FIFTH International Conference on Architecture and Urban Design

SELF - SUFFICIENT CITY

PROCEEDINGS BOOK

NOVEMBER 16-18, Tirana 2023

Department of Architecture, Faculty of Architecture and Engineering, EPOKA University


EPOKA UNIVERSITY

5th International Conference on Architecture and Urban Design

5-ICAUD

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Welcome Speech

Dear Madam, dear Sir,

It is our great pleasure to invite you to the Fifth International Conference of Architecture and Urban Design ICAUD 2023, in Tirana, Albania on November 16-18, 2023.

The 5ICAUD 2023 is organized by the Department of Architecture, Faculty of Architecture and Engineering, EPOKA University. We look forward to endure our academic practice and provide an excellent forum for scientists, researchers, and practitioners, not only from Europe, but from all over the world. Thereby, new ideas, latest developments, and potential directions in the fields of Architecture and Urban Design shall be presented and discussed under any of its specialized themes as shown below. The main focus of the conference will be on exploring the idea of self-sufficient cities in terms of social, economic and cultural aspects.

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CONFERENCE CALL

CONFERENCE CALL

The Department of Architecture at EPOKA University, welcomes participants to the Fifth International Conference on Architecture and Urban Design (5-ICAUD), to be held on 16 – 18 November 2023 in Tirana, Albania. Building upon the successful experience of the previous four editions of ICAUD, the conference promises a venue of scientific debate on a wide range of topics on architecture and urban design, and an international audience of academics and practitioners from around the world

Recent developments have produced a range of real global challenges. Climate change, natural disasters, pandemics such as Covid'19, and wars have reshaped the local, regional and global arena. Issues such as migration, energy supply, economic and climate crises are pushing many countries to reflect and think for new creative solutions. It is evident that dealing with these challenges requires more than a political approach; it requires a cross-disciplinary and cross-sectorial approach. The role of disciplines such as urban planning, architecture engineering and design is crucial in these problem-solving processes. Also, the need for a more holistic trans-disciplinary approach in dealing with the built environment is essential.

The 5th International Conference on Architecture and Urban Design (5.ICAUD 2023) aims to create a medium of discussion and knowledge sharing in topics related to architecture and urban planning/design but not only. The main focus will be on exploring the idea of **self-sufficient cities** in terms of social, economic and cultural aspects.

5-ICAUD chair
Egin Zeka

CONFERENCE TOPICS

1 SELF-SUFFICIENT CITY

- Circular economy in built environment
- Energy efficiency in built environment
- Food supply, agriculture and industry
- Green-Blue infrastructures
- ICTs, Data and the smart city
- Heritage, conservation and revitalization
- Sustainable residential environment

2 THE HUMAN DIMENSION IN CITIES

- Walkability in cities
- 15 minute city
- Mixed use development
- Compact city
- City at eye level
- Children friendly city
- Gender perspective
- Elder friendly city
- Universal Design
- Sustainable Mobility

3 LANDSCAPE URBANISM

- Nature Based Solutions for risk mitigation
- Green-Blue Infrastructures and reconnection of marginal areas
- Water-wise techniques in landscaping
- Ecological and naturalistic approaches in landscape design
- Community gardens and foodscapes

4 ARCHITECTURE, INTERIOR AND SPATIAL DESIGN

- Architectural Design practices
- Innovative technologies in Architectural Design
- Environment and user Behavior
- Housing and Design

- Material and Construction techniques
- Interior Design Considerations

5 BUILT ENVIRONMENT

- Environment and Behaviour Relations
- Space Syntax
- Socio-Spatial Dimension of Built Environment
- Sustainable and Resilient Built Environment
- Placemaking in Built Environment
- Participation in Built Environment
- Digitalization of Placemaking

Thank you,
Dr. Egin Zeka / Chair of the conference
MSc. Kreshnik Merxhani / Co-Chair of the conference

LANDSCAPES OF INDUSTRIAL PRODUCTION: RESOURCES BETWEEN CONSERVATION AND TRANSFORMATION

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ABSTRACT

This article introduces the research project "Landