation not always go hand in hand).

So, from the urban scale of a single urban item, albeit quite big, such as the Fiera del Mediterraneo in Palermo, we ended up reasoning about Africa, and of the consequences on the territory (and on the landscape) of the digital transition. Society changes, and its cultural landscape as well.

At all levels, and at all scales.

Reference

- Sauer, C.O., 1925, The Morphology of Landscape. *University of California Publications in Geography* 2,2, pp. 19-53.

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Introduction

The question of environmental sustainability fatally intertwines its horizon with the geographies of development. Suffice it to say that in July 2023 the European Parliament gave the green light to the CAP, the EU Green Deal and the Nature Restoration Law, a law that aims to restore all natural environments that have been damaged by man over the years. In particular, the law aims to restore at least 20% of the territory between now and 2030 and aims to reach up to 90% by 2050. These kinds of measures are at the center of major protests across Europe that are being led by farmers' unions, which are frightened by too-fast transitions and diminishing returns.

On a global scale, on the one hand the globalization process today is struggling to recognize a definite leadership and imposes a new colonial matrix on the development of the territories linked to large financial capital and the hoarding of raw materials, on the other hand the 2030 Agenda, the Paris Agreements and the COP constitute some of the essential elements of global governance for the technological and ecological breakthrough.

In this general context, territories continue to transform due to endogenous and exogenous development drives. The thickening of logistics and transport networks, large commercial hubs, energy supply options, agricultural and industrial policies, tourism and migrations constitute then, individually and in a systemic sense, some of the lenses available to read the transformative dynamics of territories in the crucial current geopolitical context. In addition, the increasing reach of digital technologies in the spaces and practices of our daily lives, has changed the way we perceive and use the landscape.

These transformations find a reified outcome in landscape transitions, becoming a foothold for a trans-scale geographical reflection. We therefore want to insert this volume on this horizon. In fact, we have wanted to stimulate the geographical community to try their hand at landscape analysis to identify, through methodological and/or applied research contributions, problems, practices and trajectories inherent in the transformative dynamics of territories, compressed between the urgency of development and the need to change the energy and consumption paradigm. This volume, full of transcalar reflections and case studies, is a piece of a reflection still in full unfolding.

The Editors

1. The *Fiera del Mediterraneo*: a (Post) Pandemic Landscape as Difficult Heritage

Emanuela Caravello, Giulia de Spuches, Gabriella Palermo

1. The *Fiera del Mediterraneo*: a (Post)Pandemic Landscape as Difficult Heritage

Emanuela Caravello, Giulia de Spuches, Gabriella Palermo [1]

Abstract

This chapter aims to analyse the geographical perceptions of an urban landscape through the lens of difficult heritage. The choice to speak of a difficult heritage seems to us better suited for dealing with the traces of the past that are complex, painful, and controversial, given their association with tragic events. In order to analyse this particular form of heritage, we will use the methodology of the survey, which involves both an exploratory and a dialogic phase.

We intend to consider the Fiera del Mediterraneo in Palermo through three keywords: development, transformation, and sustainability. Firstly, the Fiera was founded as an exhibition space in 1946 in an expanding area of the city. The Universal Exhibitions were its archetype, the aim was to be the bridge of the Mediterranean economic area. The transformations of the 1970s interrupted the initial idea of landscape unity by fragmenting and transforming the outdoor space and pavilions into empty spaces, to be filled with industrial products of everyday life. In the third phase, the Fiera changes its use value once again by becoming the pandemic space for the Covid-19 tests and vaccinations. Although only three pavilions were used, the Covid-19 changed the image of this area: it was the Covid-19 landscape. Thus, the question is how to deal with this difficult heritage? How to live-with and re-signify this difficult heritage?

Keywords: *Difficult Heritage, Fiera del Mediterraneo (Palermo), Covid-19, Ruins, Pandemic landscape*

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1. Introduction[2]

In the current geopolitical context, urban spaces are increasingly traversed by multi-scalar dynamics that affect the way we perceive landscapes. Among the most incisive transformative events, the Covid-19 pandemic posed a crucial challenge and still continues to manifest its effects in spaces, practices and representations.

This article focuses on geographical perceptions of an urban landscape deeply marked by the pandemic event, as the last transformative phase of a complex process. The case study is the Fiera del Mediterraneo (Palermo, Italy), established in 1946 as an exhibition space in an expanding area of the city. The Fair has undergone significant transformations over the decades: in its first two phases it served as a trading bridge between the Mediterranean shores, then, with the neoliberal acceleration it lost its purpose; Covid-19 crisis turned it into a pandemic landscape; today it has become a post-pandemic space to question.

Our focus will be on the pandemic, as it is the period in which the image of the Fiera changed. This transformation has led us to ask ourselves what kind of heritage remains in the present and how to define it. We started with the following questions: is it possible to see the Fiera as a difficult heritage? What do the ruins signified by the trauma of a pandemic, but simultaneously by relations of contagion with which to remain in contact, suggest to us? How can we live-with and re-signify this landscape with its difficult traces?

Our reflections are based on the theoretical background of cultural heritage and in particular the conceptualisation of difficult heritage. We believe that this polysemic concept is particularly suited to deal with traces of the past that are complex, painful, and controversial. From a methodological point of view, we used the method of the exploratory and dialogical survey, which allowed us to consider the Fair as a difficult landscape in its ambivalence. On the one hand it emphasises a painful memory, a landscape of illness; on the other hand, in the landscape of care, it questions us in order to imagine sustainable ways of living together.

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[2] Even if the article is the product of a collective work, paragraph 2. has to be attributed to Emanuela Caravello, 3. to Giulia de Spuches, 4. to Gabriella Palermo. Introduction and Conclusions are instead collective.

2. Difficult heritage and pandemic landscape: a theoretical framework

The frameworks through which heritage can be examined are multiple and pertain to multidisciplinary perspectives that intersect with each other. Lowenthal's seminal study (1985) presents the past as a landscape continually reshaped in light of present needs and instances. Building upon this conceptualisation, the theoretical and methodological domains of heritage are traceable in the economic field, discursive practice, visual representation, and affectivity. In the economic realm, theoretical approaches have emphasised the materiality of heritage and explored its role as an economic resource in regeneration and tourism. This focus on heritage objects has led to reflections on heritage commodification or over-commodification driven by marketing imperatives (Hewison, 1987; Smith, 2006). Among the studies that question how the past is interpreted in the present, Waterton and Watson (2013) suggest looking at heritage in discursive terms. Representation practices in heritage are viewed as texts that can be read and deconstructed. Theories of visual culture applied to heritage focus on how it is displayed by revealing representations and narratives in the process of construction (Rose, 2007; Waterton & Watson, 2010). Finally, another theoretical framework connects heritage to the realm of affectivity. In this perspective: "heritage and its economies are driven by affective politics and consolidated through emotions" (Tolia-Kelly *et al.*, 2017, p. 1). This embodied approach to heritage research focuses on the value, power, and politics of emotions. Heritage is conceived as a materialised social memory. The focus on the politics of emotions raises questions about authorised versus marginalised or hidden heritage, and why certain aspects are valued. In the realm of affectivity, exploring the agency of heritage allows us a richer and more complex understanding of the form of heritage we choose to call difficult. The central question then becomes: what are the affective capabilities of heritage spaces and objects?

The dimension of affectivity in the Heritage Studies appears particularly relevant because it links together the materiality of places with their symbolic value. Moreover, it involves memories and emotions, even conflicting ones, experienced or transmitted. According to Rose (1995), one can identify or not identify with places; likewise, heritage can have both a positive reference, and also be difficult, dissonant, negative, abject, and ambivalent.

This problematic dimension of heritage has been analysed in one of the most authoritative writings on the subject by Tunbridge and Ashworth (1996), who proposed dissonance as a concept that best captures the intrinsic nature of all heritage: as there are infinite ways to interpret the past, conflict

and contestation are implicit in the construction of historical narratives. Moreover, they conceived dissonance as an inalienable attribute of heritage, acknowledging that this characteristic is particularly pronounced in sites linked to negative events of the past. This feature is implied in the concept of negative heritage elaborated by Meskell (2002). He reflects on conflicted places that become repositories of negative memory in the collective imagination with the aim of considering how this negative heritage can be mobilised to master past traumas through rehabilitation for educational purposes or, alternatively, erasure.

The debate on heritage has further emphasised the concept of negativity through the idea of abject heritage, used in reference to obsolete monuments to be destroyed in the name of modernity (Herscher, 2010) and abandoned, unfinished, and destabilising spaces (Smith, 2013). Furthermore, the concept of ambivalent heritage proposes a return to a view that emphasises the various alternative interpretations suggested by Tunbridge and Ashworth. The ambivalence of heritage is investigated by Breglia (2006), who speaks of heritage as an arena where a variety of public and private actors compete for the right to benefit from its control and can give rise to claims. Heritage ambivalence therefore consists of different ways of attributing meaning and is closely connected to the theme of affectivity policies (Chadha, 2006).

With the awareness of this rich transdisciplinary debate, difficult heritage is a polysemic concept that we consider more relevant in reference to the space of our analysis. Indeed, it refers to traces of the past that are complex, painful, and controversial due to their association with tragic events, atrocities, genocides, and various forms of oppression. MacDonald first introduced the term in reference to a past recognized as significant, but simultaneously contested and "awkward for public reconciliation with a positive, self-affirming contemporary identity" (2009, p. 1). Looking at heritage as unsettling, uncomfortable, and traumatic allows for questioning the interconnections between past, present, and future, as well as the representation policies of spaces. It also allows one to deconstruct the singularity of emotional reactions and representations. Building on this theoretical and interpretive context, we note that difficult heritage is a particularly effective concept as it ties places and spaces to complex and traumatic events of the past that can influence their perception and representation. Among the traumatic events of the recent past, the COVID-19 crisis has transformed urban spaces, questioned distinctions between local and global, and also brought changes in the use and management of spaces and landscapes. In this contribution, we will therefore use the concept of difficult heritage with explicit reference to the

pandemic as a traumatic event and examine the landscape of the Fiera del Mediterraneo through this interpretative filter. As a matter of fact, the global virus of Covid-19, that spread all over the world in 2020, infected and still haunts this particular landscape in the post-pandemic scenario, signifying it, according to our research question, as a difficult heritage. While clearly the words infected and contagious refer to the terrible pandemic that ravaged the world, and whose effects we are still reckoning with, in the Environmental Humanities literature (Haraway, 2016; Tsing, 2015) those terms refer to a crisis that must be seen with a double meaning: not only as emergency, but also as potentiality, i.e., the possibility of cohabitation among the ruins of capitalism (Edensor, 2005) that produced the pandemic. By interweaving together this literature with that of the difficult heritage, the aim of this article is to query about the possibility to deal with the Fiera landscape as a problematic heritage, signified, among other spatial-temporal layers, by the Covid-19 pandemic. Is it possible to see the Fiera in its various layers sedimented over time as a pandemic – and now post-pandemic – landscape as a difficult heritage? What do these ruins, signified by death and the trauma of a pandemic, but at the same time by relations of contagion with which to stay in contact, suggest to us? How to deal with these difficult traces? What kind of memory is at work here? How to survive among the ruins of capitalism signified by the pandemic in such urban spaces? How to live-with?

3. The case study: the Fiera del Mediterraneo

The methodology used to investigate this landscape takes advantage of a multiple gaze analysis. A first view from above shows, for the most part, the visions of technicians and institutions. A second is from below, and we can divide it into two practices: on the one hand the vision of associations that have tried to animate the area during the period of great institutional crisis; on the other, our visions (the researchers). The method used was the survey method (de Spuches, 2007). It consists of two moments: the first exploratory, the second dialogic. The former is embodied in our active perceptive gaze and, at the same time, our emotional state and contact with the landscape. The latter, the dialogical surveying, occurs in the encounter with the other who guides us. One is led (even mentally) while still holding a reflexive approach. We met some challenges in making full use of the dialogic survey method as, nowadays, the Fair area cannot be regularly accessed; it opens to the public just for few rare events per year.

Therefore, we opted to proceed through interviews with the support of maps of both the city and the fair area. Some interviews were imagined providing an account of what the outdoor spaces and the pavilions are like: a sort of imaginary walk with a guide. The various voices of the privileged actors have composed the description (never neutral, of course) that we will report here.

Before exploring the pandemic and post-pandemic Fiera del Mediterraneo landscape, we want to trace the history of this fragment of Palermo. At the end of the 18th century, in the large Northern area of the city, which is the subject of our case study, an urban sprawl started and changed the face of this area in little more than a century. Numerous industrial plants sprang up and changed the urban function. However, the vast plain below the Monte Pellegrino was always used for military exercises and pasture. The Piazza del Campo, the wide esplanade on which the Fiera del Mediterraneo was to be built, was excluded from this housing development activity. Turning to visions and looking at the historical maps, the triangle of the future fairground (83,000 square metres) is clearly visible (**Fig. 1**).

Fig. 1. Palermo, 1935. Source: https://palermohub.opendatasicilia.it (drawn by the authors)

The first sign of urbanisation is a road that would have joined the Reale

Parco della Favorita to today's Via Montepellegrino. However, the former cartographic sign of the road will be incorporated into the internal avenue of the fairgrounds. Therefore, in 1946, the Fiera del Mediterraneo was inaugurated in this vast area (Covello, 1995). Paolo Caruso designed the entire neighbourhood in the decentralised Piano delle Falde on the edge of a heavily bombed Palermo and beneath Mount Pellegrino. The spaces were designed with simple lines but with a focus on solids and voids, Cardella's Chemistry pavilion and Epifanio's Mechanics pavilion formed this new urban landscape (Fatta, 1995). In the 1970s, at the end of the internal transformations of the Fair landscape, the entire area was intended to be a representation of the Modern (**Fig. 2**).

Fig. 2. Palermo: Fiera del Mediterraneo, 1956. Source: https://palermohub.opendatasicilia.it

In our view, the Fiera del Mediterraneo "object" should be analysed by distinguishing three periods: the golden age, the long transition marked by the changing landscape and by the crisis, the pandemic landscape between disease and care.

The first period still adheres to the logic of Universal Expositions and, therefore, as a place of innovation, through the ability to exhibit (de Spuches, 2002). Here, the concept of exhibition had as its purpose both the commercial side and the entertainment and leisure side. In this first period, the heritage that is formed is anything but difficult. There were no traces of contestations or oppositions, as it had been the case with the Universal Expositions; this was a time of rebirth for Palermo, after having suffered

heavy bombardments. It was an idyllic landscape, made of architectures that offered composite styles (as in the Universal Exhibitions) and had at its centre a large fountain that ordered a symmetrical space. Finally, the intention was to create the rhetoric of Palermo as the centre of the Mediterranean. The Fair was named "del Mediterraneo" because it acted as a bridge between Europe and Africa, between the West and East of the Mediterranean.

In the second period, from the 1970s to the first decade of the 2000 (the space was closed in 2007), the imperative of Modernity changed its face. Structures seek criteria of greater functionality, causing replacements and changes that transformed the whole design layout. In this period, the space of the object was privileged over the exhibition space. The industrial object of everyday life had little links to the context of the representation. The surprising effect was left to the images of the lights, introduced by the advertising signs, which attempted to recreate an urban landscape. However, once the lights were turned off, the landscape unity imagined at creation was lost and the Fiera became a space made up of pavilions without an overall vision. Interviewing some privileged actors who witnessed this great change, we report the difficulty of accepting this upheaval and the consequent disaffection towards the Fiera. We mark this first affective shift because we are already in the realm of experience, towards "the sensory realm and the materialities and affective atmospheres of heritage landscapes" (Tolia-Kelly *et al.*, 2017, p. 1). It is in this key that we have interpreted heritage spaces: in fact, through the affective relationships we have with our past, a cultural heritage can become difficult. In the voices of our privileged actors, the oscillation of affections for the Fiera landscape emerged clearly; through their situated memories, they have given voice to the various affective stratifications accumulated over time. The crisis of the commercial function of a trade fair space has been increasingly felt as the decades have passed. We have slowly witnessed the decay of activities and the emergence of an empty and abandoned space. The consideration to be made is that the landscapes of the exhibitions hardly match the swirling speed of neoliberalism.

The year 2007 is considered to be the year of the Fiera's abandonment, even if the area has never been completely deserted, not only because some ephemeral commercial or cultural events took place, but above all because several processes of spatial re-appropriation were actually triggered and implanted. These re-appropriations of spaces have been fragmentary (pavilions 1 and 2 for the Teatro Mediterraneo Occupato [TMO]; pavillon 3 for the Emmaus association; pavilion 5 for the Lisca Bianca association) or general, with the spread of vegetation throughout the area. Interviews with

the TMO collective reveal the total rupture that these places have with the urban space; occupation is being acted out as a practice of resistance against a governance interested more in processes of gentrification and touristification than in cultural spaces for citizenship. The occupation occurred, in fact, when the governance started talking about a project for a big conference centre. And we quote "the project financing is nothing but the most refined financial architecture that allows an unequal distribution of resources, i.e. a private appropriation of public money flows" (Palermo & Sorci, 2018, p. 123). In different ways, the associations Emmaus and Lisca bianca are non-profit organisations set up to promote the social and labour inclusion of disadvantaged young people; the latter, in addition, has restored and put into navigation a boat (bearing the same name) as a symbol of Mediterranean culture and tradition.

The presence of these cultural and social activities gave new meaning to the ruined pavilions. The strength of these associations raises questions. Can we call them ruins? Edensor would answer that "ruins are sites which have not been exorcised, where the supposedly over-and-done-with remains – but at the same time as – the rapid and continual change of modernity, in which everything that is solid turns into air, may be perceived as threatening chaos or embraced as exciting" (2005, p. 835), we are convinced that heritage maintains its memories if it involves cultural and social practices. Affection for ruined landscapes finds new strength in the capacity for collective transformation.

Finally, we have the third period: the Fiera as a landscape, again, of disease and care. This period, which corresponds with the Covid-19 pandemic, needs to be treated in greater detail and attention.

4. Landscapes of contagious and capitalistic ruins: a (post)pandemic difficult heritage

In the previous paragraph, we pointed out how the Fiera del Mediterraneo has been affected by several transformations: in what seemed to appear as an urban void, several agents, human and more-than-human, have resignified this problematic landscape, from politics of re-appropriation to the urban greenery spread among the interstices of the ruins of abandonment. Between the end of 2019 and the beginning of 2020, the global outbreak of the Covid-19 pandemic has grafted a new infesting agent onto this contested landscape: the virus resignified the function of the Fiera, which soon became the pandemic space par excellence in the city of Palermo (**Fig. 3**).
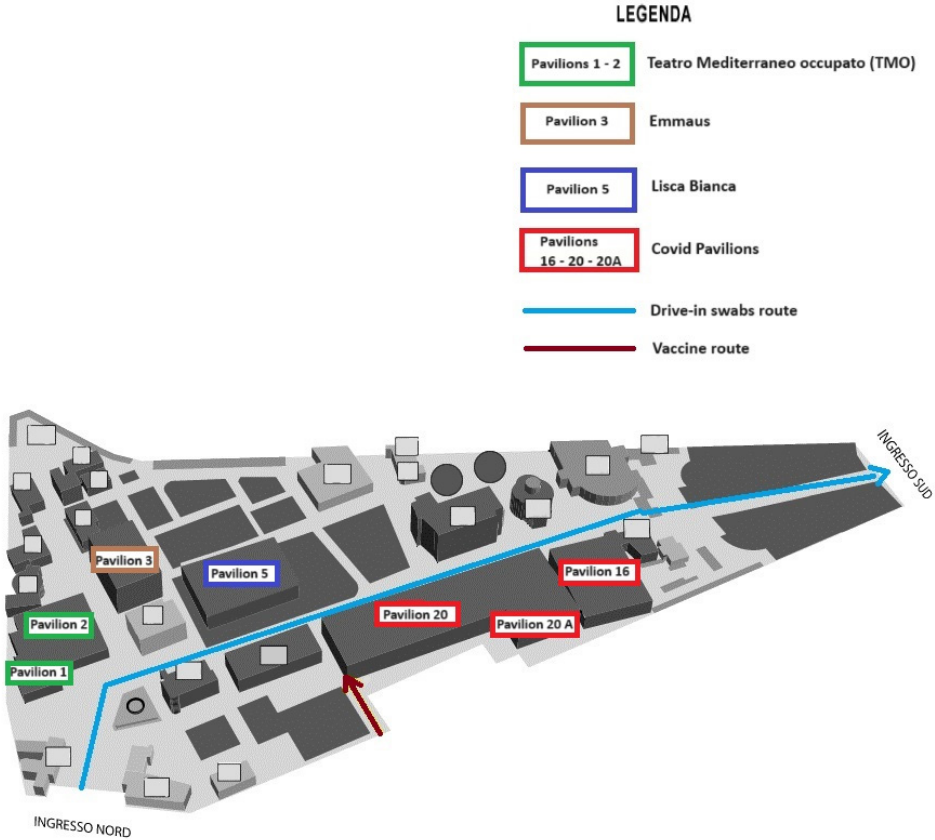
Fig. 3. The Fiera del Mediterraneo during Covid-19. Source: Ente Autonomo Fiera del Mediterraneo (drawn by the authors)

This re-functionalisation took place in different phases – which obeyed to different spatial productions determined by the political-health management of the pandemic, in Italy and in Sicily in particular. As it is well known, Italy has faced the pandemic with different strategies over time, that can be identified in three phases – and which correspond to the three phases of spatial organisation of the Fiera.

Following the lockdown implemented throughout the country between March and May 2020, the attempts to reopen to public life in the Summer of 2020 caused a large increase in the number of contagions – and therefore of

deaths – in Sicily, which up to that point seemed to remain far from the large outbreaks of the North of Italy[3]. This is the reason why in September 2020 a commissioner for the Covid-19 emergency was nominated in Sicily: as Renato Costa[4] pointed out, he chose the Fiera del Mediterraneo as the hub to deal with the pandemic, because it appeared the optimal structure for the absorption of large numbers of people and the establishment of a total pandemic centre, both in terms of management and accessibility. As we mentioned before, the Fiera was at the time conceived as an urban void according to the political governance – even if actually signified by politics and relations from below. It is precisely this conceived emptiness that determines the choice of the Fiera as the perfect 'city within the city': the management of this pandemic space shaped thus a new landscape, both of fear and healing, both of contagion and care.

The Fiera as a pandemic hub opened in October 2020 to respond to the first emergency need: the mapping of contagion, through the administration of six million free of charge rapid swabs purchased by the Region of Sicily. The numbers of access and demand exceeded all expectations: on the first day alone, more than 3,000 people went in for a swab. In this first phase, the Fiera was organised like a drive-in, accessible only by car from the North entrance (via Anwar Sadat). The snake of cars among the ruins of the pavilions and the vegetation that had taken possession of them over the years, then reached the end of the triangular area where, under gazebos, the staff recruited during the pandemic, carried out the rapid swabs through the cars' windows. The columns of cars, increased considerably during the months, determining the landscape around the urban area of the Fiera: every day one could witness these very long queues where the car itself was both a safety bubble, and the border of isolation from other possible infected people. In the car park inside the area, in front of Piazza Cascino (South entrance), one thus waited for the outcome: if negative, one left the Fair area with relief; if positive, one was sent back to the pavilion for the molecular swab. Thus, in the unravelling of this cars' serpentine, the sensory and affective realm of this urban landscape emerged and materialised: waiting became a spatial device made of a shared fear of the possibility of contagion and isolation while in the cars' rows; of a shared solidarity for the possibility of healing when someone left the parking area. Therefore, that triangular area determined a Covid landscape,

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[3] For an overview of the different legislative decrees and Covid-19 data in Italy, see https://www.epicentro.iss.it/coronavirus/2020. On narratives and pandemic phases, see de Spuches, Sabatini, Palermo, Caravello 2020.
[4] Interview conducted in November 2023.

made of lines of cars, of masks, of waiting, of fears and relief: a landscape of contagion, made inside and outside the walls. As excessive material of this memory, a graffiti artwork is represented on the wall of the Fair in Via Sadat for Jamba, a rapper of the Palermo scene who died in 2020 in London of a possible Covid death: a trace of the Fiera landscape as difficult heritage in a space in between.

The second phase of the functionalisation of the Fiera corresponds to the peak phase of the pandemic, both in terms of the number of infected, and the start of the vaccination campaign. The drive-in for the swabs is accompanied by the opening of Pavilion 20, the largest in the exhibition area, which is thus used as a space for administering vaccines[5]. This means that, in April 2021, the Fiera is not only the place where the infection is confirmed or not, but also a place of care: a place of possibility. The landscape gains thus new horizons of meanings and above all new shades of affectivity: although fear was still condensed in this urban area, queues, now also outside the car, became meetings for sharing stories while waiting in a space of care, perceived safety, hope and healing.

A third phase corresponds to the waning phase of the pandemic, when basically the vaccination campaign seems to be working and contagions – or at least, deaths – decrease. As the new centre-right governments won the elections at national, regional and municipal level, soon started the plan for dismantling the hub, which was definitively handed back to the municipality on 20th January 2023. Pavilion 20, which until a few months ago had been the vaccination centre, within a very short period of time went back to being used for ephemeral exhibition events. The new municipal government is proposing new plans for the Fair, which have not been yet hesitated, as the space seems to be unfit for use at present.

The management of the Fiera as pandemic space had instead proposed to maintain and permanently transform the Fiera into a citadel of health, as it has been a comforting space for the city over the years: there have been multiple events where people went there looking for the staff, even for requests that exceeded the functions of the hub for swabs and vaccines. In this perspective, the Fiera emerges as a space of care, of possibility of survival, of proximity, consequently experienced with positive ease by citizens in

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[5] Other vaccination hubs are set up at the port, at the airport and in some neighbourhoods thanks to the existence of self-structured and self-financed popular clinics: this is the case of the Ambulatorio Popolare Borgo Vecchio, inside the Centro Sociale Anomalia in the neighbourhood of the same name (https://palermo.repubblica.it/cronaca/2021/10/14/news/borgo_vecchio_al_centro_sociale_anomalia_superate_le_500_vaccinazioni-322109363/, last acc. December 2023).

the great moment of crisis and precariousness of life brought about by the pandemic. Moreover, not only does Covid-19 continue to spread, albeit in other ways and with other strains, but cases of spillover (Quammen, 2012) now seem to be intrinsic to the production and overexploitation modes of contemporary capitalism, suggesting that Sars-viruses, like those spread in 2002 and 2019, will still determine the global future.

The acceleration of governance and the municipal administration to dismantle it, on the other hand, seem to suggest a desire to put an end to the pandemic and to soon forget the functionalisation of the Fiera as a pandemic landscape. It is precisely these two approaches to the pandemic's memory, as well as those of us authors of the essay – who, as embodied subjects in research, are entangled in this process through positionality and reflexivity – that let emerge the Fiera in our view as a possible difficult (post)pandemic heritage. A space of fear, of contagion, of the ruins caused by the production of capital on the one hand; a space of care, of safety, of the possibility of surviving amidst these ruins on the other. In this ambivalence of emotion, diverse co-existing affectivities, and a different materialisation of the social memory of the recent past, there is a production of a contested landscape.

Following MacDonald (2009), if difficult heritage refers to traces of the past that are complex, painful, and controversial due to their association with tragic events, and simultaneously contested as "awkward for public reconciliation with a positive, self-affirming contemporary identity", the Fiera as (post)pandemic landscape is a condensed space of ruins to deal-with. These ruins are signified by multiple spatial-temporal layers: as industrial ruins (Edensor, 2005) of the abandonment of the exhibition space; as more-than-human green figurations, contagious practices and relationalities, thus possible figurations to stay in contact with the trouble of our contemporary time (Haraway, 2015); as ruins of a system whose increasingly precarious sustainability produces infections, among which we need to imagine ways to survive. "This is a story we need to know […]. And yet: such documents are not enough. If we end the story with decay, we abandon all hope – or turn our attention to other sites of promise and ruin, promise and ruin" (Tsing, 2015, p. 18): the difficult heritage of the Fiera del Mediterraneo suggests and needs new ways to deal-with this excessive memory of an area that becomes a multiscale knot to understand future sustainable cities.

5. Concluding thoughts

In this article, which certainly needs further future research, we looked at the Fiera del Mediterraneo as a difficult heritage. A landscape that is signified by multiple complexities: the transformation of the area that marks the end of the golden age, a Mediterranean productive dream; a space of contestation that resignifies the urban void with other practices of contagion, human and more-than-human; the space par excellence of the pandemic. This difficult heritage, as a landscape of contagion with a contested memory, is signified in particular by the ruins: the ruins of the abandonment of the industry; the ruins of the more-than-human interregnum; the ruins of the infection of the capitalistic mode of production, whose sustainability is increasingly precarious. The urban ruins of this particular difficult heritage question us through multiple layers of meanings: dealing with the pandemic memory; staying in contact "with the trouble" of our contemporary crisis; imagining other possibilities of contagion. Perhaps, starting from an urban void that actually was never empty, but full of traces to be questioned. By looking at the development and the transformation of the Fiera, its difficult heritage emerges as a landscape of condensed contestation: a knot to imagine other sustainable cities.

References

- Breglia, L.C., 2006, *Monumental ambivalence: the politics of heritage*, University of Texas Press, Austin.

- Chadha, A., 2006, "Ambivalent heritage: Between affect and ideology in a colonial cemetery", *Journal of Material Culture*, 11, 3, 339-363.

- Covello, R., 1995, La Fiera e la città: le fasi dello sviluppo. In: Fatta, F. (Ed.), *La Fiera del Mediterraneo a Palermo. Un manifesto tra internazionalismo e tradizione*, Ente Autonomo Fiera del Mediterraneo, Palermo, 45-50.

- de Spuches, G., 2002, "La fantasmagoria del moderno: Esposizioni universali e metropoli", *Bollettino della Società Geografica Italiana*, 4, 783-794.

- de Spuches, G., 2007, "Brancaccio come terreno di azione. Sguardi geografici su un quartiere delle periferie di Palermo", *Asur – Archivio di Studi Urbani e Regionali*, 90, 183-189.

- de Spuches, G., Sabatini, F., Palermo, G., Caravello, E., 2020, "Risk narrations and perceptions in the COVID-19 time. A discourse analysis through the Italian press", *AIMS Geoscience*, 6, 4, 504-514.

- Edensor, T., 2005, "The ghosts of industrial ruins: Ordering and disordering memory in excessive space", *Environment and Planning D: Society & Space*, 23, 6, 829-849.

- Fatta, F., 1995, Ed., *La Fiera del Mediterraneo a Palermo. Un manifesto tra internazionalismo e tradizione*, Ente Autonomo Fiera del Mediterraneo, Palermo.

- Haraway, D.J., 2016, *Staying with the Trouble: Making Kin in the Chthulucene*, Duke University Press, Durham.

- Herscher, A., 2010, *Violence taking place: the architecture of the Kosovo conflict*, Stanford University Press, Stanford.

- Hewison, R., 1987, *The heritage industry: Britain in a climate of decline*,

Methuen, London.

- Lowenthal, D., 1985, *The past is a foreign country*, Cambridge University Press, Cambridge.

- Macdonald, S., 2009, *Difficult heritage: Negotiating the Nazi past in Nuremberg and beyond*, Abingdon, Routledge.

- Meskell, L., 2002, "Negative heritage and past mastering in archaeology", *Anthropological quarterly*, 75, 3, 557-574.

- Palermo, G., Sorci, G., *Palermo e i suoi spazi occupati. Cronache di autogestione*, Centro Zabut, Palermo.

- Quammen, D., 2012, *Spillover. Animal Infections and the Next Human Pandemic*, W.W. Norton & Company, New York.

- Rose, G., 1995, Place and identity: a sense of place. In: Massey, D., Jess, P. (Eds.), *A place in the world?: places, cultures and globalization*, Oxford University Press, New York, 87-132.

- Rose, G., 2007, *Visual Methodologies: An Introduction to the Interpretation of Visual Materials*, Sage Publications, London.

- Smith, L., 2006, *Uses of Heritage*, Routledge, Abingdon - New York.

- Smith, P., 2013, *Mythogeographic Performance and Performative Interventions in Spaces of Heritage-Tourism*, University of Plymouth, Plymouth.

- Tolia-Kelly, D.P., Waterton, E., Watson, S. (Eds.), 2017, *Heritage, affect and emotion: politics, practices and infrastructures*, Routledge, London-New-York.

- Tsing, A. L., 2015, *The mushroom at the end of the world: On the possibility of life in capitalist ruins*, Princeton University Press, Princeton.

- Tunbridge, J.E., Ashworth, G.J., 1996, *Dissonant heritage. The Management of the Past as a Resource in Conflict*, Wiley, Chichester.

- Waterton, E., & Watson, S. (Eds.), 2010, *Culture, heritage and representation: Perspectives on visuality and the past*, Routledge, London-New-York.

- Waterton, E., Watson, S., 2013, "Framing theory: Towards a critical imagination in heritage studies", *International Journal of Heritage Studies*, 19, 6, 546-56.

2. Cultural Heritage as a Mirror of Sustainable Development. Its Potential Roles and Functions in Areas of Environmental Crisis: a Case Study

Valentina Castronuovo

2. Cultural Heritage as a Mirror of Sustainable Development. Its Potential Roles and Functions in Areas of Environmental Crisis: a Case Study

Valentina Castronuovo [1]

Abstract

The indirect destruction of cultural heritage through various local and national development plans is the subject of the research. As a systemic problem, it is directly linked to the global environmental crisis and to the specific cultural and social values of contemporary society. Among the areas where this short-circuit is particularly evident, Taranto - one of the most populous urban centres in Apulia (a region of southern Italy), whose case study is the subject of this study - is a typical place where, alongside the ineffective means of protecting and regenerating the territorial heritage, it seems crucial (for "the few") to favour systems of industrial and military growth that have caused an environmental disaster. Urban abandonment, disintegration, social degradation, impoverishment of the quality of urban life, disease, death, compromised use of land and water are just some of the effects of "productive development at any cost". A development policy that also reproduces the obvious effects on the cultural heritage of the area, which today represents a synthesis of the deep ecological crisis of the city: a widespread heritage stratified by almost three thousand years of history, whose impoverishment is the order of the day after repeated collapses and static instability, calculated here, methodologically speaking, from censuses and quantitative statistics from primary sources. The aim of this study is to demonstrate the need for a renewal of the development dynamics of the area under study, with a view to a regenerative coexistence of resources and assets within the paradigm of a culture of sustainability.

Keywords: *Cultural Heritage; Cultural heritage damage; Environmental crisis; Urban policies; Sustainable Development.*

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1. Introduction: cultural heritage as a matrix for developing a culture of sustainability

Industrialisation, practices of extractivism and linear economics have a significant impact on the longevity of architectural heritage, even when it is not directly affected by local events (Tengberg *et al.*, 2012). This is the 'indirect' destruction of cultural heritage, theorised in doctrines dealing with the highly topical issue of recent years: the destruction of cultural heritage even in the absence of armed conflict.

As early as 1968, UNESCO published the Recommendation for the Protection of Cultural Heritage Threatened by Public and/or Private Projects (UNESCO, 1968), which recommended that cultural heritage should be preserved in anticipation of the effects of the economic development of Member States: pollution, large-scale industrial development projects, agricultural activities, unauthorised excavations, inadequate infrastructure maintenance and planning, unsustainable tourism and urbanisation are among the factors that threaten the survival of cultural heritage today, as in the past. The continuation of unsustainable human activities in places where cultural heritage exists can undermine its resilience and resistance. Failure to recognise this risk, and consequently to calculate the true cost of loss and damage, could trigger mechanisms for the re-functionalisation of urban centres that are not sustainable. In recent years, the study of the impact of various manmade factors on heritage has developed, which is of great importance for heritage conservation (Hongshu & Xiufeng, 2023). By analysing these mechanisms, we can identify them and establish some macro-control measures. The combination of environmental monitoring technology for in-depth understanding of the environment in which built cultural heritage is preserved, whether mobile or immobile, and research on heritage conservation techniques represents a new way of thinking about its preservation and planning new protection plans (Hongshu & Xiufeng, 2023).

Moreover, the protection of cultural heritage is closely linked to the degree of resilience of a place (European Commission, 2003), understood as the ability to cope with and recover from aggressive external events (UNESCO, 1968). In the context of a broader reflection on the risks of loss and deterioration of a society's history, memory and symbolic apparatus, the state of health of the cultural heritage could represent a "mirror" of the level of sustainability of the development processes implemented in a place.

For many years now, there has been a significant and fruitful debate in Europe on the development of for the development of a territorial cultural policy:
reflection on the territorial value of cultural heritage, on its role in a modern society
which feels the need to look to the future, on its status as a significant element and generator of values, memories and identifications
(Carta, 2006, p. 37) [2].

But the common memory represented by heritage is not an inert, passive thing, but a field of activity in which past events are selected, reconstructed or erased, and endowed with political meaning (Said, 2000). Even today, territorial heritage represents a crucial space of investigation for observing the processes and dynamics of an ever-evolving extractive capitalism and for understanding how crisis of values are not sudden crises, but the result of a process that takes place through precise choices, choices that are materialised in territories and contested by territories (Imperatore, 2023, p. 14). The extent to which a concept of "active territoriality" (Banini, 2017) can be found in contestation, based on the so-called "consciousness of place" (Magnaghi, 2010), as an awareness of the value of territorial heritage as an essential element for the reproduction of individual and collective life, as well as biological and cultural life, is to be found in the possibility for the settled community to choose the distinctive features of the inhabited territory (Banini, 2017). From this perspective, the territorial cultural heritage becomes a by-product of the active interrelation between people, places, things and practices, a factor that emerges from "chains of connectivity", which requires an ontological change in the decision-making process concerning it (Harrison, 2013). This integrated perspective allows heritage conservation to be reconceived as a creative and contingent process of producing the past, in the present, for the future, within the power/knowledge effects at play in the domain of governmentality (Harrison, 2013; Smith, 2006). Heritage can therefore become a means for the territory to reconfigure itself in the face of systemic crises (Caravello, 2023). It should therefore represent the restructuring of the ideological apparatus, the change in the way of thinking and seeing forms in the wider context of human activity (Eco, 1980). From this perspective, the activity of rediscovering the meanings of the signs of history, rather than a simple philology of the past, implies an "invention" of new interpretive codes. These considerations lead us to propose a prospective management

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[2] Author's translation.

of cultural resources: cultural heritage must go beyond its predictable uses, and the multiplicity of potential uses must face the challenge of a concept always oriented towards authenticity, implying a permanent interplay between adaptability and identity, in a perpetually "mobile" perspective. This is to avoid the trap of a cultural heritage that is seen only as a precondition for all collective strategies of public property management and not as a co-acting component of territorial development (Carta, 2006). Cultural heritage thus becomes, together with natural heritage, an ecosystem capable of concretely generating principles and criteria of a culture of sustainability.

The aim of this study is to demonstrate the need for a renewal of the development dynamics of the study area, aiming at the regenerative coexistence of resources and assets in the paradigm of a culture of sustainability. Furthermore, through a case study and analysis of secondary data of the historical centre of Taranto (Puglia, Italy), affected by an environmental disaster of anthropogenic nature, it aims to evaluate the effectiveness of the environmental measures adopted and to know the role of the protection and enhancement of the cultural heritage carried out by the political authorities in the last two decades. The choice of indicators used is closely linked to the purpose of the analysis. Within this framework, this chapter aims to explore considerations regarding the role of cultural heritage in regional and multi-level development planning, in the light of EU policies and recent global sustainability initiatives. The focus will therefore be on the trends and limitations of the planning approaches used so far, as possible evidence for updating local development plans in a human-environment relationship key (Fusco Girard, 2021) and for re-decoding areas of environmental crisis.

2. Materials and Methods

2.1 Study area

On 1 January 2023, the municipality of Taranto had a population of 188,310 and an area of approximately 249.86 km^2 (**Figure 1**).

Figure 1. Puglia Region and Municipality of Taranto: administrative boundaries view. Source: author's elaboration on Qgis data.

The city is developed along three natural peninsulas and an artificial island - the historic centre, known as the "Città Vecchia" (**Figure 2**) - between the two basins of Mar Grande and Mar Piccolo, natural outlets of the Gulf of Taranto.

Figure 2. The historic centre of Taranto: satellite view.
Source: author's elaboration on Qgis data.

Its strategic position has been responsible for its military importance for centuries. The Taranto dockyard, inaugurated in 1889 and located in the coastal area of Mar Piccolo, has become a source of marine pollution due to the release of pollutants such as heavy metals and polychlorinated biphenyls onto the seabed. Around 2,400 civilian employees work in the most important technical-industrial company in the Italian defence sector. Since the early 1950s, the city of Taranto has not only had a military function (confirmed by the construction of the new N.A.T.O. naval base inaugurated in 2004), but also an industrial one. In fact, it became a centre of excellence for steel production with the creation of the IV Centro Acciaierie "Italsider" (now Acciaierie d'Italia S.p.A.), inaugurated in 1965 and still one of the largest industrial steel processing complexes (the full cycle production plant covers an area of 15 square kilometres). To the north of Taranto is the ENI S.p.A. refinery, which is directly linked to the Basilicata oil field in Italy. On the same side are many centres for the management of hazardous waste from Taranto and other industrial areas. Despite the presence of many important production and military facilities, the city shows significant forms of degradation and socio-

economic imbalances linked to the strong constraints that large industrial groups and military institutions exert on its economy: high unemployment, poverty, marginalisation, crime, low education rate, environmental degradation and social and economic inequalities between the different neighbourhoods of the city. For example, the provincial employment rate for the 15-64 age group will only reach 44.7% in 2022, compared to the national rate of 60.1%[3]. Of particular concern is the poor health of the population (high mortality from respiratory and cardiovascular diseases) and excessive infant mortality. The mortality rate between 1995 and 2009 represents 15% of the total population (Comba et al., 2012). According to the official ISTAT mortality statistics, the change in the mortality rate recorded in 2021 with respect to the 2015-2019 average shows that the city of Taranto has one of the largest increases (+22%), a percentage probably favoured by the impact of the COVID-19 syndrome. In 2021, the Ministry of Justice will declare Taranto an environmental disaster city.

The state of the city's built heritage is also alarming, particularly that of Taranto's historic centre, which has suffered from years of neglect. In fact, since the 1970s, the 'historical' population has been forced to migrate to newly built neighbourhoods (Blandino, 1974; Trono et al., 2016), offshoots of the 'new' city, due to the static condition of the residential structures. The loss of architectural heritage is a process that also affects buildings of historical and cultural value, affected by multiple collapses and structural damage (Castronuovo, 2023) (**Figure 3**).

Figure 3. A square in *Taranto Vecchia* between collapsed buildings. Source: ph. Castronuovo Valentina.

[3] Data available on the I.Stat platform, accessed on 7 march 2024.

On the basis of the Emergency Response and Damage Monitoring Instrument of the Taranto Provincial Fire Brigade Command, a census of the situation was made between 1995 and 2020 (the data from 2016 to 2020 are a projection of the statistical trend compared to previous years): more than 800 accidents were recorded, with an average of 31.38 accidents per year. The trend identified (**Figure 4**) can support the hypothesis that, in the absence of targeted intervention plans that include the historical centre of Taranto in a systemic planning of the area, further static damage will occur in the next few years in a range of 24-38, with and average static damage = 3. During the years studied, the maintenance of the structural fabric of the historical centre of Taranto was almost never definitive: often the same building was subjected to several successive static failures.

Number and trend of static instabilities in the old city of Taranto - Years (1995-2020)

$y = 0,1108x + 29,582$
$R^2 = 0,0115$
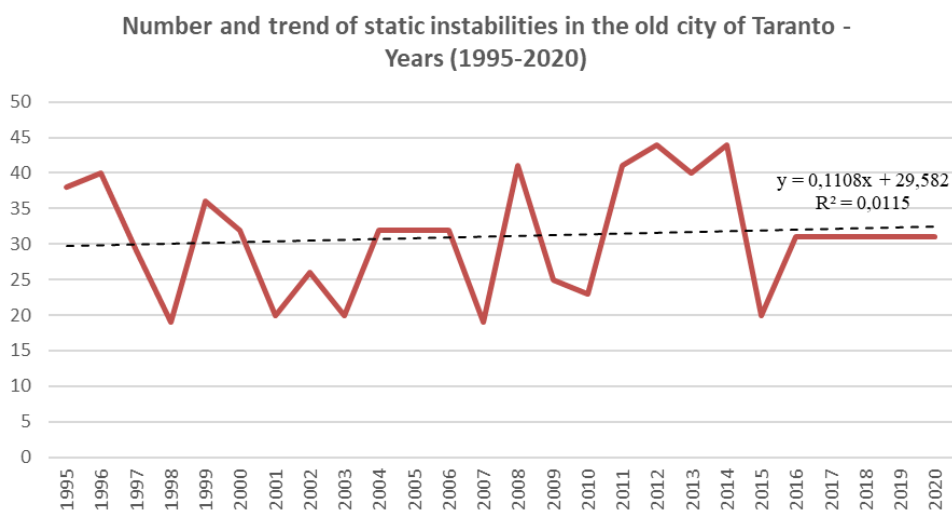
Figure 4. Static collapse trend 1995-2020. Source: author's elaboration from data archives of the Taranto Provincial Fire Department.

The abandonment of the architectural heritage of the historical centre is already having questionable consequences: the ongoing gentrification process, which is certainly slower than in other historical centres, tends, as always, to leave no room for the original inhabitants of the place and to distort the intended use of the area.

2.2 Data Collection and Analysis

After an in-depth analysis and literature review, the identification of core

indicators closely related to the management of the cultural heritage in the city of Taranto is carried out, with emphasis on the historical centre for the years 2001-2020. The decision to consider this period from the point of view of continuity was made due to the availability of good quality data. In general, an indicator is successful when it reflects the phenomenon under study, is measurable (in numbers, proportions and ranks), verifiable and reproducible. On the basis of the literature consulted, it was therefore decided to enrich the specific indicators to be included in the cultural heritage sector with territorial indicators (United Nations, 2004; Castronuovo, 2023; Caspersen & Olafsson, 2010; Bruni, 2016; Vallega, 2008; Fleskens *et al*., 2009; Lee & Hsieh, 2016; Neri *et al*., 2016). The data collected are divided into four main areas, namely "community", "environment", "cultural heritage" and "economy" (**Table 1**), according to their subject matter and the details presented.

Response indicator	Unit of analysis	Year range
Area under landscape protection (Km2)	Municipality	2001-2020
Area under landscape protection on total area (%)	Municipality	2001-2020
Municipal public expenditure devoted to the management of cultural heritage – (% of total budget expenditure)	Municipality	2001-2020
Current public expenditure per capita for the management of cultural heritage on a regional basis (museums, libraries and art galleries) (€)	Region	2001-2020
Static disruption of the historic centre's land heritage (no.)	Municipality	1995-2020
Urban regeneration plans/Site Specific policies with cultural heritage interventions (no.)	Municipality	2001-2020
Decontamination proceedings concluded out of total proceedings at provincial level (%)	County	2001-2020
Pro-industrial law decrees (no.)	State government	2001-2020
SIN sites surface area (km2)	State government	2001-2020
SIN sites surface area (km2) - marine area	State government	2001-2020

Table 1. Indicators selected and analysed on the 'Taranto case' subdivided by thematic area. Years 2001–2020.

The data used for the analysis came, depending on the topic, from scientific and technical reports from various institutions, research centres and active citizens, including the National Institute for Statistics (ISTAT, 2015); the Municipality of Taranto (Città di Taranto, 2019; Comune di Taranto, 2014); the Apulia Region - Department for Environmental Quality (Barbanente, 2013; 2014; 2015); the CNR Institute for Coastal Marine Environment; the Higher Institute for Environmental Protection and Research (ISPRA); the Ministry for the Environment and Protection of Land and Sea. The information was then evaluated in order to establish cause and effect relationships. The metrics representing each component of the analysis were first standardised, i.e. converted into purely numerical values, using the min-max method. The purpose of normalising the indicators was to make them comparable, as they were originally expressed in different quantities and polarities. The normalised indicators were then multiplied by a numerical coefficient to create a synthetic indicator category with an exponential mathematical function (OECD, 2008). This step required the application of a weighting system that considered all indicators equally important and the identification of the technique of compensatory synthesis (indicators were considered as substitutes).

3. Results of European and ministerial policies applied to the "Taranto" contex

The arrangement of the line graph resulting from the comparison of the aggregated data related to the government policies aimed at addressing and mitigating the pressures and issues related to cultural heritage (**Figure 5**).
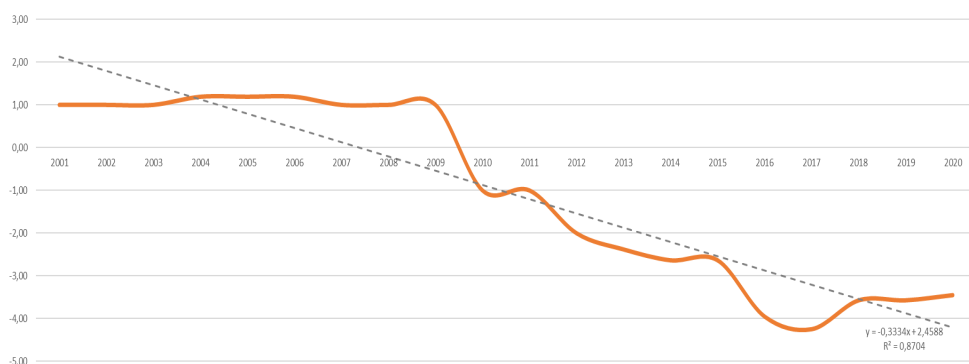
Figure 5. Improving impacts of multi-level policies on cultural heritage: trend in the Taranto urban area. Years 2001–2020. Source: author's elaboration

Overall, the pattern over the defined period is negative, especially for the period 2012-2020, as a result of the implementation of the "pro-iron and steel industry decrees". Despite the fact that these measures were taken in response to the environmental disaster in Taranto, they must be considered proportionate to the protection of the area's environmental resources and aimed at maintaining industrial production. The slight increase in 2020 is due to the remediation processes that have been completed; of the total number of processes expected at provincial level, the entire area of the Site of National Interest (SIN) has been taken into account, which will increase by +38.96% in 2020.

The indicator "Urban regeneration initiatives involving cultural heritage" is particularly interesting. Several European and national policies have been applied to the Taranto competition, including the Urban II strategic plan for urban regeneration, which ran from 2000-2006. From the planning stages of the actions, their implementation did not correspond to reality. In fact, the proposed urban redevelopment initiative was intended to bring about a significant change in a part of the city, without mentioning the harmful effects of past industrial and military activities, which still have an impact on the area. The area of intervention was the historic centre and the Borgo neighbourhoods (designed by Murat at the end of the 19th century) and the Porta Napoli/ Tamburi neighbourhood, the two branches of the historic centre that extend inland near the industrial area, for a total of 509 hectares and a population of 47, 400 inhabitants, with European funding of 15.1 million euros. The programme attempted to pursue a strategy based on the transformation of the territory through public interventions for the integrated recovery of the historic area, with the aim of reconnecting the historic centre with the whole urban area, strengthening both its historical roots and its settled society, and recovering the deepest ties that make the idea of the 'city' concrete and shared (Comune di Taranto, 2009). Of the forty interventions provided for in the Operational Programme, only 10% were structural interventions in buildings of historic-artistic interest already owned by the municipality and functional for their adaptation as cultural spaces. However, during the years in which the programme was implemented, the municipality went through a period of financial instability and political and administrative crisis, which had a significant impact on the implementation of the programme. The resurfacing of streets and pavements and the work carried out on urban amenities could not compensate for the failure of the programme in all those interventions that required longer-term planning, such as the repopulation of central areas, the restoration of dilapidated historic buildings and the improvement

of environmental quality (together with the rehabilitation of dilapidated sewerage and water supply networks). It is worth noting, among other things, that the most unsuccessful actions were concentrated precisely in what was defined as the 'central point' of the programme, because of the importance of the old settlement, the historic centre, 'which had to be reconnected to the city in its sociological roots of building and strengthening the settled community' (Comune di Taranto, 2009, p.8). To date, the two main policy instruments that have also been prepared for the historic centre of Taranto are the Institutional Development Contract (CIS), launched following the approval of Law 20/2015, which has suffered from the change of government at the national level (Rotondo, 2020), and the project "Re-inhabitation of the historic centre of Taranto", approved within the National Innovative Programme for Housing Quality (PINQUA), funded by the National Recovery and Resilience Plan with 2.8 billion euros, which aims to restore the historic centre of Taranto to its original state and to improve the quality of life of its inhabitants. 2.8 billion, which aims to reduce suburban decay, improve the energy efficiency of public housing and carry out urban regeneration measures to improve the quality of life of the population. The progress of the CIS intervention programme includes, in the "Heritage, cultural activities and tourism promotion" sector, the implementation (now completed) of two cultural heritage interventions located outside the historical centre of Taranto, but close to extremely endangered industrial areas. The restoration of a number of buildings in the historic centre of Taranto are included in the "Urban Regeneration" sector, such as the restoration of Palazzo Carducci, Palazzo Troilo and a building on one of the main streets, via Garibaldi. All of these interventions are still at an embryonic stage. In particular, they are all measures derived from older programmes (e.g. Urban II) and have never achieved the implementation objectives of these specific measures. On the other hand, the PINQUA project "Restoration of the historical centre of Taranto" concerns a large part of the area, the eastern quadrant of the historical centre, which is characterised by a high housing shortage and socio-economic difficulties. Buildings, including residences. The plan aims to "repopulate" the area, which is currently largely uninhabited. A total of 95 apartments in 8,041 square metres of public space will be renovated at a total cost of 15 million euros. The process is still at an early stage and suffers once again from the serious administrative problems associated with the title deeds of the properties affected. The difficulty of tracing the owners of the properties, due to the historical process of abandonment, makes it difficult to carry out the planned works.

4. Conclusions

The rehabilitation and redevelopment plans for the historic centre of Taranto are only able to take root in a small percentage of the urban, social and cultural fabric of the area. This is evidenced by the fact that the interventions in favour of the island's cultural heritage are constantly transferred from one operational plan to another, which shows that no "altering" operation is effective without reprogramming the territory from a sustainable and long-term perspective. The results of the analysis must necessarily be read in this light: any policy, however methodologically coherent and well-intentioned, proves ineffective or partially effective in the face of the maintenance of the status quo of the existing production system. They are also useful as a first approach to highlight the possible causal relationships existing in the territory, they reveal gaps in the interpretation of the territorial cultural heritage, which should be the subject of a more detailed analytical evaluation in order to specifically understand the possible direct causal relationships between the environmental degradation of the city and the loss of its cultural heritage.

Furthermore, the period analysed is a limitation of this study. In order to highlight the causal relationship between the factors identified with regard to the loss/preservation of the cultural site, it is necessary to take into account the analysis of the Taranto area in both the pre-industrial and post-industrial periods. This comparison can provide further evidence of the effectiveness (or ineffectiveness) of the policies implemented. Obviously, the availability of data in the pre-industrial period represents an important source of follow-up. This gap can be filled by using historical indicators which, despite their limited distribution, can provide a partial view of changes in the environment of the study area.

However, cultural heritage, if used as a matrix of anti-systemic value and representation of processes of collective recognisability (Tinacci Mossello, 2014), and not as a mere recipient of recovery interventions, could play a primary role in the act of regenerating, with continuity, that social network of interpersonal trust relationships that is necessary for the very existence of any community and place over time.

In the conventions and documents of the Council of Europe and the Commission of the European Community on spatial planning and cultural heritage, spatial cultural assets are essentially considered as symbols of the cultural heritage of events that have marked the evolution of society. Cultural heritage thus translates the time of the cultures that have stratified the territory into visible signs and offers an image of the "eternity" of civilisation for

reflection. In order to improve the understanding of the actual and potential role of cultural heritage and not to reduce it to a reduced testimony of unsustainable modern development, it is important to define it conceptually and politically as a source of social innovation for smart, sustainable and inclusive growth.

These considerations lead us to propose a forward-looking and proactive management of cultural resources. Currently, the top-down approach to heritage management in the study area has both interpretive and operational shortcomings, which are mitigated to a very small extent by bottom-up approaches aimed at partially recovering heritage use rights (Castronuovo & Berardi, 2017). These are forms of social claim that start from a direct knowledge of place and focus on an operational, rather than an analytical, dimension of collective action. They are self-organised social processes capable of producing contextual socio-spatial effects. From this perspective, the study aims to stimulate policy makers, together with communities, to initiate specific analyses of the risks threatening cultural heritage, in order to implement organic protective measures before irreversible further damage occurs, an urgent need in the face of global challenges.

References

- Banini, T., 2017, "Proposing a theoretical framework for local territorial identities: concepts, questions and pitfalls", Territorial identity and development 2 (2), 16-23, http://doi.org/10.23740/TID220172

- Barbanente, A., 2014, "Processi e pratiche di pianificazione del paesaggio in Puglia", *Urban. Inf.*, 255, 5–6.

- Barbanente, A., 2015, "Il nuovo piano paesaggistico della Puglia", *Urban. Inf.,* 258, 5–6.

- Barbanente, A., 2013, *La Pianificazione del Paesaggio in Puglia. Un Processo Culturale per un Nuovo Sviluppo*; *Report*; Informa, Laterza.

- Blandino, F., 1974, *La Città Vecchia di Taranto: Il Piano per il Risanamento e il Restauro Conservative*; Dedalo libri, Bari.

- Bruni, D., 2016, "Landscape quality and sustainability indicators", *Agric. Agric. Sci. Procedia,* 8, 698–705, https://doi.org/10.1016/j.aaspro.2016.02.047

- Caravello, E., 2023, "Preserving cultural landscapes in the face of globalization. The musealization of Sicilian heritage", *AIMS Geosciences*, 9 (4), 697-712, DOI: 10.3934/geosci.2023037

- Carta, M., 2006, *L'armatura Culturale del Territorio. Il Patrimonio Culturale come Matrice D'identità e Strumento di Sviluppo*, Franco Angeli, Milan.

- Caspersen, O.H., Olafsson, A.S., 2010, "Recreational mapping and planning for enlargement of the green structure in greater Copenhagen", *Urban For. Urban Green*, 9, 101–112, https://doi.org/10.1016/j.ufug.2009.06.007

- Castronuovo, V., 2023, "Losing Cultural Heritage due to Anthropic Environmental Disasters: An Application of the DPSIR Spiral Framework", *Sustainability,* 15, 1978 https://doi.org/10.3390/su15031978

- Castronuovo, V., Berardi, G., 2017, "Il "Convicinio" di Sant'Andrea degli Armeni a Taranto: un bene relazionale, oltre che culturale. La gestione

partecipata dal basso come motore per la rigenerazione urbana", *IN_BO. Ricerche e progetti per il territorio, la città e l'architettura; The Future of Churches: themes & landscapes*, 8 (11), 490-499.

- Città di Taranto, 2019, *Piano Comunale di Protezione Civile, Relazione Generale,* available from: https://drive.google.com/file/d/1mB7JIKxfLbJ9tbPmnYpiZ8PR6RpnLviB/view

- Comba, P., Pirastu, R., Conti, S., et al., 2012, "Ambiente e salute a Taranto: studi epidemiologici e indicazioni di sanità pubblica", E&P, November/December, 305-320.

- Comune di Taranto, 2009, *Rapporto Finale di Esecuzione al 30 Giugno 2009 Programma d'Iniziativa Comunitaria PIC URBAN II 2000–2006.*

- Comune di Taranto, 2014, Riserva naturale regionale orientata Palude La Vela, Piano territoriale. Valutazione Ambientale Strategica, Rapporto Ambientale, Relazione di Piano. Redatti ai sensi della L.R. 44/2012, Taranto, 2014, available from: https://www.comune.taranto.it/images/areetematiche/DOCU/ambiente/VAS_sint_RappAmb_Piano_LaVela(1).pdf

- Eco, U., 1980, *La struttura assente. Introduzione alla ricerca semiologica*, (1968), Bompiani, Milan.

European Commission, 2003, *European Common Indicators Towards a Local Sustainability Profile; Final Project Report; Development Refinement, Management and Evaluation of European,* available from: https://www.gdrc.org/uem/footprints/eci_final_report.pdf

- Fleskens, L., Duarte, F., Eicher, I., 2009, "A conceptual framework for the assessment of multiple functions of agro-ecosystems: A case study of Trás-os-Montes olive groves", *J. Rural Stud.*, 25, 141–155, https://doi.org/10.1016/j.jrurstud.2008.08.003

- Fusco Girard, L., 2021, "The evolutionary circular and human centered city: Towards an ecological and humanistic "re-generation" of the current city governance", *Human Systems Management*, 40 (6), 753-775.

- Harrison, R., 2013, *Heritage: Critical Approaches*, Routledge, London.

- Hongshu, P., Xiufeng, W., 2023, "The impact of environment on cultural relics", *Scientific Culture*, 9 (2), 49-62. DOI: 10.5281/zenodo.7918252

- Imperatore, P., 2023, *Territori in lotta Capitalismo globale e giustizia ambientale nell'era della crisi climatica*, Maltemi, Sesto San Giovanni.

- ISTAT, 2015, *BES delle Provincie, Il Benessere Equo e Sostenibile nella Provincia di Taranto, Upi/Cuspi*, available from: http://www.besdelleprovince.it/fileadmin/grpmnt/1017/PDF_BES/BES_2020_FASCICOLO_TARANTO.pdf

- Lee, T.H., Hsieh, H.P., 2016, "Indicators of sustainable tourism: A case study from a Taiwan's wetland", *Ecol. Indic.*, 67, 779–787, https://doi.org/10.1016/j.ecolind.2016.03.023

- Magnaghi, A., 2010, *Il progetto locale. Verso la coscienza di luogo*, Bollati Boringhieri, Torino.

- Neri, A.C., Dupin, P., Sánchez, L.E., 2016, "A pressure-state-response approach to cumulative impact assessment", *J. Clea. Prod.*, 126, 288–298, https://doi.org/10.1016/j.jclepro.2016.02.134

- OECD, 2008, *Handbook on Constructing Composite Indicators, Methodology and User Guide*, available from: https://www.oecd.org/sdd/42495745.pdf

- Rotondo, F., 2020, "Problemi maligni e strategie di rigenerazione urbana. Appunti per Taranto", Working papers, *Urban.it* 2/2020.

Said, E.W., 2000, "Invention, memory, and place", *Crit Inquiry*, 26, 175–192, https://doi.org/10.1086/448963

- Smith, L., 2016, *Uses of Heritage,* Routledge, London.

- Tengberg, A., Fredholm, S., Eliasson, I., et al., 2012, "Cultural ecosystem services provided by landscapes: Assessment of heritage values and identity", *Ecosystem Services,* 2, 14-26, https://doi.org/10.1016/j.ecoser.2012.07.006

- Tinacci Mossello, M., 2014, Prospettive di sviluppo del turismo

sostenibile. In Trono, A., Imperiale, M. Leo, Marella G. (Eds.), *In viaggio verso Gerusalemme. Culture, Economie e Territori*, Mario Congedo, Galatina, 273-281.

- Trono, A., Zerbi, M.C., Castronuovo, V., 2016, Urban Regeneration and Local Governance in Italy. In Nunes da Silva, C., Bucek, J., (Eds), *Local/ Urban Governance in Europe*, 1st Eds., Springer, New York, 171–192.

- UNESCO, 1968. Recommendation concerning the Preservation of Cultural Property endangered by Public or Private Works, available from: https://unesdoc.unesco.org/ark:/48223/pf0000114047.page=134

- United Nations, 2004, Human Settlements Programme, Urban Indicators Guidelines, Monitoring the Habitat Agenda and the Millennium Development Goals, available from: https://unhabitat.org/sites/default/files/download-manager-files/Urban%20Indicators.pdf

- Vallega, A., 2008, *Indicatori per il Paesaggio*, Franco Angeli, Milan.

3. The territorial challenge of the wine-growing system in Castiglione di Sicilia (Etna)

Leonardo Mercatanti, Mariacristina Ruffo

3. The territorial challenge of the wine-growing system in Castiglione di Sicilia (Etna)

Leonardo Mercatanti, Mariacristina Ruffo [1]

Abstract

For the past few decades, the slopes of Mount Etna have been characterised by a new interest in wineries. This research, largely carried out in the field, will focus on the northern slope of the volcano, whose municipalities have been plagued by an inexorable demographic decline for decades. The emblematic case of Castiglione di Sicilia will be developed to understand the extent of the phenomenon, recent and potential future directions in terms of territorial development, based on the policies implemented.

Keywords:
Etna, Sicily, Castiglione di Sicilia, wine-district.

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1. Introduction

In recent decades, the slopes of Etna have been characterised by a new interest in wineries that have chosen to settle in an area known for its fertility and microclimate. This characteristic was already known at the time of the geographer Strabo (around 64BC - 24 AD): "Now although the ash is an affliction at the time, it benefits the country in later times, for it renders it fertile and suited to the vine, the rest of the country not being equally productive of good wine" (Strabo, 1988, p. 69).

Today there are more than 70 wineries, most of them recently established. A new form of entrepreneurship has come forward. It is attentive not only to the quality of the product, but also to the defence and enhancement of the territory. Sometimes the fortunate combination of the vocation of the land and the territory for agriculture use, the liveliness of a young entrepreneurial class and the adoption of winning development paths can bring about a true territorial revolution in just a few years. An Etna DOC wine district has thus been established, which has contributed to creating a tourist offer focusing on landscape, traditional culture and food and wine. In addition to recovering traditional structures (lava stone walls, houses and rural buildings, ancient roads), the wineries have created unusual agricultural landscapes of great interest to every visitor. Attractiveness is favoured by typically slow mobility routes that cancel out the consequences of a hectic lifestyle and optimally connect people to cultural landscapes. This paper will focus on the Alcantara Valley, located in the north-eastern part of the volcano, and specifically in the territory of Castiglione di Sicilia.

2. Territorial framework and methodology

The area under investigation falls within a territory of great geo-cultural interest in north-eastern Sicily: the Alcantara Valley. It was formed by erosion due to the Alcantara river (approximately 53 km) and is bordered to the north by the Peloritani Mountains, to the north-west by the Nebrodi Mountains, and to the south by Mount Etna. The Alcantara river flows into the Ionian Sea near Giardini Naxos and marks the natural border between the metropolitan cities of Catania and Messina. Within the valley, the Alcantara River Park (just over 1,900 hectares) was established in 2001. The area, described by Pietro Bembo in his De Aetna (1495), is already visually recognisable in various maps from the 16th century. In the mid-20th century, geographer Francesco

Speranza provided an excellent description of it, highlighting how varied the origin and nature of the terrain is, and also providing details of climatic types and vegetation (Speranza, 1955). Today, the valley has some common features and uniform elements. Common elements include a weak economic structure and a demographic dynamic that reveals one of the area's most significant critical issues: a slow and general demographic decline that calls for novel approaches and innovative measures. This theme, associated with the increase in the elderly population, is intrinsically linked to highly topical issues in the scientific debate, such as the need to repopulate marginal places, to increase their attractiveness and, no less important, to reflect on aspects such as mobility and accessibility. The territory is also characterised by many cases of hydrogeological instability, often caused by the actions of man who over the years has failed to respect the nature of the soil and has illogically built everything, taking space away from nature itself and intensifying occupation with cement.

The area is culturally relevant. Hundreds of rural dwellings, factories, mills, masseries and palmenti are spread throughout the Alcantara Valley. Scholar Lucia Militi, through long and meticulous field research, has carefully surveyed them (Militi, 2023). The area is also characterised by some important geosites, endowed with high educational, as well as scientific and environmental value. Geosites consist of landscape components thanks to which it is possible to study and understand the evolution of the territory. Specifically, they may consist of sedimentary rocks in which fossils or minerals may be present, basaltic outcrops, peculiar landscape forms, etc. (Mercatanti, Privitera, 2020, p.57). Accessibility appears to be one of the area's weak points. In reality, a lower level of accessibility is consistent with the impervious nature of the area and is by no means a weakness if one reflects on the new opportunities and attractiveness of so-called 'slow travel' or 'slow tourism'. In recent years, Sicily has received unprecedented attention in terms of territorial reorganisation aimed at the local development of marginal areas. On marginal areas, geographers themselves are making the scientific debate of great interest (Battisti, 2017; Sommella, 2017; Cerutti, De Falco, Graziano, 2022, just to mention a few articles). There are indeed many marginal territories whose cultural heritage deserves to be enhanced, also through the promotion of so-called slow tourism, a possible new paradigm for bottom-up territorial development policies (Lavarini, 2008; Nocifora, de Salvo, Calzati, 2011). In a society increasingly oriented towards speed, synthesis and synthetic and often trivial information, slow travel offers the opportunity to return to the past, to enjoy the landscape and

its elements, as well as an unprecedented confrontation with nature. Slow travelling offers the visitor a better insight into places and landscapes while respecting the timeframe of optimal learning and experience. The same rural buildings, even when they are not in the best condition because they are abandoned, retain an intrinsic beauty and a double meaning: that of a cultural asset and the testimony of the existence of a strong identity in an area with great potential. The encouraging statistics on visitors corroborate these elements flows in the study area, which are slowly and steadily increasing.

The landscape is therefore a cultural landscape, rich in elements that hark back to the area's past, but also skilfully shaped to meet the area's new development needs.

The research was largely conducted in the field through various on-the-spot inspections and the testing of several tourists' itineraries and events, with visits to some representative wineries in Castiglione di Sicilia. The preliminary phase of the study was initiated through extensive bibliographic research. During the visits, informal discussions were held with privileged players in the wine-growing and wine-producing sector, and the main strategies for promoting products and places were noted.

The creation of a wine district of excellence offers an opportunity for development, also through tourist routes characterised by slow mobility and experiential practices, starting precisely from the regeneration of the landscape. A case study consistent with the idea that environmental sustainability actions can effectively integrate local development paths. This work will focus on the emblematic case of Castiglione di Sicilia, with its 46 districts, already mapped as Additional Geographical Units (UGA), to understand the extent of the phenomenon and potential future developments in terms of territorial development on the basis of the policies implemented.

3. The 'Etna Nord' wine district

As Fabrizio Meli well explains, the slopes of the volcano were already cultivated with vineyards in ancient times. After the Second World War, due to the economic and agrarian crisis, Sicilian viticulture went into a period of sharp decline. Several vine diseases (mainly due to phylloxera) also contributed to the sector's collapse. Thus began a widespread substitution of crops: for decades hazelnut, chestnut and citrus trees characterised the Etna landscapes. On the other hand, abandoned crops allowed nature to restore the Etnean woods. In the last two decades, the recovery of terraces, small roads,

and rural buildings has allowed a return to the past since, as already indicated, the land is particularly suited to the cultivation of vines (Meli, 2016, p. 214).

The Consorzio Tutela Vini Etna DOC (Consortium for the Protection of Etna DOC Wines), in agreement with the Sicilian Region, has drawn up a thematic map identifying the 133 Districts (Contrade) of Etna (**Figure 1**). A further nine Contrade were identified in 2022. Belonging to one of the identified Contrade certifies the presence of certain organoleptic qualities in Etna DOC wines. The new thematic map highlights, through colour gradations, the characteristics of altitude, exposure, ventilation, rainfall, temperature range and soil type.
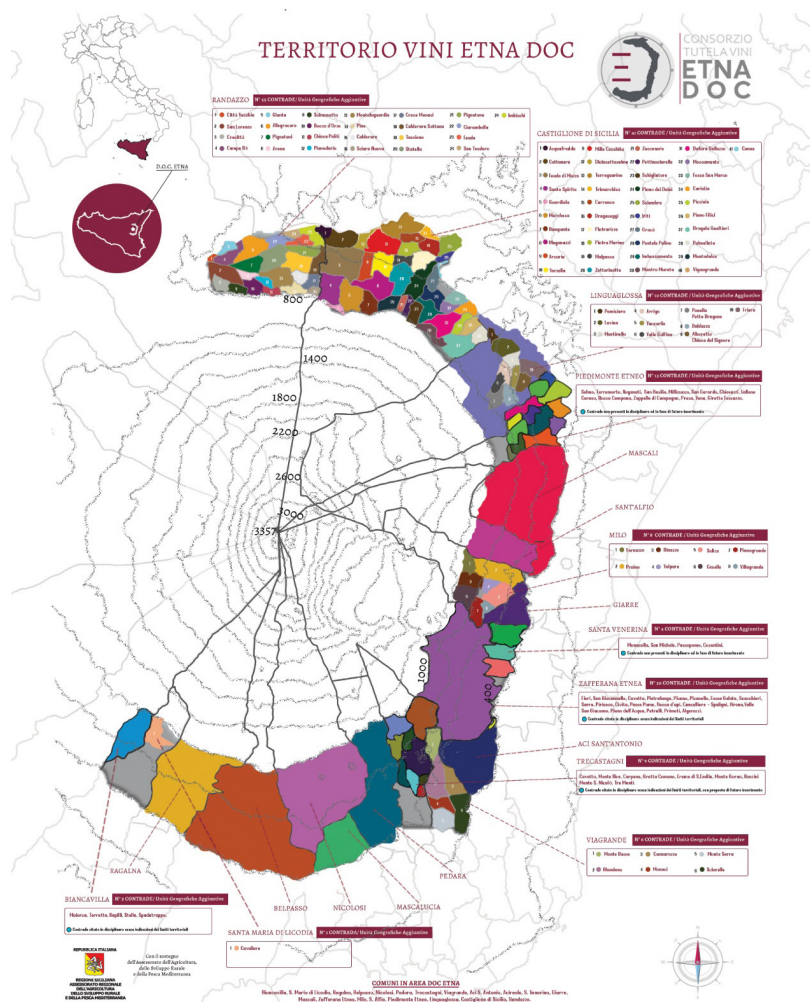
Fig. 1: Set of municipalities in the Etna DOC area
Source: Consortium for the Protection of Etna DOC Wines

Since 2011, the production regulations of the Etna Controlled Denomination of Origin, born in 1968 and thus the oldest in Italy, recognise the presence of 133 contrade (districts) within its area, which covers the territory of 20 municipalities, legally equivalent to Additional Geographical Units (UGA). In the long work of reconnaissance of the territory, updating the boundaries led to the identification of 9 new contrade, thanks to the collaboration of the Consortium's member producers, which will be officially included in the next update of the production regulations. The new Contrade Map also takes these into account, bringing the number to 142 Contrades, which are divided into the territory of 11 municipalities. The northern part of the surveyed territory holds the largest number of Contrade: 25 are in Randazzo, 46 in Castiglione di Sicilia, 10 in Linguaglossa and 13 in Piedimonte Etneo (**Figure 2**). This map represents an important step towards the zoning of the DOC area.

Figure 2. The Etna municipalities
Source: Created on QGIS by L. Mercatanti
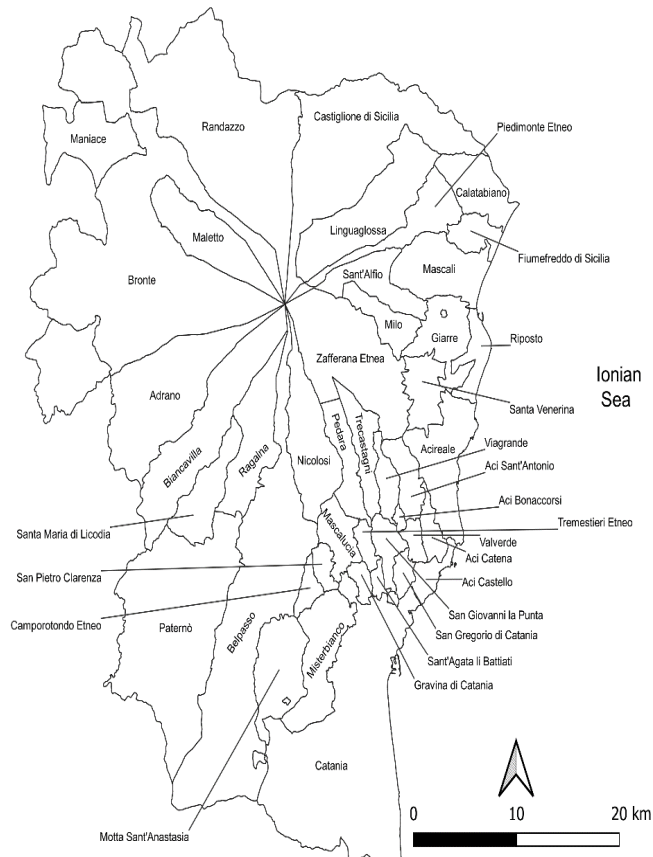
The recent identification of the Contrade (districts) was obtained thanks to new topographical surveys that were superimposed on cartographic layers, created through repeated surveys using Geographic Information System-GIS instruments. In this way, the old cadastral maps - which no longer correspond to a rapidly changing territory, at least from the point of view of agricultural production - were updated.

Since the 1990s, a true wine district has been formed, located on the slopes of Etna on the northern slope, from Randazzo to Linguaglossa, between 400 and 800 metres above sea level. The northern slope of the volcano is characterised by higher rainfall. This district, characterised today by a multitude of high-quality wineries, the recovery of ancient farmhouses transformed into agritourism structures and the presence of a large Golf Resort & SPA, is of great interest for geographical research. Among the most important sites for viticulture are Passopisciaro, Rovittello and Solicchiata, hamlets of Castiglione di Sicilia. Starting in the mid-19th century, residents settled in these hamlets and specialised in the production of an excellent wine, exported to cut prestigious national and French wines (Meli, 2016). The morphology of the Etnean territory was tamed by building terraces that still clothe the surfaces of the Etnean reliefs today. The skilful wine-growing techniques and traditions of an area particularly suited, thanks to an advantageous pedoclimatic environment, have been preserved through various generational relays. Since the 1990s, entrepreneurs from other regions and abroad have been "attracted by the production potential of terraced vineyards, but also by the beauty of the landscape and the black magic of Etna volcano" and have introduced modern techniques and practices (Militi, 2016, pp. 72-73).

In just a few years, an area that has been able to enhance factors such as territorial identity, hospitality, taste, genuineness and authenticity of traditions, thus providing valid elements for its recognisability, has gained importance. Dozens of districts are characterised by tidy vineyards and refurbished masserias and rural houses, inside which can be admired the palmenti built in lava stone. Due to the subdivision of the latifundia, manor houses of absolute landscape-architectural value were built between the 17th and 19th centuries, which still adorn the Etnean landscape today (Cascone, Pennisi, di Fazio, 1997). Some of them are ruins, but their recovery is not excluded, given the growing interest in the area. Farms, wineries and accommodation facilities in the district are now associated thanks to the experience known as the Etna Wine Route, which offers events, wine tourism tours and short trips aboard the Circumetnea Railway train or "Littorina of Etna", a true food and wine

tourism product (Cannizzaro, Corinto, 2012). In 1994, the Consorzio di tutela vini Etna Doc was founded, committed to promoting the brand and overseeing compliance with the production regulations in defence of consumers and producers. In addition to the initiatives of individual producers and actors in the area, the rebirth of this territory and the interest of a lively entrepreneurial class, which has given rise to concrete and effective territorial initiatives, as well as clear benefits for the local community, has certainly been benefited by specific measures that the Sicilian Region, through the Regional Department of Agriculture, Rural Development and Mediterranean Fisheries (Regional Department of Agriculture), has favoured, albeit following EU-initiated guidelines such as the Common Agricultural Policy-CAP. In particular, we refer to the Common Market Organisation - Single CMO (EU Regulation 1308/2013). The restructuring and reconversion of vineyards measure, for example, implemented through various wine-growing campaigns, has granted economic aid to those who produce DOC and DOCG wines regarding varietal reconversion and vineyard restructuring. These subsidies facilitated, through the provision of a 50% non-repayable contribution, the restructuring of wineries and estates, obviously in cases where the authorisations were present. In 2021, Decree 1897/2021 of the Regional Councillor for Productive Activities concluded the process that established the *Distretto Produttivo Vino di Sicilia* for five years. The main objective is to promote strategic planning. At the moment, none of the companies on the volcano's northern slope are involved in the District, but the initiative is destined to spread. The Region, thanks to its autonomy, does not make a significant contribution to the growth of the sector. Still, it does, however, assist and support the various local initiatives and EU strategies, probably in the conviction that local entrepreneurial forces, certainly of quality and aware of their own capacities and ambitions, are capable by themselves of self-determination (Mercatanti, Pioletti, Sechi, 2022).

4. Castiglione di Sicilia

Castiglione di Sicilia is a municipality of just under 3,000 inhabitants located in the centre of the Alcantara Valley, between Randazzo and Taormina at an altitude of about 600 metres above sea level. It is a fortified medieval centre located on a rocky buttress defending the Alcantara Valley. Founded by the Greeks in 496 B.C., it reached a certain importance under the Norman and Swabian dominations and became a fief of Ruggero di Lauria in 1283.

Like most of the municipalities in the Alcantara Valley, the population of Castiglione di Sicilia is constantly and significantly decreasing (**Figure 3**).
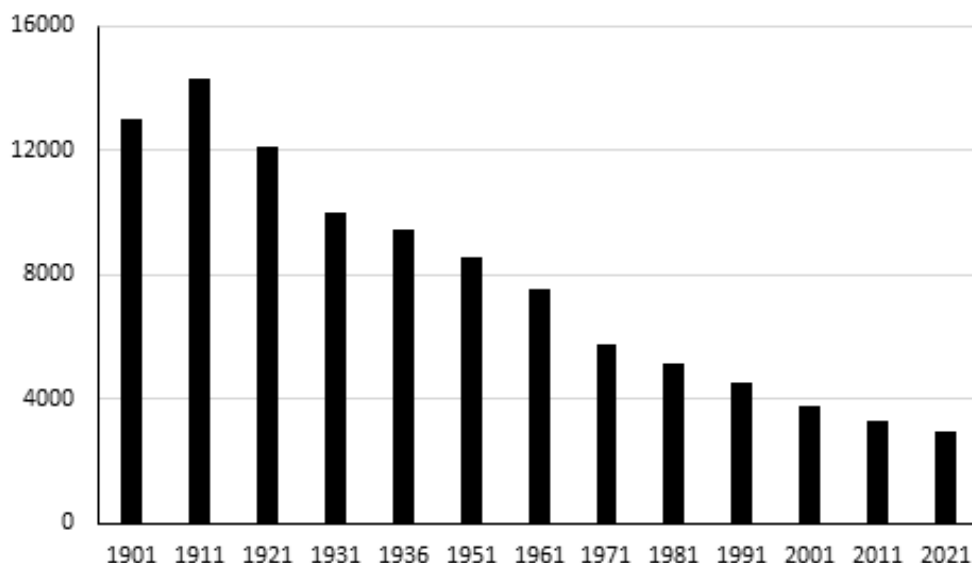
Fig. 3: Demographic dynamics in Castiglione di Sicilia. Years 1901-2021
Source: National Institute of Statistics (www.demo.istat.it).

The hamlets of Castiglione di Sicilia are Gravà, Mitogio, Passopisciaro, Rovittello, Solicchiata and Verzella. The most important and well-known for wine production are Passopisciaro, Rovittello, and Solicchiata. The territory of Castiglione di Sicilia today has about 800 hectares under vine and is therefore one of the most important on Etna. Around 34,000 hectolitres of wine are produced annually (Militi, 2023, p. 142). As a result, Castiglione di Sicilia is known as the 'Wine Capital of Etna'.

Vine cultivation has been one of the economic activities that have characterised Castiglione di Sicilia for centuries. Since the mid-19th century, phylloxera, a parasitic aphid that attacks the roots of the plant and quickly causes its death, spread throughout Europe (and at the end of the same century in Sicily).

After several years of crisis in wine-growing, the problem was solved by using, limited to the root system, certain varieties of American vine, completely immune to the parasite. Thanks to this intuition, it was decided to create a plant with an American foot and European leaf apparatus. In general, the soils in the districts of Castiglione di Sicilia consist of alluvial soils, with a permeable, deep and porous sandy texture. They are therefore ideal for the circulation

of oxygen, even in the deep layers. Their predisposition to be penetrated by plant roots allows the plant to find water even in the driest years, which are increasingly frequent due to climate change (Militi, 2016, pp. 68-69). While the nature of the soil and climate is favourable for planting a vineyard, it is also unfavourable. The soil itself is in fact rich in lava stones, which means that the land must first be well tilled in order to accommodate the plants. Moreover, the presence of slopes often forces operators to the only possible solution: terracing. The terracing system is a working technique whose origins go back a long way and allows steep terrain to be enhanced. This technique was created to accommodate the need to make sloping areas cultivable by increasing the surface area of land that can be worked flat and reducing rainwater runoff. Terraces are very useful for preventing and combating soil erosion, they prevent hydraulic and hydrogeological instability, they have a microclimatic function and are silent witnesses of an agricultural culture that has positively modified the rural landscape. Some terraces are even part of the tourist offer: well-known cases are the Cinque Terre in Liguria, the Douro River Valley in Portugal or the picturesque terraced rice fields in Vietnam (Mercatanti, Privitera, 2022, pp. 51-52). As the geographer Domenico Ruocco has well pointed out, cultural heritage includes also the "terraces and other traces of the conquest of the land for land-grabbing and cultivation [...] are authentic testimonies of civilisation" (Ruocco, 1979, pp.4-5). Terraces are, therefore, rightfully part of the cultural heritage and an integral part of Etna's agrarian landscape.

Terraces have been built in abundance in the past and many of them have been recovered. However, they require constant maintenance (e.g. to avert the danger of their disruption or landslides) and certainly plant care operations (soil cleaning, fertilisation, pruning, fruit picking) are more complicated, since they are not an open field on a single level of altitude.

In the territory of Castiglione di Sicilia, the main cultivars are Nerello Mascalese, cultivated since time immemorial, from which red and rosé wines are obtained; Nerello Cappuccio - increasingly rare due to a slow abandonment by wine-growers - from which red wines suitable for ageing are obtained; Carricante, a white grape variety. In addition to these, Catarratto, Minnella, Grecanico, Alicante, Cabernet and Chardonnay are also cultivated. In 1968 (Presidential Decree of 11 August 1968) Castiglione di Sicilia was included in the production area of DOC Etna.

The harvest takes place between September and October (Militi, 2016, pp. 71-72). It is precisely during the harvest months that many accommodation facilities and wineries organise educational days for visitors,

offering days in contact with nature in which they can become protagonists in the harvesting and pressing of grapes according to traditional methods.

Castiglione di Sicilia hosts various events of viticultural interest. Among them is "Le contrade dell'Etna", in its 15th edition in 2024 and an unmissable event for local producers and many visitors (https://lecontradedelletna.com). The events "Cantine aperte" (Open Cellars) and "Calici di stelle" (Goblets of stars), between May and August, also have great resonance in Castiglione di Sicilia, thanks to guided tours of the vineyards.

In 1989, Castiglione di Sicilia was the site of the first major Sicilian golf club, now one of the most popular on the island: Picciolo Etna Golf (www.ilpiccioloetnagolfresort.com/it) with 44 hectares of land on which various courses are laid out over a distance of around six kilometres. The golf course has 18 holes. Rows of vineyards, together with lava flows, oaks and hazelnut trees, are part of the landscapes visible during golf tournaments. These landscapes are recognised as unique by visitors and give uniqueness to the playing experience (Mercatanti, 2017, p. 76). In addition to the agrarian landscapes, which, as mentioned, are to be understood as cultural landscapes, there are many other cultural assets in the territory of Castiglione di Sicilia. Field research has shown that they can be of great interest to visitors and for educational visits. The following is a brief outline of some of them.

The highlight of the urban cultural offer is certainly the imposing Lauria Castle, probably of Norman origin. It is located at the top of the urban centre of Castiglione di Sicilia, recently restored and fully open to visitors, and is often the venue for events, conferences and various events.

Between Castiglione di Sicilia and Motta Camastra there is an important geological site called 'Basalts of the Larderia Gorge in the Alcantara River', established by Decree D.A. 238/2018. The basalts of this gorge, about 12 kilometres from the mouth, are characterised by their typical columnar appearance and were formed following the rapid cooling of lava that came into contact with the waters of the Alcantara river. They offer a rare spectacle of natural curiosity with their multiple prism walls of varying stratification.

Castiglione di Sicilia was once rich in Cube, typical three-lobed religious buildings erected between the 6th and 7th centuries (but also later), cubic in shape, with a central plan, surmounted by a depressed dome. Few remain today, but their charm is intact. In Castiglione di Sicilia, the remains of the Cuba of Santa Domenica (**Figure 4**), surrounded by the countryside of Castiglione di Sicilia a few hundred metres from the Alcantara river, can be visited, at present externally (Virgillito, 2023, pp. 273-275).

Fig. 4: Cuba of Santa Domenica with rows of vines, visible only in autumn.
Source: Photo by Maria Virgillito, september 2022.

5. Conclusions

In the title of this contribution we spoke of challenges. Why challenges? Because there are so many threats facing the territory. Among them is depopulation and the consequent abandonment of the urban and surrounding territory. It is precisely the birth of new economic activities linked to the world of wine production and connected to tourism that could lift the demographic fortunes of the territory. The many guided wine tourism itineraries - to discover vineyards, wineries, wine museums, wine shops and agritourisms aimed at promoting and enhancing the territory - are of great interest to tourists who are already present in the surroundings of Castiglione di Sicilia due to the proximity of the volcano, the sea and Taormina, one of Sicily's most important destinations. As we have briefly described, there are many other attractions. The challenge lies in the ability to know how to promote an area that is already rich in resources, some of which are very different from each other.

An area that could further benefit from the recovery of rural buildings with high potential and architectural and historical interest, but also from the establishment of mill roads, rural paths and ecomuseums. All these resources, both internal and external, if suitably valorised by private individuals and actors involved in the governance of the territory, can contribute to relaunching the economy through the promotion of wine-growing, which could prove to be a driving force for the affirmation of forms of cultural and food and wine tourism.

References

- Battisti, G., 2017, "Le aree interne: un'interpretazione in chiave geopolitica", *Geotema*, 55, 85-88.

- Bembo, P., 1495, *De Aetna liber ad Angelum Chabrielem*, Io. Antonium & fratres de Sabio, Venezia.

- Cannizzaro, S., Corinto, G.L., 2012, "La Littorina dell'Etna: la circumetnea come prodotto turistico enogastronomico", *Annali del Turismo*, 1, 283-303.

- Cascone, Cerutti, S., De Falco, S., Graziano, T., 2022, "Geography of marginality in Italian Municipalities: outcomes of a cluster-based multifactor analysis", *Bollettino dell'Associazione Italiana di Cartografia*, 174, 49-70.

- Cascone, G., Pennisi, P., di Fazio, S., 1997, "Edificios protoindustriales para la producción de vino en Sicilia. Los palmentosy las bodegas del Etna desde el s. XVII al XIX", *Informes de la Construcción*, 49, 61-75.

- Lavarini, R. (Eds), 2008, *Viaggiar lento. Andare adagio alla scoperta di luoghi e persone*, Hoepli, Milano.

- Meli, F., 2016, Alle pendici del vulcano: mastri dell'Etna e vigneti di Castiglione di Sicilia. In: Bonardi, L., Varotto, M. (Eds), *Paesaggi terrazzati d'Italia. Eredità storiche e nuove prospettive*, Franco Angeli, Milano, 213-218.

- Mercatanti L., 2017, "Lo sviluppo del turismo del Golf in Sicilia", *Geotema*, 54, 2017, 73-80.

- Mercatanti, L., 2023, Living on Mount Etna between risk, beauty and need: a field survey on villages struck by 2018 earthquake. In: Dahiya, B., De Pascale, F., De Pietro, O., Farabollini, P., Mercatanti, L. (Eds), *Disaster Resilience and Human Settlements – Emerging Perspectives in the Anthropocene*, Springer Nature, Singapore, 187-202.

- Mercatanti, L., Pioletti, A.M., Sechi Nuvole, M., 2022, Gli interventi per lo sviluppo locale all'interno delle regioni ad autonomia speciale. In: Amato,

F., Amato, V., de Falco, S., La Foresta, D., Simonetti, L. (Eds), *Catene/Chains*, Memorie Geografiche, 21, Società di Studi Geografici, Firenze, 309-314.

- Mercatanti, L., Privitera, S., 2020, I Geositi del monte Etna: un caso studio del patrimonio geologico. In: Cannizzaro, S. (Ed.), *Ecomuseo dell'Etna tra natura, mito e cultura*, Pàtron, Bologna, 54-65.

- Mercatanti, L., Privitera, S., 2022, "Il patrimonio culturale dei terrazzamenti siciliani", *Humanities*, XI, 22, 49-67.

- Militi, L., 2016, "La viticoltura a Castiglione di Sicilia, volàno dell'economia e del rilancio del territorio", *Humanities*, V, 9, 53-88.

- Militi, L., 2023, *Paesaggio e beni culturali nella Valle dell'Alcantara. Processi di recupero dell'identità territoriale*, Pàtron, Bologna.

- Nocifora, E., de Salvo, P., Calzati, V., 2011, *Territori lenti e turismo di qualità. Prospettive innovative per lo sviluppo di un turismo sostenibile*, Franco Angeli, Milano.

- Ruocco, D., 1979, "Beni culturali e geografia", *Studi e Ricerche di Geografia*, 2, 1, 1-16.

- Sommella, R., 2017, "Una strategia per le aree interne italiane", *Geotema*, 55, 76-79.

- Speranza, F., 1955, *La valle dell'Alcantara. Studio geografico*, Crisafulli, Catania.

- Strabo, 1988, *The Geography of Strabo*, Translated by H. L. Jones, vol. III, Harvard University Press, Cambridge [first printed 1924; first original edition 14-23 AD].

- Virgillito, M., 2023, *Diario di un viaggio in Sicilia. Appunti di una escursionista: fra archeologia, miniere, tonnare, castelli e… mondi scomparsi*, Scrimm Edizioni, Catania.

4. The "Instagrammability" effect: a new mass tourism or a digital panacea?

The case of bakeries in the Sicilian landscape

Sonia Malvica

4. The "Instagrammability" effect: a new mass tourism or a digital panacea?

The case of bakeries in the Sicilian landscape

Sonia Malvica [1]

Abstract

The effects of social media on marketing and business support sparked multidisciplinary interest and generated interdisciplinary collaborations for investigations on such a new form of digital culture. In particular, Instagram's photographic communication can help tourists insert themselves into the flow that is most suitable for personal experiences and expectations and then, live the identity of the place. This phenomenon could lead to the so-called *Instagrammability*, which indicates a large-scale appreciation and sharing through the appealing aesthetic of clusters of pictures. Although sharing photographs could favour including places otherwise out of tourist choice in the destination circuit, some critical issues could be solved. In the most extreme cases, we witness an authentic reconstruction of the destination, configuring a digital landscape that does not necessarily correspond to the place identity. The present work focused on the relationship between bakeries (i.e., American pastries-type businesses with specific dishes and visual aesthetic choices) and the city of Catania as an example of local identity strongly connected to culinary tradition. More precisely, it will highlight two cases of bakeries whose web reputation is firmly related to post sharing on Instagram to analyze how such photo sharing impacted the city's gastronomic reputation.

Keywords: *Food, Local Identity, Catania, Marketing.*

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1. Introduction

In a scenario of conveying online information on a global scale with easy-to-use tools, marketing strategies are increasingly linked to the use of social media. Such a topic involves observing a revolution in the classic marketing concept, increasing the range of action and reducing the time for conveying the message (Srivastava *et al*., 2020). By sharing content, entrepreneurs can insert themselves into an electronic word-of-mouth circuit, such as exploiting visual involvement to create a community of support and visitors. Among the most powerful marketing channels, Instagram stands out, and sharing visual material makes it a relevant branding opportunity in social media. Instagram allows users to immediately identify the content with the most outstanding consumer involvement, proving more effective than other social media (Singh, 2020). Those who are mainly involved are Generations Y and Z, for whom SMEs could sponsor their offer through attractive photographs. It is then firmly recommended to embrace the potential of the new digital era, which allows companies to have continuous monitoring and constant interaction with users, who, through comments, posts and shares, contribute to the marketing phenomenon and the creation of trends (Rummo *et al*., 2020). This phenomenon is called *Instagrammability*, i.e., the qualification of a photo through respect for a contemporary aesthetic based on the ability to attract appreciation and sharing on a large scale (Unger & Grassl, 2020). Instagrammability has become a fundamental marketing concept, supporting businesses in promotion and visibility. An example of popular content in this sense is food, whose evocative power requires full awareness of the components that correctly attract the social media audience: images constantly uploaded to social media are often the reason why users decide to visit a particular bar or restaurant (Philp *et al*., 2022). In recent years, interdisciplinary scientific research focused on this phenomenon (Contois & Kish, 2022), demonstrating how small restaurants, in particular, benefit from the sharing of information on social media to obtain powerful low-cost advertising, increasing the word-of-mouth and suggesting a more targeted use of online content (Lepkowska-White, 2017). In compliance with this communicative logic, the culinary realities related to Instagrammability are those whose products stand out for a particular aesthetic beauty: this is the case of bakeries, whose origins can be identified in American pastry shops based on products baked goods, such as cupcakes, brownies, cheesecakes, milkshakes and other desserts that have all the requirements to stand out on the social network. The present work was driven by the awareness of the diffusion of bakeries on a global scale,

their evocative power on social media for food consumption, and the interest in gastronomic tourism promotion in contexts where food is an influential factor of local identity. More precisely, concerning the rampant phenomenon of glocalization[2], the research was aimed at understanding wether bakeries' evocative online presence of bakeries could support place's gastronomic tradition or end up establishing itself as an online reality separate from the local reality, creating a digital landscape utterly separate from the physical one. With these premises, it is here exposed the case study of the Catania metropolis (Sicily, Italy): although the city is firmly anchored to the Sicilian culinary tradition, in recent years, there has been a growth in bakeries, which managed to attract residents and visitors due to the aesthetic appeal of the locations and the dishes. Through a field investigation of two pivotal cases of bakeries in the city, it was analyzed how much photo sharing has influenced the gastronomic reputation of the urban context and whether changed it.

2. Food and local identity

Shifting attention to branding with tourism-related promotional interests, an example of the Instagrammability effect, also occurs in food and wine tourism (Spence, 2022). The focus on this topic is motivated by the strong impact that food and wine tourism plays on a global scale: according to the fourth edition of the Report on Italian Food and Wine Tourism 2021, in Italy, food and wine tourism represents a growing trend, in the sample of participating interviewees to research, from 21% in 2016 to 30% in 2018 and 45% in 2019, reaching 55% in 2021; these results were supported by the World Food Travel Association, whose research returned a percentage of 92% of tourists participating in food and beverage activities in 2020 and 2021, despite the pandemic crisis (Borsa Mediterranea del Turismo, 2021). Recent research confirmed the role of social media in delineating the destination (Abbasi *et al*., 2023; Messina, 2020) and supporting tourists through sharing experiences. In particular, Instagram's photographic communication can convey the offer of destinations and help tourists identify the various types of

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[2] Glocalization is a concept whose origin is a matter of debate. It could be the result of a translation of the Japanese term *dochakuka* into American English in the 1980s, and the term *glocal* was first used in the 1990s (Roudometof, 2016a). In the complex interpretations of the relationship between globalization and glocalization, this work supports Roudometof's thesis (2016b, p. 403): «Glocalization is […] defined as the refraction of globalization through the local».

tourism (Le Busque *et al*., 2022), inserting itself into the flow most suitable for personal experiences and expectations. Considering the importance of food and wine tourism in defining a place's brand, food is an excellent tool for understanding local identity. A visitor can get to know a place through the culinary experience. For this reason, sharing related content on social media can prove fundamental for city marketing, especially in places where the food tradition is solid. The power of social media to change tourist behaviour can trigger a case of overtourism (Basarangil, 2022; Solanky & Gupta, 2022), as well as the development of new mass tourism that disrespects the requirements of responsible and sustainable tourism. On the contrary, sharing destinations on Instagram could lead to an opposite flow: through appropriate trends (e.g., "Instagram vs. Reality"), visitors unmask the fiction of some scenarios and help to visit crowded destinations in an alternative way. Furthermore, hashtags connect tourists with similar interests and, consequently, similar destinations (Sormaz & Ruoss, 2020). So, online sharing is intended to help the tourist peer community prevent the tourist trap, i.e., the choice of destinations because of qualities not corresponding to reality (Capolupo *et al*., 2020).

3. The impact of bakeries upon food-place identity: the case of Catania (Sicily)

Tourism promotion through food is conducted not only by guaranteeing the good quality of the food but also by the visitor's experience, falling within the scope of destination branding and marketing dynamics in all respects. Accordingly, restaurants are also called upon to present a culinary presentation of the dishes capable of activating word-of-mouth, which will outline the aesthetic quality of the experience and, with it, the destination image. Food-and-wine tourism is closely linked to experiential and creative tourism, starting from the awareness of how food has the role of place marker. A similar argument applies particularly to those activities strongly connected to the aesthetic satisfaction of food: the bakeries. This type of activity brings together what is, in fact, currently required of a tourist experience: a multisensorial and experiential approach. The term *bakery* derives from *to bake/baker*, which refers respectively to cooking in the oven and to the figure of the baker: a bakery, therefore, stands out for the sale of baked products. However, such a characteristic is not enough to create a bakery scenario: bakeries as we know them derive, in fact, from a particular type of American restaurant in which the sense of smell and taste are preceded

by visual satisfaction. Design in a bakery is fundamental: both the location and the desserts must be colourful and fun, and the food must reach a high level of perfection in presentation. Bakery desserts are often an explosion of colours. A pivotal case is provided by red velvet, a cake with a voluptuous consistency and a bright red colour. Although created previously, red velvet became famous with a 1989 movie, *Steel Magnolias* (directed by Herbert Ross), where the cake is presented during a wedding party in the bizarre shape of an armadillo (Fabricant, 2007). The bakeries represent a case of made-in-the-USA import that occurred mainly thanks to cinema and TV series: a famous example (in addition to the already mentioned *Steel Magnolias*) is the series *Sex & The City*, in which the *Magnolia Bakery* (recalling the 1989 movie) appears among the protagonists' favourite places for a tasty break and consists of a bakery whose red velvet has excelled in popularity since the activity opening in 1996.

The basis of a bakery is the sharing of a precise approach to food: the quality of the experience must be slow (i.e., the food should not be consumed at the counter), aesthetically attractive (i.e., the products a bakery stand out for the beauty of the creations) and quiet, far from the idea of overcrowding and a chaotic place (i.e., bakeries are normally distinguished as very small contexts, with very few seats). It is a place of homage to the freshness of food, with the possibility of visually accessing the kitchens where the products are created. Due to a great aesthetic strength, bakeries are strongly present on social media and are therefore inclined to develop an Instagrammability effect. This scenario can cause a phenomenon of weakening the catering activities that are more linked to the culinary tradition of the specific place. In this case, the products are more characteristic but more limited, resulting in less frequent posting on the official channels. Consequently, visitors following the flow of posting and sharing could be directed to visit quality activities that are not strictly linked to what can be defined as a food tourism destination. This concept is fundamental in the case of a country like Italy, where food and wine production is significantly anchored to the place's identity, so the choices of catering activities require pivotal attention to the communication context. The bakery trend entered Italy in Milan and then spread throughout the country. While the Italian pastry chef is linked to culinary tradition, bakery products represent a different output (Red Academy, n.d.). Italy stands out as a European country with excellent foods provided with recognized geographical certifications: tourism is then closely linked to the local gastronomic experience nationally and internationally (Privitera, 2020). An istance is given by Catania, a metropolitan city in Sicily,

as well as a case of an identity tradition strongly linked to food, in which a foodification phenomenon maintains the communicative power of local culture (Graziano, 2020). Its historic centre is characterized by catering activities linked to the singularity of the city's products, so much so that historic pastry and gastronomy businesses (such as *Savia* and *Prestipino*) are recognized as landmarks. It has actually been demonstrated that tourists in Catania search for food experience as a pivotal part of overall cultural knowledge (Privitera, 2020). Given these premises, we should highlight how much the new online communication typologies can develop a distorted image of such a local culture. So, two cases of bakeries in Catania are illustrated below, showing a pioneering case of non-connection to the place food identity and a will of enhancing communication between American and Sicilian pastry making. The information collected results from ethnographic research with participatory observation, therefore including constant attendance of the two places over the years since the first years of activity.

Figure 1 - *Map of Catania with geolocation of the two case studies, as well as other pastry shops and places mentioned in the work. (Source: Elaboration of the Author)*

3.1 A non-place identity case

In 2013, the *Bisou the Bakery* business presented itself with a delicate

pink logo to define a cake design reality, focusing mainly on selling cakes on commission. The first post on Instagram dates back to 12 March 2013, with a close-up of a white forest cake. At first, the images posted on Instagram were mainly linked to cupcakes, brownies and cookies, showing a context on the colours of pink, with glasses, cutlery, plates, cups and sugar bowls typical of a world built on satisfaction aesthetic and almost fairytale-like (**Figure 2**).

<p align="center">(a)   (b)</p>
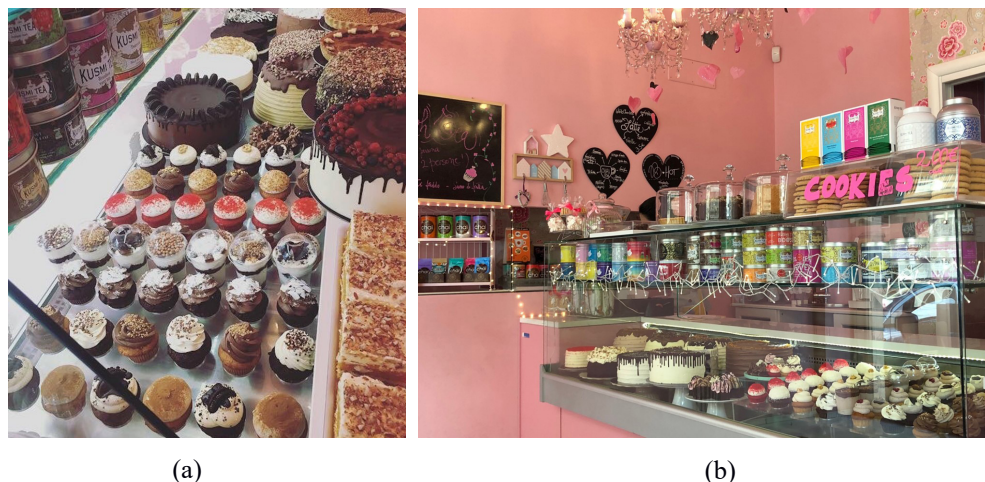
Figure 2 - *Pictures of Bisou the Bakery: (a) details of the bakery-type dishes (date: 14 October 2017); (b) part of the pink-shades interior settlement (date: 6 April 2019). (Source: Author's personal archive)*

Subsequently, following the start of online sharing of the beauty of the location and the food offered, the very few tables in the restaurant became increasingly popular, with a mainly female audience who, attracted by the pastel colours and the beautiful pastries, chose more and more often to spend the afternoon chatting with friends, hot chocolate and herbal teas. From that moment on, *Bisou* increased the availability of seats (albeit always very limited), welcoming its new identity as a magical place in the Catania context: more and more titles were entrusted to the media venue, from «a pink apostrophe between via Milan and via Dalmazia» to «la vie en rose». A community of *Bisou lovers* emerged, whose photos were re-shared on official channels while the business offered the chance of a free cupcake on future visits. This phenomenon of community creation was visible from the content on Instagram, which often consists of close-ups of the dishes served at the tables, denoting a sharing of the sweet moments between visitors. Over the years, there was a constant tendency to photograph the pink environment and

the ordered dishes. The business time slots were also starting to expand, with some days in which visitors were invited to reach *Bisou* until 1 am for a tasty break. A merchandising offer also opened, allowing customers to buy mugs and tasty objects. Interesting, in particular, is what was stated on the *Iodonna* (i.e., an Italian magazine distributed as a supplement of Corriere della Sera) page: «If you love desserts but want to take a break from Sicilian cassata and cannoli, try this place». *Bisou* entered the scene precisely as an alternative to Catania's food identity: those who go there do so to take a break from purely Sicilian cuisine. The basic idea was to claim a peaceful contradiction, still placing itself in the centre of the city but making that pink world a parenthesis of total Instagrammability, where the people of Catania (and all visitors) could play on such a surprise effect with courses beautiful and impactful. In 2018, *Bisou* participated in the *Best Bakery* program broadcast on the TV8 channel in competition with other pastry shops highly linked to the Sicilian culinary tradition, such as (but not only) *Savia, Ernesto, I Dolci di Nonna Vincenza.* What appeared, therefore, was the presence of two parallel worlds that equally publicly claimed to be spokespersons of "bakery" in Catania, with the risk of creating confusion in the definition of the original American concept. *Bisou*, in particular, showed no desire to mix the reality of a bakery with Sicilian cuisine: even the cappuccinos were creamy and served in large cups, more closely resembling non-Italian-style beverages (**Figure 3**).

(a)   (b)

Figure 3 - Pictures of Bisou the Bakery: (a) example of bakery-type sweets and beverages (date: 10 July 2018); (b) cupcakes and bakery-style cappuccinos (date: 28 October 2017). (Source: Author's personal archive)

It could be claimed that people looking for culinary traditions in Catania should not certainly choose *Bisou*. Over the years, it happened that some visitors requested typical products of the Sicilian/Italian tradition, such as *granita* (i.e., a Sicilian cold spoon dessert consisting of a semi-frozen liquid mixture prepared with water and sugar, with the addition of other ingredients according to taste) and *panettone* (i.e., a Christmas-period Italian sweet bread); however, *Bisou* confirmed the idea of maintaining its identity as a classic bakery, while still guaranteeing the seasonality and locality of the products used (such as Mount Etna's blackberries for some types of cakes). In *Bisou'*s case, the Instagrammability effect leads to rapid overcrowding: the queue to grab a table became frequent, and people were increasingly eager to share the atmosphere of the place and some happy shots to publish on social media. Added to this difficulty is the chaos of the city context, which made problematic for drivers to find a parking space. To manage the flow increase, *Bisou* responded by expanding the offer, offering sporadic savoury dishes during lunch, such as pancakes and salad. A turning point took place when *Bisou* abandoned Via Milano to choose a more extensive context on Piazza Verga, more central and closer to Catania's business centre: the opening was declared with an Instagram post on 10 September 2019, but the start of the new activity took place about a month later: from that moment on, the bakery expanded its menu also focusing on lunches; also, the coffees and cappuccinos ultimately responded (in appearance) to the demand of the Catania bars and the restaurant, although maintaining the imprint of a bakery, it abandons the shades of pink, adapting to a broader audience. The reality of the bakery continued to be respected. Under the banner of new hashtags such as #bakerysicilia, it probably aimed not to experience a total detachment from the Catania context. However, this new choice was destined for a short presence. Through the image of a red velvet cupcake (an iconic sweet) published on social channels on 1 November 2022, *Bisou* declared the definitive cessation of the activity. With the excellent quality of its products and respect for the basics of creating a typical bakery location, *Bisou* indeed started an era in Catania urban scenario more than ten years ago; still, from a tourist point of view, it did not use food as a marker of the city of Catania. On the contrary, *Bisou* contributed to attracting mainly residents for an experience far from the logic of a tourist who would like to get closer to the reality of the urban destination. If *Bisou* attracted tourists, it certainly did so in the logic of almost a non-place, not desiring any contamination with the gastronomic spirit of Catania. Therefore, *Bisou* should not be identified as a case of re-introducing tourist flows among

the restaurant activities most anchored to the identity of the Sicilian city.

3.2. A "glocalized" bakery

(a)   (b)
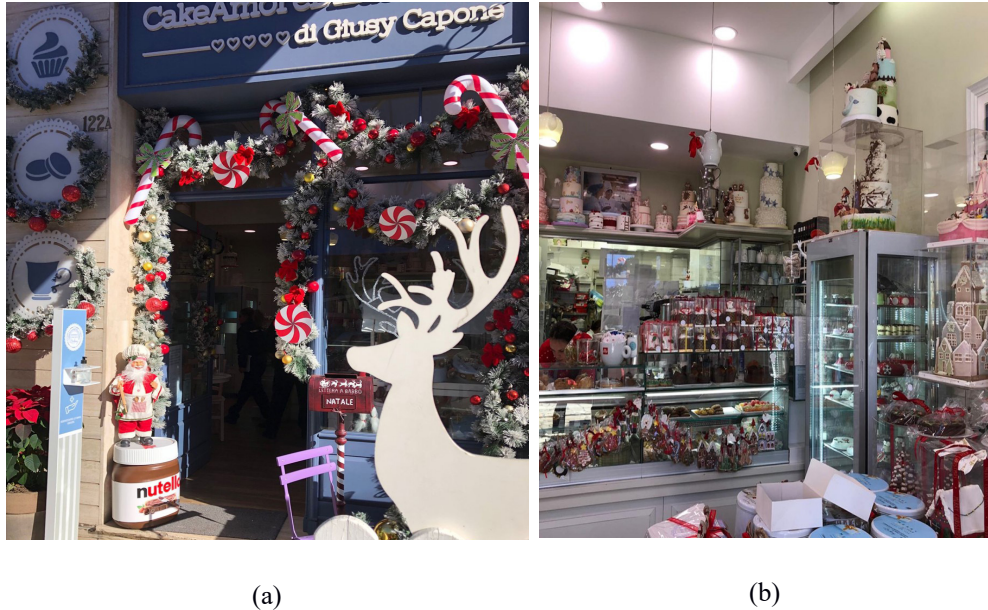
Figure 4 - *Entrance (a) and interior settlement (b) of Cake Amore di Zucchero Bakery in the Christmas period (date: 17 December 2022). (Source: Author's personal archive)*

Cake Amore di Zucchero Bakery (Figure 4) is an active enterprise located on Corso delle Province street, close to Via Milano, where *Bisou* initially opened. Its first appearance on Instagram dates back to 7 November 2016, with a view of the restaurant that immediately conveys the aesthetic qualities of a bakery, with pastel blue tones and a showcase full of sugar paste cakes. The invitation to visitors is evident on the profile page: «Explore the kingdom of sweets with us!»: It focuses on pastel shades of blue to propose an integrated settlement alternative on Sicilian soil. Like *Bisou*, *Cake* presents itself mainly as a cake design business. Currently, *Cake* seems to concretize the best compromise between a bakery and a city closely linked to its culinary tradition, maintaining its essence. However, in the spirit of glocalization and in a scenario that visually respects the basics of constitutions of a bakery, *Cake* decided from the beginning to include the Sicilian tradition in its menu, with both a tasteful and aesthetic agreement that works and is never off-topic. For example, in November, it is possible to find, (alongside cupcakes, brownies and cakes) the *rame di Napoli,* typical sweets

of Catania which characterize the All Saints' Day period; also, it is possible to enjoy the artisanal production of *panettone* for Christmas and *colomba* for Easter, as well as *granita* and brioche during the summer season (**Figure 5**).

(a)   (b)

Figure 5 - *Pictures of Cake Amore di Zucchero Bakery: (a) bakery-type dishes and Italian coffee (date: 5 July 2019); (b) ice cream, pistachio-flavour granita and Sicilian brioche, known in a folkloristic way as brioche col tuppo (date: 4 July 2019). (Source: Author's personal archive)*

The example of the availability of *granita* is emblematic, as it is strongly linked to the Sicilian culinary tradition: for example, in a post on the official Instagram page from June 2018, the quality of the products is guaranteed through local provenance, offering *granita* with toasted almonds from Avola, Bronte pistachio (Protected Designation of Origin - DOP product), Modica chocolate (Protected Geographical Indication - IGP product), Maletto strawberries, Sicilian lemon; all accompanied by *brioche col tuppo*, i.e., a particular Catania-Sicilian round shape pastry with a small hat in the centre. In general, the hashtags connected to such content clearly show the local trend of the depicted storytelling: #cataniafoodporn, #sicilyfoodporn, #sicilianfood, #granitasiciliana. In sum, *Cake* provided a revisitation of the bakery concept, combining the interest in American pastry making with promoting some of the typical Catania and generally Italian products. Therefore, a potential tourist could enjoy both gastronomic readings without conflict and alleviate the sense of displacement through a more international approach (playing a bit according to the mechanisms of the "environmental bubble"). Finally, although the integration of Sicilian cuisine is evident, Cake remains a

beautiful and high-quality bakery, both in appearance and in the main courses.

4. Conclusions

Food can represent a critical factor in establishing a territory identity, contributing to the diffusion of the culture of a city: it is not just an experience of taste but the component of an experience that contributes to the configuration of destination branding (Du Rand & Heath, 2006; Rousta & Jamshidi, 2019). Studies on the marketing strategies confirmed the high impact of food component in the manifestation of the destination, contributing to the delineation of an authentic brand and local cultural knowledge (Fusté-Forné & Filimon, 2021; Lin *et al.*, 2011; López-Guzmán *et al.*, 2018). In the case of social media use with immediate impact, such as Instagram, posting images supported by appropriate hashtags could convey the image of a reality which, although satisfying, risks not focusing on the true identity of the place. The present investigation suggested that the Instagrammability effect applied to bakeries could not be integrated into the conveyance of a tourism brand. Although the application of glocalization requirements is possible, a bakery is visually and qualitatively too decontextualized to engage with the local culinary tradition, which instead requires both specific dishes and visual feedback linked to the folklore of the urban context (as in the case of the *Savia* and *Prestipino* mentioned above). Therefore, if the Instagrammability effect emerges as an excellent marketing tool for the individual company, it may not always positively impact local branding and image in the food business. Social media should be seen as a powerful tool but with contrasting effects: in fact, it generates mass sharing, which could constitute a digital landscape utterly different from the identity of a place, leading visitors towards businesses that, even if of excellent quality, could distort the *genius loci*. On January 14, 2024, a comparison of numbers on Instagram seems to show a specific trend clearly: *Savia* counts 399 posts for a total of 11.200 followers, *Prestipino* 592 posts and 3.695 followers; instead, *Cake Amore di Zucchero Bakery* reports 6.236 posts for a total of 9.686 followers, and the *Bisou the Bakery* page closed its business with 1.001 posts and 6.764 followers. The difference in posting between a bakery and a gastronomic activity linked to the urban context historicity is clear, and this has repercussions on what the social algorithm will return in searches with appropriate hashtags linked to the city.

In conclusion, it is strongly recommended to control the Instagrammability effect within the culinary promotion of a place, especially when the latter is strongly anchored to the value of food and tradition. The risk could be

that tourists may choose their stops starting from the web reputation of the businesses. However, this could contribute to creating a contradictory digital landscape and not appropriately inserted into the local culture. It is necessary to implement an appropriate training plan on digital storytelling for food and beverage companies to establish themselves online and effectively make Instagrammability a digital panacea.

Funding sources

References

- Abbasi, A.Z., Tsiotsou, R.H., Hussain, K., Rather, R.A., Ting, D.H., 2023, "Investigating the impact of social media images' value, consumer engagement, and involvement on eWOM of a tourism destination: A transmittal mediation approach", *Journal of Retailing and Consumer Services*, 71, 103231, https://doi.org/10.1016/j.jretconser.2022.103231.

- Basarangil, I., 2022, The Instagram effect on the transformation of tourist behavior to overtourism. In: Ozturk, A., Hancer, M. (Eds.), *Digital Marketing and Social Media Strategies For Tourism and Hospitality Organizations*, Goodfellow Publishers, Oxford, 91-102.

- Borsa Mediterranea del Turismo, 2021, *Il Turismo Enogastronomico protagonista: attira sempre più italiani e stranieri*, https://bmtnapoli.com/il-turismo-enogastronomico-protagonista-attira-sempre-piu-italiani-e-stranieri (access on 10 January 2022).

- Capolupo, N., Giampaola, V., Piscopo, G., 2020, "The 'Dark Power' of Instagram: Prospects and Threats for Tourism Organisations", *International Journal of Island Research*, 1, 1, 57-72. https://doi.org/10.21427/ed9w-h862.

- Contois, E.J.H., Kish, Z., 2022, *Food Instagram: Identity, Influence, and Negotiation,* University of Illinois Press, Champaign.

- Du Rand, G.E., Heath, E., 2006, "Towards a framework for food tourism as an element of destination marketing", *Current Issues in Tourism*, 9, 3, 206-234, https://doi.org/10.2164/cit/226.0.

- Fabricant, F., 2007, "So Naughty, So Nice", New York Times, https://www.nytimes.com/2007/02/14/dining/14velv.html (access on 5 February 2024).

- Fusté-Forné F., Filimon, N., 2021, "Using Social Media to Preserve Consumers' Awareness on Food Identity in Times of Crisis: The Case of Bakeries", *International Journal of Environmental Research and Public Health*, 18, 6251, https://doi.org/10.3390/ijerph18126251.

- Graziano, T., 2020, "Nuovi foodscapes e turistificazione. I mercati storici

come frontiere di gentrification?", *Etnografie del contemporaneo*, 3, 3, 865-897.

- Le Busque, B., Mingoia, J., Litchfield, C., 2022, "Slow tourism on Instagram: an image content and geotag analysis", *Tourism Recreation Research*, 47, 5-6, 623-630, https://doi.org/10.1080/02508281.2021.1927566.
- Lepkowska-White, E., 2017, "Exploring the challenges of incorporating social media marketing strategies in the restaurant business", *Journal of Internet Commerce*, 16, 3, 323-342, https://doi.org/10.1080/15332861.2017.1317148.

- Lin, Y.C., Pearson, T.E., Cai, L.A., 2011, "Food as a form of destination identity: A tourism destination brand perspective", *Tourism and Hospitality Research*, 11, 1, 30-48, https://doi.org/10.1057/thr.2010.22.

- López-Guzmán, T., Torres Naranjo, M., Pérez-Gálvez, J.C., Carvache Franco, W, 2018, "Gastronomic Perception and Motivation of a Touristic Destination: The City of Quito, Ecuador", *GeoJournal of Tourism and Geosites*, 21, 1, 61-73.

- Messina, G., 2020, Social media e turismo, dinamiche transcalari. In: Zilli S., Modaffari, G. (Eds.), *Confin(at)i/Bound(aries). Memorie Geografiche*, Società di Studi Geografici, Firenze, 129-135.

- Philp, M., Jacobson, J., Pancer, E., 2022, "Predicting social media engagement with computer vision: An examination of food marketing on Instagram", *Journal of Business Research*, 149, 736-747, https://doi.org/10.1016/j.jbusres.2022.05.078.

- Privitera, D., 2020, "A view on culinary tourism - case study of Catania, Italy", *Geography and Tourism*, 1, 8, 105-114, https://czasopisma.ukw.edu.pl/index.php/gat/article/view/137.

- Red Academy", n.d., "Bakery: la pasticceria americana tra tradizione e innovazione, https://redacademy.it/bakery-pasticceria-americana/#colazione (access on 5 February 2024).

- Roudometof, V., 2016a, *Glocalization. A Critical Introduction*, Routledge,

Oxon-New York.

- Roudometof, V., 2016b, "Theorizing glocalization: Three interpretations", European Journal of Social Theory, 19, 3, 391-408, https://doi.org/10.1177/1368431015605443.

- Rousta, A., Jamshidi, D., 2019, "Food tourism value: Investigating the factors that influence tourists to revisit", *Journal of Vacation Marketing*, 26, 1, 73-95, https://doi.org/10.1177/1356766719858649.

- Rummo, P.E., Cassidy, O., Wells, I., Coffino, J.A., Bragg, M.A., 2020, "Examining the Relationship between Youth-Targeted Food Marketing Expenditures and the Demographics of Social Media Followers", *International Journal of Environmental Research and Public Health*, 17, 5, 1631, https://doi.org/10.3390/ijerph17051631.

- Singh, M., 2020, "Instagram marketing - The ultimate marketing strategy", *International Journal of Advance and Innovative Research*, 7, 1, 379-382.

- Solanky, M., Gupta, S., 2022, Social Media Transforming Tourist Behavior: Leading Towards Overtourism. In: Hassan, A., Sharma, A. (Eds)., *Overtourism, Technology Solutions and Decimated Destinations*. Springer, Singapore, 47-64.

- Sormaz, A., Ruoss, E., 2020, Social Media to Balance Tourism Flow in Natural Heritage Destinations. In: Cantoni, L., De Ascaniis, S., Elgin-Nijhuis, K. (Eds.), *Proceedings" of the Heritage, Tourism and Hospitality International Conference HTHIC2020 "Living Heritage and Sustainable Tourism,* Università della Svizzera italiana, Lugano, 15-28.

- Spence, C., 2022, "Interacting with food: Tasting with the hands", *International Journal of Gastronomy and Food Science*, 30, 100620, https://doi.org/10.1016/j.ijgfs.2022.100620.

- Srivastava, R., Chawla, S., Popat, V., 2020, "Social media. A new platform for mass marketing", *International Journal of Advance and Innovative Research*, 7, 1, 238-240.

- Unger, S., Grassl, W., 2020, "Insta-Holidays and Instagrammability", *Journal of Tourism Leisure and Hospitality*, 2, 2, 92-103, https://deregipark. org.tr/en/pub/toleho/issue/56188/764974.

5. Social media and the iconization of natural landscapes in tourism discourse

Simone Gamba

5. Social media and the iconization of natural landscapes in tourism discourse

Simone Gamba[1]

Abstract

The chapter discusses the impacts of tourism and digital technology enhancements on natural and mountain landscapes. Over the past two decades, nature tourism destinations witnessed an increase in interest, more recently and partially driven by the pandemic that has favored outdoors and proximity tourism. Jointly, with the advent of Web 2.0, digital communication, and user-generated content, visual storytelling is increasingly shaping tourism practices and places (Giudici *et al*., 2021; Piva & Tadini, 2021; Savi & Emanuel, 2021). The role of photography and video shooting shifted from being a mere playful act into an empowerment tool that iconizes reality. Given these premises, the chapter addresses the social media imaginary produced by tourists in visual representations of natural landscapes, notably mountain destinations, to understand the effects of geo-referencing and online sharing by e-communities committed to travel blogging. It is the case of Horseshoe Bend Canyon, Lake Braies, and Val Verzasca, where sudden popularity on social media caused overcrowding issues. As content sharing may result in the transition of an unspoiled place to a desirable destination, the focus is on the narrative devices employed since the origin of landscape iconography, from romantic paintings to contemporary post-photography; also, on the relationship between tourism and spreadability (Jenkins, 2013) and the concept of the social landscape in which images influence the perception of a place and its promotion, flattens tourism experience, standardize behaviors and the tourist gaze (Urry & Larsen, 2011).

Keywords:
Social media, tourist gaze, landscape photography, overtourism, mediatization

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1. Tourism and the mediatization of nature

Over the past two decades, we have witnessed a growing interest in nature tourism destinations. The COVID-19 pandemic has contributed to an increase in the desire to visit open spaces with scenic views and to an intensification of flows to natural areas - considered safe because outdoors -, also boosting proximity tourism (Giudici *et al.*, 2021; Piva, Tadini, 2021; Savi, Emanuel, 2021).

Yet, the radical change in the perception of tourism's impact that emerged before the pandemic, (Dodds, Butler, 2019), has returned to arouse interest. To help provide a key for fragile ecosystems to face the risks induced by overtourism, it is appropriate to find answers to questions such as: what is the role played by visual media and social communication in the transformative processes of the territory, landscapes, and nature?

Media have become integral to almost all aspects of modern life and significantly impact how society functions, including how we perceive, understand, and engage with various phenomena. Indeed, *mediatization* refers precisely to the experience of the real as a result of the mutual co-construction of technology, sociality, and spatiality (Leszczynski, 2015).

As a mediated object, nature isn't just a physical entity with material characteristics, it also carries a symbolic meaning. As represented, shared, and employed in user-generated content and visual storytelling, it plays a crucial role in shaping and influencing tourist activities, which affects the environment and human experiences. The result of this mediatization, in essence, is the transformation of a given portion of territory into a desirable landscape for tourist consumption.

In other words, when the tourist – in the following paragraphs often addressed as "user-tourist" - performs a mediated representation of a natural landscape, this becomes a background and either environmental or architectural spectacle for consumers supposedly looking for authentic aesthetic experience (Minca, 2002).

2. Theoretical framework

Digital communication is largely employed by tourists, particularly in younger age groups, more inclined to content-sharing through social media, providing specific spatial representations. Given the considerable

pervasiveness afforded by modern technological devices, the use of these tools raises theoretical and practical questions, which fit into an ongoing debate begun, among others, with the *spreadable media* conceptualization (Jenkins *et al*., 2013), about people's motivations for disseminating data and images online.

Users make socially contextualized decisions when choosing to spread the image of a visited location, based on questions such as: is it content worth spending time on? Is it worth sharing? Can it be interesting to some specific person or niche of people? Does it communicate something about me or my relationship with this location? What is the best platform to spread it, and how to maximize views? Communicating a destination means, conveying information and creating visual narratives (Robinson, Picard, 2009): photos, but also videos, reviews, and so on.

Social media like Facebook, Instagram, YouTube and more recently TikTok have changed how tourists get recommendations, reviews, and insights from other travelers. These platforms are valuable sources of travel information because they allow travelers to access a broad array of user-generated content, such as images, videos, and personal narratives, which greatly influence their destination choices (Sigala, Gretzel, 2012). In other words, sharing information and images makes tourists co-developers of tourism products and promoters of territories (Savi, Emanuel, 2021).

Therefore, the current research draws on visual geography methodology, studies about media in tourism practices, and presents some case studies with the intention of a theoretical reflection. The next paragraphs aim to reflect upon the narratives conveyed by user-tourists on social media to understand how the mediatization of places and landscapes generates tourist icons, with a brief historical reconstruction of landscape imagery. The narratives provided by user-tourists are analyzed mainly through a selection of Instagram photos.

The geolocated posts to which the case studies refer are selected based on their popularity and *spreadability* to identify destinations of greatest interest to user-tourists and the common elements in the representation of geographical spaces. The content analysis is carried out according to keywords, categories, and hashtags related to recent tourist hotspots considered as new desirable "must-see destinations". Users who engage with travel-related content are targeted to identify patterns, motivations, and behavioral changes to question the material consequences of the massive presence of tourists in almost or unspoiled areas.

Secondly, the aim is also to give a short insight into social media storytelling's effect to comprehend how photo-sharing and geotagging may foster or, on the

contrary, hinder tourism planning. Photo-sharing is a topic already addressed in the literature to understand tourism preferences (Garcia-Palomares *et al*., 2015), and the effects of social media on destination selection and decision-making have gained significant attention in tourism research. Scholars dealt with distinguishing residents'perspective from that of the locals (Garcia-Palomares *et al*., 2015), mapped the intensity of photographs on photo-sharing services (Kisilevich *et al*., 2010), and examined the effect of user-generated content in tourism and travel information searches (Fotis *et al*., 2012; Jacobsen, Munar, 2012; Xiang, Gretzel, 2010). As a result, a specific imaginary emerges from stories, comments, and images posted, which not only helps to understand the tourist's perception of a place but also conditions the fruition and planning of the tourist destination (Morazzoni, Zavettieri, 2021; 2023).

3. A controversial canyon

The enjoyment of the tourist experience begins on social media (Leung *et al*., 2013), even before the trip, and ends only once the experience is over when photographs and experiences are available to networks of friends or other potential tourists (Munar, Jacobsen, 2014). The growing tendency to share potentially attractive images during the trip, portraying certain places as evocative and worth visiting, has at least two consequences.

Firstly, as we will see, the imaginary produced and shared by individuals converges substantially toward an aesthetic uniformity, ending up in standardized models, forms, and structures in which the extraordinary, by a multiplicative effect, is soon reduced to the ordinary. A seemingly spontaneous act of taking a picture or filming a video is transformed into data processed by an algorithm that categorizes and distributes the data, assigning it a value and a position in the digital environment.

Figure 1. Horseshoe Bend. Source: Instagram, #horseshoebend.

The second consequence is related to the so-called "Instagram effect" which boosts the popularity of a point of interest or *Insta-spot* (Ungera, Grassi, 2020) when highlighted on social media, regardless of its accessibility and carrying capacity (Miller, 2017). As contents generated by other tourist users who have already traveled to the same destination are perceived as more reliable than official tourism websites, travel agencies, and mass media advertising (Xiang, Gretzel, 2010), it is not hard to imagine how rapid the spread can be.

Furthermore, a given location may become rapidly viral through *geotagging*. Such a practice has caused concern in America and spurred the emergence of the Leave No Trace movement[2]. The easiness of geotagging, together with new media roles such as influencers and content creators provided travel storytelling with unprecedented power. A clear example of geotagging and content-sharing effect on social media is the case of Horseshoe Bend in Arizona (Shi *et al.*, 2021; Vanderberg, 2023). Around a decade

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[2] Leave No Trace is a list of behavioral principles to keep in outdoor places compiled by the Leave No Trace Center of Outdoor Ethics (the principles are as follows: plan and prepare; travel and camp on durable surfaces; dispose of waste properly; leave what you find; minimize fire impacts; respect wildlife; be respectful of other visitors).

ago, this site on a meander of the Colorado River began to be identified by visitors as particularly picturesque because of its horseshoe shape - hence the name in English - and stunning panoramic views on the canyons (**Fig.1**).

Horseshoe Bend has gained such immense popularity that within just a few years, it has attracted an astonishing number of visitors. By 2018, the number of annual visitors had grown to about 2 million visitors, or about 5,000 visitors a day[3]. Local authorities claimed that the area was not remotely prepared to accommodate such an amount of people and that the lack of traditional security services normally guaranteed by the presence of rules and appropriate spatial delimitations, put safety at risk (National Park Service, 2018).

4. An historical imaginary of the natural landscape

The case of the aforementioned American canyon is neither geographically isolated nor without historical precedent. Media, particularly visual media, have long played a role in the social construction of outdoor experiences (Urry, 1990; Urry, Larsen, 2011). They can be viewed as a practice rather than merely a representation , actively participating in the world instead of just reflecting it (Crang, 1997).

Landscape painting and nature photography have influenced the way we visually represent open spaces since the earliest days. The very act of shooting is part of the historical process of shaping symbolic landscapes and imaginative geographies. In Western cultures, landscapes shifted from being a mere background to becoming a central theme in Flemish paintings from the XIV century onward (Berque, 2019). The influence on contemporary landscape imagery, however, comes from XIX-century artists who often portrayed landscapes as a rural idyll or the sublime, positing humans as solitary observers watching over the landscape (Smith, 2019). Artists such as J.M.W. Turner, John Constable, and Thomas Cole, each with their style, celebrated nature, emotion, and the sublime, often depicting humans as small and contemplative figures within the *grandeur* of the natural world. Plus, capturing images of visited locations has been a tradition for travelers since the era of the *Grand Tour*, often in the form of a pictorial portrait next to a monument or landscape. With the emergence of photography, the inclination

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[3] Charlotte Simmonds, *et al.*, "Crisis in our National Parks: How Tourists are Loving Nature to Death," The Guardian, November 20, 2018: https://www.theguardian.com/environment/2018/Nov/20/national-parks-america-overcrowding-crisis-tourism-visitation-solutions.

to represent a subject according to historical aesthetic categories and the desire to visually represent experiences remains unchanged, although nowadays, with smartphone ad platforms like Instagram, the "tourist performance" has evolved (dell'Agnese, 2018).

Yosemite Valley, in California, became an iconic natural subject reproduced first in an oil painting (**Fig.2**) and, only a few years later, by a photographer (**Fig.3**), albeit the latter with a slightly different framing. Despite the subject being the same and photography being inspired by painting, something has occurred along the way, with the shift from analog to digital, from image production intended either for personal use or addressed to a limited network of viewers to wider digital content publishing.

From an aesthetic point of view, in the case of Horseshoe Canyon images, the subject, framing, and intentions seem to match the "romantic gaze" associated with the wild and majestic natural landscapes of the Yosemite Valley. Nevertheless, the compulsive sharing enabled by new media may contribute to unintended consequences. The overabundant proliferation of images available daily in the media seems to have progressively altered our processes of perception and signification.

Our actions are often the result of our ongoing relationship between ourselves - and our intentions - and the devices through which we tell our stories as subjects/objects in places that are experienced, co-constructed, and shared in media environments. A more complete understanding of this phenomenon has not only conceptual implications but also practical ones.

Figure 2 (left). Albert Bierstadt, *Looking Down Yosemite Valley, California*, 1865. Source:https://www.artsbma.org/collection/looking-down-yosemite-valley-california/.

Figure 3 (right). Carleton E. Watkins, *Looking Down Yosemite Valley*, 1872, https://www.metmuseum.org/art/collection/search/264908.

5. The algorithm and the tourist gaze

The rapid growth of Instagram and its integration into everyday life have transformed it into a significant source of travel inspiration, recommendations, and information (Sigala, Gretzel, 2012). Every day 95 million photographs are uploaded to Instagram[4], meaning that less than every two seconds people take more photos than were taken in the first 150 years of photography history. Can we browse this visual magma? Hardly so. The sophisticated algorithms underlying digital platforms' basic functions take care it on our behalf. Such a context of algorithmic dominance is inherently set up to the reassuring standardization of the gaze and confine user-tourists in a *filter bubble* that, in this case, is in all evidence that of a tourist postcard icon.
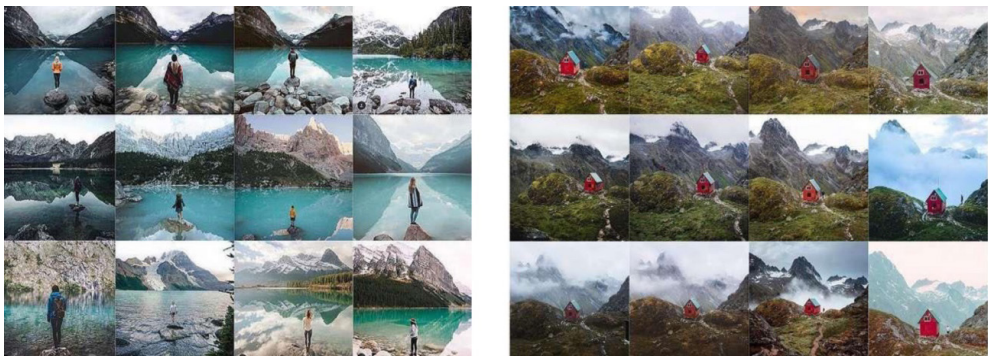
Figure 4. Insta_repeat. Source: Instagram.

As the user-tourist imagery conveyed through social media follows aesthetic patterns and specific representations (Skinner, 2022), one will not be surprised when introduced to Insta_repeat (fig.4). This Instagram account serves as an aggregator of images in which natural sceneries in Canada and the United States are framed almost identically, showing the extreme homogeneity of posted content and a clear standardization of the gaze. Paradoxically, images taken to frame the beauty of a scenic view end up being reduced to ordinariness, matching representational clichés (Dondero, 2005). The authenticity of the experience is shaped by these representations, turning the landscape into a commodified product for tourist to consume (Urry, 1990). Although, as we know, the mimetic desire of tourists dates back to the Grand Tour, nowadays they can express their vision through more

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[4] https://earthweb.com/how-many-pictures-are-on-instagram/ , last access: December 18, 2023.

advanced devices and the results are, as in this case, stereotypical narratives, where the plurality of possible subjects is reduced to a single dimension.

What Insta_Repeat has accomplished in Canada can be similarly replicated elsewhere, for example, in the context of the Italian alpine landscape. Through a procedure based on targeted keyword *tagging,* images that can be aggregated on the model of Insta_repeat are strikingly similar (**Fig.5**). They reveal a propensity for repetition that neutralizes the self-perceived originality of the experience to which the authors of the shots seem to aspire.

Such iconographic reiteration may be attributable to the very characteristics of the social media algorithms to spread repetitive tropes while showing relevant content to single users. However, there is another reason why we might have the impression of always seeing the same frames and subjects in social media photos. The reason lies in the fact that taking pictures is not simply an individual gesture, but a participatory action in a collective ritual (Bell & Lyall, 2005)—a typical ritual of the hypermobility era: shoot and share. User-tourists and, in particular, so-called influencers, travel bloggers, or "TikTokers", just like a professional filmmaker or photographer, perform an act by which they sacralize a place and make it a destination for pilgrimage by their worshippers – followers -, who will then repeat the same ritual of the shared snapshot or video (Jurgenson, 2019; Zhou, 2022; Trillò *et al*., 2022).

6. The end of romantic contemplation?

Moreover, the moment a given panoramic view is considered photogenic enough to become "Instagrammable", the very sanctity of the place is compromised due to the risks associated with overcrowding (UNWTO, 2018). In this regard, the case of Lake Braies or Pragser Widsee in South Tyrol, initially popularized in Italy by the TV show "A un Passo dal Cielo" is striking evidence[5].

While taking a photograph that has already been seen and seen again thousands of times in front of Lake Braies, user-tourists are perpetuating the well-established romantic pattern. In Caspar David Friedrich's "The Wanderer on the Sea of Fog"[6] we recognize the figurative device known as *Rückenfigur,*

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[5] The same argument applies, for example, to Hallstatt, the Austrian village that inspired the Frozen cartoon. https://www.euronews.com/my-europe/2020/01/20/quality-of-life-has-deteriorated-mayor-of-austrian-town-taking-new-measures-against-overt, last access: December 18, 2023.

[6] https://www.hamburger-kunsthalle.de/sammlung-online/caspar-david-friedrich/

that is, a character seen from the back, lost in the contemplation of nature, with whom the observer identifies. This model is often adopted unwittingly by the many users who post images of people portrayed from behind, intent on admiring a valley or on the prow of a wooden boat in Lake Braies (**Fig.5**).

Figure 5. Lake Braies, South Tyrol. Source: Instagram.

Just as white sand, coconut palms, and crystal-clear waters are maritime icons showcased to attract tourists, in the same way, mountain landscape iconic views become central in the gaze of tourists or hikers, in a paradoxical relationship between tourist massification and the wilderness search (Sedda, Sorrentino, 2020). As in romantic picturing, leveraging emotion remains a current practice, with the difference that, nowadays, the subject's emotions and their contemplation are regulated by the inner logic of the digital algorithm, a computational system designed to enhance user engagement, satisfaction, and platform growth.

Nevertheless, when technical rationality leads to standardization, as in this case, the tourist experience's serendipity, that is the ability or need to discover something new and different from what we are used to, is neutralized (Tanca, 2019). This happens under conditions of overexposure to data, issues that are not framed into the dominant narrative end up blending into informational *fuzziness* (Turco, 2021). The experience of contemplation is eclipsed by

wanderer-ueber-dem-nebelmeer, last access: December 18, 2023.

the very same mechanisms involved in confirmation bias and filter bubbles attributable to algorithm curation.

Similarly, the tourist who witnesses a potentially "Instagrammable" event risks not grasping the deep and aesthetic density of the contemplation experience, rather is simply induced to the reproduction of a stereotyped image.

7. The material consequences of iconization

Since the 1990s, a discourse has emerged in fine arts studies around the concept of post-photography, which refers to photography that flows into the hybrid space of digital sociality as a result of visual overabundance (Fontcuberta, 2015). The spread of digital cameras, personal computers, and increasingly user-friendly graphics processing and photo editing features have long been signs that photography is entering a new phase.

An excess of images has long been considered a characteristic of the contemporary world, a sign of "supermodernity", (Augé, 1992). From a geographical perspective, the excess of images produced particularly by television, to which Augé referred, with the new media intensifies and causes spatial disorientation, challenging the possibility of mapping. The purpose of a map is to abstract and synthesize information to facilitate our orientation on the ground and, for that reason, it must filter the mass of big data to retain only those pertinent to a focused analysis. Borges' unrealizable map of the empire in his *A Universal History of Infamy,* which superimposes on every fold of the land its graphic transposition, hypothetically is now reproducible, only in the metaverse. We would be lost, however, should it be, in the indiscriminate amount of detail, as infinite information equals zero information.

Again, when and where user-tourists employ social media to share videos and photos of natural landscapes , not only an overabundance of images is produced, but also as a consequence a multiplier effect that conveys flows of visitors to those areas.

Therefore, to the five characteristics (innovator, informed, impatient, deluded, unfaithful) that tourism marketing ascribes to the contemporary tourist (Ejarque, 2011), one more might be added: flooded. Perpetually connected, the user-tourist floods– and is flooded- with a multitude of information and messages that affect his selection process and choice of destinations. In this sense, social media algorithms function as a compass: viral content directs flows toward a new destination in such a short period as

to cause overcrowding.

For example, in the summer of 2017, a valley in the Canton of Ticino, benefited from a spontaneous media campaign by a group of teenagers, that generated a faster increase in visitors than we might expect from Swiss territorial marketing. A video they shot in the clear waters of the Brione River in the Verzasca Valley went viral within hours, with the headline "The Maldives an hour from Milan"[7], resulting in tourist flows far exceeding seasonal averages, as the spike in Google we research requests suggests (**Fig.6**).
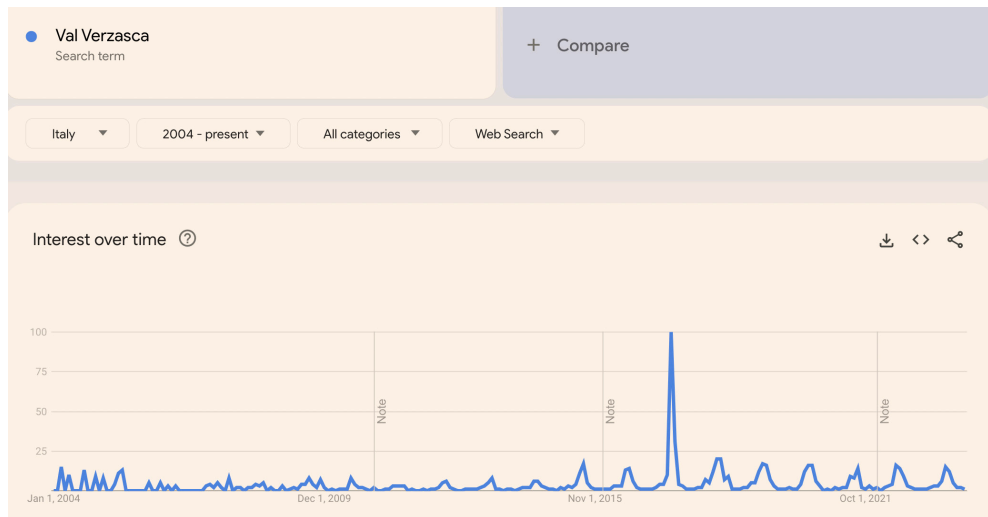
Figure 6. Val Verzasca results in web searches. Source: Google Trends.

Identifying representations by user-tourists during the exploration phase of new potential destinations, could allow public and private stakeholders to develop strategies to increase its value, plan access more consciously, propose new tourist itineraries, and stimulate the local community.

The problem is that the transcience of the trending topic makes long-term planning complicated. Since the role of photography and video footage shifted from a mere playful, memorial moment to a tool of *empowerment* that iconizes the real, some material consequences arise. Such iconization contributes to substantial demand volatility, frequency, and quantity of

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[7] *La Repubblica*, "Le Maldive a un'ora da Milano": la Val Verzasca invasa dai turisti dopo il video virale", https://www.repubblica.it/viaggi/2017/07/23/news/_le_maldive_a_un_ora_da_milano_la_val_verzasca_invasa_dai_turisti_dopo_il_video_virale-171449999/ last access: December 16, 2023.

tourist flows challenges policy intervention by destination management organizations (DMOs) . Moreover, although local policymakers and stakeholders have long considered tourism a large development opportunity for years, this perspective has been questioned and it is not taken for granted that tourism development must necessarily be pursued (Higgins-Desbiolles *et al*., 2019).

8. Final reflections

We explored the transformative impact of technology on contemporary tourism practices by focusing on the role of social media and geotagging. The evolution of these technologies has significantly altered tourism, providing destinations with increased visibility and spreadability. A hybrid state between reality and virtuality is produced and communicated through a certain selection of images, a *cyberplace* (Albanese and Graziano, 2020), or, in other words, a space where personal interpretations spread massively through new media, transferring our visions to others. Social media users iconize nature, turning landscapes into alluring destinations, exemplified by Horseshoe Canyon. Destinations shared online are portrayed either as "must-see landscapes" or "places to see at least once in a lifetime".

Drawing parallels between modern tourist behavior and historical-artistic trends, particularly the romantic appreciation of landscapes in painting and then photography, we pointed out similarities with visual practices of the past. Nowadays social media facilitates the rapid and wider dissemination of destinations, reinforcing the standardization of subjects and the ritualization of practices, dividing locations into those deemed Instagram worthy and others not. This standardization results in a superficial and trivialized experience of a place, where the visual representation and content sharing of the location take precedence.

Also, an erosion of the indexical relationship between subject and image can be observed, in favor of digital fluidity (Gunthert, 2015), which involves immediate commentary and re-sharing. Two main consequences of this practice have emerged: the first, as already mentioned, is a stereotypical reproduction of naturalistic views to enhance the aesthetic qualities of the landscape; the second is that these representation patterns and rapid diffusion contribute to the success of a new tourist destination with transformative effects and potential overtourism issues.

User-tourists do not only offer and share their representation of places

through Instagram, but through their practice, they contribute to directing and re-directing tourist flows. Consequently, a pattern of intense and unstable place consumption can be identified, making tourism and environmental management challenging due to its susceptibility to trends. In summary, a complex interplay can be noticed between technology, social media, and tourist behavior, leading to a shift in the travel experiences and the challenges faced by territories.

The transformation of places into tourist destinations due to photo sharing, geotagging, and visual storytelling through digital platforms has both positive and negative consequences. First, the popularization through iconization of landscapes can attract a larger number of tourists, leading to increased revenue for local businesses, accommodations, and tour operators. The influx of tourists may drive local governments to invest in infrastructure development, improving amenities and services in response to the increased demand. Popularization may also lead to increased awareness of the need for conservation, prompting local communities and authorities to invest in preserving natural and cultural assets, in particular environmental management solutions such as spatial zoning, concentration or dispersal of tourists, and entry restrictions. This is due to high tourist numbers that can lead to overcrowding, and commodification, putting strain on local resources and ecosystems, resulting in environmental degradation and loss of the destination's appeal.

Understanding these consequences is crucial for tourism planners, policymakers, and local communities to develop sustainable tourism practices that balance the positive economic benefits with the need for environmental and cultural preservation.

References

- Albanese, V., Graziano, T., 2020, *Place, cyberplace e le nuove geografie della comunicazione. Come cambiano i territori per effetto delle narrazioni online*, Bononia University Press, Bologna.

- Augé, M., 1992, *Non-lieux. Introduction* à *une anthropologie de la surmodernité*, Le Seuil, Paris.

- Barthes, R., 1980, *Camera Lucida: Reflections on Photography*, Hill and Wang, New York.

- Bell, C., Lyall, J., 2005, "'I was here': pixelated evidence". In: Crouch D., Jackson R., Thompson, (Eds.), *The Media and the Tourist Imagination: Converging Cultures*, Routledge, London.

- Berque, A., 2019, *Ecumene: Introduzione allo studio degli ambienti umani*, Mimesis, Milano.

- dell'Agnese, E., 2018, *Bon voyage. Per una geografia critica del turismo*, UTET, Torino.

- Dodds, R., Butler, R., 2019, *Overtourism: Issues, realities and solutions*, De Gruyter Oldenbourg, Berlin and Boston.

- Dondero, M. G., 2005, "Scenari del sé e monumenti in posa nella fotografia turistica", *E/C. Rivista dell'Associazione Italiana di Studi Semiotici*, 2, 1-19.

- Ejarque J., 2011, *La destinazione turistica di successo*, Hoepli, Milano.

- Fotis, J., Buhali, D., Rossides, N., 2012, "Social Media Use and Impact during the Holiday Travel Planning Process". In: Fuchs, M., Ricci, F., Cantoni, L. (Eds), *Information and Communication Technologies in Tourism*, Springer, Vienna.

- Fontcuberta, J., 2015, *The Post-Photographic Condition*, Kerber Verlag, Berlin.

- García-Palomares, J.C., Gutiérrez, J., Mínguez, C., 2015, "Identification

of tourist hot spots based on social networks: A comparative analysis of European metropolises using photo-sharing services and GIS", *Applied Geography*, 63, 408-417.

- Giudici, D., Dezio, C., Donadoni, E., Fera, A., 2021, "Un modello di ripartenza post Covid per i territori fragili di montagna: il caso di TWIN", *Territorio*, 97, 2, 102-112.

- Gunthert, A., 2015, *L'image partagé. La photographie numérique*, Editions Textuel, Paris.

- Higgins-Desbiolles, F., Carnicelli, S., Krolikowski, C., Wijesinghe, G., Boluk, K., 2019. "Degrowing tourism: rethinking tourism", *Journal of Sustainable Tourism,* 27,12, 1926-1944.

- Jacobsen, J.Kr.S., Munar, A.M., 2012, "Tourist Information Search and Destination Choice in a Digital Age", *Tourism Management Perspectives,* 1, 39-47.

- Jenkins, H., Ford, S., Green, J., 2013, *Spreadable Media: Creating Value and Meaning in a Networked Culture*, New York University Press, New York.

- Jurgenson, N., 2019, *The Social Photo: On Photography and Social Media*, Verso Books, New York.

- Kisilevich, S., Krstajic, M., Keim, D., Andrienko, N., Andrienko, G., 2010, "Event-Based Analysis of People's Activities and Behavior Using Flickr and Panoramio Geotagged Photo Collections", *14th International Conference Information Visualisation*, London, 289-296.

- Leszczynski, A., 2015, "Spatial media/tion", *Progress in Human Geography,* 39, 6, 729-751.

- Minca, C., 2001, "Il paesaggio come oggetto di consumo", *Beni culturali territoriali regionali: siti, ville e sedi rurali di residenza, culto, lavoro tra ricerca e didattica,* Atti del convegno di studi, Urbino, September 27-29, 339-346.

- Miller, C. "How Instagram is changing travel. National Geographic."

2017. https://www.nationalgeographic.com/travel/travel-interests/arts-and-culture/how-instagram-is-changing-travel/, last access 16/06/2023.

- Morazzoni, M., Zavettieri, G., 2021, "Instagram e Visual Tourism. La rappresentazione delle destinazioni turistiche in Oman", *Memorie Geografiche*, 19, Società di Studi Geografici, Firenze.

- Morazzoni, M., Zavettieri, G., 2023, *Geografia, nuove tecnologie e turismo*, Carocci, Roma.

- National Park Service, 2018, Glen Canyon National Recreation Area Park Statistics, https://www.nps.gov/glca/learn/management/statistics.htm, last access 16/06/2023.

- Piva E., Tadini M., 2021, "La geografia della montagna tra interpretazioni, progettualità e percorsi di sviluppo turistico", *Semestrale di Studi e di Ricerche di Geografia*, 2.

- Robinson, M, Picard, D., 2009, *The Framed World: Tourism, Tourists and Photography*, Routledge, London.

- Shi, M., Janowicz, K., Cai, L., Mai, G., Zhu, R., 2021, "A Socially Aware Huff Model for Destination Choice", *Nature-based Tourism, AGILE: GIScience Series*, 2, 14.

- Savi P., Emanuel C., 2020, "Le tecnologie digitali per la rivitalizzazione turistica della montagna debole". In: Lazzeroni M., Morazzoni M., (Eds.), *Interpretare la quarta rivoluzione industriale. La geografia in dialogo con le altre discipline*", Carocci, Roma.

- Sedda, F., Sorrentino, P., 2020, "Piaceri e tormenti dell'isola paradiso". In: Pezzini I., Virgolin, L., (Eds.), *Usi e piaceri del turismo. Percorsi semiotici,* Aracne, Roma.

- Smith, S. P., 2019, "Landscapes for 'likes': Capitalizing on travel with Instagram", *Social Semiotics*, 31, 4, 604-624.

- Sigala, M., Christou, E., Gretzel, U., 2012, (Eds) *Social media in travel, tourism and hospitality. Theory, practice and cases,* Ashgate, Surrey.

- Skinner, H., 2022, "Online destination image and user-generated content". In: Gursoy, D, Kaurav, R.P.S, (Eds.), *Handbook on Tourism and Social Media*, Edward Elgar Publishing, Cheltenham (UK), 110-124.

- Tanca, M., 2019, "L'algoritmo del paesaggio. Selfie e sprezzatura del reale". In: Cavedagna, V., Dutto, A.A., (Eds.), *EXTRA#3 - Schema. Verso un dizionario filosofico-architettonico*, 131-144.

- Trillò, T., Hallinan, B., Shifman, L., 2022, "A typology of social media rituals", *Journal of Computer-Mediated Communication*, 27, 4.

- Turco, A., 2021, *Epimedia, Informazione e comunicazione nello spazio pandemico*, Unicopli, Milano.

- Ungera, S., Grassl, W., 2020, "Insta-holidays and Instagrammability", *Toleho Journal of Tourism, Leisure, and Hospitality*, 2, 2, 92-103.

- UNWTO, 2018, "Overtourism'? Understanding and managing urban tourism growth beyond perceptions", Madrid.

- Urry, J., 1990, *The Tourist Gaze: Leisure and Travel in Contemporary Societies*. Sage Publications, London.

- Urry, J., Larsen, J., 2011, *The tourist gaze 3.0*, Sage, Los Angeles.

- Vanderberg, K., 2023, "Mimetic Consumption of the World: Social Media and Overtourism". In: Regensburger, D., Wandinger, N., (Eds), *Imagining the Other: Mimetic Theory, Migration, Exclusionary Politics, and the Ambiguous Other*, Innsbruck University Press, Innsbruck.

- Xiang, Z., Gretzel, U., 2010, "The Role of Social Media in Online Travel Information Search", *Tourism Management*, 31, 179-188.

- Zhou, Y., 2022, Social Media Platforms and Representations of the Urban Landscape, *International Journal of Education and Humanities*, 4,1, 115-119.

6. Heritage and tourism: the case study of the Magna Grecia Park

Mattia Spanò

6. Heritage and tourism: the case study of the Magna Grecia Park

Mattia Spanò[1]

Abstract

The purpose of the paper is to show in the wider regional context the Magna Grecia Park project, which consists in the construction of a monumental theme park in Crotone's province, inspired by the VI century BC Magna Graecia, when the city was a leading *polis*. To give back its lost centrality is the designers' and promoters' main intent, believing the park could be an opportunity of growth and development. It's a massive operation, established on the crossed actions of private investors, public institutions, and civil society. Thus, great attention is needed to evaluate the pros and cons of the MGP in the bigger picture. The stakeholder analysis has been a crucial tool to find a general trend: the actors involved stressed out the possible positive impact, although underlining the severe absence of a functioning infrastructure could constitute an obstacle.

> As a discipline investigating relationships between terrestrial inhabitants, which might be human, natural, or hybrid, geography could have a key role in social sciences, putting on display the multi-scalar network constituting the Earth, specially between semiotic and bio-geographic spheres through which pass social relationships (Dematteis, 2021, p. XX).

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1. Introduction: origins and future

I would like to delve into the heart of the matter of this paper by recalling some of my thoughts published in the newspaper *il Quotidiano del Sud*, dated June 27, 2022. Just few days before this date, the Magna Grecia Park project was presented in Crotone and I felt compelled to give my contribution to the cause, to shed a positive light on a tormented territory in South Italy. My contribution reconsidered the profound meaning of each *return-investment* on cultural Heritage, both material and immaterial. Such valuable gestures, each one with an *inexhaustible resonance*, can be configured as an exercise of theoretical and practical expansion. In perspective, it was then attempted to dwell on the following question: «Why investing in the past?». It was tried to expand the perimeter on one assumption working as a horizon for renovated itineraries of work: every act of returning to the past should translate into a *comprehensive rebirth* of the present.

To obtain the above-mentioned purposes, the Magna Grecia Park project should continuously and concretely help the region's rebirth. Nonetheless, it is necessary to rigorously examine the economic and environmental sustainability of the project. Thus, the hints in my previous article need to be probed in further Heritage-touristic research, that is the intention behind this paper. My study consists in a composite and multi-scale analysis in which the structure, lineaments and directions of the project disrupt in the dialogue – between past, present, and future – with the broader regional context in which the Magna Grecia Park should (or at least could) be. Since this is a complex and time-consuming manoeuvre, that requires the interaction of public and private actors, stakeholder analysis was applied, interviewing ten key actors. My purpose is to understand if the construction area, already characterized by multiple and diverse *points of interest*, could proceed towards an overall improvement that can relaunch the regional economy and tourism, through a cultural and environmental protection operation.

2. Heritage and tourism

The term Heritage is layered and ambiguous because it refers to a complex of practices that changes over time and space depending on the individual or collective using it. It is not surprising, then, that it acquired different nuances of meaning (Tunbridge & Ashworth, 1996), on which experts still debate today (Dell'Agnese & Pollice, 2021). Beyond the innumerable

perspectives composing and animating the intense debate, it is necessary to highlight a key aspect: the semantic spectrum of *Heritage* significantly exceeds the mere and obvious link with the past. Quite the opposite, it also refers to the actual exploitation of the past; consequently, the term has been hybridized with *concepts-scenarios* such as culture, identity, places, society, economy, politics, conflict (Graham *et al.*, 2000). *Heritage*, thus, embraces not only what is more properly considered the historical-natural wealth of a geographical area but also to its living culture and administration – between conservation and use; between past, present and future (Di Matteo, 2023).

These are the faces of the polyhedric weave of Heritage tourism, whose history is not less jagged nor exempt from still intense debates (Gilli, 2005). It is one of the most productive and studied segments of international tourism over the past few years. The related scientific research has mostly focused on aspects concerning supply, demand, management, interpretation-explanation, authenticity, and policy. Several key-points will be analyzed in my research, starting from a basic assumption: the historical memory of the landscape-cultural Heritage can only be realized through the dynamic protection of the same, aiming at the economic-social rebirth of the territory.

3. Retracing ancient Kroton: territory and points of interest

In my newspaper article, it was argued that now the project could allow to concretely retrace the "streets" of *Kroton*, while visiting the actual Crotone, generating an economical and cultural growth. The previous reflection stems from the project's ambition of reviving the essence of a 6th century BC Magna Graecia *polis* in the guise of a "theme park": a period when Crotone soared as one of the main philosophical, artistic, and cultural theatres.

The intention behind the project was to restore in a modern way the lost centrality of Crotone and its districts, through the help of the homonymous foundation[2], and the promised adhesions of public institutions. Thus, it's appropriate to examine the expected construction site.

So far, the foundation has selected an undisclosed site in the region around Crotone. The choice is based on the project's feasibility and sustainability. Despite being ranked almost at the end for life's quality[3], the city and its surroundings present different points of interest. It's a

[2] https://www.fondazionemgpk.it, website examined on November 3rd, 2023.
[3] https://lab24.ilsole24ore.com/qualita-della-vita/,website examined on December 18th, 2023.

worthy threshold to pause on: including a point of interest and a local variety is a necessary but non-sufficient feature of a touristic destination (Andergassen *et al.*, 2013). It's fundamental 1) to consider if these points of interest are properly exploited; 2) to give an explanation in the present study. Thus, an overview of some of these locations will be provided.

3.1 Capo Colonna

A relevant role in the region belongs to the Greek and Roman archaeological Heritage of worldwide significance. Sited around ten kilometres from Crotone, Capo Colonna is the location of the *national museum and archaeological park of Capo Colonna*. The area, with a surface around 50 hectares, touch the eastern extremity of the homonymous promontory. *Capo Colonna* derives its name from the surviving column, on the brink of the crag, of the Doric temple of *Hera Lacinia*, dated V century BC. In the extended sacred area, expanding around the temple, has emerged a more ancient cultural site containing some manufacts of the so-called *Hera's treasure*, now recollected in the *National archaeological museum of Crotone*.

By recalling the Heritage of Capo Colonna, emerges another important tile of the broader cultural mosaic: the *National archaeological museum* in Crotone is an historical institution designed to preserve the material and immaterial traces of Calabria's historical Heritage. The museum's action should be in synergy with the various actors involved in the cultural Heritage sectors (Costa, 2013, p. 74). Opened to the public in 1968, following numerous adaptations and extensions, the museum offers an expositional path that develops chronologically from the rise of the ancient Greek colony of *Kroton* to the Late Antiquity. Comparing the two museums, the one sited in Capo Colonna hosts mostly Roman relics and the partially reconstructed marble cover of the *Hera Lacinia*'s temple.

This feature underlines the historical and cultural reach of the entire archaeological site, which is beyond a simple exposition of historical frames from the Greek colonial period. The site contains the traces, both visible and invisible, of a long-course human presence dating thousands of years, in a tradition still renewing itself. Nearby the ancient city walls, – consisting of two parts: the older Greek level and the Roman level made of rhomboid blocks – it's located an *accommodating area*, dated around IV century BC; moving north, there are the remains of the Roman settlement identified as *Croto*, a colony established in 194 BC; the ruins of a Roman villa and the thermal baths, both datable around the III century AD.

Not so far from the Roman remains, rises the *Nao Tower*, erected during the XVI century by the will of the Habsburg Emperor Charles V, as part of Napoli Kingdom's coastal watchtowers. Beside the tower is located the Sanctuary of Saint Mary of Capo Colonna: constructed between the XI and the XIII century, it acquired its actual structure following a restoration in 1897. Still today, the Sanctuary is the end point of a cultural procession that the devotes of Crotone undertake the third Sunday of May, to celebrate the Virgin Mary: it's a 15 kilometres-long night-pilgrimage connected to a Greek ritual. It co-emerged alongside the pilgrimages that the inhabitants of *Kroton* conducted to honour the goddess *Hera*. Then, under a process of cultural symbiosis due to the advent of Christianity, it was reconfigured and embedded as a form of Marian worshipping. Despite being Dionysius the Aeropagite the patron saint of Crotone, celebrated on the 9th of October, the most intensely felt festivity is the one dedicated to the Virgin Mary of Capo Colonna, that involves the community beyond the mere time extension of the pilgrimage. The sacrality embedded in the site, emerging from past uses and the contemporary traditions, still echoes today.

3.2 *Capo Rizzuto Marine Protected Area*

Much more extended, partially out the municipality of Crotone, is another important point of interest: the *Capo Rizzuto Marine Protected Area*. The marine reserve, with a surface measuring around 15 thousand hectares and extending linearly for 42 kilometres, is one of the largest in Europe.

In this context, it is worth remarking that «Today, cultural heritage plays a central role in the narratives of coastal regions and in their reorganization as places and/or containers of historical, cultural, social and economic safeguards» (Ivona, 2021, p. 126).

The *Protected Area* includes a significant Heritage, both naturalistic (numerous special areas of conservation) and historical (some mentioned above). Among them, one deserves a special mention, without disrespecting the others, highlighting a site that autonomously emerged as one of the main touristic and economic point of interest: the Aragonese Castle (Fig. 1) of *Le Castella* – standing out as an important film location in many productions, which have given value to its environmental features (Nicosia, 2021).

It's important to pause on the specific features of those cultural Heritage sites, especially if described as follows:

The fortunate co-presence of natural conditions, landscape, climate […] acquires at least a triple value for the territory where they belong: they are privileged witnesses of the history and evolution of the region; they have a strong architectonic relevance; they can be prestigious sceneries used for social events (Di Liberto & Mercatanti, p. 141).

Thus, it's appropriate to pause on the possible consequences that the castle produce, and – why not? – to consider the touristic impact of art exhibitions located and hosted inside monuments and buildings, part of the cultural Heritage, as some of the recent research suggests. Indeed, they possess a certain power of attraction based on a pre-existing receptivity of the monuments: those are possible development lines that, beyond the mere fruition of the castle, constitute diversified itineraries and impulses for the growth of the region, exploiting multiple points of interest.

Speaking about castles it is worth to mention the Castle of Charles V, an IX century medieval fortress in the historic centre of Crotone. Modified across time, today the Castle has a particular architecture, weaving together different styles, tangible signs of the alternating political and social powers in the history of Crotone. Beyond the cultural offer in north-east Calabria trough museums, sites, art exhibitions, not of less interest is to examine theatre performances and music events (Tosto, 2013). Above all, from its roots, if not being the original cradle, the territory was at least one of the first and most important centre of elaboration and development at the beginning of Western Civilization.

3.3 Sila National Park

Another relevant point of interest, not so far from the construction area of the *Magna Grecia Park*, is the *Sila National Park*. Tripartite in Big Sila, Greek Sila, and Small Sila, the park's perimeter is contained in 19 municipalities, divided among three districts: Catanzaro, Cosenza, and Crotone. The total surface of the reserve is 74.000 hectares. First, it's necessary to underline the rich geologic Heritage, strongly linked to the geographic location: from the wide variety of arboreal species in the colourful woodlands (constituting the 80% of the total surface) – among which stands out the black pine of Calabria –, to the fundamental presence of ponds, used for multiple purposes; from the polychromatic fauna to the landscapes used as grazing land and plantations that speckle and shore up the wide stretch of woodlands. An interest centre that serves, overall, as the intersection among territorial tutelage, socio-economic development, and sustainable tourism, inside which it's possible to

try different activities (Skiing, trekking, sledding, rowing, mountain biking, horse riding), in a region with a high density of historical, archaeological, and natural Heritage.

Figure 1 – The Aragonese Castle sited in Le Castella (Photo by the author).

4. Magna Grecia Park

Once passing through and around the construction site of the *Magna Grecia Park*, it's necessary to consider the impressive spatial requirements of the project: 160 hectares, a feature that would make the MGP one of the largest theme parks in Italy and one among the largest in Europe considering its surface and number of attractions.

Inside the area, the project includes the reproduction of the Ionic coast from Taranto to Syracuse, along which were established the most important Greek colonies of Magna Graecia and Sicily. The *poleis*, accurately duplicated, would run along an artificial lake of 20 hectares simulating the Ionian and Tyrrhenian Sea. In these terms, the intent of the entire project, at first glance, could appear exceedingly ambitious. Surely, it's not simple to attempt a scaled reproduction of an entire seacoast spanning from two poles, covering around 400 kilometres. On the other hand, it's clear that the purpose behind the idea is to revive the overall greatness of the Magna Graecia, sacrificing the absolute loyalty, dimension-wise. Thus, as highlighted by the designer Antonio Lidonnici:

Each *polis* will have its temple, its main monumental building, its workshops, and market centre – of course, following the Magna Graecia style – on a real scale reproduction; […] some actors will recreate the inhabitants of the various structures, and advanced technologies will be used to experience the cultural heritage: virtual, augmented, mixed reality; holograms, artificial intelligence, virtual production, motion capture, motion tracking. […] Outside the city walls, but inside the perimeter of the *polis* extended area, an agricultural area (wine yards, olive groves, cereal farms) and an animal farm will be included, both equipped with educational labs.

Next to the *Polis* area, the project includes two other thematic sections: the *Village of Knowledge* and the *Ancient Greece Olympics*. The former, with the vigil stare of the statue of Pythagoras, will include a series of pavilions, divided in expositive thematic areas: it is the truly theoretic area, even though the project's concept swings from recreational to educational intentions, passing through the techno-scientific mission. The latter, instead – the *Ancient Greece Olympics* – should have inside multiple real size arenas, with re-enactments of ancient sporting events, physically or through VR technologies. Thus, as demonstrated by the planned sailing in the artificial sea, the intention is to give substance to a concrete experience, as the touristic sector ask loudly:

[…] in contemporary times, the roots of the heritage get value and significance due to the contemporary representation, thanks to the creative and educative potential, and because of ways of representation (narrative, dramas, real and hyperreal experiences, storytelling) based on entertainment and incitement (Dallari, 2013, p. 16).

These ideas are the foundation of the *vision* and *mission* of the project creators and supporters. Thus, Antonio Lidonnici uses the following words to describe what just mentioned:

The Magna Graecia Park is not only a theme park but an open-air museum of the ancient Magna Graecia: it's possible to have fun and learn at the same time; the entertainment is the medium to acquire information about the great characters of modern Western Civilization; figures that completely changed our culture, that have changed the world, and that are actual still today. […] The project, that has become highly specialized, embraces essentially the world of the ESG (Environment Social and Governance): it has not only an economic impact but mostly social, environmental, and territorial effects. […]; fundamentally, it lays on the bond among three business assets: the entertainment and the touristic sector; the environment and the natural energetic sector; the housing sector, that involves the real estate and residential business.

The project includes the residential area that, as the name suggests, it involves the construction of many accommodating structures, with a housing capacity of approximately eight thousand people. Already have been designed modules as branded residences, bungalow, suite hotels and a resort, equipped with mooring points directly connected to the residences. About that, Lidonnici states:

> The idea is not only to host the visitors of the park, but also to create an innovative area – similarly to many other parts of the world – to think in terms of long-term renting, since the structure can become, for all intents and purposes, a city. There will be sport facilities – with tennis and paddle courts, bocce fields, a gym – and a shopping centre including the services for the residents, from the doctor on call to the shops, to the grocery stores.

Together with the three thematic areas and the residential section, the project includes an administrative area, the systems area, a 9,5 hectares water park, and a shopping centre, serving also as a local agricultural market (Nicoletti, 2021). From this point of view, the park could become a showcase for local produce and companies; just as it would be possible to become an event location or an exhibition centre, using the impressive six pavilions of the exhibition complex, already included in the project.

In this frame of reference, the following quote of Walter Santagata is emblematic: «Tourism suffers from the *Grand Tour* syndrome», to avoid which «it would require structures that illustrate the story and fame of the locations, out-and-out gateways to our culture that are almost completely absent», in a way designed to provide an answer to the actual touristic needs of «bringing visitors in touch with the local traditions»; meaning also the contact with «concrete and breathing experiences, through fairs, festivals and relationships with local associations» and «typical artisanal manufacturing» (Santagata, 2013, p. 2). Thus, the project appears, considering its link with the surrounding territories, not so far from what it should be, as experts of the touristic sector inevitably outline.

Last but not least, it is the postgraduate campus, that would include a higher research institute of Magna Graecia's history: «a structure that has the ambition of becoming a hub and spoke of many centres distributed all around the world among university departments, foundations, and institutions focusing their research on Magna Graecia». These are the conclusive words of the engineer Lidonnici.

About the environmental asset, the project includes different facilities

designed to protect the environment, with the intention of realizing cutting-edge structures that, besides covering the park's energetic requirements, would also have a positive impact on the territory and the exceeding energy could be redistributed to the broader geoeconomics area. Here follows few examples of energetic facilities: a seawater purifying and desalination facility, a solar pond, a photovoltaic production facility, and an aerobic bio-digestive system to dispose of all the waste of the entire park.

In addition to that, it has been estimated that the MGP could provide 2500 direct job places, and more than 5000 other indirect job places, not to mention the impressive total profit of the entire enterprise, an operation of great impact, directed to reinvigorate a regional economy mostly exclusive and stagnant.

5. Stakeholder analysis: theory, literature, and method

The *Stakeholder analysis (SA)*, originally used in the economic and political research sector, has revealed itself as a valid instrument in every field involving individuals bearing interests (Kvale, 1996; Duxbury, 2012). Thus, it is used for some time now in a widely inside the geographic research sector (Cannizzaro *et al.*, 2017). Related to the subject of the present paper, the contribution of the stakeholders was of fundamental importance: the different opinions drew from the interviews have significantly enriched my attempt of zooming in and zooming out the project's bigger picture.

The selection consisted in a preliminary identification of the potential stakeholders interested in or affected by the MGP project. Here follows the prearranged list of the classes of stakeholders, inside which ten privileged speakers (PS) have been identified and interviewed:

• Entrepreneurs.
• Local and regional CEOs.
• Public bodies and public institutions.
• Project designers and promoters.
• Associations and activists.
• Artists and researchers, endorsing the revivification of the region.
• Residents.
• Press.

Here follows, the list of the roles of each stakeholder in his specific sector (Tab. 1):

PS n.	Role	Sector
1	Activist/Hotel Manager	Tourism
2	Partner Manager	Finance/Start-up
3	President	Confindustria Crotone
4	Marketing manager	Local business
5	MGP engineer, project creator and designer	Freelancer
6	Manager	Cultural Heritage exploitation
7	Writer	Research
8	Journalist	Local Press
9	Scholar	Resident
10	Administrative director	Local business

Table 1 – *The list of the roles of each stakeholder in his specific sector.*

The interviews were structured on six fundamental questions:

1   What's your opinion about the actual situation of the MGP's construction area?
2   Do you consider well-structured and sufficiently promoted the points of interest inside the province of Crotone?
3   Environment-wise, do you consider the realization of the project sustainable and feasible?
4   Do you judge the actual public transportation system of the region as sufficient and in line with the scale of the project? Or could it be considered an obstacle?
5   Do you believe that the monumental project would be convenient or disadvantageous for the region? In other words, what are the pros and cons?
6   Do you consider that all the key actors involved have been operating in favour of the project's realization?

The interviews took place between December 2023 and January 2024, via internet and on the phone. A common line has emerged from the different answers, despite the stakeholders' different areas of employment. Shown below, there is a synthesis including some statements from the interviews.

6. Results

Most of the actors involved believe that the MGP's construction could provide positive and multiple impacts to the region. At the same time, they stress out the plausible controversies to be encountered in a regional context full of potential yet characterized by profound structural flaws. Almost all the stakeholders agree upon considering Crotone and its province a crossroad of attractions. Besides the aforementioned locations, the PS 1 placed side by side two more sites of great beauty and global scientific relevance: the salt dome of Zinga, that the ISPRA (Higher Institute for Environmental Protection and Research) recognized as a natural geo-site of national interest; and secondly, the Vrica GSSP (Global Stratigraphic Section and Point), which is referred to as the beginning of the Calabrian (a subdivision of the Pleistocene Epoch) by the scientific community. The field of emotional geography argues that the feelings caused by the geological sites complements their scientific value (Gregori, 2010; Puttilli & Santangelo, 2018).

Despite the abundant natural and historical Heritage, mostly negative opinions emerged from the interviews about the actual exploitation of these points of interest, being insufficient and inadequate. It depends on a specific problem pin-pointed by most of the stakeholders: the poor infrastructural system – in Crotone, and generally in Calabria. The opinions were almost unanimous. The nearby areas of Crotone can rely on two functional and logistic points: Saint Anne Airport and the Port. The pertaining authorities have already disposed a requalification plan, carrying out the bureaucratic procedure to update the state highway 106 (from Sibari to Catanzaro), and slowly working on the *Sibari-Catanzaro Lido* railway[4].

However, most of the stakeholders believe that the project could impact positively the transportations infrastructure network. Nevertheless, the opinions diverge:

«It has been said that the MGP could possibly contribute pushing the institutions to improve the infrastructural network. I think that

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[4] https://www.mit.gov.it/comunicazione/news/strade-ok-ai-cantieri-sulla-ss106-jonica-per-3-miliardi , website examined on December 21st, 2023.

this kind of construction project it's not sufficient by itself because other factors come into play […] not so easy to overcome» (PS 2).

«So, I believe that a project of such size could give a huge incentive to create structures and infrastructures useful for the project good-end results, not only in the realization phase. It seems an inverted logic, but I believe it makes sense» (PS 7).

«[…] The project could favour the upgrade of the infrastructures (port, railway, state highway 106, airport), extending their interconnection» (PS 3).

The PS 6 stressed out the need of a previous infrastructural upgrade of Crotone, to build up a missing cultural identity and a wide appealing dimension: only a contemporary and innovative city, equipped with an updated offer can concretely exploit the existing natural and historical Heritage. It's the mission of the complex project *Antica Kroton*[5], already under construction.

«The issue of becoming an area with a touristic and cultural appeal does not end with having the sea, a seafront (**Fig. 2**) or mountain areas: it means providing a city with an offer that allows visitors to choose Crotone, basing their choice on its cultural history. But we have never given value to our cultural history. Today, after many years, however, has been insured that Crotone would acquire its own physiognomy, where culture serves as a growth engine – without it, it cannot succeed. […] So, if I manage to give the city a strong cultural identity, externally appealing, then I can argue that this ambitious project can possibly merge and conjugate opportunities of creating an integrated touristic offer» (PS 6).

Not so distant, the PS 2 highlighted the need of a multi-step marketing plan, designed to represent a project and an area capable of wide appeal. Thus, Walter Santagata's suggestions are very precious: it's necessary to bear some characteristics of the contemporary cultural tourism, among which stands out the so-called «evil of the superstars», which dims many touristic locations of great relevance that lack a proper and wide mediatic coverage (Santagata, 2013). Following the semiotic of touristic appeal (MacCannell, 2005), for a location to become a touristic destination it should be highlighted

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[5] https://www.comune.crotone.it/Antica-Kroton , website examined on December 21st, 2023.

Figure 2 – The seafront of Crotone (Photo by the author).

by a *marker* (D'Eramo, 2019, p. 49). These have been the sceneries that the designers and supporters have faced from the beginning: «the presentation of an out-and-out project will soon come up beside the first concept presented a year ago. […] According to that, the constitution of an advertising committee will take place with the task of promoting the project in the world» (PS 5).

Environmental sustainability-wise, more than one stakeholder paused on the related specific issues: it's a crucial side, depending on multiple factors, hardly measurable without having a clear frame of all the pivotal factors. It's appropriate to remember, as stated by the designer, that the environment is one of the three main assets included in the project.

7. Final remarks

From my research emerged the need of a multilevel plan, through whose intertwining undertake a global renew of the calabrese area: from the increased exploitation of the points of interest around Crotone and Calabria, to the urge of updating the overall infrastructure and urban system; from strengthening the historic-cultural identity to a structured cultural marketing campaign. It consists of a general manoeuvre, attentive of the environmental protection and exploitation, that bases itself in involving the entire area, both socio-economically and politically: public and private actors that, from different perspectives, inhabit the same geographic reality (Pollice, 2021). In other words, it's necessary to work on the objects-representations-practices braiding, three apexes in a constant interaction of what Marcello Tanca presents as the ontological triangle of geography (Tanca, 2018).

Then, every relevant intervention should emerge and evolve from a different way of thinking. In a region massacred by the failure of promises of growth and development, slowed down by bureaucratic and technocratic tendencies, the risk of cancelling the bond between living being and urban-natural environment is higher (Sini & Pasqui, 2020, pp. 25-26). Nevertheless, as stated by PS 7, in Crotone and Calabria, «the resources already exist, in terms of natural beauty, geographical position in the Mediterranean Area, and human resources. Working on improving, even the sentimental resources will come back: enthusiasm, sharing, cooperation, involvement».

Between environmental strengths and serious infrastructural deficiencies, reasons for fascination and harsh confrontations with a context that is all too often static, the Magna Grecia Park is configured, meanwhile, as an opportunity for a reasoned return to the territory. To talk about it, while waiting for the Foundation to communicate the latest implications of the project, means to support an approach that considers as a collective enterprise an economic-cultural rebirth of the territory that is based on environmental protection.

So, it is important to work on the actual and *mobile shape* of the territory: it means to revive the uninterrupted and asymptotic longing for possible worlds that, on the pleasure of the never soothe discovery (here returns Dematteis, cited in the exergue), lays the foundation of all the disparate humans' declinations of inhabiting the world.

Here emerges again the profound theoretic and pragmatic meaning of the geographic research, in its full significance and centrality: inhabiting knowledge, making and dismantling the maps of our thought-action system, and returning to the collective dimension through a repetition that, still is

and always will be, a renovation without which it's neglected the individual dimension. In other words: returning to the ancient meaning of *polis*, in the inextricable bond of past, present, and future, towards an aspired perfectibility.

References

- Andergassen, R., Candela, G., Figini, P., 2013, Per una tassonomia delle destinazioni turistiche. In: Cusimano, G., Mercatanti, L., Porto, C. M. (Eds.), *Percorsi creativi di turismo urbano. Beni culturali e riqualificazione nella città contemporanea*, Pàtron Editore, Bologna, 39-57.

- Cannizzaro, S., Corinto, G. L., Nicosia, E., 2017, "Saint Agatha Religious Festival in Catania: Stakeholders' Functions and Relations", *Almatourism. Journal of Tourism, Culture and Territorial Development*, n. 7, 124-138.

- Costa, N., 2013, La valorizzazione multimediale delle aree archeologiche: il caso di Akrai – Palazzolo Acreide – Inda come magnete creativo del turismo urbano. In: Cusimano, G., Mercatanti, L., Porto, C. M. (Eds.), *Percorsi creativi di turismo urbano. Beni culturali e riqualificazione nella città contemporanea*, Pàtron Editore, Bologna, 72-89.

- Cusimano, G., Mercatanti, L., Porto, C. M. (Eds.), 2013, *Percorsi creativi di turismo urbano. Beni culturali e riqualificazione nella città contemporanea*, Pàtron Editore, Bologna.

- Dallari, F., 2013, Beni culturali e turismo: una relazione scontata? Introduzione alla tavola rotonda. In: Cusimano, G., Mercatanti, L., Porto, C. M. (Eds.), *Percorsi creativi di turismo urbano. Beni culturali e riqualificazione nella città contemporanea*, Pàtron Editore, Bologna, 13-24.

- D'Eramo, M., 2019, *Il selfie del mondo. Indagine sull'età del turismo da Mark Twain al Covid-19*, Feltrinelli, Milano.

- Dell'Agnese, E., Pollice, F. (Eds.), 2021, *Heritage Geographies: politics, uses and governance of the past*, Università del Salento, Series of Geographical Studies on Places and their representations, Lecce, N. 3.

- Dematteis, G., 2021, *Geografia come immaginazione. Tra piacere della scoperta e ricerca di futuri possibili*, Donzelli, Roma.

- Di Liberto, E., Mercatanti, L., 2013, I castelli: beni culturali tra innovazione e promozione. In: Cusimano, G., Mercatanti, L., Porto, C. M. (Eds.), *Percorsi creativi di turismo urbano. Beni culturali e riqualificazione*

nella città contemporanea, Pàtron Editore, Bologna, 140-153.

- Di Matteo, G., 2023, "Heritage from below. Questioni, narrazioni ed esperienze a confronto (Roma, 24 ottobre 2023)", *Semestrale di Studi e Ricerche di Geografia*, XXXV, 1, 189-193.

- Duxbury, T., 2012, "Towards More Case Study Research in Entrepreneurship, Technology Innovation", *Management Review*, vol 3, 3, 9-17.

- Gilli, M., 2005, "*Heritage tourism*, appartenenza e ricerca d'identità", *Equilibri. Rivista per lo sviluppo sostenibile*, 2/2005, 393-416.

- Graham, B., Ashworth, G. J., Tunbridge, J. E., 2000, *A Geography of Heritage: Power, culture and economy*, Arnold, London.

- Gregori, L., 2010, Paesaggio emozionale: comunicazione della "suggestione geologica" dei luoghi. In: Persi, P. (Eds.), *Territori emotivi. Geografie emozionali. Gente e luoghi: sensi, sentimenti ed emozioni*, Università degli Studi di Urbino "Carlo Bo", Associazione Italiana Insegnanti di Geografia, Fano (PU), 66-73.

- Ivona, A., 2021, Lighthouses and coastal structures. New recovery and restoration paths of the coastal heritage. In: Dell'Agnese, E., Pollice, F. (Eds.), 2021, *Heritage Geographies: politics, uses and governance of the past*, Series of Geographical Studies on Places and their representations, Università del Salento, Lecce, N. 3, 125-128.

- Kvale, S., 1996, *Interviews: An Introduction to Qualitative Research Interviewing*, Sage, London.

- MacCannell, D., 2005, *Il turista. Una nuova teoria della classe agiata*, Utet, Milano.

- Nicoletti, L., 2021, Il paesaggio colturale calabrese tra natura e cultura. In: Gambino, S., Nicosia, E., Porto, C. M. (Eds.), *Tracce e riflessioni interdisciplinari. Scritti in onore di Caterina Barilaro*, Pàtron editore, Bologna, 91-97.

- Nicosia, E., 2021, L'immagine della Calabria: cinemato(geo)grafia di una regione. In: Gambino, S., Nicosia, E., Porto, C. M. (Eds.), *Tracce e riflessioni interdisciplinari. Scritti in onore di Caterina Barilaro*, Pàtron editore, Bologna, 2021, 99-106.

- Pollice, F., 2021, "L'esigenza di una pianificazione territoriale della cultura", *Territori della Cultura*, n. 46, 36-43.

- Puttilli, M., Santangelo, M., 2018, "Geografia e emozioni. Andamenti carsici nel dibattito italiano e internazionale", *Rivista geografica italiana*, 125:3 (2018), 227-242.

- Santagata, W., 2013, *Introduzione*. In: Cusimano, G., Mercatanti, L., Porto, C. M. (Eds.), *Percorsi creativi di turismo urbano. Beni culturali e riqualificazione nella città contemporanea*, Pàtron Editore, Bologna, 1-4.
- Sini, C., Pasqui, G., 2020, *Perché gli alberi non rispondono. Lo spazio urbano e i destini dell'abitare*, Jaca Book, Milano.

- Tanca, M., 2018, "Cose, rappresentazioni, pratiche: uno sguardo sull'ontologia ibrida della Geografia", *Bollettino della Società Geografica Italiana*, 14, 1(1), 5-17.

- Tosto, C., 2013, *I teatri della Musica, le nuove scene urbane in scena*. In: Cusimano, G., Mercatanti, L., Porto, C. M. (Eds.), *Percorsi creativi di turismo urbano. Beni culturali e riqualificazione nella città contemporanea*, Pàtron Editore, Bologna, 281-288.

- Tunbridge, J., Ashworth, G. J., 1996, *Dissonant Heritage: The management of the past as a resource in conflict,* Wiley, Chichester.

Websites

- Casadei, M., Finizio, M., *Qualità della vita*. In https://lab24.ilsole24ore.com/qualita-della-vita/, website examined on December 18th, 2023.

- Direzione Regionale Musei Calabria,
Museo e Parco archeologico nazionale di Capo Colonna: https://musei.calabria.beniculturali.it/musei?mid=83&nome=museo-e-parco-archeologico-nazionale-di-capo-colonna, website examined on November 2nd, 2023.

- Fondazione Magna Grecia Park: https://www.fondazionemgpk.it, website examined on November 3rd, 2023.

- Ministero della cultura, *Museo archeologico nazionale di Crotone*: https://www.beniculturali.it/luogo/museo-archeologico-nazionale-di-crotone#descrizione, website examined on November 3rd, 2023.

- Parco Nazionale della Sila: https://parcosila.it, website examined on November 3rd, 2023.

- Ministero delle infrastrutture e dei trasporti: https://www.mit.gov.it/comunicazione/news/strade-ok-ai-cantieri-sulla-ss106-jonica-per-3-miliardi, website examined on December 21st, 2023.

- Comune di Crotone, *Antica Kroton*. In https://www.comune.crotone.it/Antica-Kroton, website examined on December 21st, 2023.

7. Winescapes and cultural identities: a glance on the island of Salina (Aeolian Islands)

Sonia Gambino

7. Winescapes and cultural identities: a glance on the island of Salina (Aeolian Islands)

Sonia Gambino[1]

Abstract

The aim of this piece of research is to analyse how the island of Salina has exploited its natural and cultural landscape through the promotion of new tourist itineraries based on slowness. These will offer visitors new experiences going beyond sea-side tourism, which is what the islands are mostly known and appreciated for. The objective is to identify itineraries and trails allowing tourists to retrace the ancient roads on the island, joining together protection of the environment, observation of rural landscape and in-depth experience of the traditions linked to the production of Malvasia wine, product of excellence of this territory. The methodological approach adopted in this piece of research will consider natural resource-based view (NR-BV) (Hart, 1995), based on the creation of a competitive advantage represented by favourable climate conditions in any season of the year, by the presence of archaeological areas and historical elements of high cultural value, by the acknowledgement as UNESCO World Heritage site, by the authenticity of high quality typical products. Furthermore, the need to develop a sustainable and responsible tourism is underlined, to be set against the impact of over-tourism, which often worsens the fragility of this ecosystem in periods with high number of visitors. Wine tourism therefore seems one of the most significant answers to rediscover a territory with such a strong identity. It is able to draw considerable attention on cultural aspects and represents a valid option and an important strategic decision to promote new sustainable tourist flows in places of ancient cultural tradition, where the symbols of the past are still evident.

Keywords:
winescape, territorial development, heritage, malvasia, Salina

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1. Introduction

The present study is aimed at analysing the promotion of landscapes characterised by Malvasia wine on the island of Salina. The region is home to historical, cultural and natural heritage and therefore the role of wine tourism is crucial for the implementation of "multi-sensorial" tourist experience and for a real integration between city and countryside.

The recent development of wine tourism on Aeolian Islands is an example of a tangible socio-economic system based on exploitation of local resources. Food and wine tourism represents a powerful instrument to get in-depth knowledge of a given region. This is precisely what consumers are more and more looking for, as they want to enjoy some real sensory experience during their stay. Over the last years, it has turned into a strategic asset and a major financial opportunity for a lot of regions, since it combines the possibility to exploit local beauty with the ability to create top-quality excellences. The growing interest in wine and the popularity that has marked this product over the last decades stems from tourists' search for meaning and identity, from their desire to pursue a more authentic, rather than contemplative, experience. As a matter of fact, typical products are closely connected to region-specific features such as the area of origin and/or manufacturing, and they represent the last step of accurate and long-standing manufacturing processes that are the result of ancient skills and techniques passed down from generation to generation.

Fig. 1 Salina Island. Source: Capofaro Resort

Food and agricultural products coming from the Aeolian Islands are rich and diverse. Seafood, farm products, and local food traditions tell us about history in this region and about the populations who have ruled over Sicily. It is in wine landscapes that the combination of nature and anthropic action can be most clearly seen: the concept of work, the creation and the stratification of traces on the land gain a very special meaning in the tight bond that agriculture, environmental protection, territorial and local culture establish one with another. Over the last years, top-quality and heroic vine growing on the island of Salina has made it possible for the island to be more and more associated with the production of malvasia wines, thanks to its history, boasting an ancient winemaking tradition. Nowadays, wine tourism seems to be one of the most significant ways to discover regions whose local identities are just as strong as ever and which are able to represent a major cultural attraction. The strategic objective to be achieved is to reinforce competitiveness of the territory as a tourist destination, through a «dynamic protection» of natural and cultural heritage, intended as enhancement of the tourist product, in which business transformations meet with preservation of the historical-cultural heritage in a functional renovation.

Fig. 2 Wine landscape in Salina. Source: Capofaro Resort

2. The attraction potential of wine landscape on the island of Salina

Sicilian smaller islands are an excellence in the regional territory. They are attractive tourist destinations thanks to their precious natural, marine, cultural and archaeological heritage, in which landscape plays a crucial

role in attracting people, offering unrepeatable and invaluable identity.

Landscape conservation on smaller islands represents an important chance to protect the unique feature of a territory in which the beauty of the land blends with the history of the place. The landscape, in fact, must not be considered just as a visual element, but rather as a blend of cultural, natural and economic resources. The natural element is perfectly mixed with human activities and these, over the years, have contributed to create those elements of preciousness that make it exclusive, a living memory of all those cultures that have contributed to create its shape. The territory of the Aeolian Islands represents an important pole of attraction and tourist destination with exceptional resources. Unesco World Heritage Site, the seven islands are a treasure of history, nature and food culture. Over the last decades, the Aeolian Islands have set the scene for remarkable tourist development.

After a first pioneering phase, over the 80's of the last century there was a phase of tourist development mainly concentrated in the summer. The Aeolian Islands, although owing a very heterogeneous natural heritage, have essentially reinforced their image connected to beach holidays, while the other potentials, connected to cultural and environmental resources, have not been correctly enhanced yet. The island of Salina, the greenest among all seven islands, possesses the most varied and richest floristic heritage in the archipelago. Even for this reason, today, this is the only island boasting a natural reserve set up in 1984 (Gambino, 2001, p. 6). The island of Salina is located North West of Lipari and is the second biggest and most populated island in the archipelago (after Lipari). There are about 2.400 inhabitants on the island and it is about 26 km² big. From an administrative point of view, it is divided in three municipalities: Leni, Malfa and Santa Maria Salina, almost equal in size. The landscape on this island, boasting a strategic location, is enriched by the highest peak in the archipelago: Monte Fossa Delle Felci (962m) which, together with the other peak Monte dei Porri, give origin to the ancient name of this island: Didyme (twins). The particular features in geomorphology, landscape and vegetation on the island are, in fact, the reason why the Sicilian Region set up the natural reserve called "Le Montagne delle Felci e Monte dei Porri" in 1984, now managed by the Metropolitan City of Messina. Setting up the reserve has, without any doubts, contributed to preserve the most remarkable flora and fauna, together with local tradition and culture. The area has moreover been identified as Site of Community Importance. On the island of Salina there is not that kind of hetero-directed tourism which has determined new processes of dependence, deconstruction of territory and exogenous settlement models, as it has happened on the

islands of Vulcano and Lipari. Salina has chosen to be characterized, on the other hand, by a tourist policy that has considered factors such as the natural environment, thanks to a kind of tourism connected to the protection of resources of the territory. The island is known for its rural features and traditional Aeolian architecture and it can represent a micro-island model of sustainable tourism. Currently there are three main categories of tourism on the island. The first includes tourism connected above all to beach holidays, mainly concentrated in summer months. A second category is represented by that kind of tourist who pays attention to the cultural events that the territory is able to offer. Particularly in Salina the spread of cultural tourism is linked to events and the excellences of the island, with festivals such as "*Mare Festival Salina*", "*Salina DocFest*", the Caper Festival, "*Unda Maris*", "*La Terrazza del dodici agosto*", "*Settimana Enogastronomica Eoliana*", "*Salina International Arts Fest*". These are all events contributing to extend and deseasonalize tourism on the island. A third category includes commuters and daily tourists, especially coming from the other islands and from the metropolitan area of Messina.

Salina, known as the green island, boasts the most developed agriculture among the Aeolian Islands and even today plays a significant role in spatial development, so much that it can be considered as a key model of Mediterranean island preserving its ancient agricultural tradition (Manzi, 1988, p. 31). Terrace cultivations, villages and built-up areas make it clearly different from the other islands in the archipelago, in which roughness of the soil or lava expansions or, even worse, real estate speculation make any agricultural activity fairly impossible (Cavallaro *et al*., 1984, p. 15). In this context, agriculture and territory can benefit from a strong interaction that is evident in the production process. As underlined by some authors (Ritchie & Crouch, 2003) the competitive skills of a tourist destination depend on the presence of resources able to nourish development, as well as on the existence of local skills able to transform such resources into goods available for the market. As evidence of this, the island of Salina has addressed its territorial strategies towards absolutely unique natural and cultural elements:
• good vegetation cover;
• presence of historical and cultural backgrounds;
• a coastal system partially protected from mass tourism;
• a widespread and high-quality agricultural production (capers and grapevines);
• small businesses in the agricultural and tourist sector.
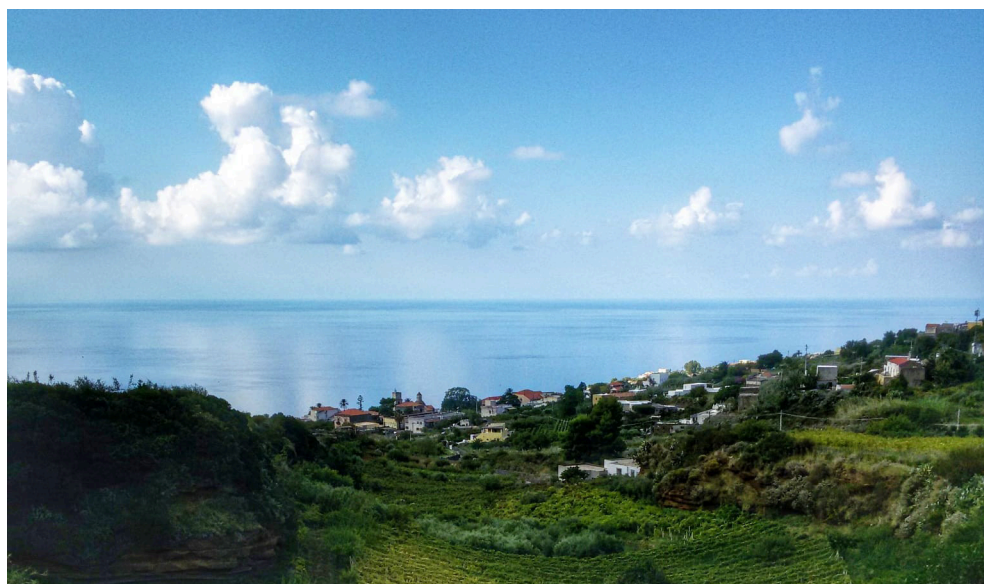
Fig. 3 Rural landscape in Salina. Source: Giuseppe La Malfa

On the island of Salina wine landscapes are those which most evidently show a meeting between nature and anthropic action: hard work, production and the stratification of marks on the territory gain particular meaning in that close link between agriculture, environmental protection, landscape and local culture. These landscapes show some specific characteristics such as historical continuity of the landscape, the presence of a living landscape made up of villages, built-up areas, a wide variety of grapevines, presence of architecture enriching the landscape, such as wineries and farms (Moreschini *et al*., 2016). The territory therefore becomes key element and the food products linked to history, art and culture of the place become a driver for local development and interaction between tourists and local residents. In this way local people become active players, able to welcome and motivate visitors to find out about their roots and traditions (Anelli, 2007, p. 17). Salina inhabitants have managed to protect the agricultural landscape, preserving the integrity of the territory and educating young generations to a relation with the land, and rediscovering all those practices and techniques regarding cultivation and harvest processing to create a real business and productive network and export malvasia wine to national markets, therefore contributing not only to wine production but also to local employment.

3. The role of malvasia wine in enhancing cultural identity on the island of Salina

Malvasia from Lipari islands is the result of cultural and economic heritage. Thanks to its favourable climate and its morphology, the territory of the Aeolian archipelago has been devoted to vine-growing since ancient times.

In this territory, humans have left marks on the land with their hard work on the fields, building a unique cultural identity. From the picturesque peaks of the mountains to the beaches, to the rural villages rich in history and ancient architecture, Salina offers an interesting view. On one hand, the heterogeneous coast, famous from a tourist point of view, and on the other hand the rural villages, today places of remarkable cultural and natural heritage. The process of promotion of Sicilian food and wine resources bears strong importance in cultural, social and financial terms, encouraging and supporting sustainable development, bringing together the need for environmental protection and the preservation of traditions as well as of quality products. To this aim, the example of the recent development of wine tourism in Salina is a key model of a tangible socio-economic system based on exploitation of local resources.

The spread of typical crops, in particular in the territory of Salina, has given life to the production of one of the most valuable products in the entire archipelago: malvasia wine. For its specific characteristics it definitely expresses traditions and narrations of the local community. According to Diodorus Siculus, the presence of Malvasia grapes on Aeolian islands dates back to the first century before Christ. According to more recent studies, the first vine shoots of Malvasia were implanted on Aeolian islands at the end of the 16th century. At the dawn of the 19th century some favourable conditions led to a sudden increase in the demand of malvasia. In particular, these conditions were linked to 10.000 English soldiers who in Messina were trying to face a potential advance of Napoleon in Sicily. For 10 years the soldiers of the British army have asked for the known passito wine from Aeolian islands called malvasia and they have found it on their tables. Here is the start of the development of an economy linked to this valuable and thriving vine on the island (Saija, 1997). In Salina, vine-growing has historically been a culture of values, representing an attraction factor for the population, both from the point of view of settlement, favouring the expansion of scattered villages, and from the point of view of increasing financial resources of the local community, both at an agro-industrial level, determining the localization of vine-growing areas, and at a commercial level, promoting exports.

The current areas of localization of this crop are mainly concentrated around Val di Chiesa, the area of Malfa up to Capo, the area of Santa Marina Salina and the cavity of the crater in Pollara.

The production of malvasia wine represents one of the few still vital sectors that can at the same time enhance agricultural landscape, supporting in this way a kind of development based on the concept of sustainable agriculture, focused on identifying the following main characteristics: long term preservation of natural resources and agricultural productivity, minimum environmental impact, adequate return in terms of income for the local population, achievement of good yields with promotion of organic agriculture, food and wine tourism, setting up new rural roads even in protected areas, updating agro-industrial activities.

Known world-wide for its outstanding wine and its great vine-growing and wine-making tradition, Salina is a fascinating island with rich history, a location where community, culture and history mix together. It is possible to discover the culture of wine and cuisine of this unique Mediterranean island walking along the many natural itineraries. In Sicily, land rich in both natural and cultural contrasts, wine producers make a great deal of daily effort to produce wines that appeal to and stimulate the senses of wine lovers, bringing together ancient flavours and modern winemaking trends. Malvasia delle Lipari DOC is the denomination of origin for Malvasia wines made on Aeolian Islands, the volcanic archipelago located off the North-Eastern coast of Sicily. The denomination of controlled origin includes white wines obtained from the Malvasia Bianca variety, to which Corinto Nero (a black-skinned variety) is sometimes added. The flavour comes from the volcanic trait that makes up the soils where malvasia vines are cultivated. Today, the wine sector on Aeolian islands is bustling, with wine being a *leitmotiv* of such a charming place. Malvasia is a dry or sweet aromatic wine, whose name comes from a small area in the Peloponnese called Monemvasia. Based on the writings by Diodorus Siculus, the story of Malvasia began when the first Greek colonizers brought it from their native land to Lipari islands, around 580 b.C.

The vineyards stretch from the sea level up to more than 400 metres high. Since ancient times very steep areas have been cultivated on the characteristic terraces limited by walls made with lava stones, creating a unique, peculiar and fascinating landscape. Over the last years, the top-quality and heroic vine growing of the island of Salina, which can be traced back to a remote winemaking tradition, has made it possible for the island to be more and more associated with the production of malvasia wines. Featuring their typical amber colour and their sweet and velvety flavour, they can be dry

white wines, passito or dessert wines. In each of these cases, according to the Italian winemaking protocol, wine must be made from Malvasia delle Lipari variety for maximum 95% and from Corinto nero grapes for 5-8%, the latter being also known as *minutidda.* As far as passito, the finest type, grapes must be harvested when overripe. After picking, the bunches of grapes are laid out to dry on large woven reed trays called *cannizzi*, for 15-20 days depending on sunlight exposure. All Salina producers (about 12 wineries) organize winery tours and tastings including local products, taking their visitors on a journey along history and ancient traditions through a sensory itinerary. The island of Salina has been able to diversify the tourist offer in a sustainable way, letting tourists visit the small farms offering land products along a food and wine trail. This data shows that the positive increase in arrivals and in overnights characterize the evolution of the last three years.

2022		
	Arrivals	**Overnights**
Leni	2.504	7.809
Malfa	11.138	36.171
S. Marina	8.600	25.000
Total	**22.242**	**68.980**
2021		
	Arrivals	**Overnights**
Leni	2.078	6.722
Malfa	7.175	24.058
S. Marina	7.038	22.450
Total	**16.291**	**53.230**
2020		
	Arrivals	**Overnights**
Leni	1.457	4.934
Malfa	4.172	13.881
S. Marina	4.817	15.015
Total	**10.446**	**33.830**

Table 1: Tourist flow in Salina from 2020 to 2022. Data representation by the author. Source: Regione Siciliana

In particular, foreign tourists have increased in number, and are particularly attracted by wine tourism, as confirmed in an interview in which "Capofaro" winery declared that in 2022 they had a production of bottles of Malvasia divided as follows: Didyme 2022 > 20.000 75 CL bottles, Vigna di Paola 2022 > 8.000 75 CL bottles, Capofaro 2021 > 6.000 50 CL bottles. The production of malvasia wine is connected to a national market, while 90% of guests at Capofaro resort come from abroad and are interested in living a wine experience. Setting up tourist-cultural itineraries that are in full respect of the environment can represent a way to enjoy widespread cultural heritage, as well as a chance to highlight the variety of landscapes and traditions, connecting the elements of material and immaterial culture. Moreover, promoting these itineraries based on traditional and quality products can even increase the visibility of the places, encouraging in this way visitors even in seasons less busy with mass tourism and enhancing specific local cultural features and natural resources different from the sea (Gallia & Malatesta, 2022, p. 117). Wine tourism connected to malvasia wine can give a significant contribution to deseasonalization of tourist flows, on the island excessively concentrated in the summer period, therefore allowing to avoid processes of touristification that put the very same protected heritage into risk and modify the social structure of the territory. Moreover, wine tourism seems to be particularly interesting for the development of Sicilian areas where "heroic" winemaking is carried out, because its development is slow and attention is paid to the mix of culture and people who live in the territory (Cannizzaro, 2017, p. 24). Over the last years, in the wide variety of tourist offer for smaller islands, the demand has been directed also towards forms of slow tourism which, through a targeted approach between tourists and host location, highlight the unique characteristics of the places, local traditions, habits and costumes, again in a sustainable perspective and in order to protect the environment (Albanese, 2013). Tourism connected to local typical products can become a driver for development and conservation, as demonstrated by several examples connected to "roads of wine and tastes". The sector of wine tourism is closely linked to wine roads, in order to promote wine-making culture and to find out about the territory. Salina is part of "Road of Malvasia from Aeolian Islands" which includes also the other islands of Alicudi, Filicudi, Lipari, Panarea, Salina, Stromboli, Vulcano and even the municipality of Milazzo (Nicosia & Porto, 2011). Malvasia wines represent a driving force for the economy of this island as demonstrated by the establishment of the "Consortium of Malvasia from Lipari islands" which includes about a dozen producers: Barone di Villagrande – Barbanacoli -

Colosi- Eolia - Caravaglio – Tasca d'Almerita – Hauner – Fenech – D'Amico – Colosi – Virgona - Punta Aria - Tenuta di Capofaro, dealing with wine production and supporting initiatives for its protection (Gambino, 2005).

Fig. 4 (left) Winescape in Capofaro. Source: Capofaro Resort
Fig. 5 (right) Tourists in a cellar. Source: Giuseppe La Malfa

4. "Salina ecogastronomica": a project to find out about high-quality productions

An efficient policy of reassessment, in which food and wine products are more and more considered as a capital able to create income and employment, must be able to include these products in a strategic circuit between local economic and productive context and policies of protection and conservation, therefore representing a fundamental element of cohesion and cultural bridging (Friel & Trimarchi, 2007, p. 113).

In the close link between protection of the landscape, conservation of nature and biodiversity, cultural, slow and sustainable tourism is a project of tourist development compatible with reassessment of historical activities on the island. In this perspective, the initiative "*Salina ecogastronomica*" gains particular meaning because, respecting the principles of responsible

tourism, has started a process of enhancement towards a more rational management of the territory. Interacting with all actors of the production chain on the island, "*Salina ecogastronomica*" organizes within the festival "*Island of Experiences*" a series of eco-tours dedicated to food and wine, set in different periods and aimed at tasting malvasia wine and other typical specialties from Salina in wineries and in farms and therefore contributing to rediscover wine tradition and culture. This proposal is in line with the idea of travelling as an emotional and enriching experience through a real interaction with the territory. The aim is to share culture, which will then enable tourists to appreciate the extraordinary productions of an outstanding landscape, getting closer to local territory. In this case "local" must be intended as "a permanent set of socio-cultural features settled in a certain geographical area through the historical evolution of interpersonal relations, and in relation to usage methods of local natural ecosystems" (Dematteis, 1994). In this context *Salina Ecogastronomica* is able to promote the island by communicating its identity to those who belong to other cultures, live in other contexts, in order to increase the attraction potential of the territory, and invite tourists to get into contact with these places and start a sympathetic relation with them (attractive narration) (Pollice, 2017) therefore promoting interaction with local people and personal enrichment in an integrated view (Aloj *et al*., 2013). One of the most popular events for tourists, among those included in *Salina ecogastronomica,* is *Salina wine trekking*, a walk along the hills where malvasia wine is produced, at the footsteps of Monte Porri and Monte Fossa, along an emotional itinerary joining experiential and nature tourism. These tourist activities, according to sustainable principles, are essential not just to promote inland places but because they also represent an opportunity for development and growth for the territory through new forms of exploitation. In this perspective, information will be spread on social networks about the calendar of the events, and higher visibility will be given to natural and cultural sites where the origins of wine-making on the islands are found. A new role for this productive sector will be designed, as it is able to use food and wine biodiversity as an efficient instrument to explain the description of "*inner peripheries*", (Ietri & Pagetti, 2019) which are those places that are not peripheral in a strictly physical sense, but marginal from a functional point of view. Adopting this policy will mean including malvasia wine in Dop economy, which will eventually represent a driver for development based on a system of values focused on synergy between agriculture, environment, tourism, culture and sustainability. "*Salina Ecogastronomica*" on one hand aims at meeting a growing demand for authenticity (especially coming from

an international market) oriented towards forms of tourism that can offer visitors an experience in which the peculiar features of the island become the protagonists of the *genius loci*. In 2023 Salina Ecogastronomica has made the island known to about 400 people from March to November. They were mainly interested in wine trekking, cooking classes, walking, tastings in wineries and farms, stayed on average for 3 nights on the island, and came above all from United States (45%), United Kingdom (13%), Australia (10%), European countries (22%) and in a small percentage from Italy (10%).On the other it is intended to extend the seasonality of accommodation facilities which are often active just for few months a year and are forced to close down during the long phase of tourist gaps.

The creation of a network of greenways can represent a chance to preserve, defend and exploit the territory and can mean a big opportunity to foster forms of slow and sustainable mobility. In this perspective a long greenway will have the advantage of considerably widening tourist offer, as it develops along the natural and cultural heritage.

Fig. 6 Walking along vineyards in Lingua. Source: Salina Ecogastronomica

5. Conclusions

Malvasia is a geographic narration of great value for the territory of Aeolian Islands as it is an element of cohesion between man and the environment, between environmental and cultural heritage.

Getting to know about the Aeolian Islands cannot leave aside the aspects that are most specifically linked to the landscape, not strictly through historical-cultural fascinations, but also through that heritage which has contributed to shape the place and its history. Malvasia from Lipari islands still represents a little exploited sector, if compared to its great potential. In the last years the success of malvasia wine has consolidated other forms of economy linked to wine production as wine tourism. This is a new tourist form growing in popularity on the island of Salina. However, it still suffers from some points of weakness and higher investments are needed in better marketing campaigns, promoting the territory and involving more the businesses working in catering, handicraft, hospitality and transport and reinforcing digital technologies as advertisement instruments. This would allow an "economic reconversion" without the risks of total dependence on the global tourist market which increases anthropization in summer months and accelerates loss of identity. The present piece of research has limited itself to assess the historic dimension of wine landscape on the island of Salina following the success of top-quality typical products able to play a fundamental role for rural economy and to re-launch a tourist image linked to local culture and identity. It would be necessary to furtherly stimulate projects for development foreseeing on one hand preservation of local resources and on the other exploitation of natural beauties as an opportunity for employment and economy. In this sense, even the institutions are starting to encourage tourist practices based on exploiting local typical products, which in the case of malvasia are the undisputed symbol of Salina. In fact, thirty years after the last planning document approved in 1993, the Sicilian Region will have a new Wine-making Plan, with the aim of reinforcing a communication model combining typical and quality products with the element of the territory. Food and wine culture must, in fact, become one of the drivers of Sicilian tourist offer, because it is naturally suited to enhance – at the same time - food, landscape, natural beauties, art, culture and tradition (Regione Siciliana, 2023). The new Wine-making Plan takes up this challenge, aiming at the excellences of the territory avoiding one-direction tourist development, privileging forms of integration with other economies on the territory and their specific features, creating in this way chances for regeneration and economic development.

References

- Albanese, V., 2013, "Slow Tourism e nuovi media: nuove tendenze per il settore turistico", *Bollettino della Società italiana*, Roma - Serie XIII, vol. VI, 489-503.

- Aloj, E., De Castro, M., Zollo, A., 2013, Identità dell'ecogastronomia: presupposto dei nuovi percorsi creativi del turismo urbano. In: Di Blasi, E., Arangio, A., Graziano, T. (Eds.), *Percorsi creativi di turismo urbano*, Patron editore, Bologna, 20-31.

- Anelli, G., 2007, *Il turismo enogastronomico*, Aracne, Roma.

- Arfini, F., Belletti, G., Marescotti, A., 2010, *Prodotti tipici e denominazioni geografiche Strumenti di tutela e valorizzazione*, Edizioni Tellus, Roma.

- Calabrò, G., Vieri, S., 2016, "The Food and Wine Tourism: A Resource for a New Local Development Model", *Amfiteatru Economic*, 18(Special Issue No. 10), 989-998.

- Cannizzaro, S., 2017, "La viticoltura "eroica" in Sicilia. Qualità, turismo e sostenibilità ambientale", *Studi e Ricerche socio-territoriali,* Napoli, fasc. 2, 3-38.

- Cavallaro, C., Zuffi, M., Gagliardi, L., 1984, *Isola Salina. Ipotesi di assetto territoriale,* Eurographis Aire-La-Ville.

- Croce, E., Perri, G., 2010, *Food and wine tourism: integrating food, travel and territory*. Oxford: CAB International.

- Dematteis, G., 1994, "Possibilità e limiti dello sviluppo locale", *Sviluppo locale*, n.1, 10-30.

- Friel, M., Trimarchi, M., 2007, Le risorse culturali e la crescita del territorio. In: Gaddoni, S. (Eds.), *Italia regione d'Europa*, Patron editore, Bologna.

- Ietri, D., Pagetti, F., 2019, Unità territoriali delle politiche pubbliche: una definizione delle inner peripheries. In: Salvatori, F. (Eds.), XXXII

CONGRESSO GEOGRAFICO ITALIANO. *L'apporto della geografia tra rivoluzioni e riforme* A.Ge.*I.* - Roma 7-10 Giugno 2017, A.Ge.I, Roma, 3145-3150.

- Gallia, A., Malatesta, S., 2022, "Le isole minori italiane nelle missioni del PNRR. Una visione sul futuro", *Documenti geografici*, 0(1), 161-174, http://dx.doi.org/10.19246/DOCUGEO2281-7549/202201_11.

- Gambino, S., 2001*, L'area protetta dell'isola di Salina*, Archivio storico messinese, Messina.

- Gambino, S., 2005, La produzione del cappero nelle Isole Eolie: un modello di cultura gastronomica. In: Palagiano, C., De Sanctis, G. (Eds.), *Geografia dell'alimentazione* -Atti dell'Ottavo Seminario Internazionale di Geografia Medica, RUX Edizioni, Perugia, 533-538.

- Garibaldi, R., 2018, *Primo rapporto sul turismo enogastronomico italiano*: *2018*, Centro Editoriale Librario Studium Bergomense, Bergamo.

- Hart L.S., 1995, "A Natural-Resource-based Wiew of the firm", *The Accademy of management review*, 20(4), 986-1014.

- Manzi, E., 1988, Isole Eolie. In: *Sicilia-Collezione attraverso l'Italia*, TCI, Milano.

- Moreschini, L., Ramello, G., Santagata, W. (Eds.), 2016, *Un marchio per la valorizzazione dei territori di eccellenza: dai siti UNESCO ai luoghi italiani della cultura, dell'arte e del paesaggio*, Rubbettino Editore, Soveria Mannelli.

- Nicosia, E., Porto, C. M., 2011, Promozione turistica del territorio, il ruolo dell'enoturismo in Sicilia. In: Cannizzaro, S. (Eds.), *Per una geografia del turismo - Ricerche e casi di studio in Italia*, Pàtron editore, Bologna, 93-99.

- Pollice, F., 2017, Placetelling® per lo sviluppo di una coscienza dei luoghi e dei loro patrimoni, *Territori della Cultura*, 30, 106-111.

Regione Siciliana- *Dipartimento dell'agricoltura- Viticoltura ed enologia*, www-regione.sicilia.it

- Regione Siciliana https://www.regione.sicilia.it/la-regione/istituzioni/strutture-regionali/assessorato-regionale-turismo-sport-spettacolo/dipartimento-turismo-sport-spettacolo/aree-tematiche/attivita-staff/osservatorio-turistico/osservatorio-turistico-della-regione-sicilia/movimenti-turistici-comunali

- Ritchie, B., Crouch, I., 2003, *The Competitive Destination: A Sustainable Tourism Perspective,* CABI Publishing Series.

- Saija, M., 1997, Salina e la malvasia. In: *Eolie perle del Mediterraneo*, Edizioni affinità elettive, Messina, 78-79.

- Sparks, B., 2007, "Planning a wine tourism vacation? Factors that help to predict tourist behavioural intentions", *Tourism Management,* 28, 1180-1192.

- Zago, M., 2018, "Il ruolo delle comunità locali e dei turisti nella valorizzazione dei saperi tradizionali: l'esperienza degli ecomusei del gusto. In: *Futuribili – Rivista di studi sul futuro e di previsione sociale* vol. XIII, nn.1/2, Eut Edizioni Università di Trieste, Trieste.

8. Natural resources and landscape conservation in Velipoja administration unit

Ervis Krymbi

8. Natural resources and landscape conservation in Velipoja administration unit

Ervis Krymbi [1]

Abstract

Velipoja lies along the Adriatic coastline in the North – West of Albania, near Buna River. River Buna discharges at the Adriatic Sea close to Montenegro boarder. The coastal area of Velipoja is characterized by a sandy shore and covers approximately 694 ha. The Buna River-Velipoja Protected Landscape is a protected landscape area in northwestern Albania, encompassing the estuary of Drin, the Lagoon of Viluni, the River of Buna with its estuary, and the Gulf of Drin that runs across the area of Velipoja alongside the Adriatic Sea. During the transition process is not given much importance of territorial planning initiatives. The whole area is distinguished for its biodiversity values, such as a wide variety of terrestrial and aquatic flora and fauna species. Since 2005, the Albanian part of Velipoja wetlands including Viluni Lagoon and the Shkodra Lake hold the protection state of a Managed Natural Reserve (IUCN Category IV), and since 2006 the zone is included in the RAMSAR list. Velipoja coast is subject to dynamic geomorphologic changes, including accumulation, erosion in different segments. These geo-morphological littoral changes have impacted the landscapes and economic activities. Dynamic urbanization process without a certain strategy was associated with a total negligence on the coastal environment of Velipoja. Thus, construction, urban and territorial development in the transition years has not been the result of the implementation of previously approved territorial and urban planning instruments. The Velipoja administration unit territory has a very good location but the remaining coastal developments uncontrolled speculative and far from administration and planning in accordance with the principles of sustainable urban development.

Keywords: *Velipoja administration unit, Buna Delta, Anthropogenic, Erosion, Urban planning.*

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1. Introduction

The administration unit of Velipoja is part of the Shkodra municipality. The town borders on the northwest with Montenegro along the Buna River, on the East with the Region of Lezha, on the North with the administration unit of Dajç and on the South with the Adriatic Sea. The total surface of the administration unit is 72.4 km². The whole zone is a vast field surrounded by the hills of Baks, Ças, Shtiqen and Maja e Zezë. The administration unit has a vast spread along the Adriatic coast in and a beach which dates to about 300 years. The concept of the coast is ambiguous. The coast is often defined as the "land next [or close] to the sea" or as a more general "land next to the shore" (American Heritage Publishing Company, 2015; Cambridge University Press, 2013). The actual number of populations in the entire administration unit of Velipoja is 8270 inhabitants. The tendency is for the population to grow at fast rate due to various factors such as internal migration, the desire to invest in tourism, etc. The administration unit is made up of 10 villages which are: Velipoja, Reç-Pulaj, Luarz, Gomsiqe e Re, Baks-Rrjoll, Pulaj-Plazh, Reç i Ri, Baks i Ri, Ças, Mali Kolaj. Velipoja is characterized by Mediterranean climate, with hot and dry summers, wet and mild winters. The wind of Murlan, which is very characteristic of the area, makes the winters harsh; whereas in the summer the wind of Shiroku brings humidity The greatest part of the population is employed in the private sector as in agriculture, retail shops, construction sector, etc (Krymbi et. al., 2014). The coast […] is intended as harmonious interpenetration in continuous visual, material, functional, interactive, and dynamic transformation between the action of man, sea, and land. The coast represents the edge where to intervene. With its porosity and open boundaries, it can respond to climate change and functioning as a resilient device (Porfido & Sani, 2018, p.105). The area is also characterized by recent rapid development, particularly along a narrow strip within 5 km of the coastline and highways. A construction boom, mainly affecting the coastal zone and the urban centres, in the 1990s was followed by increased informal development, of which there is insuficient control and inadequate mechanisms for the sanctioning of illegal buildings. Anthropogenic activities in the region, mainly through the uncontrolled coastal development, population growth, increased economic activities and poor management of urban waste and wastewater are adding pressure on the watershed of the Buna/Bojana watershed, affecting both the environment and human wellbeing. The Viluni draining station discharges its waters directly to the Velipoja Beach, very close to the Viluni Lagoon.

Viluni draining station is situated between the buffer and transition zone of the Shkodra Lake, Buna, Velipoja forest, Domni wetland and Viluni Lagoon Protected Landscape. Each of the sites mentioned has the third protection level or is the IV protection category of IUCN, Nature Managed Reserve.

2. Geographical position and boundaries of Velipoja administration unit

The administration unit of Velipoja is part of Shkodra municipality, it is located in the southwest of the city of Shkodra at a distance of about 24 km from it, in the northwest it is bordered by Montenegro along the Buna river, in the east by the district of Lezha, in the north by Dajçi administration unit and to the south by the Adriatic Sea. The total area of the Velipoja administration unit is 72.4 km2. The whole area is a large plain surrounded by the hills of Baksi, Çasi, Shtiqni and Maja e Zeze. The area of Velipoja has a wide extension along the coast of the Adriatic Sea and a beach with a natural age of about 300 years. Velipoja beach has a length of 14.5 km and a width of 200-500 m, hypsometry of the territory 0.0-5.0 m, average slope 0.1-0.5 0, horizontal fragmentation 0.0-1.5 km/km^2, vertical fragmentation 0.5-5m/ km^2 with unused sand with a high percentage of sodium and potassium salts and there is an extremely high percentage of iodine in the sand. The stretch of the beach in a condition of such parameters creates numerous and inexhaustible opportunities for tourist use from the mouth of Buna to the edge of the field of Zunkthi (or as it is called Rëra e Hedhur). At a distance of 1-3 km from the sea coast, there is the hill of Rrenci, which is almost parallel to the coast with an average height of 300-500 m above sea level. The river Buna dominates the water regime of the whole area. After joining with the Drini river, the Buna is rather shallow, especially some km upstream, where even small islands have been formed. Further down towards its mouth the depth increases to 3 m which makes the river nearly navigable for small boats. Between the villages of Samrisht in Albania and Gorica in Montenegro and the mouth, the river is shared between Albania and Montenegro and defines the border (Miho *et. al*., 2013).

(a)   (b)
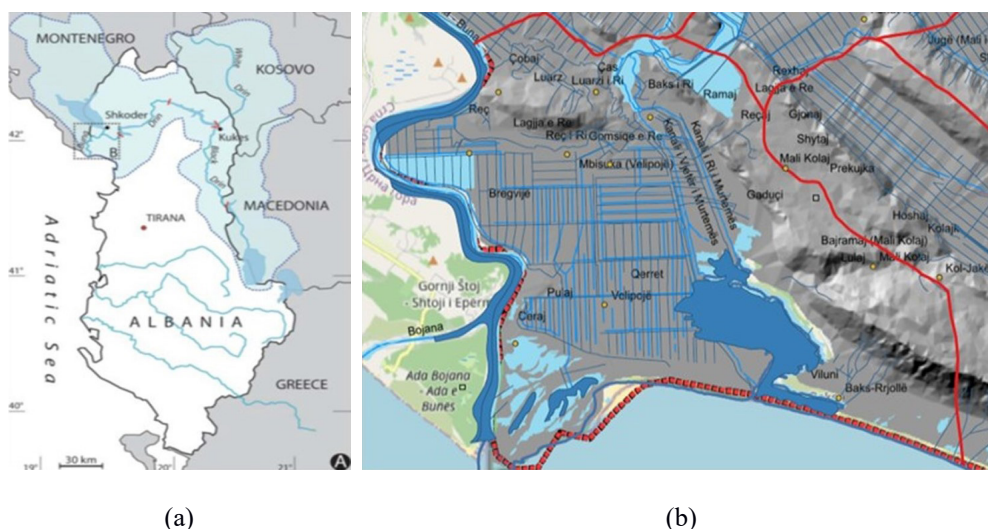
Figure 1: Location map of the study area.

(a) Areal extension of the Buna–Drin drainage basin (in light blue) and position of the dams (in red) interrupting the Drin River course. **(b)** Detailed view of the study area, Velipoja administration unit. (Source: the author, 2023)

Regarding the hydrogeological profile, three formation complexes could be distinguished: i) Quaternary deposits, ii) flysch deposits, and iii) limestone rocks (Muceku *et. al.*, 2005). Both the lower and upper part of Quaternary deposits are composed of coarse sands with a fine sand layer in the middle. Underground water in the study area Quaternary complex was mainly related to sand formations, creating a rich aquifer Some springs flowing out from these formations are met south of the investigated area. River Buna and Reçi i Ri stream are the main water resources of these formations.

In the study area the latter consist of alternating sandstones and mudstones of turbiditic origin and Maastrichtian-Eocene age. These sedimentary rocks are involved in SW verging folds parallel to the main chain and represent the rocky substrate, only locally exposed, of the Buna River alluvial plain sediments between Shkoder and the westernmost carbonatic reliefs (Pazzi *et. al.*, 2015).

The river has a meandering trend, and it is characterized by one single channel for most of its course. The alluvial plain is poorly drained and during the wet season (November-January) it is typically waterlogged. Terrains are widely used for agricultural aims and houses are concentrated in small villages dispersed along the riverbeds or not far from them. The Buna River Quaternary alluvial sediments unconformably cover the

Cretaceous-Eocenic rocks. The alluvial succession, 20-50 m thick, consists of unconsolidated deposits and is composed of a basal interval of sandy gravel (5-30 m thick) overlaid by a silty sand interval (10-20 m thick).

Velipoja coastline comprises quaternary marine sands and silts. Flysch rocks extend to the east overlying limestone rocks where a tectonic boundary separates these rocks from one another. Flysch rocks, a combination of sandstones, siltstones and claystone's layers comprise the northern part of the hill in the area. Quaternary swamp deposits of loams, clayey silts and sands are found at the eastern and northern ends of Viluni Lagoon. The formation of the Lagoon of Viluni is closely connected with the evolution of the whole Field of Velipoja. Centuries ago, all this space, from the outpour of Buna up to the hill range of Rrenci, appeared as a system of water ponds of various dimensions, separated by little fields and strips of land.
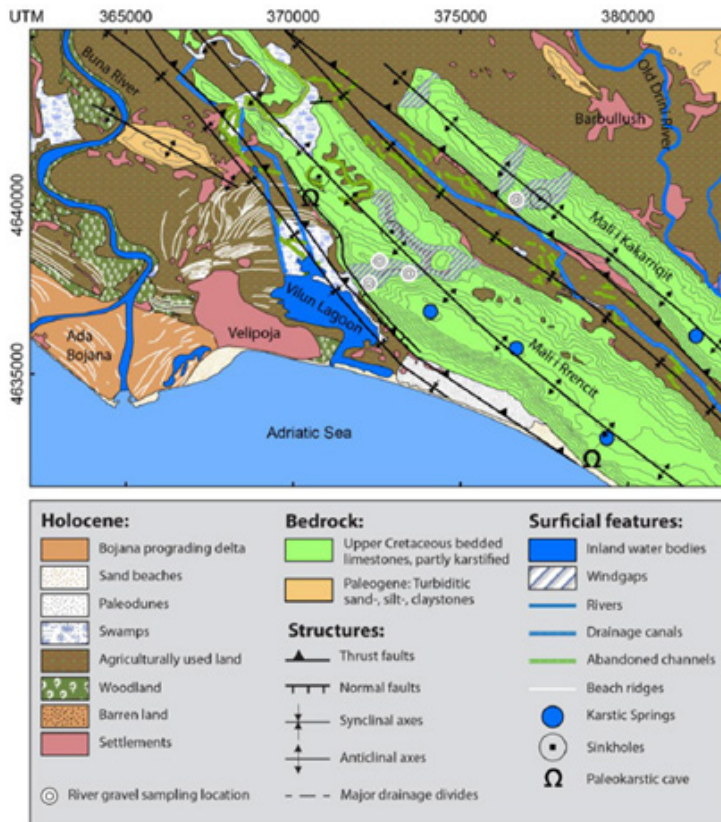
Figure 2: Map combining geological and geomorphological characteristics for the Albanian part of the study area. The map is based on the Geological Map of Albania (2002), the Tectonic Map of Albania (1999), and the Geohazard Map of Albania (2000) and is extended and revised by our own data from field mapping and remote sensing. (Source: Biermanns *et. al.*, 2019)

3. The potentials and the management of landscape in Velipoja administration unit

Tourism has been identified as one of the main economic drivers for Velipoja administration unit based on its high potentials to offer a high variety of activities. The area has an enormous natural potential that makes it very attractive for tourism and it is not a casualty that it is very preferred by citizens and tourists as well. Velipoja is also a touristic center with a wide range of accommodation, both to visit the natural values of the region but also as a relaxing place especially during summer. The Velipoja complex consists of Buna delta, Velipoja Managed Reserve, Viluni Lagoon, Baks Rrjolli coastal zone. The freshwater marshes of Domni and Mërtemza extend along the road to Velipoja. The river Buna is an important natural resource of the Velipoja administration unit and the surrounding area. It flows through two states: Albania and Montenegro. In this way, it connects Shkodra Lake and the Adriatic Sea. Its length is 44.45 km, of which the upper part of about 20 km belongs to Albania, and the lower part of about 24 km to Montenegro and forms the border between Montenegro and Albania. The sediments carried by the Buna have an important role for the morphology of the seashore and of the coastline, which is subject to strong coastal erosion in the Velipoja area. According to old descriptions (Reiser & Fuhrer, 1896; Kárpáti & Kárpáti, 1961; Kárpáti, 1962), the Buna delta was an impressive wilderness area. However, like other Mediterranean wetland areas, it has been strongly transformed during the last decades. Between 1947 and 1980 about 36 km^2 of agricultural lands were reclaimed or ameliorated from swamps and marshes, compared to only 2 km^2 of agricultural land that existed before then.

Figure 3: Velipoja landscape complex 1.Buna/Bojana delta 2. Velipoja Managed Reserve 3. Viluni Lagoon 4. Baks Rrjolli coastal zone 5. The freshwater marshes of Domni and Murtemza (Source: the author., 2023)

The Albanian part of the Buna/Bojana basin part is an Important Plant Area (IPA) (Plant life International, 2021). "Protected Landscape of Buna River – Velipoja" is designated as an EMERALD candidate site (Directorate of Democratic Participation EU, 2021). Despite its high natural values, the area is significantly threatened by unsustainable, unplanned, and illegal activities, as well as a lack of integrated management and shared values for joint planning. Stakeholders are many and from different fields and levels (tourism, fisheries, agriculture, infrastructure, pollution, nature protection, water management, disaster risk reduction), often independently and individually developing sectors and realizing interests. Practices of opportunism in planning of protected areas as well as proclaiming protected areas with no substantial de facto outcome are common for the region and here. It is evident that the processes of effective protection and integrated management are not yet in place and that synergies need to be enhanced and mainstreamed. The Velipoja Managed Reserve, an alluvial coastal forest and a wetland complex created by Buna delta and the Adriatic Sea, is well-known for the high diversity of flora and fauna, including rare and

threatened species at national and regional scales (Dhora *et. al.*, 2010). The Buna/Bojana delta offers important food sources for fish, spawning grounds, nursery and migration paths on which fish stocks depend (either within the wetland or other habitats connected to them). This area is also very important hydrographically and is well-known for its high ecological sensitivity. The so called "hydrologic junction" Shkodra Lake - River Buna - River Drin determines the hydrological regime of Shkodra Lake, River Buna itself, and their tributaries, and has an important impact on the morphology and water regime in Buna delta in the south-eastern Adriatic (Beqiraj *et. al.*, 2010).
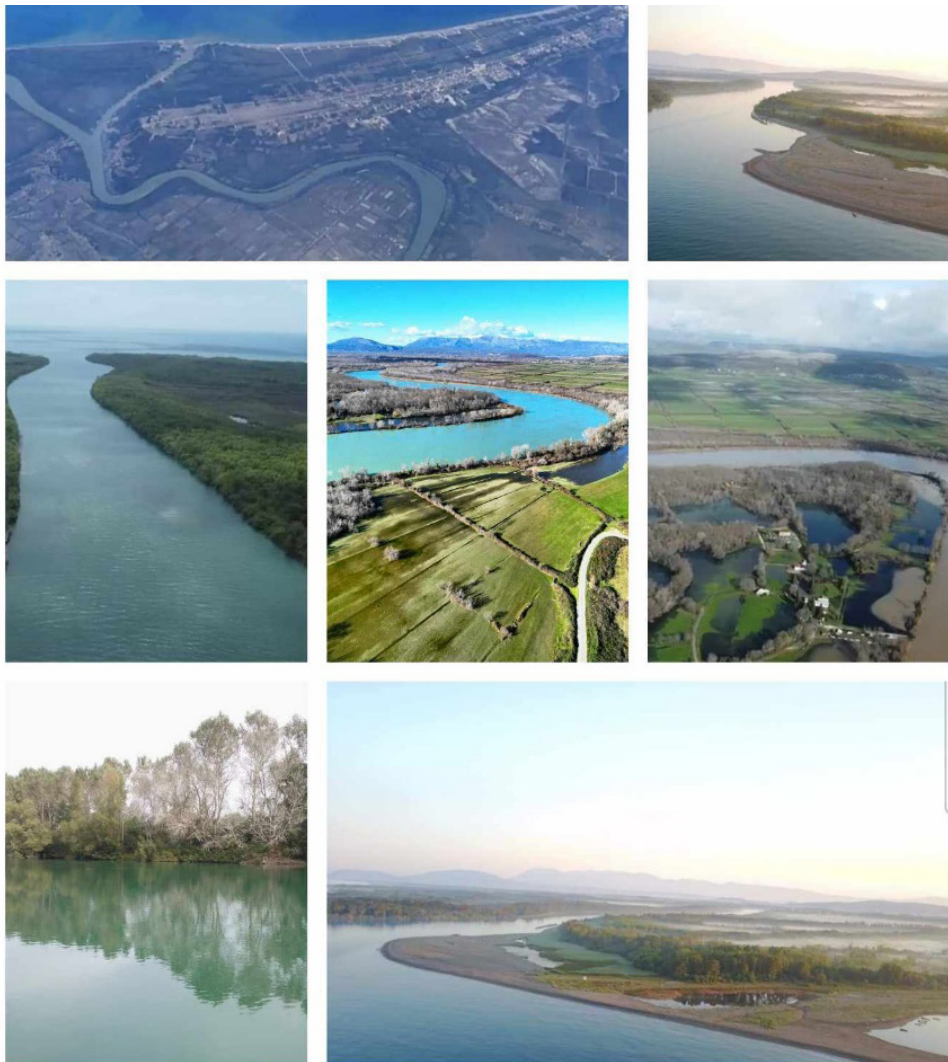
Figure 4: River Buna/Bojana delta (Source: the author., 2023)

On the Albanian coast, erosion has become a major problem in the last 3 decades, mainly related to human activity and especially to hydrological changes and river damming. In the Buna/Bojana delta, the Velipoja coast is one of the areas highly impacted by coastal erosion. Accumulation during the period 1950–1984 is estimated to be from 5 to 10 m yr-1. Erosion during 1986–2017 was extensive in some parts, occurring at a rate of 3 m yr-1 in Ada area (Montenegro) and 4 m yr^{-1} in Albania (Drin Corda., 2019). Franz Jozef Island disappeared entirely in 2016. The morphology of the Buna/Bojana deltaic complex is believed to be affected by a combination of factors: - alteration of the water flow regime in the Drin – Shkoder/Skadar – Buna/Bojana system due to the construction of the cascade of dams on Drin; -entrapment of sediment in the upper part of the watershed by the dams; -reduction of the sediment transport capacity of the Drin in combination with the natural low gradient of the channel of Buna/Bojana River resulting in the deposition of alluvium (coming from erosion in the tributaries of Buna/Bojana and Drin) preventing this from reaching the Buna/Bojana mouth at the Adriatic Sea. The sediment deposition in Buna/Bojana River causes reduction of the speed of water further resulting to additional deposition of sediment; -variability of the wave activity and sea level in combination with short-term events (storm waves and tides) and long-term processes (sea transgressions).
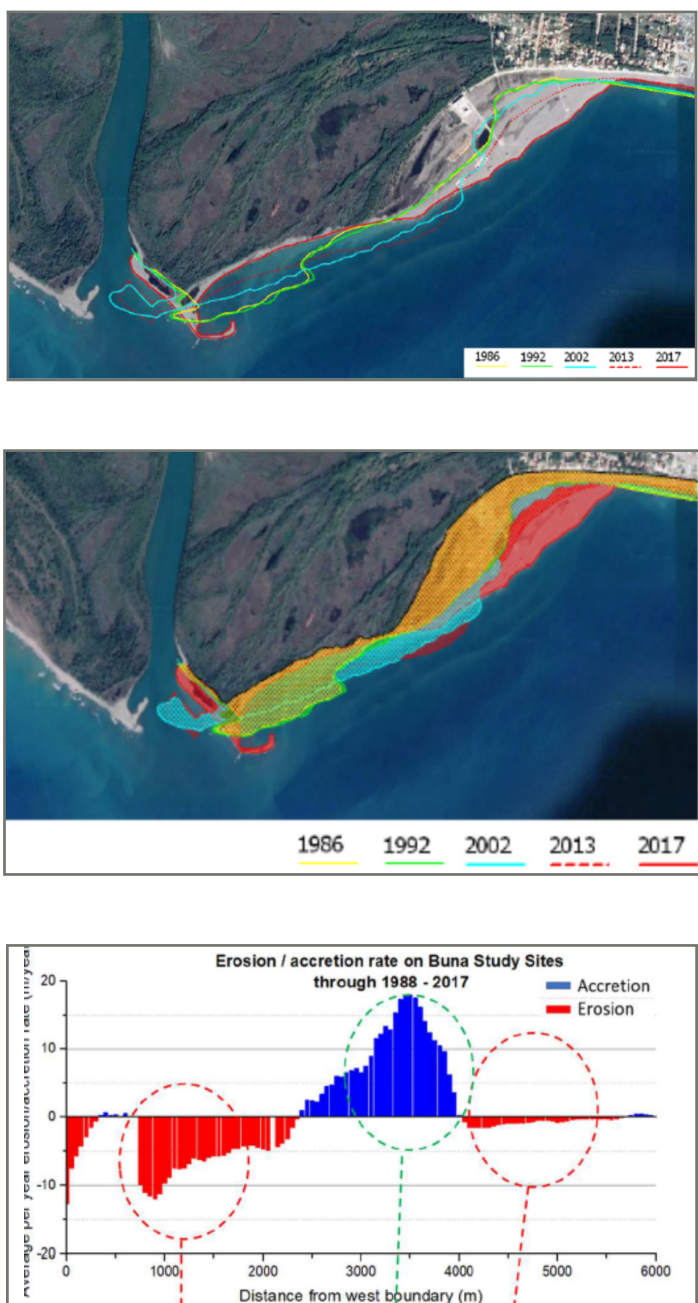
Figure 5: Erosion rate on River Buna delta through 1986-2017 (Hermes project., 2019)

Morphologic transformation in River Buna Delta over the recent years, analyse the endogenic and exogenic causes having dictated the dynamics of the coastline. There has been briefly examined the role of the geologic factor in this spatial change, by mentioning in order of importance the lithologic and structural composition, as well neotechnic movements. Velipoja beach, which is also one of the largest in the country, has generally preserved the same conditions since 1980, but the dynamic change of deposition and erosion south of Buna outlet has triggered a chain phenomenon alternating deposition and erosion in narrow sections even on Velipoja beach. Over the recent 10 years, the coastal segment that stretches between the communicating channel of Viluni lagoon and as far as Rana e Hedhun, has been eroded at a value of 1.5-3 m/year. The coastal segment belonging to the Rrenci SW edge remains stable because of strong rocky composition. The Velipoja wetland complex with a surface of 8.2 km has the shape of a triangle in the Buna delta east of the Buna River. About 6.4 km^2 are fenced and protected as Managed Natural Reserve. The Velipoja beach and the dunes form the coastal profile of Velipoja, where large sandy beaches of about 10 km length and up to 200 m width extend along the coast. The adjacent prodelta areas on both sides of the river cover 8 km^2 with a depth reaching 25 m. Velipoja Managed Natural Reserve were created in 1958. In it, vegetation and birds are in their very best natural state. This reserve has in its interior four forest belts as well as four marshes, which are connected by land to each other. Through this reserve, by road between dense forests, the mouth of the Buna River is reached. This point has a rare beauty, as there are three islands, a large one called Ada and the other two that are smaller (Dhora *et. al.*, 2010). The reserve, for its part, in the southern part of its territory, is bordered by the Adriatic Sea Coast, from the western part, it is bordered by the Buna River, while in the northern and eastern parts, and it is bordered by land.

Figure 6: Velipoja Managed Natural Reserve (Source: the author., 2023)

The marshes are strongly influenced by the dynamic processes of the Buna water regime with seasonal changes in the water flow as well as by the tides and waves of up to 3.5 m caused by strong winds. Several drainage channels link the marshland with the Buna allowing the control of the hydrological regime through special ports. Four roads starting from the main entrance facilitate the visitor to attend the different marshes and forest habitats. However, urbanization of the coast between the Reserve and the Lagoon increased rapidly during the past decade, especially focused on tourism infrastructures - all this pressure with obvious negative effects on the erosion of the coast, deforestation and destruction of the sandy dunes, water pollution and resulting ultimately in a loss of biodiversity.

Velipoja/Pulaj Beach (the southern extreme of the beach is only 10 m. far from the Viluni draining channel). This beach is considered the most important tourism site for North Albania, as thousands of visitors come to this site during the summer holidays. The beach, 3700 ml long, is situated between Velipoja forest and Viluni Lagoon. Currently, the beach of Velipoja (the oficial name of the village of Pulaj) has a population of 1082 inhabitants, of which 50 per cent have arrived in the last 15 years. On Saturdays and Sundays, the number of visitors exceeds 60,000 people. Given the reputation of tourism as a reputable business, several hotels have been built with rooms ranging from 6-30 complete with other service facilities. In addition,

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there are about 120 bars and restaurants all newly constructed made on the preference and personal plans for growth with no coordination at all and without any development perspective for making Velipoja an area of quality tourism.

Figure 7: Velipoja/Pulaj Beach (Source: the author., 2023)

The Lagoon of Viluni is one of the major lagoons in our country and represents a special geographical object in the system of the lagoons of the Albanian shore of the Adriatic. This lagoon is situated about 7 km away from Buna River, 2 km away from the Velipoja beach and about 12 km away from Shëngjin (CARDS., 2006). Its surface of 2.96 km^2 changes throughout the year especially during winter and summer, depending on the amount of water accumulated by rainfalls. It is 3 km long and 0.9 km wide and represents the remaining part after the drainage of the former large wetland complex of Pentari – Domni – Mërtemza - Velipoja. Viluni is the most important transitional habitat in the whole Velipoja complex. The typical coastal lagoon is separated from the sea by two long shore barriers. It is characterized by mostly shallow water of 0.8 to 1 m depth, in a few parts occasionally rising

to 2 to 3 m. It relates to the sea by a channel, 300 m long and 30 to 40 m wide, and of 2 m depth, by which the brackish water exchanges with the seawater with a periodicity of the tide The waters of the channel of Mërtemza pour into the lagoon. This channel accumulates all the waters of the whole field of Shkodra lowland of 6 hours. The Viluni area is a most sensitive ecosystem but disturbed by environmental factors. The Domni and Mërtemza marshes collect large amounts of freshwater from the marshes of Buna in the eastern part, from where nutrients rich water from large agricultural and industrial areas is continuously discharged into the lagoon. In the past decades, the afforested zone around the lagoon has been heavily damaged by human action, thus only about 0.37 km^2 of a sea-pine forest still exists.

Figure 8: The Lagoon of Viluni and the wooden bridge overthe Viluni, connecting Baks Rrjolli with Velipoja (Source: the author., 2023)

Baks Rrjolli Beach, extending along the coastline to the east of Viluni Lagoon. Here the beach tends to be narrower and has the spectacular backdrop or the southern part of the Renci hills in the near background. The zone extends along 11 km of the coast, from Viluni to Rana e Hedhun (blown sand) and passes the Baks Rrjolli village to the southern part of the Rrenci hills. It forms a specific combination of habitats along the coast with karstic caves, mountain slopes, sandy dunes, alluvial forests, tamarisk marshes, interstitial pools combined with a fine beach.

Figure 9 (left): Dune near Rrjolli (Source: the author., 2023)
Figure 10 (right): Renci hills and dune (Source: the author., 2023)

4. Velipoja coastline facing the challenges on territory and local infrastructure

In global scale, the coastline is under the constant pressure of the concentration of population, buildings, and economical activities. The year 1990 brought radical changes in the political, economic, social, and environmental system for former communist Albania. These changes were necessarily reflected and affected the coastal area of Velipoja. The dynamic and chaotic developments of the territory in this space turned out to be informal in most cases after the 1990s, which brought about increasing social problems that in many cases still exist today as a legacy. In the early 1990s, an influx of construction (light construction) for commercial purposes began. All cases of construction in Velipoja are cases of development on a single plot, where the builder tried to achieve the highest possible profit from the investment. After the nineties, the administrative territory of Velipoja commune, unlike the other communes of Berdica, Daçi and Ana e Malit, was declared "the area with the priority for tourism development" with the decision of Council of Ministers nr.81, dated 1.3.1993. For the territory of Velipoja commune, by an Italian company (in 1994), was designated, the master plan for tourism development, which was endorsed by the Council for Territory Adjustment of Republic of Albania (CTARA), with the Decision nr. 31, dated 23.8.1994. In the beach area, was planned to be developed approximately 3700 beds, in the accommodation structures such as hotels, touristic villages, camping, touristic residential buildings, etc, in a total surface of 99,000 m². Aiming the accommodation of the development demands, and the adjustment of the informal settlements, with the decision no.1 dated 18.06.2003 by the

Council for Territory Adjustment of Republic of Albania (CTARA) have been endorsed another urban study, prepared by the Urban Institute of Albania.

Figure 11: Remake- urban study for tourism development in Velipoja, endorsed by the Council for Territory Adjustment of Republic of Albania, with the Decision no.1 dated 18.06.2003 (National Urban Institute)

In 2008, in the framework of the "Community Works III" program, the Albanian Development Fund (ADF), assisted Velipoja commune in preparing the Local Development Plan and Spatial Plan, with the main objective, of tourism development, as part of the SCRD. The framing process of the plans, involved mainly the commune staff and inhabitants, excluding the participation of the central government as responsible part for administration and endorsement of territorial plans for the area. The project on spatial plan, is focused on the revitalization of the Buna river delta, through the setting up of an recreational place (harbor, villas, restaurants, bars, view-points, etc) which is integrated with Velipoja beach area, through road network for pedestrians, bicycles, waterways, and automobiles. This

plan is called "spatial plan", but the content and the components are related with an detailed plan for Buna river Delta (Albanian Development Fund – Program "Community Works III" – 2008-2011) (Paloka .,2012). According to the law no. 10119 of 2009, Buna River protected area, being under the administration of the MEFWA (Environment Protection) and the Ministry of Tourism, Culture, Youth and Sports for the tourism development area, can be categorized as a "territory of national importance" where the interests of national and local authorities have to be harmonized in the Integrated Territorial Plan (ITP). The ITP, will be based on the national, regional and local strategies, plans and regulations. The integrated plan, will be a cross-sectorial one, coordinating vertically and horizontally all the national sectorial strategic documents and the local strategic development documents. The existing documents at national and regional level, to be considered in the planning process, are:

• The strategy documents and environmental protection laws;
• The strategy documents and law on tourism development and other regulations;
• Strategic Regional Development Concept for the period 2010-2015 of Shkodra county;
• The Local Development Plan of Velipoja commune.

Infrastructure provision is generally poor with low levels of maintenance of local roads and an inadequate water supply. The villages supplement the potable water needs with individual drilled wells, and for the sewage there are solutions of individual septic tanks creating a health hazard for the inhabitants. The informal settlement/buildings, and the formal settlements are partially or not at all served by the infrastructure services. The existing networks of power, potable water, and sewage are completely worn out. There are no plans for their development, or management plans for the existing services.

In the field of the territorial planning, it is very important that the central and local government strength planning and development control system. There is a need for a strong planning system which has the capacity to initiate the planning processes, endorse plans and control the territorial development. The local authorities in cooperation and coordination with the responsible ministries

have to initiate immediately the framing of:

• Integrated Territorial Plan for the protected area of Buna river (integrating the local interest for future development, and other aspects of environment protection, and tourism development);
• Detail Territorial Plan for the urban integration of informal settlements (consolidation areas), after the legalization process is finished.

The government have to be engaged seriously to finish as soon as possible the two most important processes: legalization of the informal settlements/ buildings, and restitution of the properties to the historic owners (Paloka .,2012).

5. Conclusions

The organization of the coastal space of Velipoja is an important and complex process. The territory of Velipoja has a very good coastal location. This is an important premise for the development of marine economy, transport, trade, and tourism, especially when the coastal area of Velipoja is valued more than ever. Velipoja coastline has been affected by many negative phenomena such as: abrasion, damage of sandy dunes, vegetation. Planning processes and policies either do not consider the biodiversity and natural values of the area (suficiently for its sustainable use), or do not create an enabling environment for cross sectoral planning. They rather put everybody's interests together and the power of influence prevails. Plans are very often made without clear strategic directions and vision, and often based on interests. The administration unit rapid urbanization including apartment buildings, hotels and potential resorts is regularly not supported by satisfactory planning documentation. The potential for developing ecotourism all year in Velipoja is enormous. For start is important to identified some elements establishing it: - health tourism – would require mapping of health-related resources (medicinal plants, recipes – e.g. cooking pomegranate peel, etc., creation of "health trails" etc.) - immersion in old customs (demonstration of tradition to tourists through direct experiences, such as cooking traditional food.) - ecological facilities – locals identified an important element of eco-tourism is sustainable use of resources and consumption, with one of their main ideas being using restaurant bio waste to create compost on farms or to use as feed to animals

- promotion – through use of information boards, websites, marketing using social media etc.

The zonation of the Buna River Ramsar Site in Albania is a good example of how the proposed zonation can be transformed into a legal protection. The Velipoja tourist destination will profit in future from the strict protection of the beaches, the Velipoja Reserve and the Viluni lagoon. The priority would be the construction of the sewerage network in Ças, Reç i Ri and Sektor and in the future in other villages of the area. Improving the cleaning and environmental protection service would be a recommendation regarding the coastal area of the Velipoja. The continuous growth of the population, the increase of constructions and the large attendance of the beach during the summer period makes it necessary to improve the cleaning service and the protection of the environment. The priority is the placement of garbage bins in every village of the area and the cleaning of the protected area from the thrown garbage. Being a tourist area also makes necessary the improvement of other services such as the public lighting system, the construction of sidewalks, the construction of public bathrooms in the beach area, the development of the telecommunications system and the increase of the electricity supply.

References

- American Heritage Publishing Company, 2015, The American Heritage Dictionary of the English Language. Fourth edition. Boston: Houghton Miflin Harcourt.

- Beqiraj S., Fraschetti., S., Gačić., M., Joksimovic., A., Mackelworth., P., Mascle., J., Notarbartolo di Sciara., G., Odorico., R., 2010, Scientific rationale for the proposed CIESM South Adriatic Sea Marine Peace Park, MARINE PEACE PARKS IN THE MEDITERRANEAN - Siracusa, 18 - 20 November 2010.

- Biermanns, P., Schmitz, B., Ustaszewski, K., and Reicherter, K., 2019, Tectonic geomorphology and Quaternary landscape development in the Albania – Montenegro border region: An inventory, Geomorphology, 326, 116–131, 2019. Avilable at: http://doi.org 10.1016/j.geomorph.2018.09.014

- CARDS 2006, Plani lokal i veprimit në mjedis, Komuna Velipoje. [online] http://archive.rec.org/albania/Projects/LEAPs/REAP_Albanian_Final.pdf CARDS, 2006 (1). Plani Rajonal i Veprimit në Mjedis.

- Dhora, Dh., Imeraj, P. and Rakaj, M., 1998, Rezervati i Velipojës. ShRMMNSh, REC. Shkodër: 6–14.

- Environmental Management Plan and Safety specifications for Revitalization and amelioration of eficiency of Viluni Draining Pumping Station Prepared by Centre for Environmental Impact Assessment Environment and safety consultant, 2011.

- Hermes Project 2019, "A Harmonized Framework to Mitigate coastal Erosion by promoting ICZM protocol implementation", 2019. HERMES Project aims to develop a unified and harmonized framework to mitigate coastal erosion and promote beach restoration, covering all four (4) partner countries (Albania, Cyprus, Greece, and Bulgaria) through the implementation of a coherent ensemble of studies, the sharing of already developed technical tools and the design of joint policy instruments. HERMES Project will aid coastal stakeholders to harmonize and adapt to the most relevant EU policies on coastal zones, as CC, Integrated Maritime Policy, Maritime Spatial Planning, ICZM, Marine Strategy and Water Framework Directives, Inspire, etc.

- Kárpáti, I. & Kárpáti, V., 1961, Die zönologischen verhältnisse der Auenwälder Albaniens. Acta Bot. Academiae Scientiarum Hungaricae 7: 235–301.

- Krymbi, E., Kopliku, N., Rustja, D., 2014, The organization of coastal space of Velipoja-The challenge to the urban development. Studime Albanologjike, ISSN: 2304-3828.

- Miho A., Kashta L., Beqiraj S., 2013, Between the Land and the Sea -Eco guide to discover the transitional waters of Albania.

- Muceku, Y., 2005, Land evaluation and site assessment-engineering geological mapping for regional planning and urban development in Velipoja area. AJNTS-Journal of Albanian Sciences Academy, P. 101-114.

- Paloka, F. 2012, Buna/Bojana Transboundary Integrated Management Plan Spatial Planning – Albania.

- Pazzi, V., Morelli., S., Fidolini, F., Krymbi, E., Casagli, N., Fanti, R 2015, Testing cost-effective methodologies for flood and seismic vulnerability assessment in communities of developing countries (Dajç, northern Albania). Geomatics, Natural Hazards and Risk, vol. 7, no. 3.

- Reiser, O. & von Fuhrer, L. 1896., Materialien zu einer Ornis balcanica. IV. Montenegro. Bos. - Herc. Landesmuseum in Sarajevo, Carl Gerold's Sohn, Wien.

- Schneider-Jacoby, M., Sackl, P., Savelic, D., Schwarz, U., Stumberger, B., Dhora, D., 2005, Rapid assessment of the ecological value of the Bojana-Buna Delta (Albania/Montenegro). EURONATURE: 6-87.

-http://drincorda.iwlearn.org/gef-supported-drin-project/gef-drin-project-1/the-drin-ransboundary-diagnostic-analysis

9. Interactions between Cultural Landscape and Gig Economy Reading New Transformations

Bresena Kopliku, Brikene Dionizi, Elvisa Drishti

9. Interactions between Cultural Landscape and Gig Economy Reading New Transformations

Bresena Kopliku, Brikene Dionizi, Elvisa Drishti [1]

Abstract

The increasing reach of digital technologies in social spaces and practices of our daily lives has changed how we perceive and use the landscape. Traditional economic sectors of services, such as transport, tourist accommodation, or personal services have been revolutionized by the emergence of digital service platforms in people's everyday lives. This new and dynamic gig economy labor market is characterized by the prevalence of short-term contracts, freelance work, and independent work arrangements interchangeably affecting the way people work, consume, finance, learn, and interact within the social space. This paper analyses how platforms are affecting the way we live in general and especially how this new lifestyle is reflected in the landscape. Based on a qualitative methodology, the paper argues that the emergence of the gig economy in Albania, especially after the COVID-19 pandemic, has had a significant impact on the cultural landscape. 46 semi-structured interviews were conducted with geographically tethered and cloudwork workers to understand and address the geographic dimensions of these changes. This analysis was also complemented by other data about digital platform use and the sharing economy in Albania. The paper explores some of the main intersections between the gig economy and cultural landscape such as the spatial distribution of Gig workers, transportation and mobility, and the urban and rural implications. While the gig economy may be considered as a way out of the brain drain phenomenon in Western Balkans, especially for cloud work, the economic instability of the geographically tethered workers has been identified and recognized as well.

Keywords: *Albania; gig economy; social space; cultural landscape.*

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1. Introduction

The increasing reach of digital technologies in the social spaces and practices of our daily lives has changed the landscape and the way we perceive and use it. Landscapes are continuously changing over time because of the dynamic interaction between natural and cultural forces in the environment. The ways in which driving forces like accessibility, urbanization, globalization, and the impact of natural disasters have combined affect the nature and pace of these changes, as well as people's perceptions of the landscape. As a result, values are transformed and so is the way in which people use and shape the landscape (Antrop, 2005). A landscape has its own history, but it can only be understood as a fragment of a larger history of economy and society. It also has its own set of presumptions and consequences, but these presumptions and consequences have origins and implications that go well beyond how land is used and perceived (Cosgrove, 1998). The role of nature has been marginalized as human and economic forces increasingly interact to shape landscapes (Greffe, 2009). The digital revolution has changed drastically in nowadays industry. Information technology is significantly influencing the transformation of spatial structures (Meşhur, 2013).The era of digitalization has additionally heightened the interest of geographers, among others, in examining the numerous implications of geography on technological advancements (Ash *et. al* 20016; Ash *et. al* 2019; Castells 1996). In the words of Ash et al. (2016) geography has undergone a 'digital turn'. The digital economy has created a novelty and a variety of new professions influencing the employment traditional landscape and the labor market features. The perception of the traditional division between home, work, and leisure has also changed, especially after the Covid-19 pandemic. Digital technologies are challenging the notions of place-based identity as defined by a shared location, and geographers study how people reorganize socio-spatial relations between different activities, such as work, rest, and mobility, as well as between different family members, such as adults and children. In each case, pre-existing social relations are not eliminated but rather changed by the shifting geographies of the digital age (Ash *et al.*, 2016). Within the expansive domain of digitization and economic geography, this paper specifically delves into the correlation between the physical landscape and the gig economy. The rise of digital labor platforms, which comprise both web-based platforms—where work is outsourced through an open call to a geographically dispersed crowd, or "crowd work"—and location-based applications (apps), which assign work to individuals in a specific

geographic area, has been one of the most notable changes in the world of work over the past ten years (Berg *et al.*, 2018). There was a significant shift in people's desire and aspirations from blue-collar to white-collar jobs, along with related changes to their means of subsistence, standard of living, and lifestyles (Mukherjee & Narang, 2022). This new employment structure takes two main forms: (i) Remote service platforms – the digital labor platforms where services are provided remotely and transmitted electronically as various freelance marketplaces where tasks are completed online and (ii) On-location service platforms – the actual service delivery occurring in person, but the connection between consumers and service providers, as well as administrative tasks, facilitated through digital means. The gig economy refers to a labor market characterized by the prevalence of short-term contracts, freelance work, and independent, often digital, work arrangements. "People use apps [also commonly known as platforms] to sell their labor" and to earn income from short-term, on-demand assignments (Department for Business and Trade, 2018; Bryson *et al.*, 2018). Gig workers are hired through platforms for tasks that are typically completed offline, such as food delivery, house repairs, ride-hailing, and caregiving. This kind of work, which also includes odd jobs and day labor, is in high demand. The gig worker gets autonomy and schedule flexibility, which the companies frequently promote (Vallas & Schor, 2020). Although sharing economy activities have created challenges to labor and economic practices, it is important to recognize that they are also having increasingly significant effects on planning policy and urban governance. These economic activities are having profound impacts on urban environments as they disrupt traditional forms of hospitality, transport, service industry, and housing (Ferreri & Sanyal, 2018; Bryson *et al.*, 2018). This article investigates key intersections among digitalization, the gig economy, and the cultural landscape. Drawing from qualitative research, through in-depth interviews with various types of gig workers, it is argued how the organization of gig economy work is mirrored in the cultural landscape.

2. Methodology

The article is based on empirical data which comprise 30 semi-structured interviews with platform workers working for six platforms in Albania operating in ride-hailing, food delivery, and e-commerce. Each interview lasted approximately 30 minutes. In addition, 16 in-depth interviews were conducted with cloudwork professionals. All the interviews were recorded

after securing interviewees' permission. The interviews were then transcribed to enable further analysis. Notes were also taken during the interviews to use in the data analysis. After this first phase, the interviews were coded and analyzed manually by using some main key terms, such as- work – life balance, physical challenges, organization of work, and intensity of work. Two focus groups were also part of the data collection. Focus groups were organized with 12 stakeholders of the gig economy sectors working in the management, academics, workers' human rights activists, and public institutions representatives. The interviews and the focus groups were conducted during six months of fieldwork, November 2022 to April 2023, mainly in Tirana as the capital city, and also in Shkodra and were realized in the framework of the research projects "Fairwork"[2] and "Open Western Balkan Collaboratory on Online Platform Work: Serbia, Albania and Bosnia and Herzegovina PN5- 052[3]".

3. The digitalization of economy in Albania

With the widespread use of mobile technology and internet access in the early 2010s, Albania's online platform economy began to take shape and expand exponentially. This expansion accelerated throughout the COVID-19 pandemic and its aftermath, reshaping the economy and labor market development (Kasimati, 2022). Eurostat reports that 98.4% of residential buildings in Albania possess at least one internet-connected device, indicating a widespread communication network across the nation's territory (Latifi,

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[2] Fairwork is a project run out of the Oxford Internet Institute, University of Oxford and the WZB Berlin Social Science Center, and draws on the expertise and experience of staff at Access to Knowledge for Development Center (A2K4D) at the American University in Cairo's School of Business, Audencia Business School, Center for Development Evaluation and Social Science Research (CREDI), Center for Health Consultation and Community Development (CHD), Centre for Labour Research, CIPG Innovation Policy Governance, CREDI, De La Salle University, FLACSOEcuador, Institute for a Fair Economy, International Institute of Information Technology Bangalore (IIITB), International University of Rabat, iSocial, KU Leuven, Lagos Business School, Luigj Gurakuqi University of Shkodër, Observatorio de Plataformas Perú, Phenix Center for Economics & Informatics Studies, Pollicy, Public Policy Research Center (CENTAR), Qhala, REPOA, Sapienza University of Rome, TEDIC, The Policy Initiative, TU Wien, Universidad Adolfo Ibáñez, Universidad Católica del Uruguay, Universidad Complutense de Madrid, Universidad del Rosario, University of California College of the Law, San Francisco, University of Manchester, and University of São Paulo.
[3] More information on the report on
https://repeople.rs/unpacking-the-potentials-of-the-platform-economy-in-albania/

2024). The digitalisation of the economy in Albania has led to the establishment of different digital platforms, especially after 2010 which enjoyed a significant popularity increase in the wake of the COVID-19 pandemic. Online shopping, in particular, has revolutionized the predominantly bricks and mortar high street retail environment dominant in the Albanian context; simultaneously expanding the range and segmentation of customers – and thus creating new jobs for platform workers – whilst also undermining the high street (Fairwork, 2023). This expansion has occurred through platform capitalism's disruption of traditional business models and the emergence of new ways of doing business such as food delivery, ride-hailing, cleaning, cargo transport, online shopping delivery, and e-commerce. The digitalization of work in Albania has increased rapidly with the emergence of so-called "cloud work" (online work that can be done from anywhere around the globe) and location-based (geographically tethered) platform work that must be done in place, like ride-hailing or logistics. The platform economy's development in Albania can be attributed to various factors, such as technological advancements, globalization, governmental policies, and a growing demand for flexible work arrangements. The use of the Internet, as the basic necessary part for the functioning of this sector, is now part of the work landscape and it has changed the way work is organized. According to INSTAT (2023), enterprises with ten or more employees who have used computers with internet access for work purposes during 2023, represent 99.1% of enterprises, from 98.7% that resulted in 2022. The highest percentage of employees who use a computer with Internet access is observed in the information and communication activity at 72.3%, followed by professional, scientific, and technical activities at 64.9% and administrative services and support at 56.3%. In 2023, 14.8% of enterprises sold products/services via websites, apps dedicated, e-commerce websites, and applications used by various enterprises for product trade. The largest share of e-commerce is occupied by companies operating in the field of information and communication with 31.7%, followed by accommodation and service activities food with 30.7%, and administrative and support services with 25.7% (INSTAT, 2023). Even within construction regulations, it is specified that every newly constructed building must allocate space for a high-speed internet network. This means that new buildings, or buildings for offices and businesses must be equipped with an internal infrastructure that allows the installation of optical fibers and various cables up to the user (Balkanweb, 2018). Urban landscapes are enriched today with small postal service shops for online sales that prefer to choose locations close to each other, taxi cars with different colors and various typologies,

and various bicycles and motorbikes with all kinds of ergonomic baskets.

Different resources reveal the dynamic and growing gig economy in Albania. According to the data from Gigmetar[4], in October 2023 Albania reported growth in both platforms at 3.4 and 10.3 percent, respectively. Albania is the only country in the region to defy the regional decreasing trend, which saw a significant increase in the number of freelancers (10.3%) (Public Policy Research Center, 2024). These results also show that only Albania experienced growth, with its number of freelancers per 100,000 people rising by 30. Albania was the only exception, moving up from third to second place in the rankings with 297 freelancers per 100,000 people, owing to a sizable increase in the number of gig workers (Public Policy Research Center, 2024).

4. Cultural landscape and gig economy – toward new transformations

What does the digital economy increase mean for the Albanian cultural landscape and what changes are identified in the landscape? People are affected by digital transformation in different ways, but one thing that is certain is that human society is in the midst of a fundamental process of change that is affecting the economy, politics, science, society, and individuals, and that goes far beyond the technological developments initially perceived. The developments are fast, diverse, complex, and frequently contradictory (Thomas, 2020). These developments are numerous and so interconnected with each other that it is difficult to determine the weight of the digital economy in these changes per se. The distinct main effects are noted in the relationship between transportation and mobility, the spatial distribution of the gig workers, and the urban dominance of the phenomenon.

4.1 Transportation and mobility –

With the advent of the digital age, many aspects of our lives have undergone tremendous change, most notably the way we work. The traditional employment landscape has been fundamentally altered by the emergence of the so-called "gig economy." Through gig work, employers can hire workers only when needed, at specific times when workers are available to

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[4] GigmetarTM is the first instrument that describes the geography of digital work in Serbia and the region in terms of gender, income, and most common occupations. It is a result of the efforts made by the Public Policy Research Centre (CENTAR) to shed more light on the work on online platforms.

finish particular tasks. This reduces labor costs for the business but increases worker precarity, especially for low-skilled workers (Raekstad, 2022). The mobility intensified by the gig economy, especially in food delivery, ride-hailing and e-commerce is exerting pressure on today's urban landscape. European cities were developed before the era of the private automobile, meaning that nowadays they are denser, more crowded, and have more stores and eateries that are easily accessible on foot. Because of the increased traffic, complicated road networks, and sometimes very challenging parking, each "gig" takes longer to complete (and get paid for) (Sfez, 2021). In the urban landscape, especially of the capital city Tirana, the introduction of platform work can be distinguished in the increasing number of taxis, motorcycles, and bicycles placing strain on the city's infrastructure. This is particularly exacerbated in busy cosmopolitan areas with a high density of workplaces and restaurants. Urban mobility with increased traffic congestion, food delivery workers, and taxi drivers,[1] peaking during lunchtime is evidence of the way the sharing economy is acting as an agent of transformation . This is particularly exacerbated in busy cosmopolitan areas with a high density of workplaces and restaurants. Urban mobility with increased traffic congestion, food delivery workers and taxi drivers, peaking during lunch time is an evidence of the way sharing economy is acting as an agent of transformation

Foto 1: Food delivery driver and motorcycles in the street of Tirana

Foto 2: Traffic in Tirana on an ordinary weekday

Alban (M, 33, food delivery) *From the moment you begin to drive the motorcycle, you only have challenges, especially physical security challenges. 7 hours of only stress. There are many difficulties, the rain, the sun, we are all the time on the road, the cars, we have to be very careful, everywhere.*

Serjon (M, 22, food delivery) *The main challenge? the traffic, of course, is a total mess and we have to keep our mind on car drivers, pedestrians, bicycles and whatnot. Meantime, I also have to greet people as I speed by as I need to keep a good relationship with people so that they can leave me good tips.*

One of the main distinct features of the platform economy is that tasks are delivered based on the work performance of the driver, which is the time from one delivery to the other. High degrees of flexibility, autonomy, task variety, and complexity are typically provided by algorithmic management techniques. Workers are rated after tasks are completed by their clients and

workers with the best ratings and the most experience tended to receive more work due to clients' preferences and the platforms' algorithmic ranking of workers within search results. In terms of job quality, this entails a lack of worker autonomy combined with high levels of work intensity (Wood *et. al* 2018). On the other hand, these control mechanisms may also lead to low pay, social isolation, working unsociable and irregular hours, overwork, sleep deprivation, and exhaustion (Wood et al., 2018; Popan 2023). This mode of control prompts drivers to go faster, to find the shortest routes, and therefore to be more resistant to accidents during work.

> Jon (M, 38, food delivery) "*GPS is good, but you have to know Tirana, its roads, addresses and traffic because the performance depends on how quickly the orders are delivered. It's the algorithm, that is like a person looking at the system, that does the ranking automatically.*"

> Marjan (M, 28, food delivery) Y*ou are rated based on your performance, how quickly you place orders, and how correct you are with the customer, it's an algorithm that is like a person looking at the system, whether is it delaying orders or not, correctness with e-mail. A ranking is done automatically in the system based on performance, so depending on the ranking the orders are also distributed by the system.*

4.2 *The spatial distribution of Gig workers and workplace*

The pervasiveness of digital technologies has meant that they have replaced the intermediaries in our day-to-day routines related to work, travel, consumption, production, and leisure. The modern information economy has also brought about changes in the spatial organization of businesses and employment patterns that were previously dependent on processes of concentration and dispersal (Mukherjee & Narang, 2022). One of the positive benefits of crowd work is the ability to set one's schedule and work from home or another location of their choice. Crowdwork can offer a high degree of flexibility for workers in terms of the selection of tasks, how much one works, the place of work, and the organization of one's work (Berg et al., 2018). In addition to remote work becoming more and more common in established businesses, an increasing number of professionals are becoming "internationalized"—that is, working from Albania for foreign-based companies (Kasimati, 2022). The owners of digital platforms may be located on a different continent than the employees, who may not always

be aware of their employer. Several companies offer a common workplace for gig workers, especially cloud workers, who are employed in different companies around the world. Their main goal is to create a social space where workers can interact and make the difference between work and leisure. Therefore, suitable structures have been built, in the form of business centers, where the employees pay only a part of the rent and in exchange use the relevant logistics and associate with other employees. Eri's day is organized between three workplaces, including a shared big work environment.

Eri (37, M, IT, Upwork) *I have three workplaces. One is a place where I work with other 24 people, each with his own specialty, design, webmaster, IT, etc; at home of course; and an international organization which I worked for, but this is not remote work.*Such structures have also been built for platform employees where they gather in the morning and wait for orders in the app. The structures are equipped with parking spaces, rest facilities, a cafeteria, and places to charge phones.

Oni (28, M, food delivery) *I have my own schedule, we have the application that gives us online orders, we go online, we sit at our place of motorists and there we wait for the order to be sent to us by the app…*

Workers appreciate the ability to set their own schedules and work from home. According to the surveys carried out by ILO (2018), many crowd workers worked atypical hours: 36 percent regularly worked seven days per week; 43 percent reported working during the night, and 68 percent reported working during the evening (6 p.m. to 10 p.m.), either in response to task availability (and differences in time zones) or because of other commitments. Many women combined crowdwork with care responsibilities (Berg *et al*., 2018). One in five of the female workers in the sample had small children (0 to 5 years old). Despite this, these women worked 20 hours a week on the platform, which was just five hours less than the sample as a whole; many of them worked at night and in the evenings (Berg *et al*., 2018). However, there was a drawback to this independence in that working from home could also result in social isolation. As confirmed by other studies as well (Wood et al., 2018), one of the main themes of the interviews with some employees was how lonely it can be to work without interacting with others. To avoid this dissatisfaction, many employees, mainly cloud workers, choose to work for several employers, on-site and online. Precarity, the gig economy, and the continuous growth of insecure temporary work will continue to influence the

nature of employment in the 2020s (Duke, 2023). The combination of several jobs at the same time is possible for the moment because of the gap in the legal regulations for the gig economy.

4.3 Urban and rural implications

With better access to technology and a larger customer base, gig workers are prevalent in dominant areas contributing further to urbanization. According to the ILO (2018) surveys four out of five workers live in an urban or suburban area, which shows that crowdworking is primarily an urban phenomenon (Berg *et al.*, 2018). The increasing digitalization in the urban area has already impacted the landscape through the call centers which have been poles of attraction for the youngsters since their emerging in 2010. The Call Center sector took off in Albania after 2010 when many companies, mainly Italian, moved their activity to our country due to low labor costs and many people had knowledge of the Italian language. The call center sector experienced rapid expansion where, from 382 companies operating in 2011, their number jumped to 848 in 2015, the highest number in the country. Along with the increase in numbers, the weight of the sector's employment in the economy also increased, becoming the savior of many young people, who were managing to secure salaries above the average labor market in Albania (Loga, 2019). This intensification also appeared in the landscape with the typical designations of companies, and buildings suitable for such a profession. Adapting to the age of the target group employed in this sector, 20-35 years old, the call center structures were surrounded by cafeterias and fast food services. In the following years, the employment rate in this sector dropped significantly because of the digitization which reduced the need for customer services. Companies are now creating less human and more technological products, where part of the work processes are being automated. The market for call center services is moving from product sales to digital marketing. The number of employees in call center companies, once an oasis for the employment of young people, has started to shrink. According to DPT data, by September 2022, 12,404 employees will be employed in call center companies, with a decrease of 18% compared to the end of 2021 (Azo, 2023). Another orientation of the economy in Albania that is attracting young people to Tirana is that of the platform economy. Five of the six platforms studied in this research had their headquarters in Tirana. In addition to other pull factors, platforms being concentrated in the capital city affect also internal migration toward Tirana, especially for youngsters

from the secondary cities and rural areas. 80% of our interviewees come from the peripheral areas of Tirana or from other cities in Albania. According to Qiao *et. al* (2023), ride-hailing platforms do not liberate gig workers from the structural rural-urban disparities but rather form a continuation of the structural barriers and discrimination in the division of labor, even though the technological innovation discourse in the platform economy argues that the gig driving can attract the well-educated and other minorities. Gig drivers are more likely to come from neighborhoods with lower income and less regular job opportunities (Qiao *et al.*, 2023). In terms of geography, digital labor platforms are mainly concentrated in the capital city, Tirana, reflecting Tirana's dominance in Albania as the capital, but also where wealth, jobs, and cultural events are centralized, and as home to the largest population in the country. As such, the regional inequalities of accumulated economic wealth and resources in Tirana create the strongest consumer market, while peripheral regions experience a lack of investment and development. This is clearly evident in the food delivery sector (Fairwork, 2023). This also impacts workers, with people coming from secondary cities or rural areas to live in Tirana and enter the labor market, constituting a higher percentage of drivers and couriers.

Alban (M, 33, food delivery) *I am from Librazhd. After finishing high school, I emigrated to Greece and then returned to Albania. I couldn't go back to Librazhd, there are no jobs there. So 9 years ago I came to Tirana, for work. I began working first in construction and then in food delivery. I don't think I can find any better job for myself, if I decide to change, I will emigrate again.*

While the gig economy may be considered as a way out of the brain drain phenomenon in Western Balkans, especially for cloud work, the economic instability of the geographically tethered workers has been identified and recognized as well (Public Policy Research Center, 2024). The emergence of digital nomads in the labor market has also affected the way touristic social spaces are perceived, especially in smaller cities and rural areas.

Conclusions

Landscapes are dynamic, they change over time and economic factors are the main causes of this change. The gig economy is considered a transformative force in the modern working landscape and is a complex and

rapidly evolving phenomenon. The emergence of digital labor platforms, which comprise both web-based platforms where work is outsourced through an open call to a geographically dispersed crowd ("crowdwork") and location-based applications (apps) that assign work to individuals in a specific geographical area, has been one of the most notable transformations in the world of work during the past ten years. In addition to the employment landscape, this emergence has had its impact on the cultural landscape as well. The main interactions between the gig economy and landscape are seen in the changes in transport and mobility in the urban areas, the spatial distribution of the gig workers, and the urban concentration of the phenomenon. The landscape of the capital city, Tirana, is dominated by ride-hailing or food delivery with many gig-workers that are involved in transportation services, especially in the city center and lively neighborhoods. Urban mobility with increased traffic congestion, food delivery workers, and taxi drivers, peaking during lunch time is evidence of the way the sharing economy is acting as an agent of transformation. The gig economy has changed where people work and how they work. The traditional relationship between workplace and home has also changed. In addition to other pull factors, platforms being concentrated in the capital city affect also internal migration toward Tirana, especially for youngsters from the secondary cities and rural areas.

References

- Antrop, M. 2005., Why landscapes of the past are important for the future. *Landscape and Urban Planning*, *70*(1–2), 21–34. https://doi.org/10.1016/j.landurbplan.2003.10.002

- Ash, J., Kitchin, R., & Leszczynski, A. 2016., Digital turn, digital geographies? *Progress in Human Geography*, *42*(1), 25–43. https://doi.org/10.1177/0309132516664800

- Ash, J., Kitchin, R., & Leszczynski, A. 2019. Introducing digital geographies. In *SAGE Publications Ltd eBooks* (pp. 1–10). https://doi.org/10.4135/9781529793536.n1

- Azo, D. 2023, February 13. *Fillon tkurrja e punësimeve në call center*. Revista Monitor. https://www.monitor.al/fillon-tkurrja-e-punesimeve-ne-call-center-2/

- Balkanweb. 2018.,. *Objektet e reja në Shqipëri, ja specifika që duhet të respektojë çdo ndërtues*. https://www.balkanweb.com/objektet-e-reja-ne-shqiperi-ja-specifika-qe-duhet-te-respektoje-cdo-ndertues/#gsc.tab=0

- Berg, J., Furrer, M., Harmon, E., Rani, U., & Silberman, M. S. 2018. *Digital labour platforms and the future of work: Towards Decent Work in the Online World*, International Labour Office, Geneva

- Bryson, J. R., Andres, L., & Mulhall, R. 2018., *A research Agenda for Regeneration Economies: Reading City-Regions*. Edward Elgar Publishing, UK

- Castells, M. 1996. The information age: Economy, society and culture (3 volumes). Blackwell, Oxford, 1997, 1998.

- Cosgrove, D. 1998. *Social formation and symbolic landscape*. The University of Wisconsin Press, United States of America

- Department for Business and Trade. 2018, May 4. *Good work: the Taylor review of modern working practices*. GOV.UK. https://www.gov.uk/government/publications/good-work-the-taylor-review-of-modern-working-

practices

- Dionizi, B., Drishti, E., & Kopliku, B. 2023. *Unpacking the potentials of the platform economy in Albania*. Public Policy Research Center. https://publicpolicy.rs/publikacije/0ad84def06845152a0c9dd7de3f902b83d8b0f7b.pdf

- Duke, B. 2023. Future Workers Short-Changed: The Societal Transformation of The Global Employment Landscape from Secure Permanent Work to The Gig Economy and Precarity. *The Text*, *1*(5). http://thetextjournal.com/text_admin/issue/31022-1-ben-duke-jan-2023-modified.pdf

- Fairwork. 2023., *Fairwork Albania Ratings 2023: Assessing Work in the Albanian Platform Economy*. https://fair.work/wp-content/uploads/sites/17/2023/11/Fairwork_Albania_Report_2023_accessible.pdf

- Ferreri, M., & Sanyal, R. 2018., Platform economies and urban planning: Airbnb and regulated deregulation in London. *Urban Studies*, *55*(15), 3353–3368. https://doi.org/10.1177/0042098017751982

- Greffe, X. 2009., Urban Cultural Landscapes: an economic approach. In *Working paper new series 2009* (Working paper No. 1/2010). University of Turin. https://www.fondazionesantagata.it/wp-content/uploads/1_WP_Ebla_CSS-2.pdf

- INSTAT. (2023). Përdorimi i Teknologjisë së Informacionit dhe Komunikimit në ndërmarrje, 2023 [Press release]. https://www.instat.gov.al/media/12553/njoftimi_p%C3%ABr_shtyp_tik_2023.pdf

- Kasimati, M. (2022). Embracing the Digital Age: The future of work in the Western Balkans new forms of employment and platform work. In https://www.etf.europa.eu/sites/default/files/2022-09/WB%20Embracing%20digital%20age_Country%20report_Albania_EN_0.pdf. European Training Foundation. Latifi, M. (2024, January 23). Si dhe sa po përdoret interneti në Shqipëri sipas ekspertëve. Business Magazine Albania. https://businessmag.al/si-dhe-sa-po-perdoret-interneti-ne-shqiperi-sipas-eksperteveinterneti-tashme-i-shtrire-ne-cdo-shtepi-shqiptare-perdorim-i-ulet-per-kurse-dhe-traj-nime/

- Loga, L. 2019, July 19., *Shkëlqimi dhe rënia e call center*. Revista Monitor. https://www.monitor.al/shkelqimi-dhe-renia-e-call-center-2/

- Meşhur, H. F. A. 2013. Planners' Attitudes toward the Spatial Impacts of Information and Communication Technologies. Gazi University Journal of Science GU J Sci, 26(3), 473–487. https://dergipark.org.tr/en/download/article-file/83599

- Mukherjee, S., & Narang, D. 2022., Digital Economy and Work-from-Home: The Rise of Home Offices Amidst the COVID-19 Outbreak in India. Journal of the Knowledge Economy, 14(2), 924–945. https://doi.org/10.1007/s13132-022-00896-0

- Popan, C. (2023). The fragile 'art' of multi-apping: Resilience and snapping in the gig economy. *Environment and Planning A: Economy and Space*. https://doi.org/10.1177/0308518x231209984

- Public Policy Research Center. 2024, January 18. *Region October 2023 - Public Policy Research Center*. Gigmetar. https://gigmetar.publicpolicy.rs/en/region-2023-2-2/

- Qiao, S., Huang, G., & Yeh, A. 2023. Who are the gig workers? Evidence from mapping the residential locations of ride-hailing drivers by a big data approach. *Cities*, *132*, 104112. https://doi.org/10.1016/j.cities.2022.104112

- Raekstad, P. 2022., Algorithmic domination in the gig economy. *Uva*. https://www.academia.edu/80246756/Algorithmic_Domination_in_the_Gig_Economy

- Sfez, L. 2021, June 15. *Socio-cultural considerations for the gig economy in France & the UK • intO*. intO. https://www.studio-into.com/strategy/laetitia-sfez-socio-cultural-considerations-for-the-gig-economy-in-france-the-uk/

- Thomas, P. M. 2020. The Digitalizing Societys—Transformations and Challenges. In *RaumFragen: Stadt - Region - Landschaft* (pp. 447–456). https://doi.org/10.1007/978-3-658-30956-5_25

- Vallas, S. P., & Schor, J. B. 2020. What do platforms do? Understanding

the gig economy. *Annual Review of Sociology*, *46*(1), 273–294. https://doi.org/10.1146/annurev-soc-121919-054857

- Voytenko Palgan, Y., & Mont, O. 2023. Share and Repair in Cities: Developing Agenda for Research and Practice on Circular Urban Resilience. 20-23. Abstract from 8th International Workshop on the Sharing Economy "Unveiling Sharing Economy - Looking Back & Looking Ahead", Vienna, Austria.

- Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. 2018. Good gig, Bad gig: Autonomy and algorithmic control in the global gig economy. *Work, Employment and Society*, *33*(1), 56–75. https://doi.org/10.1177/0950017018785616

10. "Sicilia Archeologica" and the Sicilian archaeological park system. A reflection on the newly launched territorial branding initiative

Giovanni Messina

10. "Sicilia Archeologica" and the Sicilian archaeological park system. A reflection on the newly launched territorial branding initiative

Giovanni Messina[1]

Abstract

The landscape figure of archaeological parks constitutes, especially in the case of established tourist destinations such as Sicily, a highly relevant horizon for territorial management and enhancement policies. The case study of "Sicilia Archeologica" (Archaeological Sicily) constitutes a trial that attempts to connect a specific political action, the foundation of a System of Regional Archaeological Parks, with an instrumental intervention that can accompany it. This paper aims to represent an initial reflection on the criticalities and potentialities of the initiative.

Keywords: *Archaeological sites, Destination management, Brand*

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1. Introduction

André Corboz (1983) taught us to look at the territory in the guise of a palimpsest. Like a text (Cosgrove, Jackson, 1981) in continuous overwriting. Eric Dardel (1986), with the very powerful images of the curved line and momentum, thinks of the landscape in its dynamic tension.

In this framework, archaeological emergencies constitute a peculiar case on which we will try to insist, electing Sicily as a case study.

The excavation (Bianchi Bandinelli, 2005) is the scientific act that reassigns to Uranus and Gaea what Kronos had consigned to the darkness of Hades. Resurfacing is the ripping open of the parchment of territory. It is the epiphany of a submerged world that *ipso facto* begins to dialogue with surface relations, to knot itself in territorial plots, to inscribe itself in the image of the landscape, immense and revealing, as Gunnar Olsson (1999) taught us to believe.

This paper intends to mention the debate, proper to Human Geography, on the role that cultural heritage, and especially archaeological heritage (Gable, 1987), can play now in defining the local *milieu* (Pioletti, 2006), now in triggering local development opportunities (Pollice, Rinaldi, 2015) in Sicily.

Cultural heritage, heritage, represents a firmly rooted element within the geographical discourse. It in fact constitutes a material junction of the synchronic and diachronic interfacing of communities with space regardless of artistic connotations, (Caldo, 1994). On the symbolic value of the monument in the representation of territory and communities, Söderström intervenes, who, reiterating the concept of semiophora, notes how appropriate it is to «consider heritage as the result of a production process and not as a datum of the territory. In other words, the value of heritage is not given by the object, nor is it stable over time: instead, it is contextually constructed[2]» (Söderström, 1994, 33). What, then, are the entanglements and perspectives that connect geography to heritage? It is useful to recall in footnote the words now of Brian Graham, Greg Ashworth and John Tunbridge[3] now of Girolamo

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[2] Our translation. Original text in Italian: «considerare il patrimonio quale risultato di un processo di produzione e non come un dato del territorio. In altri termini, il valore del patrimonio non è dato dall'oggetto e non risulta nemmeno stabile nel tempo: esso è, invece, costruito contestualmente».

[3] «In the first instance, heritage is inherently a spatial phenomenon. All heritage occurs somewhere and the relationship between a heritage object, building, association or idea and its place may be important in a number of ways […] Second, heritage is of fundamental importance to the interests of contemporary cultural and historical geography, which focus on signification, representation and the crucial issue of identity. Places are distinguished from each other by many attributes that contribute to their identity and to the identification

Cusimano[4].

One glimpses an interpretive plot, within Cultural Geography, that connects within the dynamics of local development, heritage to tourism. And it is precisely on the contribution of cultural heritage to local development that Dallari's reading, which we quote *in extenso*, insists:

> «the countless projects and initiatives supported by public and private entities and by many communities to learn about, conserve and enhance cultural heritage are a testimony to the fact that on a global and local level a cultural revolution is taking place such that it constitutes a crucial issue in social and economic debate. [...] If Cultural Heritage is interpreted as a referential sign of culture understood in its broadest sense, the cultural heritage constituted by them is far more extensive than what is conventionally understood: it coincides with all the products of man. [...] We are convinced that the preservation and enhancement of territorial signs related to the historical territory and cultural heritage is revealed as a strategic project, where Cultural Heritage assumes a strategic territorial function of relationship and communication, but also of innovation and creativity» (Dallari, 1996, 89-91)[5].

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of individuals and groups within them. Heritage is one of these attributes. The sense, or more usually senses, of place is both an input and an output of the process of heritage creation. Geography is concerned with the ways in which the past is remembered and represented in both formal or official senses and within popular forms, and the implications which these have for the present and for ideas and constructs of belonging. [...] Heritage is both a cultural and an economic good and is commodified as such. This multiple use and consumption occurs with virtually all heritage and is a potent source of conflict between the various interest groups involved» (Graham and others, 2016, 4-5).

[4] «La dimensione della cultura, intesa tanto nella epifania dell'artefatto monumentale come nella sua accezione di sistema o di indotto creativo, intervenga e, spesso demiurgicamente agisca, nella creazione del senso dei luoghi, nella rappresentazione dei *milieu* locali e, dal punto di vista più operativo, nel rinsaldare l'offerta turistica dei territori. Molto, a partire dagli anni Ottanta, la geografia umana e culturale hanno riflettuto sul valore che la dimensione patrimoniale della cultura, il monumento, il bene culturale abbiano nell'indicazione del senso del luogo. Il discorso geografico ha saputo individuare con strumenti concettuali e metodologici propri, scevri dunque da derive artistico-architettoniche, il reticolato di significati costituito da territori e beni culturali» (Cusimano, 2018, 9); (our translation: «The dimension of culture, understood both in the epiphany of the monumental artifact as well as in its meaning as a system or creative inducement, intervenes and, often demiurgically acts, in the creation of the sense of place, in the representation of local milieus and, from a more operational point of view, in reinforcing the tourist offer of territories. Much, since- the 1980s, human and cultural geography have reflected on the value that the heritage dimension of culture, the monument, the cultural good have in indicating the sense of place. Geographical discourse has been able to identify with its own conceptual and methodological tools, thus free from artistic-architectural drifts, the network of meanings constituted by territories and cultural goods»).

[5] Our translation. Original text in Italian: «gli innumerevoli progetti ed iniziative sostenuti da enti pubblici e privati e da tante comunità per conoscere, conservare e valorizzare il

2. The issue of territorial branding. Some critical insights

As early as 2008, two Destination Management experts such as Umberto Martini and Joseph Ejarque were straightforward about the extent to which the tourism market had activated a global dynamic of competition that had in the territories its driving hub. The implementation of the so-called territorial in tourism offer has become, even in local development rhetoric and planning (Celata, 2004), a kind of categorical mantra, rightly or wrongly. Issues concerning the promotion and enhancement of the territory pertain to a specific critical debate (dell'Agnese, 2001) involving the most cross-cutting experiences and formations. Geographical discourse is well suited to participate, with good merit, in the intense scholarly activity on these phenomena, focusing its attention on the management policies of space, in terms of its positioning in the increasingly global market. The representations of space can have a strong performative characterization (Rossi, Vanolo, 2010); the way through which a space is organized and redefined by design cannot but orient the *modus operandi* of the actors present in the territory in an attempt to create an opportunity for its systemic development. The representation and communication of the development project, or at least of its vision, thus become the crucial hubs on which to aggregate internal consensus and on which to base initiatives to open up the territory to the external market (Messina, 2016).

The voluntary production of territorial images and representations are the test-bed, the instrument of control and verification, of the territory's development process. The concept of territorial branding actually, in a serious planning perspective, should pertain to a sublimating and synthetic process that condenses an entire universe of values into a sign (Kavaratzis, Ashworth, 2005). Forcing and rhetoric are serious risks to which one typically exposes oneself when attempting such representational processes (Bonazzi, 2020). However, one must ponder the complexity of the abstract and symbolic process that aims at the theoretical goal of complete

patrimonio culturale, sono una testimonianza di come a livello globale e locale sia in atto una *rivoluzione culturale* tale da costituire un tema cruciale nel dibattito sociale ed economico. [...] Se i Beni Culturali si interpretano quale segno referente della cultura intesa nella sua accezione più ampia, il patrimonio culturale da essi costituito si presenta di gran lunga più esteso rispetto a ciò che convenzionalmente viene inteso: esso coincide con tutti i prodotti dell'uomo. [...] Siamo convinti che la conservazione e la valorizzazione dei segni territoriali legati al territorio storico e al patrimonio culturale si rivela come un progetto strategico, dove i Beni Culturali assumono una funzione territoriale strategica di relazione e comunicazione, ma anche di innovazione e di creatività».

collective recognition of a system in its logo, to constitute public trust, sense of belonging, and recognizability (de Spuches, 2023). It is a matter, and this is the real challenge, of telling stories about a place, stories that are able to elicit a sense of recognition in the local identity fabric and at the same time the liking and familiarity of outside investors and visitors.

3. The rebranding of the archaeological heritage of the Sicilian region

3.1 "Sicilia Archeologica" project summary and methodology

By DDG no. 3861 of 14/10/2021, registered by the Central Accounting Office of the Department of Cultural Heritage and Sicilian Identity at no. 4 of 02/11/2021, the total sum of € 129,124.80 was committed to cap. 376630 (SIOPE Management Code U.1 .03.02.19.001) of which € 18,446.40 (including VAT) is to be charged to the 2021 financial year, € 55,339.20 (including VAT) is to be charged to the 2022 financial year and € 55,339.20 (including VAT) is to be charged to the 2023 financial year for Expenses for Innovation, Modernization and Management of Digital Services for Technical Assistance and Content Update Maintenance Portal[6] "Sicilia Archeologica", in favor of ETT[7] s.p.a. of Genoa (Sicilian Region, 2022).

In other words, the Sicilian Region entrusted a private company, ETT, with the task of intervening in the renovation and enhancement of the archaeological heritage placed under its jurisdiction, with particular reference to the digital dimension. This contribution intends then, moving from a qualitative approach (De Lyser et al., 2010) and through the methodology of Document Analysis (Bowen, 2009; Karppinen, Moe, 2012) integrated with unstructured interviews with two project managers, to analyze the criticalities and opportunities, of cultural and tourism policy, underlying the enhancement strategy of the island's archaeological parks.

3.2 The role of archaeological parks in the Sicilian tourism sector

Due to its geographical position and its important historical-archaeological connotation, Sicily represents a recognized tourist destination in the world. With nearly 5 million arrivals and 15 million presences (Sicilian Region, 2023a), the island in 2022 was again confirmed among the leading destinations in the

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[6] https://parchiarcheologici.regione.sicilia.it/
[7] https://ettsolutions.com/

Italian tourism supply system, with particular reference to beach, cultural and nature tourism. Sicily's cultural heritage, including as many as 5 UNESCO sites or itineraries, is considered by the Regional Strategic Plan for Tourism Development 2019/2023 fundamental; «improving the conditions for the enjoyment of cultural heritage potentially contributes to the achievement of all the overall goals outlined in the Strategic Plan[8]» (Regione Siciliana, s.d., 12).

Regional archaeological parks, which each integrate a plurality of sites, are then, in the governance vision, a key resource on which to intervene to improve the area's overall performance. They are (**Fig.1**):

Archaeological and landscape park of the "Valle dei templi di Agrigento" (UNESCO site);
Archaeological park of "Gela";
Archaeological and landscape park of "Catania e della Valle dell'Aci";
Archaeological park of "Morgantina e della Villa del Casale di Piazza Armerina" (UNESCO site);
Archaeological park of "isole Eolie" (UNESCO site);
Archaeological park of "Naxos e Taormina";
Archaeological park of "Tindari";
Archaeological park of "Himera, Solunto e Iato";
Archaeological park of "Kamarina e Cava d'Ispica";
Archaeological park of "Siracusa, Eloro e Villa del Tellaro, Akrai" (UNESCO site);
Archaeological park of "Leontinoi";
Archaeological park of "Segesta";
Archaeological park of "Selinunte, Cave di Cusa e Pantelleria";
Archaeological park of "Lilibeo".

As mentioned, 2022 marked a year of huge recovery in tourism after the Covid-19 pandemic. With respect to the enjoyment of regional museums and archaeological parks[9], the Department has issued a note of extreme interest for the purposes of our reasoning:

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[8] Our translation. Original text in Italian: Il miglioramento delle condizioni di fruizione del patrimonio culturale contribuisce potenzialmente al raggiungimento di tutti gli obiettivi generali delineati nel Piano Strategico.
[9] L'unica fonte in tal senso è ancora il *report* del Dipartimento regionale per i Beni Culturali, aggiornato al 2021.

«The year 2022 was a record year for Sicily's archaeological parks and major museums. In fact, more than 3.3 million visits were recorded, almost double the 1.7 million recorded in 2021. Leading the way was the Naxos Taormina Park, which, with the archaeological site, Greek Theater and Isola Bella, recorded 844,542 visitors compared to 352,484 the previous year (+139 percent). It is followed by the Valley of the Temples Park with 809,513 (almost 82 percent more than the 445,000 in 2021) and the Syracuse Park with 764,853 in 2022 compared to 254,713 admissions in 2021 (+200 percent)[10]» (Regione Siciliana, 2023b).

These numbers condense the strategic nature of the archaeological sector as a key factor in Sicily's tourist attractiveness.

Before the launch in 2023 of the Sicilia Archeologica project, the regional parks were present on the network in an uneven way, without branding and coordinated image strategies and with portals (where present) not only misaligned with respect to the recent needs of the most common User Experience but also rather lacking, where not reticent, about publishing reports on the sites' activities and performance. This criticality is quite significant, especially for those who need to access the datasets of institutions (public ones moreover) for research or partnership reasons. The fragmented digital presence has undoubtedly not contributed to the activation of synergies in the promotion of parks, which remain highly polarized between sites crucial to the local tourism system and completely marginalized sites. The statistics provide evidence of this, which is still constructed (when available) for individual sites and not aggregated into parks.

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[10] Our translation. Original text in Italian: Il 2022 è stato un anno da record per i parchi archeologici e i principali musei siciliani. Sono state, infatti, oltre tre milioni e 300 mila le visite registrate, quasi il doppio rispetto al milione e 700 mila del 2021. Punta di diamante il Parco di Naxos Taormina che, con il sito archeologico, il Teatro greco e Isola Bella, fa registrare 844.542 visitatori a fronte dei 352.484 dell'anno precedente (+139%). Segue il Parco della Valle dei Templi con 809.513 (quasi l'82% in più rispetto ai 445 mila del 2021) e il parco di Siracusa con i 764.853 del 2022 a fronte dei 254.713 ingressi del 2021 (+200%)

Site	Visitors	Incomes (euro)
Valle dei Templi	445.925	3.522.075,50
Taormina (theatre)	312.145	2.585.914
Siracusa	226.558	2.697.878,50
Selinunte	127.488	562.579
Segesta	124.781	587.214
Villa del Casale	102.018	850.298
Catania (theatre)	46.120	220.821
Naxos	32.311	21.820
Lilibeo	18.061	38.138
Tindari	17.427	79.746
Morgantina	2.702	17.098
Himera	1.740	3.522

Tab.1. Visitors and incomes of the main archaeological sites in the Sicilian Region. Source: Regione Siciliana - Assessorato BB.CC. e I.S., 2021.
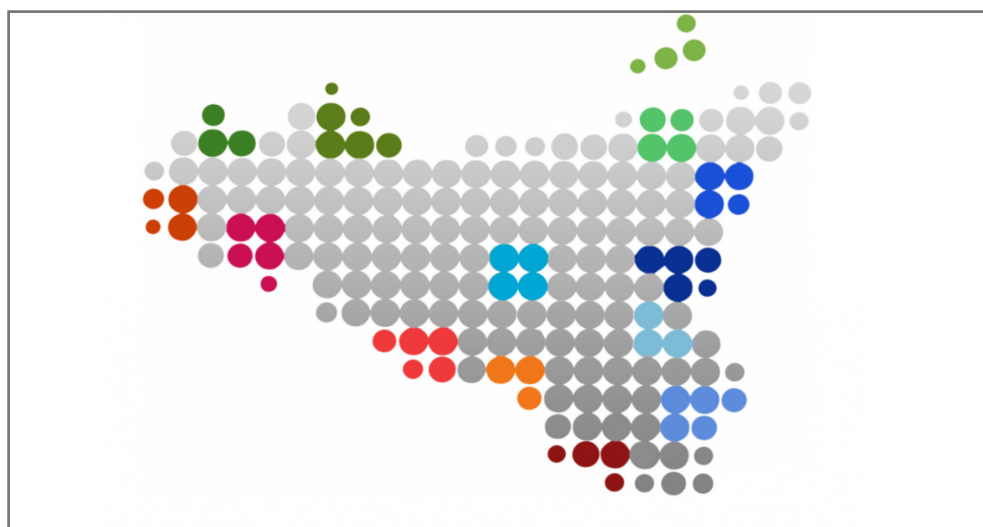
Fig. 1 Thematic sketch with location of regional archaeological parks in Sicily. Source: Sicilia Archeologica

3.3 The "Sicilia Archeologica" project. Between policies and tools.

From the missive with protocol 59847 of December 2019 delivered to ETT by the Offices of the Assessorato ai Beni Culturali[11], it is clear that the need to launch the Sicilia Archeologica project responded to a precise choice of territorial policy: to give substance to the strategy of creating a system of regional archaeological parks. The Regional System of Archaeological Parks, envisaged by Regional Law 20 of 2000, with a twenty-year delay actually got underway with the establishment of the Archaeological Park of the Aeolian Islands, the Archaeological and Landscape Park of Catania and the Valley of Aci, the Archaeological Park of Gela of the Archaeological Park of Himera, Soluto and Side, the Archaeological Park of Kamarina and Cava d'Ispica, the Archaeological Park of Leontinoi, the Archaeological Park of Lilybaeum, the Archaeological Park of Morgantina and the Roman Villa del Casale in Piazza Armerina, the Archaeological Park of Syracuse; Eloro and Villa del Tellaro, Tindari Archaeological Park, as well as Selinunte and Pantelleria Parks, Segesta Park, Naxos Park and Valley of the Temples Park, established a few years earlier. Developing a coordinated digital visual identity for the constituting system of Sicilian archaeological parks, a nodal point of the island's tourism and cultural development strategies, was then an unavoidable need and prompted the region's partnership with ETT, after concluding a public competitive bidding process.

It seemed very appropriate, we read in the regional document, in the framework of the activities in the start-up phase, especially for the newly established parks, to recognize a fundamental value to the communication and promotion aimed at the recognition of the System of Parks, that is, the archaeological heritage of the Island that for its vastness and richness constitutes a founding identity principle for Sicily. It was then decided to define a brand for the System, connected to cultural marketing to be achieved by creating a coordinated image by identifying the Portal of the Parks System as a tool, a fully bilingual and highly usable digital platform where to aggregate and connect all the information on Sicilian archaeological parks. The project was launched in 2023.

With this project, coordinated by the Department of Cultural Heritage, the region aims to integrate the communication of archaeological areas, museums, antiquaria and the many historical artifacts the regional administration keeps by creating an umbrella brand. Information, images and access to services

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[11] Internal document kindly made available to us by ETT, a leading public limited company in communication and multimedia consulting.

related to cultural sites have been aggregated in a single digital container to enable a more orderly, recognizable and organized use. The entire system of Sicilia Archeologica thus takes the form of a digital platform, capable of delivering information and in-depth content in a multichannel mode, using a main and single portal coupled with 14 sites entirely dedicated to the individual Parks that share their design and structure.

In addition to visual and textual content, from the "Sicilia Archeologica" portal it is also possible to access all the useful information for visiting (schedules, tickets, maps, info and contacts), news and events promoted by the Parks, browse specific websites and social media profiles. There is also an "educational" section aimed at activities with educational institutions and students. The same structure is also maintained in the pages of the individual Parks, with a cross-reference to those for purchasing tickets, when they exist, active on the platforms of external managers.

From conversations with internal sources[12] (and subsequent verification) we learned that among the parks, seven already have their own websites that will be gradually decommissioned and absorbed within "Sicilia archeologica". Here, too, a gradual integration with the web and mobile platform "Sicilia Virtual+" is planned for multimedia and augmented reality enjoyment of content referring to various cultural sites of the regional heritage.

Responding to the objectives set by the client, the Sicilian Region, ETT took care of the technical part and thread of the project, the principal portal from which to reach the websites of the individual parks directly. Visitors have the opportunity to deepen their knowledge and experience, both on-site and remotely, through images, texts and videos. For this purpose, existing content was conveyed and new content was produced, ensuring a homogeneous use thanks to a model capable of synergistically coordinating the communication of the entire regional Parks system. ETT produced the content in Italian and English, produced the photo and video services, implemented the augmented reality solutions, created the main portal and those of the parks and oversees, with a dedicated and ad hoc trained human resources unit, their management in synergy with the Regional Offices.

The portal complies with the legislation on websites of Public Administrations, Legislative Decree No. 33 of March 14, 2013, reorganization of the discipline regarding the obligations of publicity, transparency and dissemination of information by public administrations (13G00076, OJ No.

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[12] We thank Drs. Averna and Sparacio, project managers for ETT for their availability. The discussion with them, summarized in this paragraph, is to be considered an essential source for the entire contribution.

80 of 5-4-2013); complies with the regulations on IT accessibility of Public Administrations (Law No. 4 of January 9, 2004, as amended); and complies with the main recommendations in terms of international accessibility and, in particular, those defined in the Web Content Guidelines 2.0 (WCAG 2.0) as also provided for in the Decree of March 20, 2013.

As of September 30, 2023, there were 6,230 correctly indexed pages, 121,027 direct web search clicks and 2,910,000 search engine impressions.

4. Conclusions

The landscape figure of archaeological parks constitutes a highly relevant horizon for land management and enhancement policies, especially in the case of established tourist destinations such as Sicily. The case study of Sicilia Archeologica constitutes an example of top-down planning that attempts to connect a specific political action (and codified in a law), the creation of a Regional Archaeological Park System, with an instrumental intervention that can accompany it. The issue of branding then takes on a twofold significance. In addition to the outward communicative one, it seems clear how the rationalization of the digital presence represents an important input for internal synergies within the system. A gradual turnaround concerning the parameters of transparency and accessibility of information can be expected. We can then, by points, identify potentialities and criticalities of the project: a) Sicilia Archeologica, financed with 129,124.80 euros by the Sicilian Region, has already renewed, ordered, and made usable in Italian and English, the entire archaeological offer of the Sicilian parks. b) It has yet to resolve the criticality on performance reporting (in favor of researchers and potential investors), which remains poorly updated and deficient. c) It brings about conspicuous innovation in branding processes, which are central to any communication, promotion and marketing strategy. d) It aspires to affect the synergies that concretely should be activated among the parks, now aggregated into a system, improving their performance.

References

- Bianchi Bandinelli R., 2005, *"Introduzione all'archeologia classica come storia dell'arte antica"*, Laterza, Bari.

- Bonazzi A., 2020, "Bologna City Branding", *Bollettino della Società Geografica Italiana*, 3, Special Issue, 63-71.

- Bowen G., 2009, "Document Analysis as a Qualitative Research Method Article", *Qualitative Research Journal*, 27-40.

- Caldo C., 1994, "Monumento e simbolo. La percezione geografica dei beni culturali nello spazio vissuto", in Caldo C., Guarrasi V. (Eds.), *"Beni culturali e geografia"*, Patron, Bologna, 15-30.

- Celata F., 2004, "L'esperimento dello sviluppo locale nel Mezzogiorno: il territorio come variabile retorica", https://web.uniroma1.it/memotef/sites/default/files/FCelata_sviluppolocale_2004.pdf, last access: 11/11/2023.

- Corboz A., 1983, "The Land as Palimpsest", *Diogène*, 31, 121, 12-34.

- Cosgrove D., Jackson P., 1987, "New Directions in Cultural Geography", *Area*, 19, 95-101.

- Cusimano G., 2018, "Doni della storia e sviluppo locale", in Cannizzaro S. (Ed.), *"Cultura e creatività per la valorizzazione del territorio. Casi studio sul Mezzogiorno d'Italia"*, Patron, Bologna, 9-10.

- Dallari F., 1996, "I Beni Culturali, elemento di strategia territoriale. Un nuovo progetto geografico", *Geotema*, 4, 89-96.

- Dardel E., 1986, *"L'uomo e la terra. Natura della realtà geografica"*, Unicopli, Milan.

- dell'Agnese E., 2001, "Premessa all'edizione italiana", in Massey D., Jess P. (Eds.), "Luoghi, culture e globalizzazione", UTET, Turin, VII-XX.

- DeLyser, D. Herbert S., Aitken S., Crang M., McDowel L. (Eds.), 2010, *"The SAGE Handbook of Qualitative Geography"*, Sage, London.

- de Spuches G., 2023, "Il *brand* 'Palermo arabo-normanna' e le sue geografie immaginarie", in de Spuches G., Mercatanti L. (Eds.), *"Viaggiare nell'immaginario. Immaginare il viaggio"*, Palermo University Press, Palermo, 67-85.

- Gamble C., 1987, "Archaeology, geography and time", *Progress in Human Geography*, 11, 2, 227-246.

- Graham B., Ashworth G.J., Tunbridge J.E., 2016, *"A Geography of Heritage. Power, Culture and Economy"*, Routledge, London-New York.

- Karppinen K., Moe H., 2012, "What we talk about when we talk about document analysis", in Just M., Puppies M. (Eds.), *Trends in communication policy research: New theories, methods and subjects*, Intellect, Bristol, 177-193.

- Kavaratzis M., Ashworth G.J., 2005, "City branding: an effective assertion of identity or a transitory marketing trick?", *Tijdschrift Voor Economische en Sociale Geografie*, 96, 506-514.

- Martini U., Ejarque J., 2008, *"Le nuove strategie di destination marketing. Come rafforzare la competitività delle regioni turistiche italiane"*, Franco Angeli, Milan.

- Messina G., 2016, "Identità e luoghi. Il caso di Menfi", L'Erudita, Rome.
- Olsson G., 1999, "Landscape. Border-station between Stonescape and Mindscape", in Cusimano G. (Ed.), *"La costruzione del paesaggio siciliano: geografi e scrittori a confronto"*, Facoltà di Lettere e Filosofia - Università di Palermo, Palermo, 135-146.

- Pollice F., Rinaldi C., 2015, "Patrimonio archeologico, comunità locali e sviluppo territoriale nel bacino del Mediterraneo", in Cusimano G. (Ed.), *"Il turismo nelle/delle destinazioni"*, Patron, Bologna, 137-150.

- Pioletti A.M., 2006, "La cultura ed il paesaggio. Promuovere il luogo", in Cusimano G. (Ed.), *"Luoghi e turismo culturale"*, Patron, Bologna, 269-279.
- Rossi U., Vanolo A., 2010, *"Geografia politica urbana"*, Laterza, Bari.

- Söderström O., 1994, "I beni culturali come risorse sociali di progetti

territoriali", in Caldo C., Guarrasi V. (Eds.), *"Beni culturali e geografia"*, Patron, Bologna, 31-38.

- Regione Siciliana - Assessorato BB.CC. e I.S., 2019, "Lettera a ETT con protocollo 59847 del 6 Dicembre 2019".

- Regione Siciliana - Assessorato BB.CC. e I.S., 2022, "D.D.S. n. 5276", https://www.regione.sicilia.it/sites/default/files/2022-11/D.R.S._05276_del_24-11-2022_-_liquidazione_fattura_ETT_spa_3_trimestri_2022_cap._376630_.pdf, last access: 11/11/2023.

- Regione Siciliana - Assessorato BB.CC. e I.S., 2022, "Fruizione Luoghi della cultura 2020/21", https://www2.regione.sicilia.it/beniculturali/dirbenicult/info/urp/Fruizione BCI RS 2020-2021_def.pdf, last access: 11/11/2023.

- Regione Siciliana - Assessorato Turismo e spettacolo, s.d., "Piano strategico regionale di sviluppo turistico 2019/2023", http://pti.regione.sicilia.it/portal/pls/portal/docs/148509643.PDF, last access: 11/11/2023.

- Regione Siciliana, 2023a, "Movimenti turistici nella Regione - Dati provinciali", https://www.regione.sicilia.it/la-regione/istituzioni/strutture-regionali/assessorato-regionale-turismo-sport-spettacolo/dipartimento-turismo-sport-spettacolo/aree-tematiche/attivita-staff/osservatorio-turistico/osservatorio-turistico-della-regione-sicilia/movimenti-turistici, last access: 11/11/2023.

- Regione Siciliana, 2023b, "Musei e parchi siciliani, oltre 3 milioni di visitatori. Amata: 2022 anno d'oro", https://www.regione.sicilia.it/la-regione-informa/musei-parchi-siciliani-oltre-3-milioni-visitatori-amata-2022-anno-d-oro, last access: 11/11/2023.

Sitography

ETT spa, https://ettsolutions.com/

Sicilia Archeologica, https://parchiarcheologici.regione.sicilia.it/

11. Environmental risk perception and attitudes on climate-induced migration: survey insights among Geography students at the University of Turin

Sara Ansaloni, Daniela Santus

11. Environmental risk perception and attitudes on climate-induced migration: survey insights among Geography students at the University of Turin

Sara Ansaloni, *Daniela Santus* [1]

Abstract

This research investigates the environmental risk perception and attitudes towards climate-induced migration among Geography students at the University of Turin, with a particular focus on the influence of fake news. Drawing from existing literature and prior research, the study aimed to assess the impact of higher education and public awareness initiatives on students' understanding of climate risk and migration. A total of 133 students from geography courses, along with 87 respondents from Earth Sciences and Life Sciences departments, participated in an online survey conducted in October 2023. The findings suggest that despite access to scientific knowledge, students are susceptible to fake news, resulting in a diminished understanding of environmental risks and reduced empathy towards climate migrants. The study underscores the significance of understanding college students' opinions, given their potential impact on shaping future climate change policies, and emphasizes the importance of providing them with essential tools to critically process information effectively in an era characterized by misinformation.

Keywords:
Risk perception, sustainability, migration, fake news, geography

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1. Introduction

The migration issue is assuming characteristics that rise significant concerns in host countries, despite the desire of moving in search of a better place to live being a characteristic trait of humans since ancient times. The reasons that drive people to migrate from their place of origin are varied and complex: among them, there is a relatively "new" one, the climate change (Francis, 2019/2020).

Recognized as climate refugees, a growing population finds itself compelled to relocate in response to the escalating effects of global warming. This trend was initially highlighted in the inaugural report of the *Intergovernmental Panel on Climate Change* (IPCC) in 1990 and reiterated during the 71st session of the United Nations General Assembly. It was during this assembly, on September 19, 2016, that the now well-known *New York Declaration on Refugees and Migrants* emerged, further emphasizing the urgency and complexity of this global issue (Ionesco, Mach, 2016).

Due to steadily rising temperatures and its direct consequences, including droughts, ocean acidification, and rising sea levels, the World Bank forecasts that by 2050 an estimated 143 million people from Sub-Saharan Africa, South Asia, and Latin America will be compelled to migrate (The World Bank, 2018).

Based on this premise, we decided to administer a survey to students enrolled in *Cultural Geography* (undergraduate) and *Geography, Culture and Environment* (graduate) courses at the University of Turin, Italy. The aim was to assess the impact of both higher education and public awareness initiatives on the students' understanding of climate risk. Additionally, we sought to analyze the extent to which fake news, easily accessible on social media, were succeeding in changing and influencing their opinion. The initial hypothesis posits that as individuals tend to underestimate the risks of climate change, their reluctance to acknowledge its effects in other countries increases, leading them to perceive climate migrants as merely seeking a better place to live rather than recognizing their status as refugees.

2. Materials and Methods

Several studies (Ashlin, Ladle, 2007; Gilliam, Bales, 2001; Pasquaré, Oppizzi, 2012; Wilson, 2000) demonstrate the pivotal role of media coverage in shaping public perception in relation to environmental change and natural

hazards. Through the introduction of frames of reference, the media can influence how different individuals or societies perceive climate change, providing information in a way that highlights certain aspects over others. This is significant because the perception of the issue directly influences its response. As emphasized by Pasquaré and Opizzi, a trend that our research is likely to corroborate, Italian journalists tend to concentrate on depicting natural disasters and the resulting damages, thus overlooking vital aspects related to prevention and the advocacy for policies aimed at safeguarding the territory. This shortfall in coverage represents a missed opportunity to effectively raise awareness among the population (Pasquaré, Oppizzi, 2012).

As outlined by Giddens (2008), there are at least three distinct perspectives on climate change. Firstly, climate change sceptics argue that there is insufficient evidence to attribute today's global warming processes to human activity. Secondly, the widespread dissemination of the *Intergovernmental Panel on Climate Change*'s publications[2] has significantly heightened awareness about the risks posed by climate change, aggregating scientific data that outline various potential future scenarios. Finally, there are those referred by Giddens as "radicals", i.e. individuals who believe that: "the ice fields that cover Antarctica and Greenland may disintegrate sooner, and more thoroughly, than is usually believed possible; or that the melting of the frozen peat bogs in western Siberia and in Canada might release large amounts of methane into the air. Methane is a much more potent greenhouse gas than carbon dioxide. Some radicals – such as the scientist James Lovelock – believe it is already too late to avoid dangerous climate change. We had best concentrate most of our energies preparing to adapt to it and cope as best we can. Others think we can still hold back the more devastating effects, but to do so we must start taking far-reaching action in the here-and-now" (Giddens, 2008, p. 6). Other scholars focus on the responses and attitudes that are generated by the way we perceive climate-related risk (Semenza, Hall, Wilson *et al.* 2008) or the anxiety that arises following extreme weather events and natural disasters (Clayton, 2020; Clayton, 2021).

The scenario becomes even more complex when addressing climate-induced migration. Conditions such as natural disasters resulting in limited access to resources and the destruction of villages propel increasingly vulnerable populations to abandon their home territories. While one of the primary challenges lies in defining the phenomenon of climate-change-driven migration, given that the underlying motivation stems from a combination of concauses (including social, political, economic, and environmental

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[2] See: ipcc.ch

factors), the very classification of climate migrants poses challenges for acceptance by countries of arrival (Beine, Parsons, 2015). Does a climate migrant have the same reception rights as a war refugee? As Francis states: "Cross-border climate migrants enjoy no protection under international law. While international refugee law offers protection to people displaced across borders by instances of social upheaval such as political conflict, international refugee law provides no protection to people displaced solely by climate-related disasters. Recent international processes like the Global Compact for Safe, Orderly and Regular Migration, the Sendai Framework for Disaster Risk Reduction, and the United Nations Framework Convention on Climate Change have underscored the importance of addressing climate-induced migration, however, international law has yet to provide a governing framework for climate-induced migration. The absence of both legal rights and a comprehensive governing framework creates a key protection gap for cross-border climate migrants" (Francis, 2019/2020, p. 125). If climate factors are not combined with the grounds set out in the 1951 *Refugee Convention* – persecution on the grounds of nationality, ethnicity, religion, political opinion, etc. – there is no legal protection for climate migrants – there is no chance for climate migrants to be granted the right to protection (Francis, 2019/2020; McAdam, 2010). The situation in Italy diverges to some extent, especially with the amendments to the *Security Decrees* of December 18, 2020. These revisions have expanded eligibility for protection to include climate migrants, who are now covered under the same provisions as war refugees (Santolini, 2021). Therefore, climate risk perception not only shapes people's attitudes, with awareness of the risk prompting actions to mitigate the consequences of climate change, but also exerts influence over political decisions concerning people displacement.

Numerous studies (Koubi, Spilker, Schaffer *et al*., 2016; Koubi, Böhmelt, Spilker *et al*., 2018; Warner, 2011) have been conducted to investigate how the perception of environmental degradation motivates migration. However, fewer are those addressing the role of climate risk perception among people in host countries, particularly when the distance between migrant and host population is significant. Indeed, attitudes towards climate migrants are influenced by host-migrant geographical proximity. In simpler terms, people are more likely to welcome individuals affected by an extreme event (such as floods or earthquakes) that occurred within their own borders, compared to those impacted by a similar event thousands of kilometres away (Lujala, Bezu, Kolstad *et al*. 2020). Nevertheless, if the influx of migrants becomes constant and is not the result of isolated events, it could

adversely affect the social acceptance of even internal climate migrants, leading to their exclusion and, in the worst-case scenario, escalating into violence if social tensions intensify between displaced individuals and host communities, particularly in competition for resources (Lujala, Bezu, Kolstad *et al*. 2020; Koubi, 2019; Burke, Hsiang, Miguel, 2015).

3. Research methodology

Perceptions regarding climate change, the associated risks, and its short- and long-term impacts are shaped by the level of knowledge acquired on these subjects through educational institutions such as schools and universities, as well as through exposure to social media and news outlets. Our focus was on exploring risk perception among college students, both at the undergraduate and graduate levels. We believe that the opinions of college students are particularly significant, given that they represent a demographic poised to emerge as future researchers and lawmakers. Their potential impact on shaping future climate change policies and educating the next generation of citizens emphasizes the relevance of understanding their opinions and perceptions (Phillips, Cinderich, Burrell *et al*., 2015).

University students can be considered as "privileged witnesses" since they represent a segment of the population that encounters these issues in the educational setting. Additionally, they are exposed to climate-related information through newspapers, television programs, and social media. It is precisely this last aspect that renders our analysis interesting. Despite university students having greater access to scientific knowledge, their heightened exposure to online risks is noteworthy. Relying on the Internet for research, they appear less inclined to verify sources, consequently running the risk of mistaking inaccurate or entirely false information for reliable sources (Metzger, Flanagin, Zwarun, 2003; Phillips, Cinderich, Burrell *et al*., 2015).

In addition, as highlighted by Lombardi and Sinatra (2012), college students harbor various misconceptions regarding climate change. For instance, they often rely on short-term weather effects to either substantiate or dismiss long-term climate transformations, indicating a fundamental misunderstanding of the distinctions between weather and climate (Lombardi, Sinatra, 2012).

The present study employs a qualitative research methodology designed to probe students' understanding and perspectives on climate change and climate-induced migration, drawing from existing literature and prior research.

In particular, 235 students were invited to participate in the survey. Of the respondents, 6 were male, and 219 were female, falling within the age range of 18 to 26. All participants were enrolled in one of two geography courses offered by the Department of Foreign Languages and Literature and Modern Cultures at the University of Turin. Specifically, 180 students were enrolled in *Cultural Geography*, an undergraduate course, while 55 were enrolled in *Geography, Culture, and Environment*, a graduate course. Both courses have covered subjects related to the environment, sustainability, climate change, and human rights issues during the first semester of the academic year 2023-2024. It is important to note that the survey was intentionally administered before these topics were addressed in the coursework. The questionnaire aimed to capture both factual knowledge and subjective opinions, providing a comprehensive view of the participants' attitudes toward the subject. The methodology focused on gathering structured data that could be analysed by comparing the percentage distribution of responses to different questions, enabling a quantitative assessment of the overall trends and variations in students' perceptions. Prior to data collection, a thorough review of available literature on the topic was undertaken to inform the design of the questionnaire and guide the interpretation of results. The utilization of percentage-based data analysis offers a straightforward and interpretable approach to understanding the collective mindset of university students on climate change and climate-induced migration. To gather demographic data, students were asked to indicate their gender, age, major, and year in college. Quantitative analysis of the data involved utilizing univariate frequency distributions and bivariate cross-tabulation procedures. Additionally, content analysis was employed to look for patterns in the open-ended question.

The survey was administered online through the Moodle platform, with all invited students duly informed about the processing of personal data. The participation rate was moderate, with 103 responses from undergraduate students and 30 from graduate students. An additional 120 students, evenly distributed between the Department of Earth Sciences and the Department of Life Sciences and Biology, were invited via their academic email addresses, resulting in 87 responses: 58 from undergraduate courses and 29 from graduate courses. Overall, across the three departments involved, a total of 220 responses were obtained, with 86% of respondents being female. This outcome aligns with expectations, given that the courses offered by the Department of Foreign Languages and Literature and Modern Cultures at the University of Turin are attended by over 95% female students. Unfortunately, this distribution prevented us from exploring potential variations in attitudes based on gender.

Another criterion employed was the exclusion of incomplete questionnaires, deeming them invalid. Consequently, 100 questionnaires from undergraduate students and 30 from graduate students in the Department of Foreign Languages and Literatures and Modern Cultures, along with all 87 questionnaires from students in the science departments, met the criteria for validity.

The opinion of college students enrolled at the University of Turin has been the subject of various research studies related to sustainability and the environment. Notably, a 2021 study focused on humanities course attendees explored the correlation between climate anxiety and exposure to climate change through media representations (Acquadro, Begotti, 2021). The same year another research delved into the perception of environmental sustainability among students, technical personnel, and faculty of the Politecnico di Torino (Sonetti, Sarrica, Norton, 2021). Interestingly, a survey conducted in 2022 among students of the *Cultural Geography B* course at the Department of Foreign Languages and Literature and Modern Cultures aimed to examine university students' perceptions of sustainability and environmental issues (Genovese, 2022). Our research stands out in its specificity, seeking to understand how the perception or lack thereof of the risk posed by climate change may positively or negatively influence the comprehension of climate-induced migration.

The survey, consisting of 10 closed-ended questions (three of which were supported by images) was administered during the first ten days of October 2023. Following the completion of the survey, we engaged in a reflective discussion with the entire class through a live WebEx session, addressing aspects such as survey participation, risk perception, the efficacy of Civil Protection warning systems, and environmental migration.

4. Results

The first survey question, supported by a visually impactful collage (**Fig. 1**) showcasing some of the consequences of climate change (drought, melting glaciers, floods, fires), prompted the respondents with the following directive: *"Examine the photo collage and, in no more than 5 lines, describe what it represents to you (one or more events), the emotions it evokes, and identify any shared cause, if present"*. Unaware that the survey focused on environmental risk perception, students provided diverse responses. While students in the science departments uniformly recognized global warming as the common cause across the four images, those in the Language Department offered a

range of interpretations. The drought represented by the parched and cracked earth was identified by all 130 students, whereas the image of the melting glacier was alternatively perceived as a frozen lake in winter (18 students), a crater (another 18 students), an earth surface view from Google Earth (2 students), and correctly as a melting glacier by the remaining students. The flood, as well as the forest fire image, was correctly identified by all surveyed students.

Notably, respondents in the science departments universally acknowledged global warming as the overarching theme across the four images. This awareness translates in different emotional responses, including fear for the future (4 students), desolation (12 students), a desire for carefree living (12 students), anxiety (15 students), distress (18 students), and anger (26 students). Similarly, most students in the Language Department (comprising 83 undergraduate and graduate students) identified global warming as the common thread. However, other causes were proposed, such as nature rebelling (4 students), experiments in space (1 student), mismanagement by municipalities (1 student), and neglect (1 student). The remaining 40 students succinctly attributed the issues to "men's fault". Delving into their emotional responses, prevalent sentiments included helplessness (12 students), fatalism (16 students), anger (38 students), and a sense of lacking peace or serenity (49 students), while 15 students expressed "disgust for politicians", "concern", and "indifference". Interestingly, as highlighted by the *New Scientist*'s 2021 research, young individuals' sense of helplessness, lack of prospects for the future, and the belief that the effects of the global warming are irreversible and beyond repair, translate into a lack of willingness to adopt sustainable lifestyles (Duffy, 2021). This aspect is crucial, as will be evident in Table 4, which examines the implementation of environmentally sustainable practices, since ignorance, indifference, but above all, the feeling of powerlessness, directly influence the failure to adopt these practices or the aspiration to do it in the future.

Figure 1

The set of questions 2-3-4-5 (**Tab.1**), specifically delves into the impact of fake news on altering students' perception of climate change. The statements reference the most frequently adopted arguments by those who believe in misinformation, to which students were required to respond with true or false.

Statements	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Climate change does exist and is caused by solar activity	16% true	23% true	5% true	0% true
	84% false	77% false	95% false	100% false
Extreme heat in summer is a natural occurrence. Scientists are "puppets" controlled by the institutions aiming to instil fear in the population.	5% true	10% true	0% true	0% true
	95% false	90% false	100% false	100% false
It's too late now, the planet has only a few years left.	22% true	16.6% true	0% true	0% true
	78% false	83.4% false	100% false	100% false
Plants and animals will adjust to the changing levels of CO2	33% true	26.7% true	0% true	0% true
	67% false	73.3% false	100% false	100% false

Table 1 – Impact of fake news on students perception

Combining data from both undergraduate and graduate students, the findings revealed that among 130 students enrolled in Geography courses within the Language Department, 23 students (about 18%) believe in the existence of climate change but attribute it to the natural action of the sun. In comparison, this percentage trop significantly to 3.4% (3 students) among those enrolled in the science departments. A surprising response emerged from a small but notable group of students – 8 in total (5 undergraduates and 3 graduates), representing 6% of Geography students. They expressed conviction that scientists are manipulated to instil fear through the narrative of global warming. This *"hoax"* has gained traction during the hot summer of 2023. Interestingly, this belief has in no way affected the students of the science departments. Similarly, none of the students in the science departments shared the belief that the planet has "only a few years left to live", a sentiment expressed by 27 students (21% of the respondents) in the Language Department. Lastly, possibly due to a lack of knowledge rather than exposure to misinformation, 41 Geography students (31.5%) held the belief that plants

and animals will adapt to new levels of CO_2. Interesting, this statement was universally recognized as false by all students in the science departments.

The sixth question, paired with an image (**Fig. 2**), presented four possible options to describe the picture (**Tab. 2**). The aim was to analyse whether college student respondents were, to varying degrees, influenced by the conspiracy theory suggesting that "powerful entities" harm people through "chemical trails".

Figure 2 (Credit: Freepik.com)

Answers	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Condensation of micro-particles of toxins intentionally dispersed by aircraft to harm the population	6%	0%	0%	0%
Chemical trails	45%	73,3%	0%	0%
Vapor trails (contrails)	41%	13,3%	96,6%	100%
Experiments aimed at changing the global climate	8%	13.3%	3,4%	0%

Table 2 – Students interpretations of contrails

In this instance, the investigation aimed to explore one of the most famous climate-related false narrative: the "chemtrails" conspiracy theory. Originating in the United States in 1997 by a group of bioterrorism enthusiasts, this theory posited, without substantiated evidence, that the US Air Force dispersed mysterious and dangerous substances over the population through planes, leaving distinctive contrails. Despite numerous refutations, this "news" has proliferated, leading the most susceptible to believe in a global conspiracy involving the dispersal of poisonous substances on Earth for nefarious purposes (Corbett, 2020; Tingley, Wagner, 2017). Various beliefs surround this theory, ranging from suspicions of ethnic extermination to conditioning public opinion or generating new diseases to support the pharmaceutical trade. Some even assert that it is an attempt to manipulate and control the climate. As is typical with conspiracy theories, consensus is elusive, but a common thread is the conviction that the distinctive white streaks in the sky are abnormal.

While it is somewhat reassuring that 45 language students (both undergraduate and graduate) identified contrails in the photos, it is disconcerting that 6 believed them to be airborne poison particles, 67 perceived them as chemtrails, and 12 thought of them as experiments to alter the climate. In essence, a staggering 65% of the total sample – 85 out of 130 students – when encountering streaks of condensed water vapor in the sky left by airplanes, are persuaded that they are entangled in a conspiracy against themselves and fellow citizens. More encouragingly, students in the science departments showed better discernment, with only 2 undergraduates (out of a total of 87 respondents) entertaining the idea that the contrails depicted in the picture represented experiments aimed at manipulating the global climate.

Questions 7 (**Tab. 3.1**) and 8 (**Tab. 3.2**) were designed to assess fundamental knowledge about climate change and resource exploitation. Respondents were required to demonstrate their understanding of the concept of "overshoot day" by selecting the correct answer from four different alternatives.

Statements	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Hoax	4 %	0%	0%	0%
The day of the year when all the resources available for that year were consumed	84%	100%	100%	100%
The day scientists have calculated that humanity will cease to exist	9%	0%	0%	0%
An attempt to impose single-mindedness by powerful entities, falling on American Independence Day	3%	0%	0%	0%

Table 3 – The meaning of overshoot day and climate crisis
Tab. 3.1

As the *Fridays for Future* generation, we assumed there would be no ambiguity in grasping the significance of "overshoot day". Indeed, 100% of both undergraduate and graduate students in the science departments correctly identified it, along with 84% of undergraduates and 100% of graduate students in the Language Department. It is noteworthy that 16 students selected the incorrect answer. Some even speculated that it might be a hoax, the day of humanity's cessation, or an attempt to manipulate thoughts by unspecified "powerful entities", marking the overshoot day on American Independence Day.

Following this, the respondents were asked to determine whether the statement "*The climate crisis is not only increasing fires, droughts, and heat waves but also snowstorms*" was true or false. Given that our interviewees were university students, we assumed they were aware not only of the overall rise in average air temperatures worldwide but also that this, in turn, leads to increased water vapor retention in the atmosphere, contributing to more intense rain and snow events in certain regions. The responses, however, raised concerns. While our interviewees were likely aware of the significant snowstorm that affected the United States in late 2022 and early 2023, some may have been influenced by misinformation circulating on the internet, incorrectly linking these snowstorms as evidence against the reality of global warming. Notably, 17 undergraduate students

and 4 graduate students in the Language Department expressed a belief that global warming cannot result in extreme events such as snowstorms.

Statement	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
The climate crisis is not only increasing fires, droughts, and heat waves, but also snowstorms. True or False?	83% true	86.7% true	100% true	100% true
	17% false	13.3% false	0% false	0% false

Tab. 3.2

The ninth question was accompanied by a picture (**Fig. 3**), specifically portraying a group of climate migrants. Students were tasked with providing a definition of "climate migrants" and expressing their opinion on whether climate-related reasons could be considered valid for leaving one's country. It's important to note that, during the questionnaire's administration, Italy was grappling with a pressing migration issue, amplified by a significant increase in coastal landings (excluding entries through other means) compared to the preceding two years. Referring to data from the Ministry of the Interior, between January 1 and September 15, 2021, there were 42,750 landings, increasing to 66,237 in the same period of 2022, and further surging to 127,207 in 2023 (Ministry of Interior, 2023). Immigration concerns were a daily focus in the media during the questionnaire's period, given its prominence in the political agendas of various parties leading up to the European elections in 2024.

Figure 3 https://www.actionaid.it/informati/notizie/cambiamenti-climatici-aumentano-migrazioni

The definition of "climate migrant" posed no difficulty; all students demonstrated a clear understanding. Setting aside those who directly quoted the Wikipedia definition, the variation among others were minimal. Most respondents provided definitions such as "those who leave their country due to climate-related reasons", while others specified "those emigrating due to droughts", or "individuals compelled to relocate due to natural disasters", and "migration driven by climate or natural disasters", with examples like "earthquakes, fires, floods necessitating emigration". Responses to the second part of the question, addressing whether climate could be a valid reason for leaving one's country, were more elaborate. Some students, while acknowledging it as a valid motivation, added nuances like "the motivation is valid, but staying in the country of origin to improve one's situation would be preferable", or "it is legitimate to leave one's homeland if climate conditions make life untenable, but in Italy, there is not enough space to accommodate everyone", and so forth. More detailed discussions emerged during the post-survey virtual classroom brainstorming, which we will elaborate on in the article's conclusions.

The tenth question (**Tab. 4**) aimed to assess awareness regarding the impact of small daily actions on slowing climate and resource deterioration. Furthermore, it sought to understand whether individuals were willing to alter their habits for the sake of the environment. Respondents were presented with a list of 10 good practices accompanied by the following directive: *"Those who believe that climate change is harming life on the planet are convinced that even small everyday actions can achieve important results. Which of these actions do you already put into practice for the well-being of the Earth and its inhabitants? Answer with 'yes', 'no', 'no, but now that I know, I will', or, if you do not believe in climate change, mark 'I do not believe in climate change' for all choices".*

	Language Department		Science Department	
Answers	Undergraduate	Graduate	Undergraduate	Graduate
Yes	84%	90%	72,4%	86%
No	3%	0%	8,6%	0%
I don't know	13%	10%	19%	14%

Table 4 – Implementation of sustainable practices by students

The outlined environmentally friendly practices include:

• Limiting my shower time to five minutes;
• Organizing and storing food in the refrigerator with care to ensure proper air circulation for optimal performance;
• Opting for minimally processed foods during breakfast to reduce environmental impact, favoring seasonal fruits, bread, homemade cakes, and biscuits;
• Choosing sustainable transportation options such as cycling or walking instead of using my car whenever possible;
• Utilizing recycled paper for printing notes;
• Conserving water in the bathroom by turning off the tap while soaping hands, brushing teeth, or shaving;
• Turning off stand-by units (red, green, or yellow lights) of electronic devices like decoders, TVs, blenders, PCs, and microwaves before going to bed;
• Setting the air conditioning temperature no lower than 26 degrees Celsius during the summer;
• Prioritizing waste reduction by minimizing packaging before disposing of paper in its designated container;
• Engaging in recycling practices.

Three trends emerge from the analysis of the results. Firstly, none of the respondents explicitly declared a complete disbelief in the existence of climate change. Secondly, among the commendable environmental practices adopted by all participants, the noteworthy prevalence of differentiated waste collection suggests the positive impact of consistent municipal efforts. Thirdly, a concerning observation arises: none of the respondents, upon learning about additional beneficial climate practices, expressed a commitment to adopt them with the response "now that I know, I will do it". This indicates a level of concern for climate and resources, yet a reluctance to implement changes in daily habits, such as conserving water or using recycled materials.

Despite the lack of adequate infrastructure being a potential hindrance to the implementation of certain practices, the issue lies in the fact that, irrespective of this, none of the respondents expressed an intention to try in the future. In fact, 100% of our respondents, across all departments, indicated that these practices are not part of their routine, and not a single respondent stated that, now being aware of their benefits, they would attempt to incorporate them. Similarly, since these are small actions that require minimal effort, no one mentioned turning off, before bedtime, all stand-by switches

on devices such as set-top boxes, TVs, blenders, PCs, and microwaves, or consciously reducing cardboard packaging before disposal. In this regard, 87 out of 220 respondents, or nearly 40% of the combined total from both groups, confirmed that they do not and do not wish to pursue this practice.

These results align with recent studies (Duffy, 2021; Wachholz, Artz, Chene, 2014; Gifford, 2008; Gifford, 2011; Witmarsh, 2009) that specifically explore the concerns and implementation of environmentally friendly actions among younger generations. In particular, the *New Scientist* 2021's study examined a sample of the London population consisting of 2050 adults aged 18+. It revealed a nearly identical level of agreement across different generations regarding the impact of climate change and the need of lifestyle changes. The divergence in perspectives lies in the priority level, as older age groups tend to prioritize economic growth over environmental issues. Interestingly, in contrast to common perception, the younger generations tend to be more fatalistic about the impact of their individual actions on climate change. Indeed, 33% of Gen Z and 32% of Millennials in the UK believe there is no point in changing their behaviour since "it won't make a difference", compared to 22% of Gen X and 19% of Baby Boomers. Our study's findings echo this sense of helplessness and lack of optimism about the future, translating into a reluctance to adopt environmentally friendly behaviours among the student respondents. Contrary to stereotypes about Millennials and Gen Z being "purpose-driven consumers", it is, in fact, the older generations that exhibit sensitivity in choosing brands that are sustainable or socially responsible. Moreover, Baby Boomers and Gen Z are the most likely to boycott a brand or product due to social concerns (Duffy, 2021).

Other studies (Wachholz, Artz, Chene, 2014; Gifford, 2008; Gifford, 2011; Witmarsh, 2009) express concerns that even among the most informed college students, their worry does not translate into action to mitigate climate change, despite being aware of how their behaviour affects the environmental problem. In fact, the study conducted in New England by Wachholz *et al.* (2014) on a sample of 375 college students demonstrates that belief in and concern about climate change are not automatically preconditions for action. According to Gifford, the reasons are diverse and include climate-adverse infrastructures, lack of knowledge about the cause of climate change and mitigation mechanisms, entrenched habits, and a lack of hope due to the failure of national and global climate change policies (Gifford, 2008; Gifford, 2011). It is worth noting that the "climate generation" not only came into existence in an era of reduced scientific uncertainty regarding climate change but also against the backdrop of weak international climate change treaties.

As emphasized by Wachholz *et al.*, the "climate generation" is also the "failed treaty generation" (2014, p. 137).

Regarding our study, to provide an accurate interpretation of certain responses, it's essential to consider that the surveyed students were predominantly Italian or born in Italy (only 11 out of 220 students were foreigners). Indeed, some environmentally friendly practices may not align with certain typically Italian cultural habits. For instance, it should not be surprising that none of the respondents claimed to shower in five minutes. According to a recent Doxa survey of 1,000 respondents aged between 18 and 64, 75% of Italians sing in the shower, 67% listen to the radio, 56% shave or groom, and 25% talk on the phone. Additionally, 75% of the respondents occasionally shower with their partners, 43% often shower with their young children, and 7% admitted to occasionally showering with their dogs (BVA Doxa, 2019). These activities typically exceed a five-minute timeframe. Similar patterns emerge concerning habits like turning off the water while soaping hands, brushing teeth, or shaving. As reported by the Doxa survey, 57% of respondents turn off the water while soaping, demonstrating efforts to reduce water waste. However, this behaviour was more prevalent among interviewees over 55, mainly from southern Italy, where water scarcity is more common. Age and geographical origin data clarify why our respondents, aged 18 to 26 and residing in a northern Italian region, exhibit less concern about water wastage.

The preference for specific breakfast choices among our interviewees, particularly in terms of sustainability, is also influenced by a characteristic deeply rooted in Italian food culture. Notably, 100% of respondents rely on processed products and express no intention to alter this habit. It's a well-known fact that Italians, as a cultural tendency, are not inclined to have breakfast at home. In 2019, a pre-Covid reference year, the *Federazione Italiana Pubblici Esercizi* (Fipe) reported that 65.7% of Italians preferred enjoying breakfast at a café with cappuccino and brioches, a percentage that increased with the age of the respondents (FIPE, 2019). With the return to regular commuting following the pandemic, Italians resumed the ritual of having breakfast at the café, briefly disrupted during lockdowns. Common choices in 2022 included stuffed croissants and espresso coffee, with a rising trend in cappuccino consumption and a decline in fruit juices (Pini, 2023, 2019). Despite some downsizing observed in 2023 due to post-pandemic adjustments and inflation, Pirovano's survey suggests that Italians' breakfast preferences, whether at home or at the café, have changed minimally, with a continued reliance on industrial products (Pirovano, 2023).

To comprehend why our respondents (89 students from the Language Department and 59 students from the science departments) indicated a preference for cars over cycling or walking, a reflection on Italy's road infrastructure becomes imperative. Data reveals that Italy, as highlighted in the dossier by Clean Cities, FIAB, Kyoto Club, and Legambiente, is not particularly conducive to cycling. Notably, investments in the automotive sector were nearly 100 times greater than those allocated to bicycles: 98 billion compared to just over a billion (Magliulo, Talluri, 2022). The situation is exacerbated by policies that disincentivize public transport use, such as reducing train services on Sundays and eliminating bus services in summer months. This holds true even in numerous Piedmontese municipalities where car-free travel is either impractical or exceptionally challenging.

The eleventh set of questions constituted a series aimed at assessing students' awareness of climate change effects and their perception of associated risks. The students were prompted with the following inquiries:

- *Have you ever heard the term "climate migrants"?* The breakdown of negative responses is as follows: 87 undergraduates and 11 graduates from the Language Department, along with 23 undergraduates and 7 graduates from the science departments.

- *If yes, where did you come across this term?* As illustrated in Table 5, respondents who affirmed familiarity with the concept of climate migrants (32 students in total from the Language Department, including 13 undergraduates and 19 graduates, and 57 students from the science departments, comprising 35 undergraduates and 22 graduates) identified six primary information sources: news or TV programs, newspapers, the Internet (including Google searches, reading speeches by politicians or intellectuals, and watching interviews on YouTube or social media), conversations with friends, discussions with family members, and educational settings (comprising high school or university). Due to respondents often selecting multiple options, the data is presented in absolute numbers, with no distinction between degree courses.

Information Sources	Language Department	Science Departments
News or TV programs	9	23
Newspapers	2	9
Internet	18	45
Friends	1	3
School	6	21
Family	2	1

Table 5 – Information sources for climate migration

The analysis of this information reveals that schools generally lack comprehensive coverage of the subject, and climate migration isn't a prevalent topic in informal conversations among friends or family. The primary sources of information, as observed, are the Internet and various media outlets.

- Concerning *awareness of global warming during high school or university years,* 17.7% of the 130 students enrolled in undergraduate and graduate Geography courses (23 students in total) responded affirmatively. It's essential to note that the survey took place before the integration of environmental issues, sustainability, and the 2030 Agenda into the Department's two Geography courses. On the other hand, 100% of the sample from the two science departments (87 students) acknowledged awareness. The choice of this group as a comparative sample was deliberate, aiming to include students from the Departments of Earth and Life Sciences and Biology, expecting a high level of knowledge and sensitivity to the topic. The objective was to explore whether the perception of climate risk and empathy toward climate migrants could be influenced by the sources of information: educational institutions or other.
- *If the answer is affirmative, in what subjects?* The 23 students from the Language Department who affirmed awareness mentioned Geography courses in secondary schools (Technical Institutes for Tourism) or Cultural Anthropology courses attended at the university. In contrast, the 87 students from the two science departments primarily referred to subjects within their courses of study, such as Ecology, Marine Biology, Geography, Climatology, Nature Conservation, Sustainable Agriculture, Plants and Microorganisms for Environmental Sustainability, Plants and Environmental Restoration.
- *Do you believe that the looming threat of depleting resources will impact your quality of life? If so, how?* Most students responded affirmatively: 87 students in the Language Department, approximately 67%; and 79 students in the science departments, about 91%. Among those who answered negatively, many emphasized that this won't happen because they fortunately live in northern Italy. On the contrary, among those who answered positively, several highlighted concerns such as "if climate change forces many populations to emigrate, it will create a cultural problem or a lack of work in the host countries, resulting in a decrease in the quality of life for everyone". Additionally, responses included concerns about the impact on tourism, shorter ski seasons, increased costs for goods and services, rising diseases, and potential shortages of goods on supermarket shelves, similar to what was experienced during the pandemic period.

• *In your perception, is climate change the environmental problem that needs the most attention, or are there others that are more urgent?* This question aimed to examine whether perceptions of climate risk remained consistent or had changed since a similar questionnaire was administered to another group of undergraduate students in the same department in 2022 (Genovese, 2022). During that previous survey, about 80% of the students selected global warming as the phenomenon requiring the most urgent action. However, in the previous study, students were provided with a list of potential options to choose from, including global warming, plastic pollution, environmental impact of industries, food contamination and waste, forest loss, and intensive farming. In our current questionnaire, we opted for an open-ended question, focusing primarily on the perception of climate risk. Unfortunately, the open-ended nature of the question, coupled with a quick reading, led several students to interpret it as an inquiry into "the most urgent problem in Italy" rather than "the environmental problem" requiring more attention globally. As a result, only half of the students from the Language Department – 47% (61 undergraduate students) and 57% (17 graduate students) – identified global warming as the most urgent problem. In contrast, most students from the science departments, with 93% (54 undergraduate students) and 90% (27 graduate students) of respondents, recognized it as the most urgent problem.

• In response to the question *"If you believe there are other urgent issues, please specify which ones you consider most pressing"*, 52 students from the Language Department and 6 students from the science departments identified alternative urgent problems. However, some language students, failing to recognize the link between global warming and its effects, suggested warming of the seas (7 students), melting glaciers (8 students), and frequent flooding (13 students) as the most urgent issues. Others, from both groups, mentioned concerns such as "unemployment", "war", "gender-based violence", "corruption", and "loneliness".

• The following two questions investigate young people's concerns about worsening natural disasters (**Tab. 6.1**), with responses ranging from being very concerned that it will happen to not being concerned at all. Additionally, it explores the impact of such concerns on daily lifestyle choices. As evident in the first table, most students in the Language Department express concern about a worsening of natural disasters. Conversely, all the students in the science departments answered affirmatively. Interestingly, despite the majority of students in both departments expressing concern, this is not reflected in their daily behaviours. In fact, **Table 6.2** shows the students' responses to the question of whether they inquire about the seismicity of an area before

buying or renting a house. All students replied negatively. These findings are particularly concerning, given that Italy is a highly seismic country. However, the area of Turin, where the survey was conducted, is one of the few exceptions.

Answers	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Yes	72%	80%	100%	100%
No	28%	20%	0%	0%

Table 6 – Perception of worsening natural disasters and related actions
Table 6.1 – *Do you think natural disasters will get worse?*

Answers	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Yes	0%	0%	0%	0%
No	100%	100%	100%	100%

Table 6.2 – *Before buying or renting a house, do you inquire about the seismicity of the area or the possibility of flooding?*

It's noteworthy that the initial seismic classification of the national territory dates to 1909 with Royal Decree No. 193, issued after the catastrophic earthquake in Reggio Calabria and Messina on December 28, 1908. Subsequent regulations, including Royal Decree No. 573 of 29/04/1915, Royal Decree No. 431 of 13 March 1927, and Law No. 1684 of 25 November 1962, updated the lists based on successive seismic events. With Law No. 64 of 2 February 1974, the Ministry of Public Works was recognized as the body responsible for issuing technical standards for both public and private buildings, in agreement with the Ministry of the Interior and in collaboration with the National Research Council (CNR). The seismic classification was further updated. A significant step in this process was the establishment of the Major Risks Commission, which appointed a Working Group, including the National Seismic Service, the National Group for Earthquake Defence, and the National Institute of Geophysics and Volcanology. This group proposed the reclassification of the Italian territory, leading to the one issued

by Civil Protection in March 2003. Accordingly, the entire national territory is divided into four seismic zones, characterized by increasing seismic hazard: Zone 1 (high seismicity), Zone 2 (medium seismicity), Zone 3 (low seismicity), and Zone 4 (very low seismicity). Turin falls within Zone 4.

Similarly, the risk posed by hydrogeological instability doesn't directly impact the city of Turin. Nevertheless, the overall situation is a cause for significant concern since, across Italy, 5.4% of the national territory falls within high hazard/probability areas, covering a potentially floodable surface of 16,223.9 km^2. This surface area expands to 30,195.6 km^2, or 10.0% of the national territory, in a medium hazard/probability scenario. In a low hazard/probability scenario, the potentially floodable surface reaches 42,375.7 km^2, representing 14.0% of the total national territory. Even though Turin itself may not be directly affected, 5.1% of the Piedmont region's territory is at high risk, 8.3% at medium risk, and 13% at low risk (Trigila, Iadanza, Lastoria *et al.*, 2021).

It is not surprising that hardly any of the students interviewed had ever heard of the so-called "seismic bonus", i.e. the measure aimed at taxpayers who carry out earthquake-proof measures on buildings and who, thanks to this bonus, can deduct part of the expenses incurred from their income tax. As evident from Table 9.1, in which the students responded to the question *"are you aware of the seismic bonus"*, most students in both departments had never heard about it. Certainly, our interviewees not only study and mostly reside in Turin, but they are also young students who are generally not yet employed, and thus, they might not be particularly interested in potential tax relief. Nevertheless, we believed that the information, widely disseminated through the media, could still be known to them.

Answers	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Yes	0%	10%	0%	0%
No	100%	90%	100%	100%

Table 9 – Perception of seismic risk and related actions

Table 9.1 – *Are you aware of the seismic bonus?*

Answers	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Yes	0%	10%	0%	0%
No	100%	90%	100%	100%

Table 9.2 – *Would you consider purchasing an apartment in a seismic zone and renovating it with the help of the seismic bonus?*

Answers	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Yes	0%	6,6%	5%	41,4%
No	100%	93,4%	95%	58,6%

Table 9.3 – *Have you ever participated in any specific information campaigns regarding environmental risks?*

The information and awareness campaigns on environmental risks, such as those conducted by the Ministry of the Environment and Energy Security (MASE, 2023) or initiatives organized by different environmental agencies (APAT, 2024) and organizations like WWF[3], to name a few examples, appear to have gone almost completely unnoticed by our interviewees. Indeed, most of the respondents do not recall ever having encountered such campaigns. An exception was noted among the 12 graduate students from the science departments who not only recalled seeing them but also mentioned actively participating in their organization.

Regarding eco-anxiety, which is the profound feeling of unease and fear associated with the recurring thought of possible disasters related to global warming and its environmental effects, we asked students if they had ever heard of it and if they were affected by it. Despite a 2019 survey conducted by SWG in Italy on a sample of 800 young adults indicating that, for 51% of them, climate change is the primary source of their uneasiness (SWG, 2019), the majority of our respondents have never heard of eco-anxiety (93% of the total sample of the Language Department and 78% of the science departments). Moreover, they do not believe they are affected by it: in fact, 100% of both samples, while expressing partial concern about a potential worsening of the climate, assert that they do not suffer from eco-anxiety. This

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[3] https://www.wwf.it/cosa-facciamo/campagne/

second statement is in stark contrast to the findings of several international studies (Usher, Durkin, Bhullar, 2019; Kurth, Pihkala, 2022; Ma, Moore, Cleary, 2022). Specifically, we considered Pihkala's study (2020), revealing that eco-anxiety disproportionately impacts individuals under the age of 30, most notably, women.

Answers	Language Department		Science Departments	
	Undergraduate	Graduate	Undergraduate	Graduate
Yes	97%	100%	100%	100%
No	3%	0%	0%	0%

Table 9.4 – *In the event of a severe climate emergency, do you consider emigrating a valid course of action?*

This aspect is particularly interesting because, as evident in the preceding figures, students expressed doubts and uncertainty about the existence of climate change and the need to emigrate due to natural disasters. However, the percentages shift when the question is posed on a personal level. In fact, almost all respondents would contemplate emigrating (**Tab. 9.4**). Only three undergraduate students from the Language Department responded negatively, stating: "Emigrating would not be my first choice, but I would explore other solutions. If the climate emergency affects the whole planet, the challenges to living would be ubiquitous", or "I would not emigrate; I believe that with appropriate techniques, you can survive anywhere", and "They tried to scare us with the fake virus; they won't be able to scare us away with the excuse of the climate".

5 - Discussion and conclusions

An Ispra report (Trigila, Iadanza, Lastoria *et al.*, 2021) highlights that 93.4% of Italian municipalities face hydrogeological risks, which are exacerbated by global warming each year. The damages resulting from the effects of global warming also carry significant economic implications. For instance, the May 2023 flood in Emilia Romagna caused a staggering 9 billion in damages, ranking as the third most expensive natural disaster globally in 2023[4]. Despite these evident challenges, Italy remains a destination for climate migrations from countries experiencing dire situations. In fact,

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[4] See: https://tg24.sky.it/ambiente/2023/10/20/cambiamento-climatico-italia-danni-costo

immigration to Italy is increasingly influenced by climate-related factors (IDOS, 2022). Hence, the questionnaire was designed to gather information on the general perception of climate risk, with a specific focus on Italy, particularly on seismic and hydrogeological risks. Additionally, we aimed to understand how students' perceptions, influenced by fake news, impact the implementation of sustainable practices. Lastly, we sought to examine the perception and understanding of climate migration. It's worth noting a discrepancy between the responses of students in the Language Department and those in the science departments, with the former being more prone to accepting climate-related fake news as true compared to the latter.

As suggested by the presented data, even at the university level, students lack essential tools to critically process and comprehend information effectively. Except for courses dedicated explicitly to Biology or Earth Sciences, we are dealing with a generation of students inundated with messages and content but lacking the ability to distinguish reliable sources from misinformation. This phenomenon is exemplified by the 67 students (out of 130) from the Language Department who, upon observing contrails from planes in the sky, mistakenly interpret them as chemical trails, experiments aimed at altering the global climate, or intentional release of poisonous particles. We find ourselves in an era where the ideal of universally accessible information via the Internet (and now through various forms of artificial intelligence) has been pursued, yet the absence of critical tools has resulted in and continues to contribute to significant harm.

It is noteworthy that, upon further reflection on the Language Department sample, a significant number of students hold the belief that the deterioration of resources will not impact their quality of life. These responses reveal a lack of knowledge and a tendency to embrace false information circulating on the Internet. A considerable portion, 107 students, admitted they have never heard of global warming, while others claimed ignorance regarding climate migrants, asserting that global warming is not the most urgent issue. This lack of awareness contributes to a diminished perception of risk (Biondo, La Rocca, Trapani, 2022). Individuals are uninformed about environmental risk awareness campaigns, lack knowledge about seismic or hydrogeological risks in the regions they plan to inhabit, and attribute climate change to natural factors rather than human activities. Consequently, people exhibit reluctance to modify their daily routines to support climate improvement. Some students express fatalistic views, believing that the planet has only a few years left. This knowledge deficit also influences attitudes towards climate migration. In response, we have decided to conduct a dedicated session for

discussing these results, utilizing participatory observation methodology and providing ample space for spontaneous interaction among students.

On October 23, a WebEx meeting was organized for the respondents of the Language Department, aiming to encourage broad participation. The initial notable observation was that out of the 130 students who took part in the survey, 43 (approximately 33%) attended this reflective session. During the collective discussion, the prevailing sentiment was that climate-related issues were not perceived as significant: "as long as it's hot, we save on the gas bill", "it's not that bad, it's almost the end of October, and I still go to the beach on weekends", "now we complain that it's hot; in winter, we'll complain that it's cold— we're never happy". Participants mentioned that their primary sources of information were social media and YouTube.

The impact of misinformation became apparent when discussing risk prevention campaigns. All participants claimed they had never heard of prevention campaigns, despite the recent launch of a Civil Protection initiative in Piedmont. This project, known as IT-alert, represents a new public warning system designed to provide direct information to the population. It sends important messages to mobile phones in a specified geographical area during imminent or ongoing serious emergencies or disasters. Once operational, it will address various risks in civil protection, including earthquake-generated tsunamis, dam collapses, volcanic activity (Vesuvius, Campi Flegrei, Vulcano, and Stromboli), nuclear accidents, radiological emergencies, and heavy rainfall.

The students acknowledged receiving the alarm on their phones but expressed fear and varied reactions. Some discarded their SIM cards, later replacing them, convinced they were being monitored by hackers. Others believed World War III had erupted, blamed the government for surrendering to the Americans, suspected something amiss, or simply dismissed the alert as ineffective. The prevalence of conspiracy theories can be attributed to the exposure to videos and social media posts where fake news, primarily for political purposes, has thrived in recent years. The intended impact of disseminating fake news is to erode trust and instil suspicion, as Mashamaite notes, "Public trust in political institutions affects people's civic and electoral behaviour, with doubtful citizens more likely to forego voting or support a populist candidate. While high levels of cynicism and distrust can lead people to disengage from politics" (Mashamaite, 2023, p. 190).

The discussion on climate migration provided valuable insights into how students, in the days between the end of the survey and the WebEx meeting, reflected on the topic and partially changed their opinions. While initially

only three students stated that climate was not a valid reason for emigrating, and 16 answered that they did not know, various doubts emerged during the discussion. Reception became a focal point, with comments such as "If people are escaping from climate issues, they shouldn't come to Italy because it's hot here too", "EU aims to send all migrants to Italy as a way to dominate us", and "Germany should keep climate migrants since it's cold there". Even when informed that Germany has more than three times as many non-EU migrants as Italy, skepticism persisted, highlighting the challenge of changing opinions once false information is accepted as true (Lewandowsky, van der Linden, 2021).

The overarching issue lies in the statement "I am not convinced". This sentiment underscores a broader challenge: even within the university student community there exists a reluctance to readily accept information without personal conviction. Scientific research, once a compelling pursuit, seems to have lost its allure. In the absence of a natural affinity for science and a genuine enthusiasm for learning, misinformation, strategically crafted for economic or political gain, finds its way into the minds of future educators. This phenomenon is not incidental; regions with a higher susceptibility to misinformation also exhibit diminished awareness of environmental risks and reduced empathy for those currently facing such risks.

References

- Acquadro, M.D., Begotti, T., 2021, "Media Exposure to Climate Change, Anxiety, and Efficacy Beliefs in a Sample of Italian University Students", *International Journal of Environmental Research and Public Health*, 18, 9358.

- APAT, 2004, *L'educazione ambientale nelle Agenzie per la protezione dell'ambiente,* https://www.isprambiente.gov.it/files/pubblicazioni/quaderni/educazione-e-formazione-ambientale/educazioneAmbientale.pdf.

- Ashlin, A., Ladle, R., 2007, "'Natural disasters' and newspapers: Post-tsunami environmental discourse", *Environmental Hazards* 7, 4, 330-341.

- Beine, M., Parsons, C., 2015, "Climatic factors as determinants of international migration", *The Scandinavian Journal of Economics*, 117, 2, 723-767.

- Bhatti, A.K., 2009, *Seismic Vulnerability of Historical Arch Type Bridge Structures in Italy*, Master's Thesis, University of Padua.

- Biondo, F., La Rocca, G., Trapani, V., 2022, *Information Disorder. Learning to Recognize Fake News*, Berlin-Bruxelles, Peter Lang.

- Burke, M., Hsiang, S.M., Miguel, E., 2015, "Climate and conflict", *Annual Review of Economics* 7, 577-617, doi.10.1146/annurev-economics-080614-115430.

- BVA Doxa, 2019, *Gli italiani e la doccia. Percezione, atteggiamenti e abitudini degli italiani verso la doccia*, www.damast.it/gli-italiani-e-la-doccia-indagine-doxa/.

- Clayton, S., 2020, "Climate anxiety: Psychological responses to climate change", *Journal of Anxiety Disorders*, 74, 102263.

- Clayton, S., 2021, "Climate Change and Mental Health", *Current Environmental Health Report*, 8, 1-6.

- Corbett, C.R., 2020, "Chemtrails and Solar Geoengineers: Governing

Online Conspiracy Theory Misinformation", *Missouri Law Review*, 85, 3, 633-686.

- Duffy, B., 2021, *Who cares about climate change? Attitudes across the generations (in the UK)*, https://policycommons.net/artifacts/1813707/who-cares-about-climate-change/2549991/.

- FIPE, 2019, *Ristorazione. Rapporto annuale 2019*, https://www.fipe.it/wp-content/uploads/2021/12/RapportoPESito2019-2.pdf.

- Francis, A., 2019/2020, "Climate-induced migration and free movement agreements", *Journal of International Affairs* 73, 1, 123-134, https://www.jstor.org/stable/10.2307/26872782.

Genovese, E., 2022, "University student perception of sustainability and environmental issues", *AIMS Geosciences*, 8, 4, 645-657.

- Giddens, A., 2008, *The politics of climate change. National responses to the challenge of global warming*, London, Policy Network Paper.

- Gifford, R., 2008, "Psychology's essential role in alleviating the impacts of climate change", *Canadian Psychology*, 49, 4, 273-280.

- Gifford, R., 2011, "The dragons of inaction: psychological barriers that limit climate change mitigation and adaptation", *American Psychologist*, 66, 4, 290-302.

- Gilliam, F., Bales, S., 2001, "Strategic Frame Analysis: Reframing America's Youth", *Social Policy Report*, 15, 3, 1-16.

- IDOS, 2022, *Dossier statistico immigrazione*, Rome, Edizioni Idos.

- Ionesco, D., Mach, E., 2016, "Environmental migration in the New York Declaration", https://environmentalmigration.iom.int/environmental-migration-new-york-declaration.

- Koubi, V., 2019, "Climate change and conflict", *Annual Review of Political Science*, 22, 343-360.

- Koubi, V., Böhmelt, T., Spilker, G. et al., 2018, "The Determinants of

Environmental Migrants' Conflict Perception", *International Organization*, 72, 4, 905-936.

- Koubi, V., Spilker, G., Schaffer. L. et al., 2016, "The role of environmental perceptions in migration decision-making: evidence from both migrants and non-migrants in five developing countries", *Population and Environment*, 38, 2, 134-163, https://www.jstor.org/stable/44132372.

- Kurth, C., Pihkala, P., 2022, "Eco-anxiety: What it is and why it matters", *Frontiers in Psychology*, 13, https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2022.981814/full.

- Lewandowsky, S., van der Linden, S., 2021, "Countering Misinformation and Fake News Through Inoculation and Prebunking", *European Review of Social Psychology*, 32, 2, 348-384.

- Lombardi, D., Sinatra, G.M., 2012, "College Students' Perceptions About the Plausibility of Human-Induced Climate Change", *Research in Science Education*, 42, 201-217.

- Lujala, P., Bezu, S., Kolstad, I. et al., 2020, "How do host-migrant proximities shape attitudes towards internal climate migrants?", *Global Environmental Change*, 65, https://www.sciencedirect.com/science/article/pii/S0959378020307391?via%3Dihub.

- Ma, T., Moore, J., Cleary, A., 2022, "Climate change impacts on the mental health and wellbeing of young people: A scoping review of risk and protective factors", *Social Science and Medicine*, https://pubmed.ncbi.nlm.nih.gov/35367905/.

- Magliulo, C., Talluri, M., 2022, "Non è un Paese per bici. Come rendere ciclabili le città italiane: piani, scenari, risorse", *Clean Cities Campaign*, Fiab, Kyoto Club and Legambiente, https://italy.cleancitiescampaign.org/wp-content/uploads/2022/11/Clean_Cities_Non_Un_Paese_Bici_06Nov2022.pdf.

- MASE, 2023, Archivio Dossier Campagne Nazionali di Tutela Ambientale, https://www.mase.gov.it/pagina/dossier-campagne-nazionali-di-tutela-ambientale.

- Mashamaite, M.M., 2023, "The Impact of Misinformation and Fake News on Climate Change Perception and Response: A Comprehensive Review", *International Journal of Social Science Research and Review*, 6, 9, 183-193.

- McAdam, J., 2010, *Climate Change and Displacement. Multidisciplinary Perspectives*, Oxford and Portland, Oregon, Hart Publishing.

- Metzger, M.J., Flanagin, A.J., Zwarun, L., 2003, "College student web use, perceptions of information credibility, and verification behaviour", *Computers & Education*, 41, 3, 271-290.

- Ministry of the Interior, 2023, *Cruscotto statistico*, https://www.interno.gov.it/sites/default/files/2023-09/cruscotto_statistico_giornaliero_15-09-2023.pdf.

- Pasquaré, F., Oppizzi, P., 2012, "How do the media affect public perception of climate change and geohazards? An Italian case study", *Global and Planetary Change*, 90-91, 152-157.

- Phillips, M., Cinderich, A, Burrell, J. et al., 2015, "The Effect of Climate Change on Natural Disasters: A College Student Perspective", *Weather, Climate, and Society*, 7, 60-68.

- Pihkala, P., 2020, "Eco-Anxiety and Environmental Education", *Sustainability*, https://www.researchgate.net/publication/346732307_Eco-Anxiety_and_Environmental_Education.

- Pini, J., 2023, "Fuori casa: prima colazione in ripresa, ma occorre svecchiare il target", https://www.mixerplanet.com/bar/217198/fuori-casa-prima-colazione-in-ripresa-ma-occorre-svecchiare-il-target.html.

- Pirovano, G., 2023, "Colazione, un'opportunità per bar e hotel", https://www.italiaatavola.net/attualita-mercato/prima-colazione-degli-italiani-non-soltanto-tradizione/93719/.

- Santolini, F., 2021, "Ambiente, l'Italia apre le porte ai migranti climatici", *la Repubblica*, https://www.repubblica.it/green-and-blue/2021/01/19/news/gli_invisibili_in_fuga_per_il_clima_chi_sono_i_nuovi_migranti-282709863/.

- Semenza, J.C., Hall, D.E., Wilson, D.J. et al., 2008, "Public perception of climate change: Voluntary mitigation and barriers to behaviour change", *American Journal of Preventive Medicine*, 35, 479-487.

- Sonetti, G., Sarrica, M., Norton, L.S., 2021, "Conceptualisation of sustainability among students, administrative and teaching staff of a university community: An exploratory study in Italy", *Journal of Cleaner Production*, 316, 1-9.

- SWG, 2019, *Fighting climate change*, https://www.swg.it/politicapp?id=yedv.

- The World Bank, 2018, *Groundswell: Preparing for Internal Climate Migration*, Washington DC, https://openknowledge.worldbank.org/handle/10986/29461.

- Tingley, D., Wagner, G., 2017, "Solar geoengineering and the chemtrails conspiracy on social media", *Palgrave Communications*, 3, 12, https://www.nature.com/articles/s41599-017-0014-3.

- Trigila, A., Iadanza, C., Lastoria, B. et al., 2021, *Dissesto idrogeologico in Italia: pericolosità e indicatori di rischi*, ISPRA, https://www.isprambiente.gov.it/files2022/pubblicazioni/rapporti/rapporto_dissesto_idrogeologico_italia_ispra_356_2021_finale_web.pdf.

- Usher, K., Durkin, J., Bhullar, N., 2019, "Eco-anxiety: How thinking about climate change-related environmental decline is affecting our mental health", *International Journal of Mental Health Nursing*, 28, 1233-1234.

- Wachholz, S., Artz, N., Chene, D., 2014, "Warming to the idea: university students' knowledge and attitudes about climate change", *International Journal of Sustainability in Higher Education*, 15, 2, 128-141.

- Warner, K., 2011, "Environmental change and migration: methodological considerations from ground-breaking global survey", *Population and Environment*, 33, 1, 3-27.

- Wilson, K.M., 2000, "Communicating climate change through the media: Predictions, politics, and perceptions of risks", in: Allen, S., Adam, B., Carter,

C. (eds), *Environmental Risks and the Media, London, Routledge*, 201-217.

- Witmarsh, L., 2009, "Behavioral responses to climate change: asymmetry of intentions and impacts", *Journal of Environmental Psychology*, 29, 13-23.

12. Infrastructural development under CPEC and its impact on Pakistan's agricultural landscape

Muhammad Ammad Khan, Maryam Dogar, Mahreen Khalid

12. Infrastructural development under CPEC and its impact on Pakistan's agricultural landscape

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Abstract

The year 2023 marked a decade since the China–Pakistan Economic Corridor (CPEC) was formally launched in Pakistan as a part of the larger Belt and Road Initiative (BRI). It focuses heavily on infrastructural development and aims to transform transportation linkages, build trade channels, generate energy, and enhance telecommunication. The project also promises to enlarge Pakistan's agriculture sector by increasing accessibility to remote agricultural areas, facilitating the access of agricultural goods to wider markets, improving the livelihoods of small farmers, and enhancing its contribution to the national economy. These ambitious goals hold the potential to attract foreign investment and offer diverse work possibilities in rural areas, thereby overcoming local challenges. Moreover, the agro-processing industries create export potential through the development of Special Economic Zones (SEZs) utilizing thousands of acres of agricultural land. This chapter delves into the multifaceted aspects of CPEC's impact on Pakistan's agriculture and farming communities. It explores the growing apprehension regarding the far-reaching consequences on the socio-economic and political aspects of communities that are engaged in agriculture and farming. The analysis in this chapter adopts the Triple-Bottom-Line (TBL) approach to sustainability. Drawing from the experiences of other economic corridors, the chapter emphasizes the importance of conducting thorough environmental impact assessments and implementing mitigation measures to ensure that CPEC's development is ecologically sustainable. By adhering to sustainability principles, CPEC can maximize the economic potential of Pakistan's agricultural sector, while also addressing pressing environmental and social concerns. It will also help it to remain relevant in the emerging

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landscape of corridors that strive to align themselves with sustainability goals. This chapter offers valuable insights for policymakers, researchers, and stakeholders involved in the CPEC project and similar initiatives worldwide.

1. Introduction

Pakistan, an agrarian nation blessed with fertile land, diverse ecological and climate zones, and an extensive irrigation network, holds tremendous potential in its agricultural sector. This sector plays a crucial role in the country's economic landscape, serving as a significant source of employment for more than half of the nation's populace, food security, and poverty alleviation (Khan *et al.*, 2022). According to the Pakistan Economic Survey (2022-23), it has been determined that the aggregate cultivated land area amounts to 22.50 million hectares, thereby constituting a significant 22.9 percent share of the nation's gross domestic product (GDP). Since it employs 37.4 percent of the population, this sector is a major support base for the textile industry, which forms the backbone of Pakistan's exports (Shahid, 2023).

However, due to susceptibility to climate change and exposure to hydrogeological extremes, Pakistan Economic Survey (2022-23) shows that the agricultural sector experienced a growth rate of only 1.55% during the given year, a significant decline from the 4.27% growth rate in the previous year primarily attributed to floods. According to the Food and Agriculture Organization (FAO), about 82% of Pakistan's cultivated land relies on irrigation while 18% on rainfall (FAO, 2023). The Indus Basin Irrigation System (IBIS) is the primary source of irrigation water for the entire country (Hussain, Khan, 2023), but it faces significant issues such as water loss, waterlogging, and salinization. Studies, for instance, Sajid *et al.* (2022) and Young *et al.* (2019) reveal that Pakistan's irrigation system currently operates at a low- efficiency rate of approximately 30% which is very low compared to the global average of 58%, resulting in reduced crop yields and inefficient water usage (Caldera *et al.*, 2021). Given the heavy reliance on water, there is a pressing need for substantial reforms to ensure sustainable agricultural production amidst changing climatic conditions. Projections suggest that Pakistan is likely to encounter water shortages for irrigation due to climate change, particularly affecting drought-prone and arid/semi-arid regions. Furthermore, there is anticipated growth in crop water demand, exacerbating the existing demand-supply gap (Khan, Hussain, 2024; Zulqarnain, Khan, 2024, Shafeeque, Bibi, 2023).

The importance of the agricultural sector transcends its mere contribution to the GDP; it holds a pivotal role in ensuring food security domestically. However, findings from the 2018 National Nutritional Survey conducted by the Ministry of Health and the United Nations Children's Fund (UNICEF) reveal that 36.9% of households in Pakistan faced "food insecurity", with

18.3% experiencing severe levels of it. Baig *et al.* (2019) contend that this challenge may arise from various factors, including inadequate research and development initiatives aimed at cultivating diverse seed varieties, deficient planning strategies, compromised supply chains, ineffective marketing practices, and a lack of substantial governmental involvement in the agricultural domain. Additionally, obstacles such as restricted market entry, outdated cropping practices, limited crop insurance, and outdated post-harvest technologies further exacerbate the situation (Kanwal *et al.*, 2016).

Moreover, Pakistan's population has surged, propelling it to the status of the world's fifth most populous country, hosting 241.49 million people (PBS, 2023). This demographic expansion exerts considerable strain on the nation's natural, manual, physical, capital, and social resources (Haider *et al.*, 2021). Recent data from the Pakistan Bureau of Statistics (PBS) (2023) indicates that approximately 38.82% of the population resides in urban areas, while 61.18% lives in rural regions which are characterized by higher poverty rates and lower human development indicators (Khan, 2022). According to the United Nations World Population Prospects of 2019, Pakistan's population is projected to swell to 262.96 million by 2030 (Hashmi, 2022). Consequently, Pakistan's agricultural sector grapples with multifaceted challenges in meeting the nation's food requirements, exacerbated by population growth and environmental factors such as shifting weather patterns, water scarcity, and recurrent droughts and floods.

To overcome these challenges and unleash the full potential of the agricultural sector, the Government of Pakistan has recognized the paramount importance of agriculture and started implementing several projects to broaden the agricultural sector under the China–Pakistan Economic Corridor (CPEC). The CPEC was formally launched in Pakistan in July 2013 as a part of the larger Belt and Road Initiative (BRI) (Hassan, 2020). It places significant emphasis on infrastructural development, stretching from the western Chinese city of Kashgar to Pakistan's Arabian Sea port of Gwadar, and aims to transform transportation linkages, build trade channels, generate energy, and enhance telecommunication. The project also promises to enlarge the Pakistani agriculture sector by increasing accessibility to remote agricultural areas, facilitating the access of agricultural goods to wider markets, improving the livelihoods of small farmers, and enhancing its contribution to the national economy (Yar *et al.*, 2021). These ambitious goals hold the potential to attract foreign investment and offer diverse work opportunities in rural areas. Furthermore, the establishment of agro-processing industries, particularly through the development of Special Economic Zones (SEZs) utilizing vast

stretches of agricultural land, holds promise for boosting exports (Hussain, Rao, 2020).

The development of infrastructure along the corridor fosters a more robust economic environment, promoting financial growth and profitability. The corridor's impact extends beyond mere economic transactions, influencing the overall quality of life in these urban centers. This encompasses improved access to education, healthcare, and social amenities, contributing to the well-being of the population (Aman *et al.*, 2022). The corridor not only connects major urban centers but also traverses through regions vital to agriculture thus promoting rural development. Infrastructure projects under CPEC are expected to improve connectivity in remote areas and upgrade essential rural infrastructure for agricultural mechanization. This collective effort aims to develop and revitalize medium and low-yielding land, establishing modern agricultural zones with water-saving technologies to maximize resource efficiency. Moreover, it presents an opportunity for collaborative efforts to address and improve Pakistan's water resource management through the adoption of more efficient methods (PakistanToday, 2023).

This chapter aims to delve into the multifaceted repercussions of CPEC on sustainability, shedding light on both its positive contributions and potential drawbacks. For this purpose, academic articles, reports, and working papers have been scrutinized to assess both the anticipated and current impact of CPEC projects on the agricultural sector. The evaluation employs the Triple-Bottom-Line (TBL) framework (Elkington, Rowlands, 1999) to elucidate the sustainability challenges arising from the infrastructure development under CPEC that affects the agricultural landscape. TBL framework is a multifaceted approach to sustainability assessment, often referred to as the 3Ps —Profit, People, and Planet— that provides a comprehensive framework for evaluating the holistic impact of large-scale infrastructure projects that go beyond conventional economic considerations. While navigating through the dynamic landscape of CPEC, our analysis will extend beyond the borders of Pakistan and China to learn from other existing economic corridors worldwide. By juxtaposing the experiences of various nations and regions, this study seeks to distill valuable insights into the intricate dynamics that shape the outcomes of economic corridors. By examining the policy implications of CPEC for agriculture, including the need for capacity building, technology transfer, and institutional reforms, this chapter could bridge the knowledge gap and provide valuable insights into developing interventions and policies that promote agricultural revitalization and sustainability.

In the following sections, we present an overview of the transformative

impacts of CPEC on Pakistan's agricultural landscape; an analysis examining sustainability challenges through the lens of the TBL framework; and an exploration of sustainable strategies within the context of global economic corridors and conclusion.

2. Transformative Impacts of CPEC on Pakistan's Agricultural Landscape

Massive infrastructure projects, like CPEC in Pakistan (Figure 1), are often seen as development catalysts, but their success depends on navigating regional shifts and internal challenges (Ali, 2021). Despite obstacles, developments in the energy and transport sectors under CPEC have had a positive impact, enhancing living standards and transforming the agricultural landscape. As per the CPEC Secretariat, Pakistan, a total of 16 significant energy projects have been completed across the country. The early harvest phase that included most of these have been successfully completed by 2020, adding 13,000 MW of additional energy to Pakistan's electricity supply and effectively reducing energy shortages (M Shah, 2021). Pakistan has historically faced a severe energy crisis, which significantly impeded national development. The availability of energy is crucial across all sectors, ranging from industry to agriculture. A study by Ali *et al.* (2017) highlighted that in 2016 alone, the energy shortfall cost Pakistan Rs. 14 billion. The positive momentum in the energy sector has far-reaching implications for the manufacturing industry. Sustained energy provision fosters industrial expansion and accelerates Return on Investments (ROIs), thereby enhancing the country's export potential (Hadi *et al.*, 2018). This positive impact contributes to the economic growth aspect of the TBL. Additionally, the inclusion of renewable energy projects, such as solar, wind, and hydropower, aligns with sustainability goals by promoting a diverse and eco-friendly energy mix, thus benefiting both people and the planet.
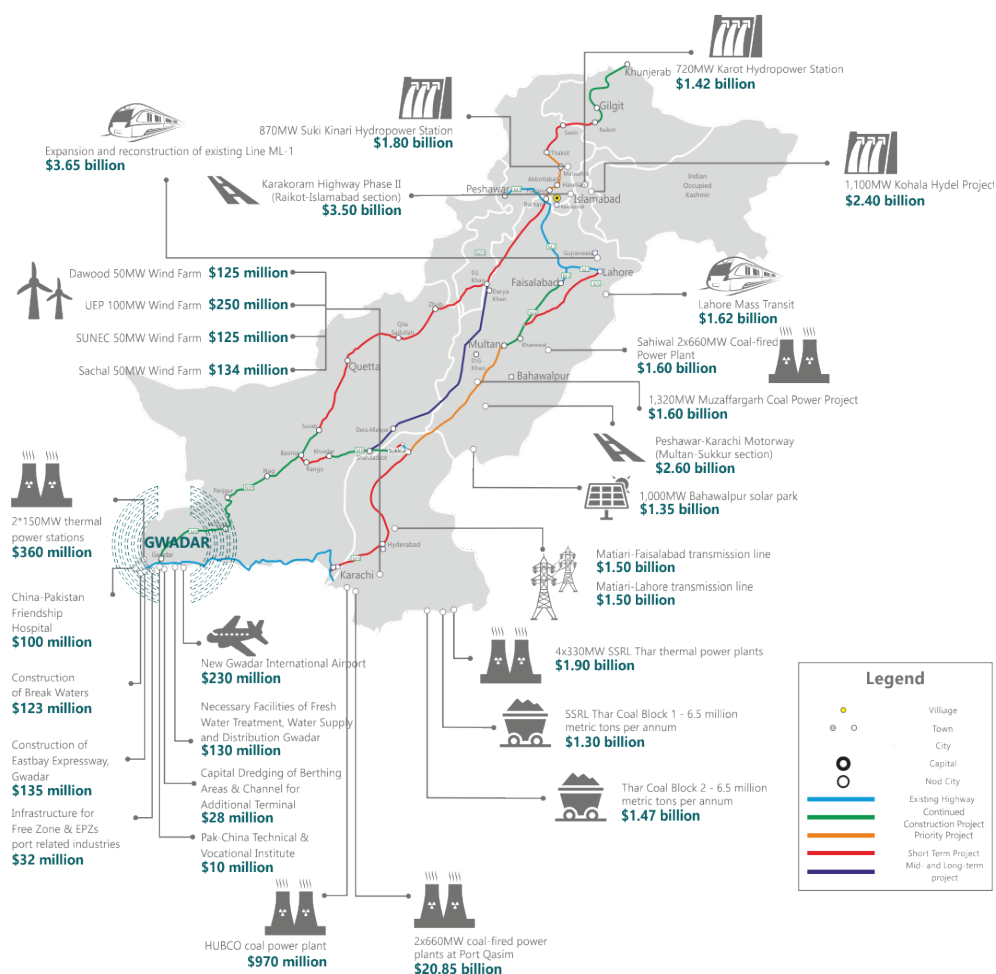
Figure 1: Infrastructure projects under CPEC (available via license: Creative Commons Attribution 4.0 International).

China's significant economic prowess has made a significant difference in Pakistan's economic landscape. China is Pakistan's largest commercial partner and main investor, accounting for 23.83% of its Foreign Direct Investment (FDI) totaling $102.5 million in the first quarter of fiscal year 2022-2023 and these inflows are expected to attract additional FDI in the coming future since CPEC's framework has been strengthened by the start of next phase which includes Special Economic Zones (SEZs) (Afzal *et al.*, 2023). So far, a total of nine SEZs have been sanctioned under the aegis of the CPEC infrastructure and energy corridor and these SEZs will make use of specially tailored beneficial tariff and tax regulations, allowing

Pakistan's manufacturing production to grow alongside the CPEC roads, assisting in the delivery of final products from this platform (Zia *et al.*, 2018). These zones are proposed under the midterm and final stages of CPEC development.

Similarly, the agriculture sector is a direct as well as indirect beneficiary of CPEC via development in backward and forward linkages (Ahmed, Mustafa, 2016). The improvement in rural electrification, facilitated by CPEC, simplifies the process of irrigating fields and cultivating diverse crops, thereby enhancing agricultural productivity (*Barnes et al.*, 2014). Research conducted by Ali *et al.* (2018) predicts that substantial investment in CPEC will positively influence land productivity, alleviate Pakistan's energy crisis, and generate numerous job opportunities. Furthermore, small-scale farmers are expected to experience socioeconomic improvements as a result of the project's implementation. Despite past neglect, the CPEC Long Term Plan (LTP) aims to revitalize Pakistan's agriculture industry. The establishment of food processing and storage zones, as outlined by the State Bank of Pakistan (SBP) (2018), aims to minimize post-harvest losses. Additionally, the industry is poised to adopt modern equipment and synthetic fertilizers to boost yields. Investments in agricultural technology will bolster Pakistan's food systems' resilience to climate change. Agricultural development fosters social equity and ensures long-term sustenance, not only within the sector itself but also for the broader population by guaranteeing food security. Hence, it forms the very basis that the TBL stands on.

3. Sustainability Challenges

Numerous studies, such as those conducted by Ahmad *et al.* (2020) and Khan *et al.* (2019), anticipate an increased agricultural production under the CPEC. They attribute this optimism to improvements in power and water supply, enhanced infrastructure, better market access, and technology transfer. However, several studies highlight concerns about the sustainability of the projects listed in Table 1 when examined through the lens of the TBL framework.

Profit	Concerns regarding the increased market presence of Chinese companies and Pakistan to secure a substantial market share in China (Younas *et al.*, 2021; Khawar, 2018).
People	In Qadirabad village, women shifted to low-paying jobs like domestic work and tailoring as agricultural lands transformed into the Sahiwal Coal Power Plant, leading to a major occupational change (Niazi *et al.*, 2019). The fishing community expressed worries about restricted coastline access due to the construction of an expressway at Gwadar Port (GRAIN, 2021). Small farmers are marginalized in export decisions, evident in the impracticality of exporting cherries which is not a viable option for small farmers, showcasing a lack of consideration for their participation in decision-making processes. (Spies, 2021).
Planet	There are concerns that the project leads to significant pollution, carbon emissions, environmental degradation, biodiversity loss, and habitat loss (Khalid *et al.*, 2021; Khayyam and Nazar, 2020; Nabi *et al.*, 2017). In the energy mix, 69.9% of the share is of non-renewable sources (PBS, 2022). Installation of coal power plants shows that both Pakistan and China have conveniently disregarded the commitments outlined in the Paris Agreement by heavily relying on coal-based power plants (Khalid, Ahmad, Ullah, 2021). Thus, evaluation of energy strategies is needed to align with the goals of the Paris Agreement.

Table 1: Sustainability challenges of CPEC identified through the TBL framework.

Recent data, presented in **Table 2**, regarding the crop production of Sahiwal district in Punjab province, shows that both area and production of Rabi (winter) and Kharif (summer) crops have reduced between the period of 2012-2013 to 2020-21 after the installation of the coal power plant. The plant was constructed over the cultivable lands as seen in **Figure 2**, which shows the vast lands of agriculture were converted to a coal power plant station and the negative consequence is apparent in the form of reduced crop production.

Year	Cotton		Wheat	
	Area (ha '000')	Production (bales '000')	Area (ha '000')	Production (tones '000')
2012-13	156.22	724.59	1239	1717.87
2020-21	36.02	162.02	387.28	1416

Table 2: Comparison of agricultural area and production before and after the installation of the Sahiwal Coal Power Plant

Source: Crop Reporting Service, Government of the Punjab, https://crs.agripunjab.gov.pk/reports
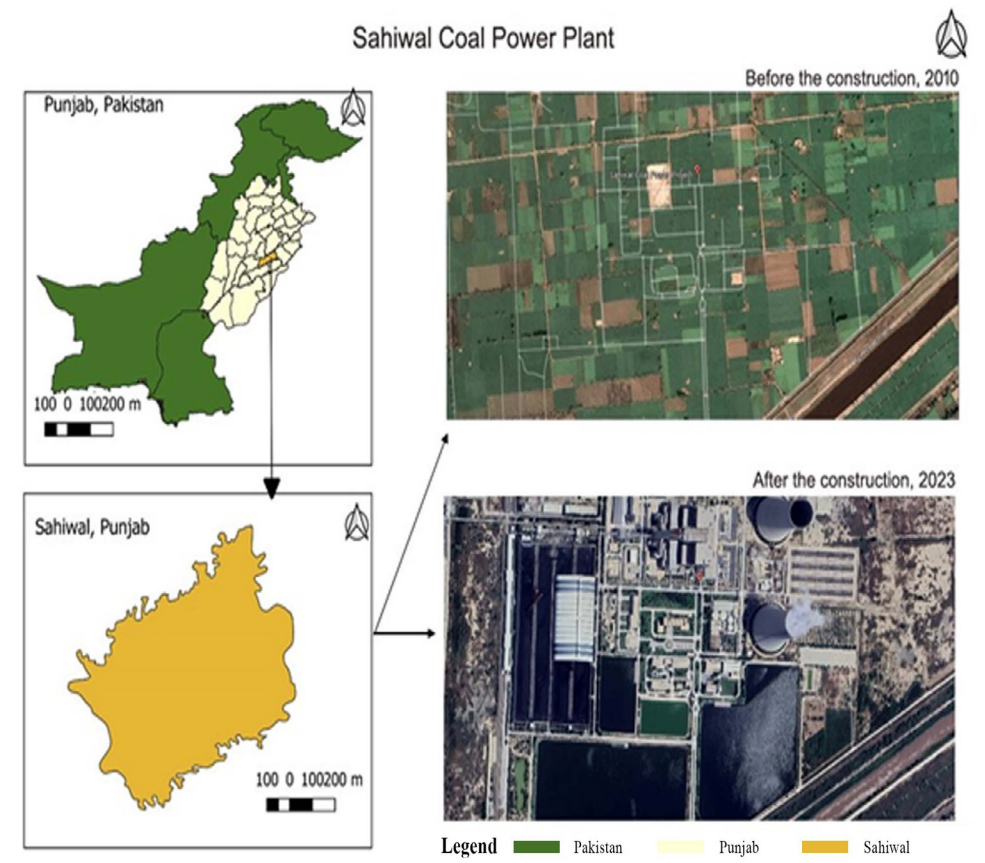
Figure 2: Map showing Sahiwal Coal Power Plant site.

Similarly, the initial hydropower endeavor in CPEC is the 720 MW Karot Hydro Power Project located near the villages of Karot in Rawalpindi district and Hollar in Azad Jammu and Kashmir (AJK) region. It was designed to cater to the needs of 5 million people, including domestic users and the farming community (Xinhua, 2022). The project is predominantly built on uncultivated land (340 ha). As depicted in Figure 3, there is a negligible difference in the cultivated and cropped area. However, its impact on biodiversity, particularly the aquatic and terrestrial habitats of Jhelum River and encroachment on national parks, as highlighted by Nowsharwan (2022), raises concerns about the project's sustainability (**Figure 4**).

Figure 3: Comparison of land utilization before and after the completion of Karot Hydro Power Project. Source: Bureau of Statistics, Punjab https://crs.agripunjab.gov.pk/reports; AJK Statistical Yearbook, 2022, https://www.pndajk.gov.pk/statyearbook.php

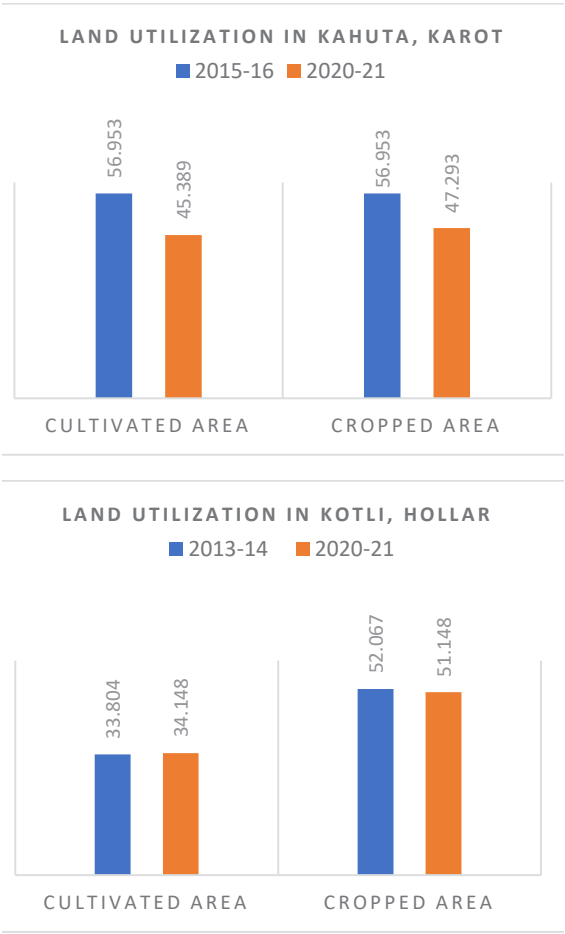**Figure 4:** Karot Hydropower Project located at the dual boundary of Rawalpindi District, Punjab and Kotli District, AJK, Pakistan. Source: CPEC Secretariat, Ministry of Planning, Development & Special Initiatives https://cpec.gov.pk/project-details/16

While CPEC promises benefits for Pakistan's agriculture, concerns arise about project sustainability, particularly in terms of increased mechanization causing land degradation and water sector sustainability (Asghar *et al.,* 2021). Historically, such issues have been linked to industrialization processes where technological interventions led to land exploitation. Moreover, CPEC's LTP (2017-2030) lacks alignment with Pakistan's climate priorities, lacking clarity on integrating water resource management and climate change, raising concerns about practical implementation. The omission of the Ministry of Climate Change from associated ministries underscores the absence of a clear strategy for addressing environment and climate-related issues and human development which is crucial for community upliftment through economic corridors. In his study, Rasheed (2023) highlights the importance of addressing these sustainability issues through community engagement. Munir and Khayyam (2020) recommend following global standards to reduce environmental degradation.

4. Sustainable Strategies: Lessons from Global Economic Corridors

The challenges and issues highlighted in the context of CPEC are not unique to this initiative alone; they are inherent to economic corridors (**Table 3**) and require continuous efforts for improvement through proper monitoring and evaluation. Some of the strategies that CPEC can adopt to make itself sustainable and viable for the local environment and community are discussed in this section.

The issue of exclusion of small farmers can be solved through the adoption of inclusive business practices and models. For this purpose, the evaluation of corridor investments and interventions should be viewed through the lens of an "*Engagement Model*," assessing how smallholder farmers and small and medium enterprises (SMEs) can be integrated into specific corridor activities (Gálvez, 2014, p.162). The literature recommends various approaches, for example, direct employment, participation in contract farming and out-grower schemes, and their role as land lessors. Initiatives like the Beira Agricultural Growth Corridor Initiative (BAGCI) and Southern Agricultural Growth Corridor of Tanzania (SAGCOT) prioritize the adoption of inclusive business models as a fundamental prerequisite for accessing corridor funds. In BAGCI, incentives were extended to companies investing in clusters with high agricultural potential, contingent upon the adoption of inclusive business models that would be beneficial for smallholder farmers (Kaarhus, 2018).

The success of CPEC lies in advancing arrangements that enhance farmers' access to vital resources such as financial services, seeds, agrochemicals, and farming and post-harvest technologies. For this purpose, BAGCI established support centers dedicated to providing agribusiness support services to investors, farmers, and other stakeholders (Gálvez, Webber, 2017, p.42). A positive change cannot be witnessed without the active participation of smallholder farmers in policy dialogues. Recognizing the significance of smallholder farmers as key stakeholders, SAGCOT attempts to increase their involvement by assessing their current understanding of policy and legislation, providing training to enhance their capacities, and facilitating meetings with other key stakeholders (Lugangira, 2018).

To resolve the issues of land-grabbing, SAGCOT has "*Participatory Land Management Processes*" in place (Sulle, 2020). Through these participatory processes, SAGCOT makes sure that the concerns of the local population are considered when large-scale investments are proposed. The village council meetings serve as a mechanism for transparent communication, allowing community members to express their opinions, voice potential concerns,

and actively participate in the decision-making process regarding land use. Adopting a similar approach, CPEC can establish a balance between economic development and the preservation of the community's rights and well-being. Another prevalent issue is the substantial delay in the disbursement of compensation payments. It is imperative that governments and project stakeholders prioritize the prompt disbursement of compensation payments. This pre-emptive measure ensures that affected families have a financial safety net in place before the commencement of any large-scale project.

In the year 2014, it was made mandatory under the *CAREC Transport and Trade Facilitation Strategy 2020* that performance must be measured and monitored on a periodic basis in Central Asia Regional Economic Cooperation (CAREC). It helps to have a systematic approach in place to evaluate the efficacy of initiatives and formulate targeted courses of action to overcome barriers. It has been proven to be instrumental in guiding decision-making processes and informing investment decisions.

Environmentally sustainable practices should be at the core of such projects (Khan and Saeed 2023), and SAGCOT actively advocates for green growth models through the *SAGCOT Greenprint* which is a framework for environmental and natural resource management (Milder *et al.*, 2012). To promote sustainable practices, a research project in collaboration with universities has been integrated, focusing on the exploration of optimal sustainable farming practices. Initial trials have shown significant potential to enhance crop yields and farmers' income without expanding agricultural areas or altering greenhouse gas levels. This emphasizes the importance of integrating academia and researchers into development projects since sustainable and desired outcomes cannot be achieved without their insights.

Observing the extent of environmental degradation resulting from CPEC, it appears that either the Environmental Impact Assessments (EIA) were inadequately conducted, or insufficient attention was paid to the findings, leading to a lack of implementation of effective control and mitigation measures. Despite the legal mandate for EIA in the country, the evident environmental harm contradicts this requirement. Nonetheless, according to Khan, Chang (2021), there is still an opportunity to rectify this situation by conducting a thorough EIA, suggesting that it is not too late to address the environmental concerns associated with the project.

Corridors	Countries	Geographical Scale		Sectoral Focus		Sectors						
		National	Regional	Bi-sectoral	Multisectoral	Agriculture	Transport	Energy	Telecom	Trade	Environment	Tourism
BAGCI (2010)	Mozambique	☑		☑		☑	☑	☑				
SAGCOT (2010)	Tanzania (plus Zambia and Malawi)	☑		☑		☑	☑	☑				
CAREC (1996)	Afghanistan, Azerbaijan, China, Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan and Uzbekistan		☑		☑		☑	☑		☑	☑	
GMS (1992)	Cambodia, China, Myanmar, Lao People's Democratic Republic, Thailand, and Vietnam		☑		☑	☑	☑	☑	☑	☑	☑	☑

Table 3: An Overview of the Global Economic Corridors

In the contemporary global landscape, the threat of climate change requires nations to explore innovative strategies to combat its detrimental effects. Recognizing the urgency of this challenge, it becomes imperative to integrate climate change considerations into infrastructure development projects. A very good example of it is the *Climate Change and Environmental Sustainability Program* (CCESP) of the Greater Mekong Subregion (GMS), which was established to address the multifaceted dimensions of climate change and the environment (Krittasudthacheewa, *et al.,* 2019). The GMS CCESP outlines a comprehensive approach encompassing six priority areas to address climate and environment-related issues. For Pakistan, this presents a unique and invaluable learning opportunity, wherein the integration of disaster risk reduction and climate change considerations into the CPEC can be transformative in fostering agriculture development and contributing to the global effort to mitigate the impacts of climate change.

Despite the encouraging news of women opting for truck driving under the CPEC project in Thar (Kumar *et al.*, 2022), the initiative's transformative impact on women's opportunities remains unclear. Insufficient evidence exists to demonstrate how CPEC has catalyzed empowering rural women

and providing them with opportunities. Interestingly, the LTP does not even mention "women". While the document acknowledges livelihood development, the omission of women highlights a lack of clarity in the plan regarding the participation and role of women in the agriculture sector despite being an important stakeholder. In contrast, CAREC has taken an inclusive approach by formulating its own *Gender Strategy 2030*. This strategy aims to ensure equal economic opportunities for women through capacity development and skill-building.

While one may argue that these economic corridors took a considerable amount of time to formulate sustainable strategies and it might be unfair to expect a similar initiative from CPEC in its initial stages. The urgency of contemporary challenges necessitates immediate action upon issue identification, as any delay would undermine the effectiveness of the development plan and lead to disparities. Therefore, it is imperative for initiatives like CPEC to proactively address community and climate-related issues and incorporate strategies that promote sustainability from the outset.

5. Conclusion and Recommendations

The strategic development through the CPEC route not only amplifies economic agricultural activities but also resonates across the three dimensions of the TBL. It enhances *Profit* through the development of agriculture, *People* through improved social well-being, and *Planet* through the promotion of sustainable practices, collectively contributing to a holistic and sustainable development paradigm for Pakistan. However, the analysis has shown the negative aspects of it that need to be addressed properly to overcome sustainability challenges.

The critique of the CPEC through the TBL framework also acknowledges the evolving dynamics of population trends and the potential impacts of pandemics, CPEC must adapt to the changing demographics of the country. With the current annual growth rate of 2.55% (PBS, 2023), the rise in population density in certain areas may pose challenges to infrastructure planning, resource allocation, and social services in the future. Moreover, the COVID-19 pandemic has exposed vulnerabilities in supply chains, healthcare systems, and overall project management. All these challenges necessitate a reimagination of the system especially to support smallholder farmers in times of crisis (Khan, 2022). CPEC should incorporate lessons from the pandemic and should come up with a framework to enhance its resilience,

ensuring that infrastructure and development plans are robust enough to withstand disruptions and contribute to long-term socio-economic stability. Moreover, the sustainability of the CPEC demands a nuanced evaluation that extends beyond the mere execution and completion of plans. There must be a proper evaluation of the projects in terms of the values that they add to the community.

CPEC must take swift action as the era where it was perceived as a game-changer is now surpassed by the emergence of its new European rival, the *Global Gateway (GG)*. GG is distinctive in its approach regarding contracts as it prefers transparency in projects. This marks a departure from the prevailing trend in CPEC contracts, which tend to predominantly favor Chinese state-owned enterprises and policy banks. The GG, in contrast, aims to prioritize financial, environmental, and social sustainability in the selection of contracts and projects (Kuo, 2021). It is imperative for CPEC to adapt to these changing dynamics to remain relevant in the evolving landscape of global economic cooperation. The adoption of sustainability will reflect a commitment to responsible development practices, which considers the environment and societal wellbeing in decisions regarding large-scale investments in the region. The success of agriculture under CPEC, as with any major project, relies on the collaborative efforts of diverse stakeholders which include local government, NGOs, private investors, financial institutions, academia, and the community. Only through such inclusive and performance-based approaches can CPEC realize its potential as a catalyst for sustainable agriculture growth and rural development in the region.

The scope of this chapter is limited mainly to energy projects and their impact on agriculture production and associated farming community as they were completed under the first phase of CPEC and have been operationalized for a long time now. The chapter discusses the potential of SEZs to create benefits for the agriculture sector through improved supply chains. However, currently these zones are under development. Thus, a comprehensive farm to fork impact through the lens of sustainability can only be evaluated once they are operationalized.

References

- Afzal, J., Afzal, M. A., Nishtar, Z., 2023, "Completion of the Ten Years of the China-Pakistan Economic Corridor (CPEC) and Its Economical Goals", *Inverge Journal of Social Sciences,* 2, 4, 23-29.

- Ahmad, M., 2020, "Developing a competitive agriculture and Agro-based Industry under CPEC, China's Belt and Road Initiative in a Global Context: Volume II: The China Pakistan Economic Corridor and its Implications for Business, 227-269.

- Ahmed, R., Mustafa, U., 2016, "Impact of CPEC Projects on Agriculture Sector of Pakistan: Infrastructure and Agricultural Output Linkages", *The Pakistan Development Review,* 32, 511-527.

- Ali, A., Shang, J., Ullah, S., 2018, "Socio-economic Impact of CPEC on Agricultural Productivity of Pakistan: A Principal Component Analysis", *International Journal of Food and Agricultural Economics (IJFAEC),* 6, 3, 47-57.

- Ali, M., 2021, "CPEC in Pakistan's Quest for Energy security: Clarifying Some Misperceptions", *China Quarterly of International Strategic Studies,* 7, 02, 179-198.

- Ali, Y., Rasheed, Z., Muhammad, N., Yousaf, S., 2017, "Energy Optimization in the Wake of China Pakistan Economic Corridor (CPEC)", *Journal of Control and Decision,* 5, 2, 129-147.

- Aman, J., Abbas, J., Shi, G., Ain, N. U., Gu, L., 2022, "Community wellbeing under China-Pakistan economic corridor: role of social, economic, cultural, and educational factors in improving residents' quality of life", *Frontiers in Psychology*, 12, 816592.

- Asghar, A. J., Cheema, A. M., Hameed, M. I., Abbas, S. Q., Fatima, U., 2021, "The Critical Junction between CPEC, Agriculture and Climate Change", *LUMS Center of Chinese Legal Studies,* Accessed 31 October 2023. https://ccls.lums.edu.pk/sites/default/files/2023-01/the_critical_junction_between_cpec_agriculture_and_climate_change.pdf

- Baig, N., He, C., Khan, S., Shah, S. A., 2019, "CPEC and food security: Empirical evidence from Pakistan", *Journal of Public Administaration and Governance*, *9*, 191-208.

- Barnes, D. F., Samad, H., Banerjee, S. G., 2014, The Development Impact of Energy Access. In: Halff, A., Sovacool, B. K., Rozhon, J., (Eds.), *Energy Poverty: Global Challenges and Local Solutions*, Oxford University Press, 54-76.

- Caldera, U., Sadiqa, A., Gulagi, A., Breyer, C., 2021, "Irrigation efficiency and renewable energy powered desalination as key components of Pakistan's water management strategy", *Smart Energy*, 4, 100052.

- Elkington, J., Rowlands, I. H., 1999, "Cannibals with forks: The triple bottom line of 21st century business", *Alternatives Journal*, 25, 4, 42.

- FAO (Food and Agricultural Organization), 2023, "Pakistan at a Glance", *FAO in Pakistan,* Accessed 29 December 2023. https://www.fao.org/pakistan/our-office/pakistan-at-a-glance/en/

- Gálvez Nogales, E., Webber, M., 2017, *Territorial tools for agro-industry development: a sourcebook*. FAO.

- Gálvez Nogales, E., 2014, *Making economic corridors work for the agricultural sector.* FAO.

- GRAIN., 2021, "Unmasking the China-Pakistan Economic Corridor", *CADTM,* Accessed 5 February 2024. https://www.cadtm.org/Unmasking-the-China-Pakistan-Economic-Corridor

- Hadi, N. U., Batool, S., Mustafa, A., 2018, "CPEC: an Opportunity for a Prosperous Pakistan or Merely a Mirage of Growth and Development", *Dialogue (Pakistan)*, 13, 3.

- Haider, S., Malik, S. M., Nadeem, B., Sadiq, N., Ghaffari, A. S., 2021, "Impact of Population Growth on The Natural Resources of the Cholistan Desert", *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18, 10, 1778-1790.

- Hashmi, N. A., 2022, "The Curse of Overpopulation", *Hilal Publications*, Accessed 10 July 2023. https://hilal.gov.pk/view-article.php?i=6751

- Hassan, K., 2020, "CPEC: A win-win for China and Pakistan", *Human Affairs,* 30, 2, 212-223.

- Hussain, E., Rao, M. F., 2020, "China–Pakistan economic cooperation: The case of special economic zones (SEZs)", *Fudan Journal of the Humanities and Social Sciences,* 13, 4, 453-472.

- Hussain, W., Khan, M. A., 2023, "Climate Change Induced Glacial Outburst Floods in Hunza Valley of Pakistan: An Assessment of Indigenous Farming Community Perceptions and Adaptation", *Environment, Development & Sustainability*, 26, 11515–11539.

- Kaarhus, R., 2018, "Land, investments and public-private partnerships: what happened to the Beira Agricultural Growth Corridor in Mozambique?", *The Journal of Modern African Studies,* 56, 1, 87-112.

- Kanwal, N. Khan, M. A., Zheng, Z., 2016, "Analyzing the Determinants of Non-Farm Income Diversification of Farm Households in Peshawar District of Pakistan", *Timisoara Journal of Economics and Business,* 9, 1, 33-48.

- Khalid, I., Ahmad, T., Ullah, S., 2022, "Environmental impact assessment of CPEC: a way forward for sustainable development" *International Journal of Development Issues*, 22, 1.

- Khan, I., Akram, A., Fatima, S., Ahmad, B., Rehman, Z., Arshad, N., Sattar, A., Ahmad, Z., 2022, "Problems of Agriculture in Pakistan: An Insight into Their Solution", *Pakistan Journal of Biotechnology*, 19, 02, 73-83.

- Khan, M. A., 2022, "Examining Community Participation in Crime Prevention in Rural Peshawar, Pakistan", *Rural Society*, 31, 3, 139-154.
- Khan, M. A., 2022, "Smallholder farmers' awareness of COVID-19, challenges and attitude towards Government's lockdown strategies in Pakistan", *Journal of Rural and Community Development*, 17, 1, 49-68.

- Khan, M. A., Hussian, W. 2024, "Climate Change Impacts on Pakistan's

Mountain Agriculture: A Study on Burusho Farmers' Adaptation Strategies towards Livelihood Sustainability. In *Traditional Knowledge and Climate Change: An Environmental Impact on Landscape and Communities* (pp. 21-45)", Springer Nature, Singapore.

- Khan, M. A., Saeed, A. 2023, "Nexus Between Social Work and Environmental Sustainability", *Social Work and Social Sciences Review,* 24, 2.

- Khan, M. I., Chang, Y. C., 2021, "Love for the climate in Sino–Pakistan economic romance: a perspective of environmental laws", *Clean Technologies and Environmental Policy*, 23, 387-399.

- Khawar, H., 2018, "CPEC and the Opportunity for Agriculture Sector", *Consortium for Development Policy Research,* Accessed 23 December 2023. https://cdpr.org.pk/wp-content/uploads/2020/03/CPEC-and-the-Opportunity-for-Agriculture-Sector-2-2.pdf

- Khayyam, U. and Nazar, U., 2021, "Energy production and CO2 emissions: The case of coal fired power plants under China Pakistan economic corridor", *Journal of cleaner production*, *281*, p.124974.

- Krittasudthacheewa, C., Navy, H., Tinh, B. D., Voladet, S., 2019, *Development and Climate Change in the Mekong Region,* Selangor: Strategic Information and Research Development Centre.

- Kumar, J., Xi, C., Imran, M., Kumari, J., 2022, "Cross border project in China-Pakistan economic corridor and its influence on women empowerment perspectives", *Plos one*, 17, 6, e0269025.

- Kuo, M. A., 2021, "Global Gateway: The EU Alternative to China's BRI", *The Diplomat,* Accessed 15 December 2023. https://thediplomat.com/2021/09/global-gateway-the-eu-alternative-to-chinas-bri/

- Lugangira, N., 2018, SAGCOT - Africa's success story. In: CTA. Experience capitalization: Public, private, producer partnerships in East Africa, *Experience Capitalization Series 2,* Wageningen: CTA: 69-73. Accessed 10 November 2023. https://hdl.handle.net/10568/96949

- Milder, J. C., Buck, L. E., Hart, A. K., Scherr, S. J., 2012, "The SAGCOT Greenprint: A Green Growth Investment Framework for the Southern Agriculture Growth Corridor of Tanzania", *SAGCOT,* Accessed 10 November 2023. https://sagcot.co.tz/images/documents/SAGCOT_Greenprint.pdf

- M Shah, K., 2021, *Mapping the Belt and Road Initiative Reach, Implications, Consequences,* New Delhi, India: Observer Research Foundation.

- Munir, R., Khayyam,U., 2020, "Ecological corridors? The case of China-Pakistan economic corridor", *Geoforum,* 117, 281-284.

- Nabi, G., Khan, S., Ahmad, S., Khan, A., Siddique, R., 2017, "China–Pakistan Economic Corridor (CPEC): an alarming threat to the biodiversity of Northern Pakistan", *Biodiversity and Conservation*, 26, 12, 3003-3004.

- Niazi, K., He, G., Ullah, S., 2019, "Lifestyle change of female farmers through CPEC's coal power plant project initiative", *Journal of International Women's Studies*, 20, 3, 154-167.

- Nowsharwan, 2022, "Biodiversity & Karot Hydropower Project. Pakistan Observer", *Pakistan Observer,* Accessed 29 December 2023. https://pakobserver.net/biodiversity-karot-hydropower-project-by-dr-nowsharwan/

- PBS (Pakistan Bureau of Statistics), 2022, "Trends in Electricity Generation 2006-07 to 2020-21", *Government of Pakistan,* Accessed 16 December 2023. https://www.pbs.gov.pk/sites/default/files/industry_mining_and_energy/publications/Trends_in_Electricity_Generation_2006-07_to_2020-21.pdf

- PBS (Pakistan Bureau of Statistics), 2023, "Announcement of Results of 7th Population and Housing Census-2023", *Government of Pakistan*, Accessed 10 November 2023 https://www.pbs.gov.pk/sites/default/files/population/2023/Press%20Release.pdf
- Pakistan Economic Survey, 2023, "PAKISTAN ECONOMIC SURVEY 2022-23", *Finance Division, Government of Pakistan*, Accessed 22 December 2023. https://www.finance.gov.pk/survey_2023.html

- PakistanToday, 2023, "Pak-China collaboration helps Pakistan combat

water woes: PCRWR", *PakistanToday,* Accessed 2 February 2023. https://www.pakistantoday.com.pk/2023/04/16/pak-china-collaboration-helps-pakistan-combat-water-woes-pcrwr/

- Rasheed, M., 2023, "Balancing Development and Sustainability in CPEC", *The Diplomatic Insight,* Accessed 5 February 2024. https://thediplomaticinsight.com/balancing-development-and-sustainability-in-cpec/

- Sajid, I., Tischbein, B., Borgemeister, C. Flörke, M., 2022, "Performance evaluation and water availability of canal irrigation scheme in Punjab Pakistan", Water, 14, 3, 405.

- Shafeeque, M., Bibi, A., 2023, "Assessing the Impact of Future Climate Scenarios on Crop Water Requirements and Agricultural Water Supply Across Different Climatic Zones of Pakistan", *Frontiers in Earth Science*, 11, 1283171.

- Shahid, R., 2023, "Digital revolution in Pakistan's agriculture sector: some key principles", *Business Recorder,* Accessed 28 December 2023. https://www.brecorder.com/news/40279475/digital-revolution-in-pakistans-agriculture-sector-some-key-principles#:~:text=Farmers%20can%20make%20decisions%20with,production%20and%20eliminate%20distorted%20markets

- Spies, M., 2021, "Promises and perils of the China-Pakistan economic corridor: agriculture and export prospects in northern Pakistan", *Eurasian Geography and Economics*, 64, 7-8, 869-895.

- SBP (State Bank of Pakistan), 2018, "Annual Report FY 2018", *State of the Economy,* Accessed 12 November 2023. https://www.sbp.org.pk/reports/annual/arFY19/Anul-index-eng-19.htm

- Sulle, E., 2020, "Bureaucrats, investors and smallholders: Contesting land rights and agro commercialisation in the Southern agricultural growth corridor of Tanzania", *Journal of Eastern African Studies*, 14, 2, 332-353.

- Xinhua, 2022, "CPEC's Karot Hydropower Plant put into 'full commercial operation'", *The Express Tribune,* Accessed 4 February 2024.

https://tribune.com.pk/story/2364053/cpecs-karot-hydropower-plant-put-into-full-commercial-operation

- Yar, P., Khan, S., Ying, D., Israr, M., 2021, "Understanding CPEC's Role in Agriculture Sector Development in Pakistan: Issues and Opportunities", *Sarhad Journal of Agriculture*, 37, 4, 1211-1221.

- Younas, D. N., Aftab, D. S., Iftikhar, D. A., Farooq, M. S., 2021, "China Pakistan Economic Corridor (CPEC) and its impacts on Pakistan Economy and Society", *VFAST Transactions on Education and Social Sciences*, 9, 1, 54-67.

- Young, W. J., Anwar, A., Bhatti, T., Borgomeo, E., Davies, S., Garthwaite III, W. R., Gilmont, E. M., Leb, C., Lytton, L., Makin, I., Saeed, B., 2019, *Pakistan: getting more from water*. World Bank.

- Zia, M. M., Waqar, S., Afzal, B., 2018, "Special Economic Zones (SEZs): A Comparative Analysis for CPEC SEZs in Pakistan", *The Pakistan Journal of Social Issues*, 9, 37-60.

- Zulqarnain, A., Khan, M.A., 2024, "Thirsty Nation: An Investigation into Water Scarcity and Public Conservation Behaviour in Pakistan", Water and Environment Journal.

13. Cruising to the poles: narratives and representation of "last chance tourism"

Gaetano Sabato

13. Cruising to the poles: narratives and representation of "last chance tourism"

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Abstract

Despite the setback that cruise tourism suffered between 2020 and 2021 due to the COVID-19 pandemic, more recent years have seen an important recovery in this tourism sector. For over a decade, alongside the typical cruise offer, the possibility of going on a cruise to the poles has increasingly established itself. Currently, some cruise companies propose this type of route as a form of "last chance tourism": visit the Arctic and Antarctica environment and live an experience represented and perceived as difficult to repeat considering the rapid changes that these regions of the planet are undergoing. This chapter aims to reflect on this dynamic from the point of view of cultural geography by analyzing some online products, such as advertisements texts on the website of one of the companies offering various cruises to the poles, the Ponant Cruise Line. Indeed, through the analysis of these narratives it is possible to reconstruct the symbolic imagery on which the cruise offer at the poles is based: a typical example of "last chance tourism". In particular, the study focuses on the way in which marketing rhetoric combines economic and tourist needs with the sustainability needs of travel, tourists, and ships, making it attractive to visit natural environments and anthropic landscapes already subject to potentially disastrous climate changes. Furthermore, reconstructing narratives and representations of cruise tourism at the poles allows us to reflect on the way in which the fragility of natural and anthropic environments that are still extreme in many ways is perceived.

Keywords:

Geography – Cruise Tourism – Poles – Arctic and Antartica – Last Chance Tourism - Cultural Geography – Sustainability and Landscapes – Narratives

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1. Introduction

After the setback that cruise tourism suffered in 2020 globally due to the Covid-19 pandemic, this type of tourism has started to grow again. Indeed, «the lockdown imposed a no entry to the routes (prohibited by law in many countries or implemented as a precaution by cruise companies), but obviously, at the same time, the freezing of national and international travels and various tourist services would have caused anyway the drastic reduction of passengers unable to reach most destinations» (Sabato, 2023, p. 125). According to CLIA's (Cruise Lines International Association which is the trade association that collects the largest number of registered cruise companies in the world) data published in September 2023, the previous year ended with a significant recovery from the start of the pandemic (CLIA 2023, p. 9). Indeed, the number of total passengers in 2022 was 20.4 million, compared to 5.8 million in 2020 and 4.8 million in 2021. Figures that, as mentioned, betray a major setback when compared to the pre-pandemic era in which there had been steady growth in cruise demand: in 2019 total passengers numbered 29.7 million, ending a decade of excellent results for this type of tourism. However, forecasts for 2023[2] indicate some recovery, with 31.5 million passengers sailing and even around 36 million for 2024. Moreover, according to the CLIA, «Cruise continues to be one of the fastest-growing sectors of tourism» (*ibid.*).

Geographically, the main (and oldest) destination market for cruise tourism has always been North America (and in particular the Caribbean, Bahamas and Bermuda), followed by Western Europe (Mediterranean Sea, North Sea and Baltic Sea). Asian destinations have increasingly joined the market, with numbers that can almost compete with the European market. In 2019, about 4 million passengers travelled to Asian destinations, compared to over 6.7 million for all European destinations, including the eastern Mediterranean (*op. cit.*).

However, an interesting niche in the cruise market is represented by so-called 'exploration cruising'. These cruises, which in some cases may have educational or scientific as well as recreational purposes, are typically operated on smaller vessels with fewer passengers and crew, and they often visit remote and hard-to-reach destinations where natural elements dominate or where there are only small traditional communities. Classic exploration destinations include, for example, Alaska, parts of Norway, Antarctica or the Galapagos Islands. In 2022, 5 of the 16 ocean-going member ships that entered service

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[2] The data are not yet final at the time of publication of this work.

in CLIA member companies were expedition ships (CLIA 2022). The routes of these cruises do not always follow fixed patterns and may vary according to many elements, including contingencies, being linked to environmental, climatic, supply needs, passenger response, etc. One can also refer to a niche because such cruises are considerably more expensive than mainstream cruises and are primarily targeted towards enthusiasts who are willing to invest significant amounts of money and occasionally even longer periods of time than a typical cruise holiday. As Ligget et al. (2023, p. 2) stated, «the high price of polar cruise itineraries, the vulnerability of human activities in remote ice-strewn polar waters, as well as the health risks associated with life on board cruise ships, make polar cruise tourism especially susceptible to pressures on global demand via, for example, pandemics, conflict, and economic recession».

As mentioned before, one of the most popular destinations for expedition cruise tourism is Antarctica: a destination that has grown in recent years (excluding 2020 and 2021 due to pandemic-related shipping restrictions). Also, according to the CLIA, «search results for expedition cruise travel to Antarctica increased 51% in 2022 compared to 2019. In addition, during 2022, 137,000 cruise travelers sailed on expedition ships. Though this number is lower than 2019 when 187,000 cruise travelers chose an expedition cruise, 2022 expedition passenger volume was nearly 70% higher than it was in 2016» (CLIA 2023, p. 26). The figures suggest that the appeal of Antarctica could remain high in the coming years.

Interest in expedition cruise tourism to the poles (and other 'remote', 'exotic' and 'wild' destinations, such as Galapagos Islands or the Great Barrier Reef[3]) is part of what is popularly called "last chance tourism" (also known as "catastrophe tourism", "disappearing tourism" or "doom tourism") (Smith, 2008; Eijgelaar, Thaper and Peeters, 2010), «a niche tourism market where tourists explicitly seek vanishing landscapes or seascapes, and/or disappearing natural and/or social heritage» (Lemelin *et al*. 2010, p. 478). However, this form of tourism presents a paradox. The attraction of visiting fragile ecosystems is certainly an opportunity to draw the attention of potential (and existing) tourists to key issues of the day, such as global warming and climate change pushing them and public opinion to environmental protection actions. On the other hand, increasing numbers of tourists (with

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[3] The quoted terms are intentionally used to emphasise that these qualities of destinations are part of a tourism imaginary built on the extraordinary/ordinary axis. The definition of what is considered 'remote, exotic and wild' should be discussed in the light of a complex cultural dynamic that inevitably positions those who use these adjectives with respect to a given destination/object of observation and (re)semantisations.

all the environmental impacts that this implies) may, in the long term, risk further compromising the fragility of such ecosystems, thereby accelerating the process of environmental degradation that is already underway (Burns and Bibbins, 2009; Dawson et al. 2010; Lemelin et al. 2010). Similarly, while this tourism brings economic benefits to local communities in the medium term, it can also become a threat to the communities themselves in the long term, as it risks further impoverishing their cultural and natural heritage. This ambivalence of last chance tourism has given rise to an intense scientific (and popular) debate on its sustainability, testifying also to how topical the issue has become in the last decade (cf. at least Eijgelaar, Thaper and Peeters, 2010; Lemelin et al., 2010; Lück, Maher and Stewart, 2010; Stonehouse and Snyder, 2010; Maher, Stewart, Lück, 2011; Huddart and Stott, 2020; Liggett et al., 2023). The public and private narratives that underpin the tourist experience also play an important role in this ambivalent process. As in other forms of tourism, the interweaving of both levels of narrative gives rise to a vast imaginary that is both producer and reproducer of the tourist experience. As has been shown in other studies (Sabato 2017; 2018; 2023), the imagery of cruise tourism also plays an essential role in its attractiveness to those who choose or have chosen this experience. This imaginary involves suggestions from various cultural productions that also convey a value system with which tourists (and to some extent communities) can either identify or oppose (Sabato, 2023). Indeed, a complex interweaving of public narratives (such as the advertising system, novels, movies, the figurative arts in the broadest sense, paintings and even video games) and private narratives (the word-of-mouth of passengers, the sharing of posts and photos on blogs and social networks) contribute to the formation of a symbolic universe that makes the cruise experience extraordinary and desirable.

As with the imagery of other types of tourism, cruise tourism has a 'concrete' impact on the economic side, orienting spending behaviour. Furthermore, the economic benefits of cruise tourism are not limited to the short term. In fact, they can become even more significant in the long term as cruise tourism helps to showcase a destination, creating a positive image that can attract not only other cruise passengers but also tourists in general (Sabato, 2018).

In the case of remote natural destinations or small communities within ecologically fragile contexts, the imagery of cruises is found to convey important concepts related to (environmental, social, economic) sustainability. Therefore, the narratives that compose this imaginary assume an important role.

From these premises, this study aims to explore, from a geographical

perspective, how certain narratives in the advertising system present the experience of some expedition cruises to potential (or returning) cruise passengers. To this end, some online advertising texts are considered and analysed here. More specifically, these are significant texts taken from the web pages of the cruise line Ponant that include last chance tourist offers to the poles. Through their analysis, carried out using a qualitative method, it is possible to reconstruct some of the narratives of the advertising system that substantiate the imagery of expedition cruise tourism at the poles. The analysis of some significant passages from these texts is given in section 3.

2. Cruising to the poles

Last chance tourism and, in particular, expedition cruises to the poles often raise important issues, such as environmental, geopolitical and socio-economical implications. One of the most important issues is the fragility of these ecosystems, which for decades have been suffering the most obvious effects of global warming and climate change. It is now well known the risk we face with the rapid deterioration of the poles. Antarctica, which contains 90% of all the world's ice, would cause the oceans to rise by 57 meters in the event of a total meltdown: historically, more than 250 billion tons of ice have disappeared since 2009 (in the 1980s 40 million of ice disappeared). Melting Arctic ice, on the other hand, would cause the oceans to rise by 6 meters (Gemenne and Rankovic, 2021). Furthermore, the rapid deterioration of the Arctic, the rate of melting for which in recent years is higher than in other areas of the Earth, has made it easier to open up new sea passages and consequently easier to exploit new hydrocarbon deposits, which have added further agents of progressive pollution and environmental depletion (*ibid.*). Therefore, there is an environmental fragility that, especially in our times, cannot be ignored even by the tourism industry. With specific reference to cruising, it must be said that almost all ships must already comply with the regulatory guidelines of the International Maritime Organization (IMO), which are then imposed at regional and general levels through the International Convention for the Prevention of Pollution from Ships (MARPOL). This convention deals with preventive actions to counter pollution from oil, sewage and waste from ships. Some technical annexes (e.g. Annex V) refer specifically to ships sailing in polar waters, which are regarded as special world areas (CLIA, 2021a). According to the CLIA, its «members satisfy and often exceed the regulatory structures set by the International Maritime Organization's

(IMO) International Convention for the Prevention of Pollution from Ships (MARPOL) and more stringent regional standards, where applicable» (*Op. Cit.* p. 1).

Liggett et al. (2023) recently showed how over the years the collaboration among polar tourism researchers has grown and self-organised international research groups (such as International Polar Tourism Research Network) and scientific committees (such as the Scientific Committee on Antarctic Research's Antarctic Tourism Action Group - Ant-TAG; the Academic Consortium for the 21st Century's - AC21 - Antarctic Tourism Research Project) have formed. Thus, the scientific literature on the subject of the sustainability of tourism and cruises at the poles is extensive[4] and takes into consideration several aspects (Stewart, Liggett and Dawson, 2017), such as the ethical debate on last chance tourism including cruise tourism (Eijgelaar, Thaper and Peeters, 2010; Lemelin et al., 2010 with particular reference to the case of the Canadian Arctic), the debate on respect for sustainability concerning different types of cruise tourism at the poles (Bauer and Dowling, 2006; Lück, Maher and Stewart, 2010; Huddart and Stott, 2020), the comparison between past and present expeditions (Orams, 2010), the development, the management and governance of polar ship-based tourism (Liggett et al., 2023), as well as the international regulations and local policies (Cajaiba-Santana, Faury and Ramadan, 2020).

The dimensions of tourism in the Arctic and in Antarctica are diverse. As far as Arctic tourism is concerned, prior to the Covid-19 pandemic (which, as mentioned above, was a watershed in the tourism and, thus, cruise market) one can observe a rapid growth of some destinations such as Greenland (about 25,000 passengers), and instead a steady positioning of more mature destinations such as Alaska (about 1 million), Svalbard Islands (about 75,000) and Canadian Arctic (about 5,000) (Liggett et al., 2023, p. 2). According to the International Association Antarctica Tour Operators (IAATO, 2022), visitors (in the sum of disembarked passengers and cruise passengers) to Antarctica increased from about 74,000 in 2019-2020 to a forecast[5] of over 106,000 in 2022-2023, with greater variability than the situation of tourist flows in the Arctic.

Due to the different geopolitical status of the Arctic and Antarctica, tourism arrives in the former by different routes: especially in European areas, tourists

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[4] The scientific literature and research topics concerning pole tourism, and thus also cruise tourism, are seemingly endless. In the knowledge that it is only possible here to propose a quick review of the studies closest to this work, some of the most significant publications are cited below. For more in-depth studies see at least: Stewart, Liggett and Dawson, 2017.
[5] At the time of publication of this chapter, available IAATO data refers to the year 2022.

in many cases may also choose aircraft or land-based means, such as trains and cars, for their trips and activities. Instead, in Antarctica, tourist flows are almost exclusively shipborne. In addition, 98% of the journeys in the Antarctic Peninsula region are operated during the seven months of the austral summer season, between October and April, with departures from the port of Ushuaia (Argentina) or other ports in the north of the Antarctic Treaty Area[6] (IAATO, 2022).

Ship-based tourism to the poles is today mainly operated by expedition vessels that, possibly, can be (re)deployed in both macro-regions (Liggett et al., 2023). Cruise ships arriving in Antarctica can be of different types: size and structural capacity is reflected in the variety of supply and demand, routes and costs (Berger, 2010). Larger ships, those used for mainstream ocean cruising with thousands of passengers, are limited to sailing in Antarctic waters, with a few stops at the most accessible ports, but far from the continent (e.g. Falkland Islands, Tierra del Fuego). On the other hand, smaller cruise ships with reinforced hulls and other structural features to protect them from the ice (*ibid*.) can disembark passengers in some areas of Antarctica. Of course, the latter type of ships are the ones that offer more expensive and time-consuming cruises (on average, these are two-week cruises), while maintaining high-profile, in some cases even luxurious, services on board. Expedition ships are, therefore, not necessarily more spartan, but appeal to a different audience: «The passengers on the small ships […] are not interested in the mainstream cruise experience, but in having a learning experience, an adventure, and actually setting foot on Antarctica. This means that the marketing of these cruises focuses upon the experiential and existential aspects of being on Antarctica rather than on the luxurious nature of mainline ocean cruisers» (Berger, 2010, p. 85).

3. The imaginary of polar tourism: the case of Ponant cruises

As we have seen, there are certainly several companies offering cruises to the poles. Since, as mentioned above, the Antarctic tourist market relies

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[6] The Antarctic Treaty Area is an international treaty that regulates the area between the South Pole and the 60th Parallel South Latitude initially signed in 1959 by 12 states claiming geopolitical interests and sovereignty rights over Antarctica (Argentina, Australia, Chile, France, Japan, Norway, New Zealand, the United Kingdom, Russia, the United States and South Africa). Today there are 56 states party to the treaty, of which 29 are consultative parties with voting and veto rights.

almost exclusively on shipping, it may be interesting to focus briefly on this macro-region to understand the dimension of cruise tourism. It is estimated that the number of ships (and yachts) in Antarctica in 2019-2020 had reached 62, while in 2021-2022 it had fallen to 48, to become around 86 in the forecast (see footnote n.4) for 2022-2023 (IAATO, 2022 – *my own processing*). In the two-year period 2021-2022, if we exclude the companies operating yacht voyages to Antarctica, there were about 24 cruise companies and operators offering cruises on the Peninsula Region. In the biennium 2022-23, it is estimated that the companies and operators are expected to exceed this figure, with more than 30 (*ibid. – my own processing*). In the last four years, among the companies most present in Antarctica is the French Compagnie du Ponant, with four ships in service. As mentioned in the previous paragraphs, here we consider some texts on the web pages of the cruise line's website to reconstruct the symbolic imagery that underpins some expedition cruises to the poles. It appears to be an interesting case study, not only because it is one of the companies with the most ships engaged in the Arctic and Antarctic macro-regions, but also because of the care taken in online media communication. To give an example, the company dedicates an entire website to its flagship, the most recent, *Le Commandant Charcot* [7], which entered service in 2021 (CLIA, 2021b). The website, that offers multimedia contents, such as videos, background music and sounds, presents the ship and the experience onboard in these terms:

> **1**) Unique experiences amidst the ice. / On board the only passenger ship in the world with a Polar Class 2 hull, which allows for navigation through multiyear ice, enjoy rare moments communing with nature, unique experiences that only / *Le Commandant Charcot* can offer you. (CommandantCharcot)

The text addresses the potential tourist by focusing on two topics: the experience of the journey as "extraordinary" (the idea behind many tourist offers) as opposed to the "ordinary" of everyday life, and the technology, the means (the ship) to reach it. The experience on board is unique, as it allows one to connect with a remote nature (the multiyear ice). The extraordinary capabilities of the means (the ship with a special hull, ranked among the

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[7] From 1904 until 1907 the explorer and doctor Jean-Baptiste Auguste Étienne Charcot was the leader of the French Antarctic Expedition that reached the west coast of Graham Land in the Antarctic Peninsula. From 1908 to 1910, he led a second Antarctic expedition, exploring the Bellingshausen Sea and the Amundsen Sea.

highest in ice capabilities) allows one to reach such remote places (and nature). Indeed, the text seems to confirm the concept of the cruise ship as a destination in itself (Löfgren, 1999; Sabato 2017 and 2018), rather than as a simple mean of transport.

On Ponant's English-language website, the offer of cruises specifically dedicated to the poles is divided into Arctic and Antarctic. Starting with the Arctic, 7 cruises are proposed, with several routes including passage from the Geographic North Pole and various destinations such as Alaska, Svalbard Islands, Iceland. These are mostly very expensive exploration cruises aimed at a high-spending audience: prices for basic packages range from nearly 38,000 euros to over 41,000 euros (prices also include flights to and from Paris and transfers). The duration varies from 15 to 20 nights on board. Each of the cruises on the webpage has its own map where the route taken by the ship is plotted.

A short introductory text presents the Arctic offer:

2) Kangerlussuaq, Grundarfjörður, Longyearbyen, Kivitoo… If there are any town and village names that truly evoke the Far North, it's those of Greenland, Iceland, Norway and Canada. The scenery in this part of the world is simply spectacular. Icebergs, sea ice and volcanic mountain landscapes extend as far as the eye can see. And amidst it all roams the polar bear, king of the Arctic, in complete peace and tranquillity. To take an Arctic cruise is to allow yourself to be transported to a world where man is simply a spectator and nature reigns supreme. (Ponant 1)

The text opens with two rhetorical figures: enumeration and metonymy. Some of the most famous locations in the Euro-American Arctic are listed. Metonymy is made explicit with reference to their respective countries and with the aggregate 'Far North', shifting the destination space to a remote elsewhere. The description of some typical elements of the Arctic natural landscape reinforces the symbolic evocation of the places that potential passengers will observe on the cruise. Reference is also made to the polar bear, one of the best-known symbols of the Arctic (Dawson et al. 2010), another metonymic device used by the text to represent nature and the remoteness of it in physical and symbolic space in relation to the tourist. Moreover, the picture of a polar bear opens the section on Arctic cruises. The text concludes with an explicit reference to the position that the passenger-visitor, defined as a "spectator" will hold towards nature. The primacy assigned

by the text to the act of observing is one of the most widely used aesthetic tensions in tourism (see at least Urry and Larsen, 2011 for the theoretical question; see Sabato, 2018 for its possible application to cruising dynamics).

After the detail on the cruises operated, another text on the webpage indicates the:

> **3)** 3 reasons to discover the Arctic / It is said to be mythical, or at least as much as its opposite, the Antarctic. Only rarely do we get to know its most isolated regions. That is what makes it so appealing And yet, the Arctic includes eight countries (Norway, Sweden, Finland, Russia, the United States, Canada, Denmark and Iceland) and many more marvels to discover. Here are three reasons to go to the Arctic. 1) To meet the local communities; 2) To discover grandiose nature; 3) To follow in the footsteps of the great explorers (Ponant 1).

Each of the subsections is further explained. Point 1) mentions the Inuit population; no. 2) mentions the primary forests of Alaska, icebergs, glaciers, geysers and volcanos, then «exceptional fauna» (*ibid.*) such as whales, finbacks, narwhals, orcas and seals, polar bears, walruses, musk oxen, Arctic foxes and Svalbard reindeer, terns, puffins, sea eagles, gannets and bald eagles; no. 3) mentions the early Viking explorers, then the exploration voyages of Cook, Amudsen, Victor and Charcot.

The Antarctica cruises section of the website features 25 expedition cruises. This is a varied offering, although some routes are repeated, but with different fleet ships and at different times of the year. Routes touch on different destinations, depending on the package chosen: Argentina, the Falkland Islands, the Shetlands, the Antarctic Peninsula, South Georgia, the Sub Antarctic Islands of New Zealand, and the Ross Sea.

Prices are lower than those of Arctic cruises, but still aimed at a select clientele: the basic offers range from about 8,000 euros to 20,000 euros (prices also include flights and transfers). Even in the case of these cruises, there are maps on the webpage tracing the route taken by the ships.

There is also a separate section dedicated to the Antarctic Peninsula, which will be discussed here later. However, the routes now listed on the site can be found both in this section and in the section dedicated to Antarctica more generally.

The introductory text to the Antarctica section is articulated as follows:

4) A legendary land with a history of attracting the great explorers, the White Continent continues to exert a strong fascination today.

Embark for an Antarctic expedition cruise and sail along the continent's incredible coasts, admire its unique wildlife — from king penguins to whales — and navigate through immaculate white scenery, where icebergs glimmer and shine in an explosion of blues, from turquoise to the darkest of tones. (Ponant 2)

In the text, Antarctica is immediately placed in a mythical, 'legendary' elsewhere, so much so that it is not named with the toponym, but with the familiar adjective of 'White Continent' that ideally brings it closer to the sensitive experience of the future passenger. The spatial elsewhere is reinforced by the chronological one, as the past of naval and geographical exploration on the continent is evoked. Immediately afterwards, the possibility of observing, by sailing, the Antarctic nature is mentioned: the morphology of the coasts, the typical wildlife. Finally, the text briefly describes the glacial landscape through the colours and light reflections that can also be observed from the ship's vantage point.

The webpage then lists the

5) 5 reasons to visit Antarctica / A trip to Antarctica is the ultimate travel goal. These ends-of-the-Earth lands are tough to access and offer constant changes in scenery. Here are five reasons to set off on an Antarctic cruise. 1) Treat yourself to a unique adventure; 2) Witness exceptional wildlife; 3) Move through incredible scenery; 4) Follow in the footsteps of the greatest explorers!; 5) Visit historical sites and scientific bases. (Ponant 2)

Also in this case each of the subsections is further explained. No. 1) affirms that Antarctica is one of the «few preserved areas on the planet. Tourism is regulated. Vessels [...] do not carry more than 200 passengers at a time» and presents the trip as an extraordinary experience to «create unforgettable memories» (*ibid.*); no. 2) calls Antarctica a «sanctuary for wildlife», enumerating the terrestrial and marine fauna; no. 3) describes the «dream-like» natural landscape of glaciers, fiery sunsets and dazzling colours; no. 4) recalls the voyages of the explorers who first reached the continent, such as Cook, Charcot, Shackleton, etc.; no. 5) refers to the «secrets» of the continent and the modern attempt to study them through scientific foundations. It also mentions the former whaling stations, the ravages of seal hunting and the southernmost post office in the world. The

text ends with these lines: «As you can see, there are so many reasons to embark on this unique adventure to a continent that's like no other» (*ibid.*).

The sixth text considered here is one that introduces the company's cruise offerings on the Antarctic Peninsula:

6) Succumb to the magic of a place unlike any other. To this day, the mythical Antarctic Peninsula still holds real fascination and promises its visitors unforgettable moments. Throughout your adventure in this icy realm, you will find yourself in the heart of a spectacular decor in subtle shades of blue and white, surrounded by exceptional wildlife. Penguins, humpback whales, seals and giant petrels are at home here […]. Depending on which sites you will be lucky enough to visit, you may get the chance to observe them and share with them the beauty of these extreme parts. / Each day, based on ice conditions, the Captain and the Expedition Leader will suggest zodiac outings or landings to discover the infinite riches of the Antarctic Peninsula. Glaciers, ice floe, tabletop icebergs, mountain peaks that plunge straight into the sea, volcanic beaches, research stations, enchanting bays, and vestiges of the whaling industry: these are the faces of the Antarctic that will likely reveal themselves to you, in a hushed and surreal atmosphere. You will sail in the wake of Jean-Baptiste Charcot, Adrien de Gerlache and Sir Ernest Shackleton, great Antarctic explorers who, from the 19th century, set out to conquer these remote and uninhabited lands. (Ponant 3)

As in text n. 4, this opens by placing Antarctica in an elsewhere (this time 'magical') and emphasising how the experience of the continent today is connected to a history of exploration and 'conquests' of remote lands that are more explicitly revealed at the end of the text. The term 'adventure' reveals precisely the universe of meaning in which the cruise experience is placed. Nature is first represented through the transfiguration into an 'icy realm' and the use of colours and shades of light. Subsequently, nature is represented through the enumeration of observable fauna. Precisely with regard to the activity of observation, the text introduces an element of exclusivity, as it opens up the possibility (i.e. the 'randomness') of such an experience occurring under certain conditions. Here the reference is both to the difficulty of encountering wildlife and the unpredictability of weather conditions that also determine the consistency of the ice. In addition, the exploration of nature is brought back to a protected experience, less exposed and carried out in subordination to the apex figures of the company under sail (the captain and the expedition

leader). Thus, natural and anthropic elements ('faces of the Antarctic') can be revealed to the passenger-visitors and made accessible through smaller, more agile boats (zodiac) that allow direct contact with the otherness of Antarctica.

4. Conclusions

As mentioned in the introduction, exploration cruise tourism at the poles is a niche in the cruise offer that takes up some of the demands of so-called last chance tourism. It gives rise to a paradox that perhaps sums up some of the contradictions of our contemporary times: on the one hand, it can contribute to a greater awareness (and knowledge) of the issues affecting increasingly fragile ecosystems such as the Arctic and Antarctica (Gemenne and Rankovic, 2021), but on the other hand it risks contributing to the very fragility it can make known (Burns and Bibbins, 2009; Dawson et al. 2010; Lemelin et al. 2010). Despite the fact that exploration cruise tourism to the poles remains a product often aimed at a high-spending clientele, the fact remains that after the crisis due to the COVID-19 pandemic, it has been on the upswing since 2022 (if current forecasts are confirmed), with tens of thousands of tourist-passengers per year deciding to embark on a cruise. A result that cannot be taken for granted, especially if one considers the many technical difficulties (special ships; variability of weather and ice conditions due to seasonality; reduced logistics; compliance with careful international environmental regulations, etc.) that characterise these cruises (Ligget *et al.*, 2023) compared to those in more canonical markets.

However, quantitative data alone do not explain some of the motivations for embarking on these cruises. It therefore becomes useful to study the symbolic universe that substantiates cruising at the poles, reconstructing some public narratives of the advertising system. In the case study presented here and conducted using the perspective of cultural geography, the analysis of some of the texts of the Ponant Cruise Lines company's web pages dedicated to cruises in the Arctic and Antarctica revealed some evidence. In fact, from all six texts taken into consideration there is a fundamental focus on the naturalistic value of the destinations, whose ecosystems are exalted from their morphological and faunal peculiarities. The Arctic and Antarctica are transfigured through a narrative process that likens them to a mythical elsewhere, remote both in space and time from the ordinary everyday life of potential passengers. The 'extraordinariness' of this experience is made possible by boarding special, unique ships capable of transforming the journey into an 'adventure'.

Implicitly, in the texts analysed, the ship remains a mobile destination that (more explicitly) allows above all a visual enjoyment of polar environments. We can therefore speak of an agentive aestheticization process produced by the narratives: such peculiar and fragile destinations are given a very high value but at the same time they become accessible to the few who could/can get there.

This chapter has limited itself to proposing a reflection on the theme of the imagery of cruises in the Arctic and Antarctic, both by contextualising this tourism geographically and by presenting a case study. Certainly, for a wide-ranging study, other texts of the cruise advertising system, both online and in information brochures, should be considered with a comparative approach. These are lines of research that the author reserves the opportunity to develop in other studies.

References

- Bauer, T., and Dowling, R.K., 2006, The Antarctic cruise industry. In: Dowling R.K. (Ed.), *Cruise ship tourism*, Oxon: CABI Publishing, 195–205.

- Berger, A.A., 2010, Selling the Adventure of a Lifetime: An Ethnographic Report on Cruising in the Antarctic. In: Lück M., Maher P.T. and Stewart E.J. (Eds.) *Cruise tourism in polar regions: promoting environmental and social sustainability?,* New York: Earthscan, 80-93 (ebook, Adobe Digital Edition pages).

- Burns, P. and Bibbins, L., 2009, "The end of tourism? Climate change and societal challenges. Twentyfirst century society", *Journal of the Academy of Social Sciences*, 4 (1), 31–51.

- Cajaiba-Santana, G., Faury, O., Ramadan, M., 2020, "The emerging cruise shipping industry in the arctic: Institutional pressures and institutional voids", *Annals of Tourism Research*, 80, 1-12.

- CLIA Cruise Lines International Association, 2021a, *Environmental Commitment, Innovation, and Results of The Cruise Industry*.

- CLIA Cruise Lines International Association, 2021b, *State of The Cruise Industry Outlook*.

- CLIA Cruise Lines International Association, 2022, *State of the Cruise Industry Outlook*.

- CLIA Cruise Lines International Association, 2023, *State of the Cruise Industry, September 2023 Update*.

- Dawson, J., Stewart, E.J., Lemelin, H., and Scott, D., 2010, "The carbon cost of polar bear viewing in Churchill, Canada", *Journal of Sustainable Tourism*, 18:13, 319-336.

- Eijgelaar, E., Thaper, C. and Peeters, P., 2010, "Antarctic cruise tourism: The paradoxes of ambassadorship, 'last chance tourism' and greenhouse gas emissions", *Journal of Sustainable Tourism*, 18, 337–354.

- Gemenne, F., Rankovic, A., 2021, *Atlante dell'Antropocene*, Sesto San Giovanni, Milano: Mimesis.

- Huddart, D. and Stott, T., 2020, *Adventure Tourism. Environmental Impacts and Management*, Cham: Springer Nature (Palgrave Macmillan).

- International Association of Antarctica Tour Operators (IAATO), 2022, *IAATO Overview of Antarctic Tourism: A Historical Review of Growth, the 2021–22 Season, and Preliminary Estimates for 2022–23*. Available online: https://iaato.org/information-resources/data-statistics/iaato-atcm-information-papers/ (accessed 19 February 2024).

- Lemelin, H., Dawson J., Stewart E. J., Maher P. and Lueck M., 2010, "Last-chance tourism: the boom, doom, and gloom of visiting vanishing destinations", *Current Issues in Tourism*, 13:5, 477-493.

- Liggett, D., Cajiao, D., Lamers, M., Leung, Y.-F. and Stewart, E.J., 2023, "The future of sustainable polar ship-based tourism", *Cambridge Prisms: Coastal Futures*, 1, e21, 1-12.

- Löfgren, O., 1999, *On holiday: a history of vacationing*. Berkeley: University of California Press.

- Orams, M.B., 2010, Polar Yatch Cruising, In: Lück M., Maher P.T. and Stewart E.J. (Eds.) *Cruise tourism in polar regions: promoting environmental and social sustainability?,* New York: Earthscan, 44-57 (ebook, Adobe Digital Edition pages).

- Lück, M., Maher, P.T. and Stewart, E.J., 2010, (Eds.) *Cruise tourism in polar regions: promoting environmental and social sustainability?,* New York: Earthscan (ebook, Adobe Digital Edition pages).

- Maher, P.T., Stewart, E.J. and Lück, M., 2011, (Eds.) *Polar tourism: human, environmental and governance dimensions*, New York: Cognizant Communication Corporation.

- Sabato, G., 2017, Cruise Tourism on the Mainland. Itineraries and Interactions (Chapter 27). In: Dowling, R., Weeden C., (Eds.) *Cruise Ship Tourism*, Wallingford-Boston: CABI, 424-438.

- Sabato, G., 2018, *Crociere e crocieristi. Itinerari, immaginari e narrazioni*, Torino: Giappichelli.

- Sabato, G., 2023, Cruise Tourism, Risk Perception and Public Narratives in Syracuse, Italy. In: Dahiya, B., de Pascale, F., De Pietro, O., Farabollini, P., Lugeri, F.R. and Mercatanti L. (Eds.), *Disaster Resilience and Human Settlements. Emerging Perspectives in the Anthropocene*, Spinger Nature, Singapore, 123-137.

- Smith, J., 2008, "Endangered destinations: Places, like species, can vanish forever. A look at some unique, imperiled treasures". *US News & World Report*, May 26–June 2, 36–43.

- Stewart, E.J., Liggett, D. and Dawson, J., 2017, "The evolution of polar tourism scholarship: research themes, networks and agendas", *Polar Geography*, 40:1, 59-84.

- Stewart, E.J., Liggett, D., Lamers, M., Ljubicic, G., Dawson, J., Thoman, R., Haavisto, R. and Carrasco, J., 2019, "Characterizing polar mobilities to understand the role of weather, water, ice and climate (WWIC) information", *Polar Geography* 43(2–3), 95–119.

- Stonehouse, B. and Snyder, M., 2010, *Polar Tourism. An Environmental Perspective*, Bristol-Buffalo-Toronto: Channel View Perspective.

- Urry, J. and Larsen, J., 2011, *The Tourist Gaze 3.0*, London: Sage.

Web references

- Ponant 1, https://bit.ly/cpn01 (accessed 19 February 2024).
- Ponant 2, https://bit.ly/cpnnc02 (accessed 19 February 2024).
- Ponant 3, https://bit.ly/cpnn04 (accessed 19 February 2024).
- CommandantCharcot, https://bit.ly/cpnn03 (accessed 19 February 2024).

14. The African geopolitical landscape: between demography and development

Giuseppe Terranova

14. The African geopolitical landscape: between demography and development

Giuseppe Terranova[1]

Abstract

Alarmist predictions of an exponential increase in Africa's population to 4 billion by 2100 are not borne out by the statistical data available to the international scientific community. In 1972, the Club of Rome, a non-governmental scientific association, published its report *The Limits to Growth*. It was based on a Malthusian approach and warned of the serious risk that high levels of consumption caused by population growth, particularly in Africa, would lead to economic collapse. Now the Club of Rome has revised this prediction and announced that the demographic bomb may never explode, at least not in the catastrophic way predicted by various international bodies and experts. It is estimated that the population of sub-Saharan Africa could peak as early as 2060. This is 40 years earlier than predicted by the UN. Africa's population growth is still high, but Africa's fertility rate is falling faster than expected, following a dynamic seen in East Asian countries in the recent past as a result of economic development in recent years. The aim of this paper is to analyse the unexpected evolution of Africa's demographic development from a geopolitical perspective. And whether and in what way it is a sign of economic development, which, although uneven, may favour a more widespread level of prosperity, historically associated with a decline in fertility. It is a scenario that would be a game-changer for Africa's geopolitical landscape.

Keywords: *Africa, demography, development, geopolitics, Malthus.*

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1. Introduction

Population geography has its origins in Greek proto-geography. Aristotle, for instance, conducted studies on the relationships between demographic and environmental dynamics, as well as the structures of a population and the territory it occupies. It is a discipline that remains relevant today, just as it was in the past, for understanding the evolution and dynamics of the relationship between humans and nature within a specific space.

This aspect is also crucial from a geopolitical perspective. Population geography has domestic and international geopolitical consequences, influencing political, economic, and social balances, as well as the weight and role of each state. It also impacts migration flows, the sustainability of welfare and health systems, and relations between old and new generations, as well as between emerging and dominant powers (Terranova, 2023). For these reasons, this paper employs the aforementioned analytical methodology to explore the dynamics of the demographic landscape of the African continent.

There are at least three reasons why Africa has been chosen as the subject of this work. The first relates to its distant past, specifically the impact of the slave trade on African demography from the early 1500s to the late 1800s. (Sale, 2020).

The second reason relates to its recent past, particularly the alarmist predictions since the 1970s suggesting that Africa's high birth rates posed a risk of turning it into a demographic bomb (Meadows, 1972).

The third reason pertains to its present, which, according to official statistics, appears to contradict the aforementioned predictions. The objective of this paper is to analyze, from a geopolitical perspective, whether and how the unexpected evolution of Africa's demographics is influenced by positive factors, such as economic development, historically recognized as a potent contraceptive in many countries. (Bolaffi & Terranova, 2019).

2. The demographic landscape of Africa: from the slave trade to the limits to growth

The demographic landscape of Africa has been significantly shaped by the actions of various foreign geopolitical actors over the years. The slave trade, predominantly orchestrated by Western powers and Arab kingdoms for centuries, played a crucial role in the depopulation of the continent until the early 20th century (Sale, 2020).

Between the second half of the 16th century and the end of the 19th century, approximately 12 million Africans were forcibly transported to the Americas and the Caribbean through the so-called Atlantic trade. The peak of African human trafficking occurred between 1760 and 1840. This surge was attributed to the limited impact of the British Empire's trade prohibition (from 1807), as smuggling persisted and was encouraged by the Portuguese. Moreover, between the 10th and 20th centuries, approximately 7.5 million Africans were forcibly deported from the sub-Saharan region to the shores of the Mediterranean. In addition to these figures, approximately 6 million African slaves were deported after the opening of the Suez Canal in 1869 via the Indian Ocean trade, which utilized the Sultanate of Zanzibar as its primary hub. (Coquery-Vidrovitch, 2012; Cooper, 2002).

The African continent stood as the sole exception globally, experiencing no population growth from the early 16th century to the late 19th century. Throughout these extended periods, it was trade, rather than inherent backwardness, that led to stagnation in African populations. Trafficking also disrupted gender and generational relations, particularly impacting the stronger and more fertile young adults.

The African continent witnessed significant population growth only after the end of the slave trade and the onset of the decolonization process. Africa's population expanded from 120 million to nearly 200 million between 1900 and 1950 (Cameron & Neal, 1997). From 1950 to 1955, Africa ranked as the third region globally in terms of fertility, following Latin America, the Caribbean, and Oceania. Subsequently, it emerged as the leader, reaching its peak between 1980 and 1985 with a fertility rate of 2.85%.

The robust demographic growth in Africa and beyond during the second half of the 20th century spurred the widespread dissemination of demographic theories and projections rooted in a Malthusian theoretical approach. Robert Malthus, a pioneer in the 18th century, formulated a model for understanding demographic dynamics at the societal level, based on two key principles: population is inevitably constrained by the means of subsistence, and unless effectively restrained by moral factors, population tends to increase exponentially in relation to the means of subsistence.

This is why he often reiterated that the growth of population is geometric, while that of subsistence is merely arithmetic. The notion that human population was expanding too rapidly permeated public opinion to such an extent that it became widely held (Roll, 1980). Malthus's theories also gained significant traction in the academic sphere and were incorporated into numerous scientific texts. One notable example is Paul Ehrlich's

The Population Bomb, where the author revisits, updates, and amplifies Malthus's theories, going as far as predicting severe famine in the late 1970s due to the inability of world food production to cope with the exponential increase in population (Ehrlich, 1968). Notably, the influential report *The Limits to Growth*, published by the Club of Rome in 1972, was grounded in this theory (Meadows, 1972). The Club of Rome is a non-governmental organization comprising academics and scientists from diverse disciplines. Established in 1968 at the *Accademia dei Lincei* in Rome, it has been based in Winterthur, Switzerland since 2008. The report's central thesis, widely accepted internationally, predicted the imminent depletion of the Earth's natural resources due to the exponential growth of the world's population.

We now know that the Club of Rome's thesis has not been borne out by the facts. The world's population has grown from 2.5 billion in 1950 to 8 billion today, and there is no shortage of resources to feed it. Food crises and famines, when they occur today, are often the result of geopolitical tensions (consider the conflict between Russia and Ukraine, two of the world's largest producers of wheat and fertilizers) and inequalities between the global North and South, rather than the inability of our production systems to guarantee essential goods for all the planet's inhabitants. This is because over the past 200 years, human population growth has been accompanied by significant advances in living standards and health: longer lives, healthier children, better education, shorter working weeks, and numerous other improvements (Spears, 2023). As the American political scientist Jack Goldstone has argued, the acceleration of technological development, especially since the Second World War, has led not to a shortage of food, but rather to a lack of economic resources to buy it (Goldstone, 2010).

3. Global population trends and the Africa's new demographic landscape.

The current geography and geopolitics of the world's population reveal not only that there is no shortage of resources to support the eight billion people on the planet but also a general slowdown in global population growth. According to United Nations data for two sample five-year periods, 1975-80 and 2005-10, the planet's total fertility declined by approximately 35%, and in countries where Islam is the majority religion, for example, it is around 40% lower. In the period 2005-2010, the fertility rate was 1.8 children per woman in Iran, 2.1 in Turkey and 2.8 in Egypt. These figures mark a significant departure from the levels of 6, 4.5 and 5.5 respectively in the five-

year period 1975-1980. The majority of people now live in countries where two or fewer children are born for every two adults. If all people in the United States today lived through their reproductive years and had children at the average rate, the result would be about 1.66 births per woman. The figure is 1.5 in Europe, 1.2 in East Asia and 1.9 in Latin America. Any global average of less than two children per two adults indicates a declining population, and in the long run each new generation will be smaller than the one before.

Western countries have been experiencing a demographic winter for decades. According to many scientists, declining mortality rates are the main cause of the unprecedented changes that, within a few decades, have disrupted the millennia-old relationship between age groups and generations - a genuine mass postponement of death. What used to happen for centuries, with the younger generation taking over and replacing the previous one every 25 years, is no longer happening. And it is likely to happen even less in the future. (Bolaffi, 2008).

More importantly, states in the so-called Global South, encompassing developing countries and emerging powers alternative to those in the West, are not yet facing a true demographic winter, but they are indeed undergoing a notable slowdown in population growth (Geruso & Spears, 2023). Consider China, which recently ceded its historic record as the world's most populous country to India, although India's population growth is also slowing. According to United Nations projections, India's population is expected to reach 1428.6 million by 2023, surpassing China's 1425.7 million. China's population is expected to decline for the first time in more than six decades. In 1971, China and India had almost identical levels of total fertility, with just under six births per woman over a lifetime. Fertility in China fell sharply to less than three births per woman by the end of the 1970s. In contrast, India's fertility decline was more gradual; it took three and a half decades for India to achieve the same fertility decline that China experienced in just seven years in the 1970s (UNFPA, 2023). By 2022, China's fertility rate of 1.2 births per woman was one of the lowest in the world; India's fertility rate of 2.0 births per woman was just below the replacement level of 2.1. According to the latest United Nations projections, India's population is expected to peak around 2064 and then gradually decline (Terranova, 2023).

The African continent is not an exception in the global demographic trend of slowing population growth. Africa seems to have been on a trajectory of curbing population growth for some time. Alarmist predictions of an exponential increase in Africa's population from the current 1.4 billion to 4 billion by 2100 are not supported by the statistical data available to the international scientific community (Terranova, 2024). Now even the Club of

Rome has revised its forecast, suggesting that the population bomb may never explode (The Economist, 2023). It is estimated that sub-Saharan Africa's population could peak as early as 2060, 40 years earlier than projected by the UN. Although African population growth is still high, Africa's fertility rate is falling faster than expected, mirroring a trend recently observed in East Asian countries due to social and economic development in recent years (**Fig.1**).
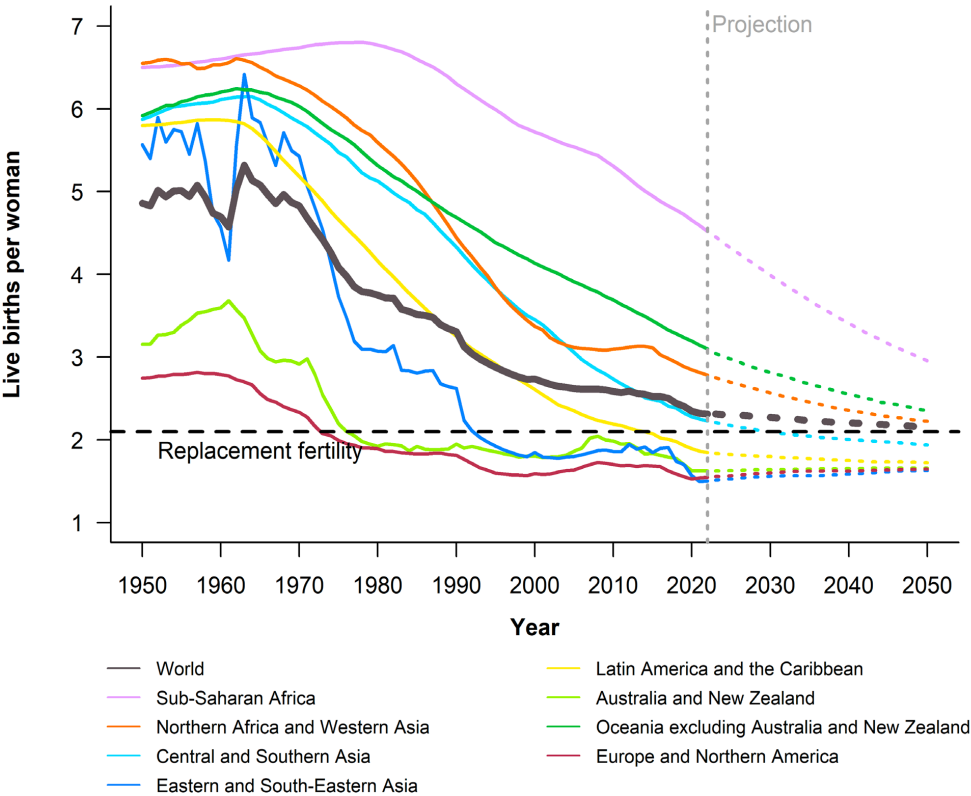

Figure 1. Total fertility rate by region, estimates and projections, 1950-2100.
Source: UNDESA, 2022.

According to the United Nations, Nigeria's fertility rate has fallen from 5.8 five years ago to 4.6 in 2021. This trend is supported by another study commissioned by the US government's development agency, USAID, which found a fertility rate of 4.8 in 2021, down from 6.1 in 2010. If this demographic trend continues, Nigeria's population could peak at 342 million in 2060, 200 million less than the United Nations estimated a decade ago. A similar trend appears to be emerging in parts of the Sahel, which still has the highest fertility rates in Africa, and in coastal West Africa. In Mali, for example, the fertility rate has fallen from 6.3 to a still high 5.7 in six years. Senegal's rate will be 3.9 in 2021, one less child per woman than just over a decade ago. The same is true of the Gambia, where the rate will fall from 5.6 in 2013 to 4.4 in 2020, and Ghana, where it will fall from 4.2 to 3.8 in just three years. These declines will bring West Africa closer to the lowest fertility rates recorded in much of southern and eastern Africa. Not to mention the Maghreb countries, which have experienced the fastest fertility decline in Africa over the past 70 years, from an average of seven children per woman in 1950 to 2.5 children per woman today. (The Economist, 2023).

In addition to these somewhat surprising data on the slowdown in African population growth, it should be noted that a large proportion of African countries are underpopulated (Sale, 2020). Compared to other continents, Africa has a low population density spread over an area of 30 million square kilometers. Sub-Saharan Africa has an average of 48 people per square kilometer, lower than the United Kingdom (277), Japan (346), or South Korea (531). Of the five most populous countries in sub-Saharan Africa, all have a population density below that of the UK. There is little evidence that entire African countries are caught in a Malthusian trap, named after Thomas Malthus, who argued that population growth would outstrip food supply, leading to catastrophe. The global increase in food trade and production, coupled with a decrease in the amount of land required for production, means that neither subregions nor countries need to be self-sufficient as long as their economies generate the wealth needed to buy it. Compared to European population densities, Africa is virgin territory for many sectors of the international economy, especially agro-industry, with considerable availability of arable land (Giro, 2019). The low density of the African population has its roots, as anticipated in the first paragraph of this work, in the African slave trade, practised in various ways by European, but also Arab, powers in past centuries. The African continent was the only one, we repeat, where the population never increased during the long period between the beginning of the sixteenth century and the end of the nineteenth

century.

4. Conclusion

By the end of this century, for the first time since the Black Death in 1300, the world's population could be shrinking rather than growing. The cause will not be the number of deaths but the decline in births: from a baby boom to a baby bust (Dassù & Menotti, 2023; Terranova, 2023). World population growth has slowed down. At the same time, we still face global challenges from more localised demographic cluster bombs. Today's demographic problems are not about overpopulation in absolute terms, as Robert Malthus and his disciples argued, but about the distribution and composition of the population in global space. The big news from recent UN surveys is that the African continent is part of this international trend.

This unprecedented and for many unexpected slowdown in Africa's population growth could be a positive sign for the continent as a whole. The geography of population has domestic and international geopolitical consequences: on political, economic and social balances, on the weight and role of each state, on migration flows, on the sustainability of welfare and health systems, on relations between old and new generations, between emerging and dominant powers, between rural and urban areas, etc. (Terranova, 2023). Historically, in the absence of exceptional events such as wars, famines and pandemics, the demographic transition, and in particular the shift from high to low fertility, reflects a long process of adapting habits to the effects of economic and social growth, as the European case shows, where the decline in the birth rate was the result of social and economic changes. In fact, history shows that welfare and widespread prosperity are the most effective contraceptives for any developing population.

This implies that Africa is undergoing a process of social, political, and economic modernization, albeit a complex, slow, fragmented, and uneven one. Falling fertility rates are expected to increase both the share of the working-age population and the number of women in the labour force, supported by rising female school enrolment (Frigeri & Zuppi, 2018). For example, it is estimated that reducing Nigeria's fertility rate by one child per woman could almost double its per capita income by 2060 (Karra *et al.*, 2017). The slowdown in Africa's population growth has also been attributed to massive urbanisation, with millions of people moving from rural areas to urban centres, where the desire to start a family has traditionally been

constrained by growing individual and professional aspirations. Humanity is actively contributing to the construction of a better, freer world, providing enhanced opportunities for everyone, especially women. This noteworthy progress warrants widespread celebration and continuous commitment from all. However, this advancement also implies that individuals, particularly women, may find their desire to start a family in conflict with other significant aspirations, such as careers, projects, and relationships. As of now, no society has completely resolved this challenge (Spears, 2023).

For African countries to fully benefit from this evolving demographic scenario, those entering the labour market must have access to productive and well-paid employment. But this is a monumental challenge for a continent that needs trillions of dollars in infrastructure investment, including roads, power lines, airports and ports, to create such opportunities. Africa's core challenge is therefore not demographic, but economic, political and social. This encompasses both internal geopolitics (Lacoste, 2014) and international geopolitics.

Internally, Africa's economic development is hampered by a corrupt and fractious political class, often incapable of managing the region's natural resources and depriving young people of a sustainable future. In addition, the democratic deficit in many countries and the persistence of military-led governments or long-standing dictatorships do not bode well for the continent's immediate future. (Sale, 2020).

From an international geopolitical perspective, Africa's economic development is being influenced, if not hindered, by various global actors eager to exploit the continent's vast natural resources. Emerging powers such as Brazil, India, Russia and Turkey, but especially China, are gaining influence as former European colonial powers lose their grip on African territories.

In the space of a few years, China's presence in Africa has gone from being a marginal concern for geopolitical specialists to a central issue in the continent's international relations. This phenomenon, unprecedented in its current scale, has roots that go back centuries. The leaders in Beijing have managed to fulfil the dream of Yongle, the ruler of the Ming dynasty. Yongle sent Admiral Zheng He to Somalia in the early 1400s to expand the Celestial Empire's global sphere of influence. Admiral Zheng organised several expeditions to the Arabian Peninsula and the rest of Africa. However, his efforts were thwarted by the successors of Emperor Yongle, who considered these ventures too expensive and unhelpful to the Chinese cause (Beuret & Michel, 2008).

Returning to more recent times, another key moment in China's

economic and political penetration of Africa was the Bandung Conference in 1955, which marked the beginning of the so-called Third World movement. China played a major role in this movement. Chinese leader Zhou Enlai's trip to Africa in 1963-64 had one primary objective: to garner support for the revolutionary national liberation movements and nascent socialist governments emerging from decolonisation. The mission aimed to find allies in the Third World and break China's diplomatic isolation.

These alliances led many African governments to officially recognise the People's Republic of China in the 1960s and 1970s. As a result, countries such as Togo, Benin, Sierra Leone and Mauritania can now proudly claim over 50 years of loyalty to Beijing and its *one country* policy, particularly in its rivalry with Taiwan. These partnerships have always included various forms of economic aid, including the construction of stadiums, presidential palaces, railways, highways, hospitals and scholarships for deserving students. (Bellucci, 2010).

After a slowdown in the 1980s and 1990s, coinciding with profound changes in Chinese domestic politics, official relations with Africa were revitalised in 2000. The first China-Africa Forum, held in Beijing and attended by representatives from 45 African states, symbolically marked the beginning of a new era. In a short space of time, Beijing successfully realised a project that, as we have argued, was rooted in the past. The declaration issued at the end of the forum introduced new ideological paradigms, whose only link with the Bandung years was opposition to Western values. The declaration claims that Africa's current lack of development is due to the heavy burden of foreign debt owed to former European colonial powers, which undermines the efforts of African countries and impoverishes their economies. A common history of victorious struggles for national liberation and a common present, with China as the largest and most powerful developing country and many developing countries in Africa, underpin the 10 points of the Declaration on China-Africa Relations in the Third Millennium. Among them, one stands out as the most important factor for China's success in Africa. In particular, reference is made to paragraph 4 of the aforementioned Declaration, in which Beijing recognises that the universality of human rights and fundamental freedoms must be respected, but, as it specifies, "*by promoting and supporting diversity in the world...*". And again: "*every country has the right to choose, in the course of its development, its social system, development model and way of life according to its own national conditions. Countries with different social systems, levels of development, values and historical and cultural contexts have the right to choose their own approach and model for the promotion and protection of human rights. The politicisation of human rights and the*

imposition of human rights conditions on economic aid must be vigorously opposed, as they are themselves a violation of human rights" (Forum China-Africa Cooperation, 2024). Unlike former European colonial powers, China offers African governments financial and economic cooperation without demanding any form of democratisation in return.

This explains China's growing influence in Africa, a phenomenon that has been interpreted in two opposed ways. The first perspective sees the Sino-African partnership as a new form of colonialism with potentially serious socio-economic consequences for the African continent. The second perspective, on the other hand, sees this new relationship as a unique and unprecedented opportunity for Africa to break out of its prolonged state of underdevelopment. Some have summed up the situation humorously: Africans have yet to understand whether the Chinese are making them lunch or eating them. (Beuret & Michel, 2008).

Because of this complex of geopolitical domestic and international factors, the near future of Africa's economic, political and social development process remains uncertain. However, as we have argued in this paper, the slowdown in Africa's population growth indicates, as the history of population geography shows, that Africa has embarked on its modernisation path. This is all the more important given the new geopolitical centrality of Africa and the Mediterranean as a result of the conflict between Russia and Ukraine. A conflict that has forced Europe to reconfigure the geography of its gas and oil supplies, replacing its historic partnership with Russia in favour of other African and Middle Eastern states. In conclusion, the process of modernisation and development in 21st century Africa has begun, the more difficult it is to determine its timeframe and manner.

References

- Bellucci, S., 2019, *Africa contemporanea,* Carocci, Roma.

- Beuret, M., Michel, S., 2008, *La Chineafrique: quand la Chine fait main basse sur le continent noir,* Grasset, Paris.

- Bolaffi, G., 2008, *Il 2008 dell'immigrazione,* Istituto Affari Sociali, Roma.

- Bolaffi, G., Terranova, G., 2019, *Immigrazione. Cause, problemi, soluzioni*, Editoriale Scientifica, Napoli.

- Cameron, R, Larry, N., 1997, *A Concise Economic History of the World from Paleolithic Times to the Present*, Oxford University Press, Oxford.

- Cooper, F., 2002, *Africa since 1940: the past of the present*, Cambridge University Press, Cambridge.

- Coquery-Vidrovitch, C., 2012, *Breve storia dell'Africa*, Il Mulino, Bologna.

- Dassù, M., Menotti, R., 2023, "Troppi o troppo pochi: Stati Uniti e Cina", *Aspenia*, 2, 5-11.

- Ehlrich, P., 1968, *The population bomb,* River city press, Kansas.

- Forum China-Africa Cooperation, 2024, *Beijing Declaration of the Forum on China-Africa Cooperation*. Accessed 21st February 2024 http://www.fmprc.gov.cn/.

- Frigeri, D, Zuppi, M., 2018, *Dall' Africa all'Europa. La sfida politica delle migrazioni*, Donzelli, Roma.

- Geruso, M., Spears, D., 2023, *With a whimper: depopulation and longtermism*. Accessed 21st 2024 https://sites.utexas.edu/pwi/files/2023/01/Geruso_Spears_Longtermism_and_Population_OUP.pdf.

- Giro, M., 2019, *Global Africa, la nuova realtà delle migrazioni: il volto di un continente in movimento,* Guerini & Associati, Milano.

- Goldstone, J., 2010, "The new population bomb. The four mega trends that will change the world", *Foreign Affairs,* I, 21-34.

- Karra, M., Canning, D., Wilde, J., 2017, "The effect of fertility decline on economic growth in Africa: a macrosimulation model, *Population and Development Review*, 43, 237-263.

- Lacoste, Y., 2014, *La géographie, ça sert, d'abord, à faire la guerre*, La Découverte, Paris.

- Meadows, D. H., 1972, *The limits to growth*, Signet, New York.

- Pagnini, M.P., Sanguin, A.L., 2015, *Storia e teoria della geografia politica. Una prospettiva internazionale*, Edicusano, Roma.

- Roll, E., 1980, *Storia del pensiero economico,* Bollati Boringheri, Torino.

- Sale, G., 2020, "L'Africa: un continente in movimento", *La Civiltà Cattolica*, I, 561-571.

- Spears, D., 2023, *The world population may peak in your life's time. What happens next?*. Accessed 21st February 2024 https://www.nytimes.com/2023/11/09/learning/whats-going-on-in-this-graph-nov-15-2023.html.

- Terranova, G., 2024, " Dal Marocco al Global South: come cambia la geografia della popolazione mondiale", ADiM Blog, Editoriale, maggio, 1-7.

- Terranova, G., 2023, "Demography, geopolitics and great power: a lesson from the past", *AIMS Geosciences* 9, 4, 798-809.

- The Economist, 2023, *The world's peak population, maybe smaller than expected*. Accessed 21st February 2024 https://www.economist.com/middle-east-and-africa/2023/04/05/the-worlds-peak-population-may-be-smaller-than-expected.

- UNDESA, 2022, *World population prospects 2022*. Accessed 21st February 2024 https://desapublications.un.org/file/989/download

- UNFPA, 2023, *State of world population 2023. 8 billions lives, infinite possibilities, the case for rights and choices*. Accessed 21st February 2024 https://www.unfpa.org/swp2023.

15. Geographical analysis of WEEE (Waste Electrical and Electronic Equipment) dynamics

Alberto Corbino; Stefano De Falco

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Abstract

WEEE (Waste Electrical and Electronic Equipment) is one of the global rising problems due to its increasing volume in association with health and environmental hazards occurring where the disposal happens. Most WEEE is currently generated by the Organization for Economic Cooperation and Development (OECD) countries; nevertheless, all the studies suggest that developing countries will be producing a double amount of WEEE than the developed ones within the next 6–8 years.

In this framework this paper explores and accounts the status-quo of WEEE generation and handling situation in different countries, analyzing their impact on public health and environment.

Keywords: *WEEE, Green and Digital Transition, Circular Economy.*

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1. Introduction

The 'twin' green and digital transitions are at the top of the political agenda of the EU and other organizations of states, as, among the others, recalled by the African Union 2063 Agenda[2], in the ASEAN[3] Digital Masterplan 2025 and in the EU_LAC Digital Alliance[4].

The EU roadmap is increasingly cited as a virtuous example of dynamics to be pursued; yet at any geographical scale (Corbino et al., 2023) it can contribute to increasing, instead of bridging, geographical gaps, due to the positive impacts they often produce only in some areas and the negative impacts in others. This paradox concerns all the phases of the production process: the extraction of raw materials with significant negative socio-environmental impacts and external diseconomies in developing countries; higher energy consumption, largely due to energy-intensive processes related to ICTs[5]; lack or inefficiency of waste disposal procedures, that are still very distant from that virtuous model of circular economy often referred to in the above-mentioned inter-governmental programs.

Among the risks included in the development of the green and digital transition trajectories, the enormous volumes of electronic waste (WEEE or E-waste) that are being generated must be taken in serious consideration. This includes the waste of secondary raw materials contained within them, such as precious metals (PM) and rare earth metals (REM) (Olanrewaju et al., 2021). Up to 60 elements can be found in some EEE; materials such as plastics, precious metals (PMs) and rare earth metals (REEs) are commonly used to produce these products (ibidem). It is calculated that, in an efficient circular economy scenario, only in West Asia from 2020 to 2050, an estimated total of 130 t of gold, 5 t of rare earth metals, 17 Mt of iron and steel, 1.5 Mt of copper, and 2.6 Mt of aluminum could be recycled.

This is why the informal sector is more active in disposing E-waste

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[2] It is recalled by the Goals n. 2 & 7 of AGENDA 2063, that is "Africa's blueprint and master, the continent's strategic framework that aims to deliver on its goal for inclusive and sustainable development and is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity". For further info: https://au.int/agenda2063/goals.

[3] ASEAN – The Association of South Asia Nations, include ten countries today.

[4] The European Union-Latin America and Caribbean Digital Alliance was launched in March 2023; it aims to foster the development of secure, resilient and human-centric digital infrastructures based on a values-based framework, ensuring a democratic and transparent enabling environment and putting a strong emphasis on privacy and digital rights.

[5] ICTS are currently responsible for 5-9% of the world's global electricity consumption (source: EU – JRC, 14/07/22 news announcement).

throughout the world: the workers involved (even children) perform crude activities without appropriate recycling facilities and are highly exposed to dangerous and unhealthy conditions (Dutta and Goel, 2021). The infamous e-waste 'recycling' sites in Agbogbloshie, Ghana and Guiyu, China are extreme examples of improper e-waste recycling that result in severe air, water, and soil pollution (Parajuly, 2019). The main health problems arising from WEEE are due to the presence of toxic substances and due to the non-biodegradability of these devices. If dispersed into the environment, certain components of WEEE can generate significant impacts on the environment and human health. In fact, these substances, if not carefully treated and disposed of, can generate acute and chronic effects on living organisms, often including irreversible damage. Health topic is currently more and more analyzed in the scientific debate. In fact, an analysis of the literature review through VosViewer software, using the keywords "WEEE" and "Health", generates a series of interconnected clusters, that shows a close relationship between the two themes (**Figure 1**).
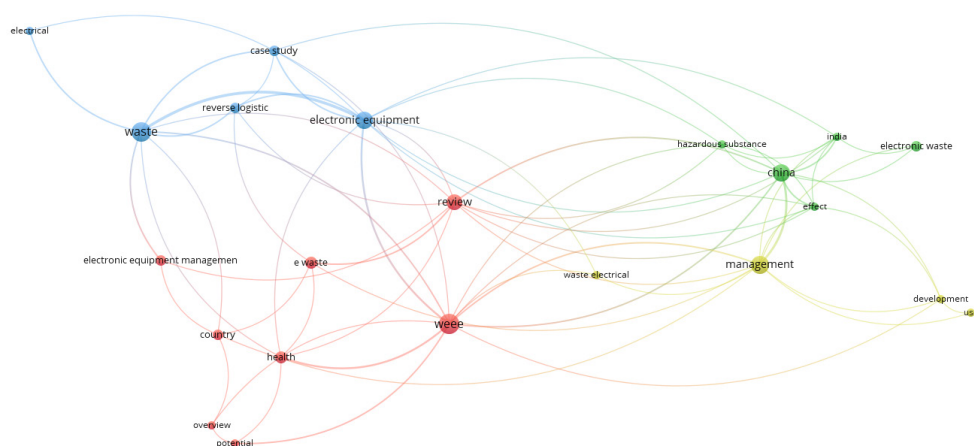

Fig. 1 Vos Viewer analysis. Source: authors' elaboration on Web of Science.

WEEE are defined by the Technical Guidelines of the "Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal[6]" as "electrical and electronic equipment that is waste,

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[6] Adopted on 22 March 1989 and entered into force on 5 May 1992. It was adopted by decision III/1 of the Third meeting of the Conference of the Parties. The so called "Ban Amendment" provides for the prohibition by each Party included in the proposed new Annex VII to the

including all components, sub-assemblies and consumables that are part of the equipment at the time the equipment becomes waste". E-waste encompasses a wide variety of discarded products and in the European Union, according to the (WEEE) Directive 2012/19/EU[7], it's classified into six main categories: Temperature Exchange Equipment, Screens and Monitors, Lamps, Small Equipment, Large Equipment (incl. PV panels), Small IT and Telecommunication Equipment. For statistical purposes, however, WEEE is classified by similar function, comparable material composition, average weight, and similar end-of-life attributes; the UNUKEYs, the E-waste Statistics Guidelines on Classification Reporting and Indicators therefore divide EEE into 54 different product-centric categories (Forti *et al.*, 2018).

At a global scale, it is estimated that the amount of WEEE is approximately 18% of the world's total urban waste in 2020 with 3–5% increasing each year (Liu *et al.*, 2020).

A significant indicator of the growth of this worrying, yet little considered issue, is the extent of ICT's penetration into people's everyday lives. If we look, for instance, at the relationship between digital and finance in Sub-Saharan Africa (SSA), a region - in people's imagination – surely not among the most innovative, we find out that here the number of mobile money agent outlets has increased significantly, from almost zero in 2008 to more than 38.000 in 2018, on average in each country. Moreover, here the number of mobile money accounts now exceeds the number of traditional deposit accounts, with 21 percent of adults in the region having a mobile money account, and mobile-money transactions more than tripled from an average of 8 percent of GDP in 2014 to 25 percent in 2018, making SSA a leading region in the world (IMF, 2020).

In response to this ICT devices proliferation, some recycling targets have been set. For instance, article 7 of the abovementioned EU - WEEE Directive states that the minimum collection rate to be achieved annually by a member State shall be 65% of the average weight of electrical and electronic

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Convention (Parties and other States which are members of the OECD, EC, Liechtenstein) of: all transboundary movements to States not included in Annex VII of hazardous wastes covered by the Convention that are intended for final disposal, and; all transboundary movements to States not included in Annex VII of hazardous wastes covered by paragraph 1 (a) of Article 1 of the Convention that are destined for reuse, recycling or recovery operations. The text has been subject to various amendments since its adoption. A full text is available here: https://www.basel.int/TheConvention/Overview/TextoftheConvention/tabid/1275/Default.aspx

[7] Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE).

equipment (EEE) placed on the market (POM) in the three preceding years or, alternatively, 85% of WEEE generated on the territory of a member state. As we will show in this chapter, most EU countries are very far from this objective, although some of them constitute the benchmark at a world level.

As a confirmation of the complex scenario described above, the document produced by the European Commission regarding the warning on the risks connected to the EU objectives entitled "Strategic Forecast Report 2022: twinning the green and digital transitions in the new geopolitical context" can be really enlightening. In fact, it is stated that the greater progressive use of digital technologies could increase the volume of electronic E-waste produced up to 75MT by 2030, causing a larger environmental impact. In the EU, now, only 17,4% of WEEE is adequately treated and recycled, while the production of electronic waste is increasing every year by 2,5MT in the twenty-seven Member States.

The notion of a just transition, i.e. not unfair in the impacts it generates, despite being aimed at a sustainable technological/digital evolution, is becoming increasingly common among professionals. Nevertheless, however, WEEE disposal is still characterized by low efficiency especially in the transformation from waste to resource, thus leading to problems of accumulation and disposal of electronic waste. The solution to this drift is becoming, in the short term, that of exporting this waste to other destinations which, for a series of geopolitical reasons, are willing to accept WEEE flows within their borders. According to Ibitz (2012), several Asian countries have allowed e-waste imports, to obtain raw materials for their domestic production of electronic goods. The flows of materials from one country to another, in fact, are not only regulated by specific inter or intra-country agreements, but rather triggered by "market reasons" such as, for example, the generation of employment, the differences between income communities, etc. (Estrada-Ayub and Kahhat, 2014). Kusch and Hills (2017) examined the relationship between e-waste and GDP in countries in the pan-European region and found evidence of a strong linear relationship between economic development and e-waste generation. Lepawsky and McNabb (2010) who first investigated the dynamics related to e-waste trade flows, using exports and imports data at different time intervals, supported the hypothesis that rich countries are more likely to export rather than import E-waste, also reproducing vicious circles in North-South differentials for electronic waste. The main generators of electronic waste per inhabitant are North America and Europe, which export the largest percentage to developing countries. China, in absolute terms, is the second largest generator of e-waste after the United States. The

enclave constituted by Taiwan, where the concentration of the electronics industry (especially microchips) is very high, generates very intense volumes of electronic waste, which for the most part is exported also and above all to China, where materials, classified as dangerous waste in Taiwan, are considered recyclable.

The practice of exporting electronic waste conflicts with the aforementioned Basel Convention which requires participating countries to dispose waste as quickly as possible and as close as possible to the source of production (Wirth, 1996). This ban is also proposed in the Bamako convention[8]. But, as Robinson (2009) argues, exporting countries often violate international treaties regarding the transportation of hazardous electronic waste. From the perspective of WEEE exporters, Tong (2004) examined the cross-border movement of e-waste and argued that it is driven by two forces: (i) disassembly of discarded electronic products is labor-intensive, and low-added-value and (ii) exporting countries' compliance with environmental regulations may increase the cost of disposal.

In figure 2 the distribution of the quantities of WEEE generated and recycled in OECD countries, and in figure 3 the histogram relating to the percentage distribution of the ratio between the two previous quantities are shown.

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[8] The Bamako Convention is a treaty of African nations prohibiting the import into Africa of any hazardous (including radioactive) waste. It was negotiated in 1991 and it came into force in 1998.
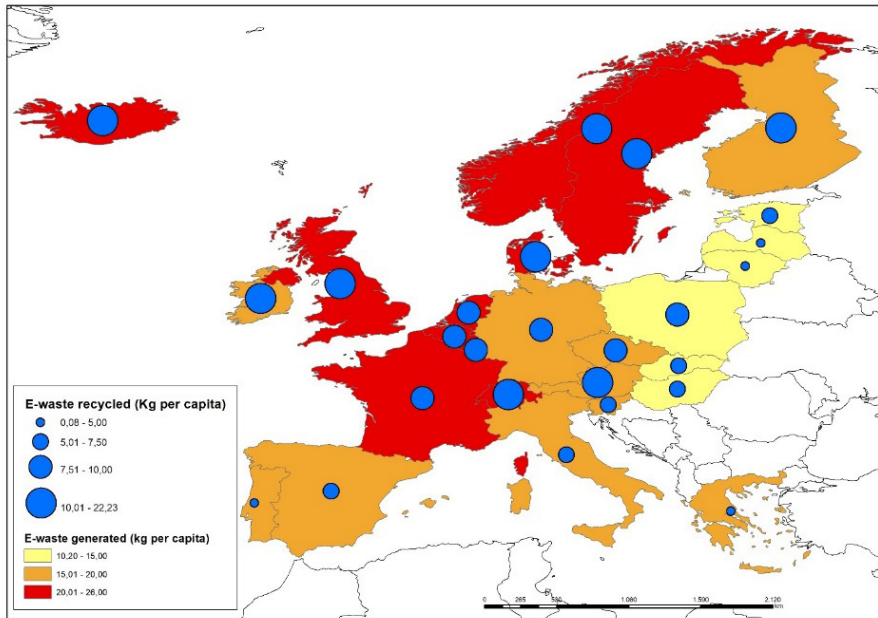
Fig. 2 E-waste generated, and E-waste recycled or reused in European OECD countries
Source: authors' elaboration on Global E-waste Monitor 2022.

Switzerland stands as the champion (over 90%) of the so-called *urban mining*, that is the ability to "find" precious metals in urban waste. One of the reasons for this success is that an advance recycling fee paid by consumers finances the recycling procedure[9] (Kamasa, 2023).
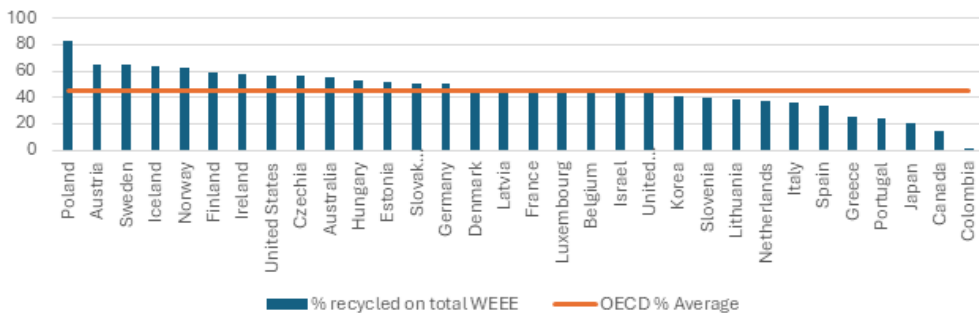

Fig. 3 % recycled on total WEEE for some OECD countries - 2019. Source: Authors' elaboration on Global E-waste Monitor 2022.

[9] In 1998, of the ORDEE - "Ordinance on the Return, Taking Back and Disposal of Electrical and Electronic Equipment", was introduced, imposing on consumers the so-called "advance recycling fee" on domestically bought electronics. In return, the consumers can bring back used electronics free of charge and manufacturers, importers, and retailers must take care of the disposal and recycling by regulation.

2. Geographic analysis of WEEE flows

The SCYCLE program of the United Nations Institute for Training and Research (UNITAR) has established a global WEEE monitoring system. The researchers collected all possible data from the Basel Convention, trade statistics and literature, compiling the first Global Transboundary E-waste Flows Monitor. The report is the first attempt to track cross-border flows of e-waste, to understand where it goes and what impact it has on communities and ecosystems.

WTO has calculated that nearly 13 million women and 18 million children work in e-waste processing informally, exposed to toxic chemicals. These include lead, mercury, nickel, brominated flame retardants and polycyclic aromatic hydrocarbons. Naturally, these impacts are concentrated in the global South, a veritable WEEE "landfill" of rich countries. Many countries lack both management infrastructure and workers rights implementation, making them attractive for cross-border trade. The new "atlas" of flows created by UNITAR estimates that around 5,1 million electronic waste (almost 10% of the total) is the subject of international trade. Only 1,8 million tons are shipped in a controlled manner. So, some 3,3 are uncontrolled, and they can become part of a legal trade, but also of an illegal trafficking of electronic waste to countries with lower treatment costs.

However, the report confirms that the movement of WEEE is mainly from north to south, from high-income countries to middle- and low-income countries. Only a very small part, between 2 and 17 thousand tons, are seized because they were illegally marketed by the European Union.

Already in 2014 Lepawsky (2014, p.10) stated that for over a decade the e-waste problem had been framed in terms of dumping of electronic discards by rich 'developed' nations in poor 'developing' ones; and although such trade was still occurring, a much more nuanced interpretation of the international trade in WEEE was needed.

Awasthi and Li (2017) argue that China and India are the two countries that mostly suffer from illegal imports of WEEE. One of the most frequent counterfeiting methodologies consists, as Huisman (2008) claims, in the transfer of volumes of used EEE in the form of electronic goods or as donations to institutions in the receiving countries (Puckett et al., 2002). Breivik et al. (2014) carried out a review of the literature to also understand different positions that positively affect the international trade of (W)EEE from developed to developing countries by justifying such flows as capable of reducing disparity in the adoption of technologies ICT.

According to this view, the export of used (W)EEE to less prosperous regions represents a reallocation of resources such as raw materials, spare parts, precious metals, etc., which can generate significant economic activity.

Efthymiou *et al*. (2016) studied the factors that influence the choice of countries where e-waste is transported illegally. They selected two types of factors: (i) macroeconomic, i.e. Gross Domestic Product (GDP) per capita and Open Market Index (OMI) and (ii) social, i.e. Human Development Index. With reference to GDP, Lepawsky and McNabb (2010) also argue that commercial transactions on e-waste tend to occur when the importer has a lower GDP per capita than the exporter.

An interesting point of view is that of Yu et al. (2010) according to which the dynamics of the flows appears to be a short-term issue since the digital development trajectory of developing countries will determine a strong increase in the production of their own waste, compared to which the import volumes they will be negligible or at least minor.

Rochman et al. (2017) sought to understand the roles of formal and informal actors in e-waste flows and identified three categories of factors responsible for illegal e-waste transports: (i) centrifugal push factors, forces capable of driving away illegal waste transports from their source, (ii) centripetal pull factors, i.e. forces capable of attracting illegal transports to their destination and (iii) facilitating factors, i.e. anything that makes illegal transports possible. They concluded that transport actors walk a fine line between legal and illegal practice, thus allowing illegal transport of e-waste to take place.

The figure 4 regards global import and export of regional WEEE flows and shows how these flows follow the same schizophrenic dynamics of international trade, in which the majority of countries are both, at the same time, importers and exporters of the same commodity.
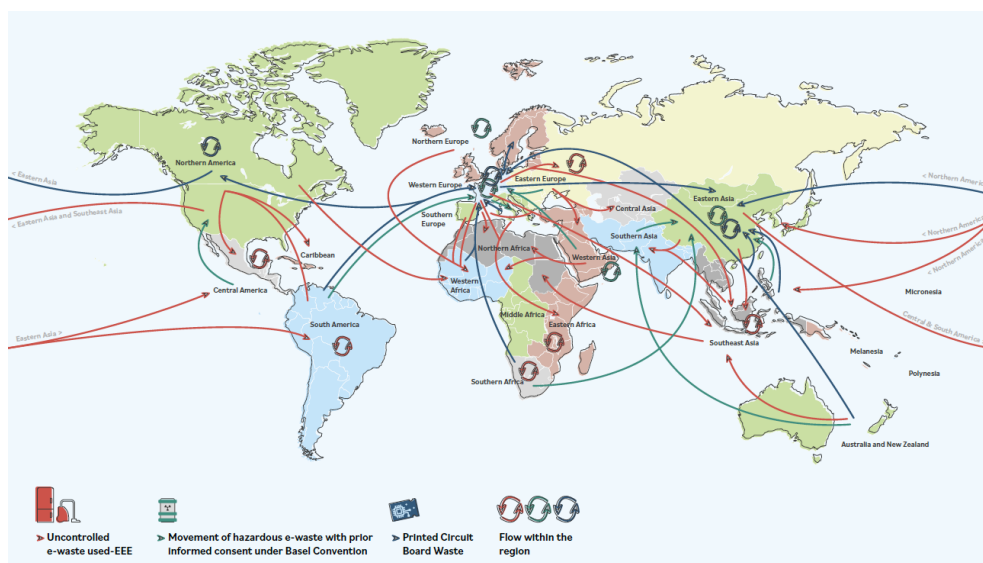
Fig. 4 Global Import and Export of Regional Flows. Source: Baldé et al., 2022

2.1 Regional scenarios

In this section we will briefly analyze the production, disposal, management and traffic dynamics of WEEE on a sub-continental basis. Given the geographic scale, very large differences between the different macro-region exist, due to a combination of several factors, including legal provisions, economic development, institutional efficiency and the complexity of the industrial chains. Furthermore, even within the same nation, therefore within the same legislative and institutional framework, notable differences can be identified, as, for example, it happens in Italy NUTS3 regions, as stated by the annual reports on this topic, published by the RAEE (WEEE) Coordination Center.

Table 1 reports some summary data about macro-regional differences in terms of E-waste production, sound management and import/export.

Region	Data	
	e-waste generated (kg/inh) e-waste documented to be environmentally soundly managed (%)	e-waste % import/export
Americas	13.1 Mt (13,3 kg/inh). 1.2 Mt (9%)	0.55 Mt (3%) imports. 0.39 Mt (2%) exports.
Europe	12 Mt (16,2 kg/inh) 5.1 Mt (42%)	1.2 Mt (10%) imports. 1.9 Mt (15%) exports.
Africa	2.9 Mt (2,5 kg/inh) 0.03 Mt (1%)	0.55 Mt (19%) imports. 0.13 Mt (5%) exports.
Asia	24.9 Mt (5,2 kg/inh.) 2.9 Mt (12%)	2.9 Mt (12%) imports. 2.8 Mt (10%) exports.
Oceania	0.7 Mt (16,1 kg/inh). 0.06 Mt (9%)	0 Mt (0%) imports. 0.021 Mt (3%) exports.

Tab. 1 Macro-regional Import and Export Hotspots. Source: authors' elaboration on Baldé et al., 2022

Americas

In the American continent, the production of WEEE is characterized by a non-homogeneous geographical distribution, especially along the North-South route. This lack of homogeneity can also be seen in relation to the different adoption from state to state of specific legislation on the topic. Furthermore, it is obvious that generation rates are very different depending on the number of people and the level of ICT penetration, since for example a city like New York generates more WEEE than many entire scarcely populated states in the nation.

In North America, Canada and the United States, WEEE production per capita is approximately 19-20 kg/person/year. Canada collects a wider range of products, but the recycling rate is only about 20% (Kumar and Holuszko, 2016). In South America, legislation related to WEEE is not widespread, although countries such as Argentina (2013) and

Brazil (2010) have drafted related legislation for the management of WEEE, whose production is increasing everywhere in the sub-continent.

Regarding the type of import/export of WEEE, North America imports printed circuit board waste, as several specialized recyclers are based in the region, while Central America and South America export this category of waste. As in many other cases, the lack of available information may hinder a better understanding and improvement of the e-waste problem in the Latin American region (Wagner *et al.*, 2022).

Europe

In European Union countries, sustainable development and the progressive adoption of circular economy models could prove to be distinctive factors in the ability to manage WEEE, however, according to the UNITAR SCYCLE programme, only 3 of the 27 EU member states (Croatia, Bulgaria and Poland) have reached the collection target of the WEEE directive. The rapid replacement rate of electronic devices also affects this dynamic[10].

As an example of the criticality of the E-waste issue with respect to negative data even in the presence of efficient dynamics, we can cite the Netherlands, where in 2018 366 kt of WEEE were generated, half of which was recorded as recycled in compliance with the NWR. It is estimated that around a quarter were recycled non-compliantly (27%) and around another quarter were disposed of in waste containers or exported for reuse, or could not be documented (UNITAR, 2020).

Africa

The use of EEE is still low in Africa compared to other areas in the world, but it is growing at a fast rate. In the last decade for instance, the penetration rate of personal computers has increased by a factor of 10, while the number of mobile phone subscribers has increased by a factor of 100, which a consequent price reduction and more affordable technology (Secretariat of the Basel Convention, 2021). In 2019 Africa was producing 2,9 MT of E-waste, in 2021 3 MT and an (under)estimated value for 2030 is 4 Mt, which accounts for a + 33% in less than 10 years-time (Massa and Archodoulaki, 2023).

It's calculated that today Africa locally generates between 50 and 85%

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[10] In Europe, on average, smartphones are replaced every 2-3 years., as reported by "Science for Environment Policy": European Commission DG Environment News Alert Service, edited by the Science Communication Unit, The University of the West of England, Bristol.

of its total e-waste, the remaining originating from illegal transboundary imports from developed countries from the Americas, Europe, and China. About 2.9 Mt of e-waste was generated in Africa in 2019, with the highest e-waste generating countries (Egypt, South Africa and Nigeria) also being major population centers.

Even though monitoring the transboundary movement of e-waste into Africa is notoriously difficult, three African countries, two on the West coast, Ghana, and Nigeria, and one on the East coast, Tanzania, have been identified as recipients of e-waste from the EU/UK (Maes *et al.*, 2022).

As highlighted by Okwu et al. (2022), in Nigeria unprofessional WEEE burning and dismantling methods contribute significantly to the pollution of air, as some of the pollutants are able to travel over a long distance from the recycling sites. The soil, as well as the crops grown in the WEEE dumpsites, are exposed to a high concentration of metals.

Very little reporting of transboundary movement of e-waste exists within the African continent. This may be due to either low levels of reporting or to the import of used-EEE that become waste while already in the region.

Asia

Figures for the Asian continent rose to 24,9 Mt in 2019 (Forti *et al.*, 2020), and now make up almost 50% of WEEE generated globally, making Asia the largest generator of WEEE worldwide.

China ranked first in the world for the generation of e-waste in 2014, generating 8.53 million tons. This quantity is forecasted to be 15,6 and 28,4 million tons by 2020 and 2030, respectively, increasing dramatically by 25,7% each year (Wang *et al.*, 2016);

In Western Asia[11], the total absence of practices relating to the management of electronic waste suggests very negative estimates (UNITAR, 2023) for the future, with very significant increases in the quantities of POM EEE (7.5 Mt in 2050). Similarly, again according to estimates (UNITAR, 2023), correct management of activities related to e-waste could generate enormous demand for work, with 225,000 full-time equivalent jobs in 2050.

In Central Asia, particularly in Kazakhstan, very high growth trends in EEE consumption per capita can be recognized, and, therefore, here too the 250 forecasts estimate large increases in electronic waste (432 million kg in total, according to UNITAR, 2023)

[11] It includes Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, State of Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, and Yemen.

In India approximately 95% of E-waste is treated in the backyard without any expert personnel, equipment, technologies, and infrastructure (Arya *et al.,* 2021).

In Malaysia, as elsewhere, informal recyclers have flooded the WEEE recycling market, adopting "backward dismantling methods" to carry out operations, in pursuit of high profits, thus causing heavy environmental deterioration. In addition, due to the low-cost competition of informal recyclers, formal recyclers cannot obtain sufficient revenues to cover the operating costs and obtain reasonable profits. Therefore, WEEE recycling policies have been introduced and implemented (Krishnaswamy, 2019), and in China, already in 2011 government began to implement WEEE recycling management regulations to subsidize formal recyclers, as part of the solution policies (Liu *et al*, 2018).

Oceania

Australia and New Zealand are the largest producers of WEEE in this continent. While Australia has a product management program that has generated schemes for waste and recycling of WEEE, New Zealand has yet to develop a legal framework to support the management of WEEE, and it currently manages its e-waste via voluntary product stewardship schemes (Van Yken *et al.*, 2021)

Oceania exports printed circuit board waste mainly to Asia but has a low level of reporting on other kind of e-waste transboundary flows. As for other regions, the lack of information hinders a better understanding of the e-waste problem in the region.

3. Some possible positive foresight scenarios

The demand for, and production of EEE is expected to continue to rise in future. With technological advances and increased accessibility and penetration of electronics, WEEE generation is expected to rise substantially, with total volume generated expected to rise to 75 MT by 2030 (Forti *et al.*, 2020).

The increase in WEEE can be explained not only by a greater consumption of technology on a global level, but also by the reduced life cycle of the devices themselves - read planned obsolescence - and by consumers' low propensity to repair them. This explains why, although the weight of electronic devices

decreases with technological evolution, the production of WEEE increases. In other terms, the subtractive dynamics of the electronic weight due to new technologies and more efficient production, is losing compared to the additive dynamics of the production of new devices due to the increase in demand.

The analysis of the current global state of disposal of e-waste has highlighted, as expected, a very different regulatory framework and very different management efficiency, ranging from over 90% in Switzerland to 0.1% in the West Asia. At the same time, everywhere, there is emerging awareness of a very needed change of scenario, necessary both to recover precious resources (urban mining) and to reduce damage to public health and the environment, deriving from mostly informal and therefore out of control disposal.

In fact, adequate regulation and application of the matter, supported by substantial public incentives to implement efficient recovery and recycling policies, will not only be able to block or decrease the flows of volumes of illegal electronic waste, but trigger virtuous circles within countries, in line with the much-vaunted principles of the circular economy. Furthermore, this would lead to both a reduction in the release of polluting substances into the environment - from mega landfills and from improvised small-scale dismantling laboratories - and obviously also in terms of employment it will lead to various advantages induced by a more regulated production chain of pre-treatment and waste recycling. It is, in fact, estimated that roughly 225.000 full-time equivalent jobs would be created for repair of used EEE and collection and pre-treatment of e-waste. In South Africa, for instance, there are currently an estimated 25 full-time equivalent recycling jobs per 1.000 t handled, and the sector has the potential to increase this number as more recycled e-waste is reintroduced back into the value chain (Lydall *et al*. 2017).

According to the current and forecasted data (Bagwan, 2024) of E-waste processing capacity and recycles it's possible to state that, the processing capacity of E-waste has been steadily increasing from 2014 to 2021. Looking ahead, the forecasted data from 2023 to 2030 suggests a continued upward trend in the number of recyclers, albeit with a more moderate rate of change. The projected rates of change range from 5,65% to 26,26% (ibid), indicating steady growth in the recycling capacity of E-waste over the forecasted period, from about 127 Mt to 199 Mt. These findings highlight the importance of promoting and supporting E-waste recycling initiatives.

Currently, fewer and fewer precious metals are employed in electronic devices, so the few metals that can be salvaged are sold for a very cheap price

in international markets, making the process of recycling less convenient than exporting e-waste to countries with little-to-no regard for worker safety or environmental protections.

Instead, the African continent, where, among other things, a massive use of solar energy and therefore the installation of millions of solar panels is expected (WB, 2022), could become an international hub for legal and qualified disposal of E-waste, subverting its economic destiny from a destination for illegal waste trafficking to a hub of a virtuous global value chain.

References

- Arya, S., Rautela, R., Chavan, D., Kumar S., 2021, "Evaluation of soil contamination due to crude E-waste recycling activities in the capital city of India Process", *Saf. Environ. Protect.*, 152, 641-653.

- Awasthi, A.K., Zeng, X., Li, J., 2016, "Environmental pollution of electronic waste recycling in India: a critical review", *Environ. Pollut.*, 211, 259–270.

- Bagwan, W., 2024, "Electronic waste (E-waste) generation and management scenario of India, and ARIMA forecasting of E-waste processing capacity of Maharashtra state till 2030", *Waste Management Bulletin*, 1 (4), 41-51, https://doi.org/10.1016/j.wmb.2023.08.002.

- Baldé, C.P., D'Angelo, E., Luda, V., Deubzer, O., Kuehr, R., 2022, *Global Transboundary E-waste Flows Monitor* - 2022, United Nations Institute for Training and Research (UNITAR), Bonn, Germany.

- Breivik, k., Armitage, J., Wania, F., Jones, K., 2014, "Tracking the Global Generation and Exports of e-Waste. Do Existing Estimates Add up?", *Environ. Sci. Technol.*, 48, 15, 8735–8743, https://doi.org/10.1021/es5021313

- Corbino, A., De Falco, S., Simonetti, L., 2023, "Blue and green transition? Dinamiche di convergenza/divergenza nelle traiettorie digitali ed ecologiche delle province italiane", *Bollettino dell'Associazione Italiana di Cartografia*, 175 (2023)", 32-53.

- Dutta, D., Goel, S., 2021, "Understanding the gap between formal and informal e-waste recycling facilities in India", *Waste Management*, 125, 163-171.

- Estrada-Ayub, J.A., Kahhat, R., 2014, "Decision factors for e-waste in Northern Mexico: To waste or trade", *Resources, Conservation & Recycling*, 86, (C), 93–106

- Forti V., Baldé, C.P., Kuehr R., 2018, *E-waste Statistics: Guidelines on Classifications, Reporting and Indicators*, second edition. United Nations University, ViE – SCYCLE, Bonn, Germany

- Forti, V., Baldé, C.P., Kuehr, R., Bel, G., 2020, The Global E-waste Monitor 2020: Quantities, flows and the circular economy potential. United Nations University (UNU)/United Nations Institute for Training and Research (UNITAR) – co-hosted SCYCLE Programme, International Telecommunication Union (ITU) & International Solid Waste Association (ISWA), Bonn/Geneva/Rotterdam.

- Huisman, J., Leroy, P., Tertre, F., 2017, *Prospecting Secondary Raw Materials in the Urban Mine and mining wastes (ProSUM)* - Final Report (ISBN: 978-92-808-9060-0). Brussels, Belgium.

- Ibitz, A., 2012, Environmental policy coordination in ASEAN: the case of waste from electrical and electronic equipment, *ASEAS - Austrian Journal of South-East Asian Studies*, 5(1), 30-51. https://doi.org/10.4232/10.ASEAS-5.1-3.

- IMF - International Monetary Fund. African Dept. 2020, Digitalization in Sub-Saharan Africa, in *Regional Economic Outlook*, Sub-Saharan Africa. USA: International Monetary Fund. Retrieved Jan 11, 2024, from https://doi.org/10.5089/9781513536835.086.ch003.

- Kamasa J., 2023, Mind the E-Waste: A Case for Switzerland, in Policy Perspectives, Vol. 11/3, August 2023, Center for Security Studies (CSS), ETH Zürich (ISSN: 2296-0244; DOI: 10.3929/ethz-b-000627493).

- Krishnaswamy, J., Seela, V., Shruthi, R., Imtiaz, M., 2019, "The proposed e-waste management model from the conviction of individual laptop disposal practices-An empirical study in Malaysia", *J. Clean. Prod.*, 208, 688-696. 10.1016/j.jclepro.2018.10.125.

- Kumar, A., Holuszko, M., 2016, Electronic waste and existing processing routes: a Canadian perspective, *Resources*, 5 (35), 1–19.

- Kusch, S., Hills, D., 2017, "The Link between e-Waste and GDP—New Insights from Data from the Pan-European Region", *Resources*, 6(2), 1-15, DOI: 10.3390/resources6020015.

- Lepawsky, J., McNabb, C., 2010, "Mapping international flows of electronic waste", *Canadian Geographer*, 54 (2), 177–195.

- Liu, G., Xu, Y., Tian, T., Wang, T., & Liu, Y., 2020, "The impacts of China's fund policy on waste electrical and electronic equipment utilization", *Journal of Cleaner Production*, 251, 119582 https://www.sciencedirect.com/science/article/pii/S095965261934452X?via%3Dihub

- Liu, H., Wu, X., Dou, D., 2018, "Determining recycling fees and subsidies in China's WEEE disposal fund with formal and informal sectors", *Sustainability,* 10 (9), 2979, 10.3390/su10092979.

- Lydall, M. Nyanjowa, W. and James, Y. 2017., *Mapping South Africa's Waste Electrical and Electronic Equipment (WEEE) Dismantling, Pre-Processing and Processing Technology Landscape*, Mintek External Report # 7574.

- Maes, T., Preston-Whyte, F., 2022, "E-waste it wisely: lessons from Africa", *SN Appl. Sci*. 4, 72. https://doi.org/10.1007/s42452-022-04962-9.

- Moyen Massa, G.; Archodoulaki, V.-M., 2023, "Electrical and Electronic Waste Management Problems in Africa: Deficits and Solution Approach", *Environments*, 10(44). https://doi.org/10.3390/environments10030044.

- Olanrewaju, S., Shittu, D., Williams, P., Shaw, J., 2021, "Global E-waste management: Can WEEE make a difference? A review of e-waste trends, legislation, contemporary issues and future challenges", *Waste Management*, 120, 549-563, https://doi.org/10.1016/j.wasman.2020.10.016.

- Okwu, O.; Hursthouse, A.; Viza, E.; Idoko, L., 2022, "New Models to Reduce the Health Risks of Informal WEEE Recyclers in MTN Phone Village, Rumukurushi, Port Harcourt, Nigeria", *Toxics,* , 10, 84. https://doi.org/10.3390/toxics10020084.

- Parajuly, K., Wenzel, H., 2017, "Potential for circular economy in household WEEE management", *Journal of Cleaner Production,* 151, 272–285.

- Puckett, J., 2010, Indonesia turns back illegal shipment of e-waste from USA "recycler". Toxic Trade News. Basel Action Network, Seattle, Washington, Retrieved from: http://archive.ban.org/ban_news/2010/100301_indonesia_turns_back.html, (accessed 13 November 2023).

- Robinson, B. H., 2009, "E-waste: An assessment of global production and environmental impacts", *Science of the Total Environment*, 408, 183-191.

- Rochman, F., Weslynne S., Ashton, A., Wiharjo, M., 2017, "E-waste, money and power: Mapping electronic waste flows in Yogyakarta, Indonesia", *Environmental Development*, 24, 1-8, ISSN 2211-4645, https://doi.org/10.1016/j.envdev.2017.02.002.

- Tong, X., 2004, Global mandate, national policies, and local responses: scale conflicts in China's management of imported e-waste, in 2004 *IEEE International Symposium on Electronics and the Environment,* 204–207.

- United Nations Environment Programme and United Nations Institute for Training and Research (2023). 2050 Electronic and Electrical Waste Outlook in West Asia. Nairobi and Bonn, Kenya and Germany.

- United Nations Environment Programme and United Nations Institute for Training and Research (2023). 2050 Electronic and Electrical Waste Outlook in West Asia. Nairobi and Bonn, Kenya and Germany.

- Van Yken, J., Boxall, N.J., Cheng, K.Y., Nikoloski, A.N., Moheimani, N.R., Kaksonen, A.H., 2021, "E-Waste Recycling and Resource Recovery: A Review on Technologies, Barriers and Enablers with a Focus on Oceania", *Metals*, 11, 1313. https://doi.org/10.3390/met11081313.

- Wagner, M., Baldé, C.P., Luda, V., I. Nnorom, C., Kuehr, R., Iattoni, G., 2022, *Monitoreo regional de los residuos electrónicos para América Latina: resultados de los trece países participantes en el proyecto* UNIDO-GEF 5554, Bonn (Alemania).

- Wang et al., 2016, Z. Wang, D. Guo, X. Wang, Determinants of residents' e-waste recycling behaviour intentions: evidence from China, J. Clean. Prod., 137 (2016), pp. 850-860, 10.1016/j.jclepro.2016.07.155.

- Wirth, D., 1996, "Trade implications of the Basel convention amendment banning North-South trade in hazardous wastes", *International Environment Reporter.,* 1-47.

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Territories continue to transform due to endogenous and exogenous development drives. The thickening of logistics and transport networks, large commercial hubs, energy supply options, agricultural and industrial policies, tourism and migrations constitute then, individually and in a systemic sense, some of the lenses available to read the transformative dynamics of territories in the crucial current geopolitical context. In addition, the increasing reach of digital technologies in the spaces and practices of our daily lives, has changed the way we perceive and use the landscape. These transformations find a reified outcome in landscape transitions, becoming a foothold for a trans-scale geographical reflection. We therefore want to insert this volume on this horizon. In fact, we have wanted to stimulate the geographical community to try their hand at landscape analysis to identify, through methodological and/or applied research contributions, problems, practices and trajectories inherent in the transformative dynamics of territories, compressed between the urgency of development and the need to change the energy and consumption paradigm.

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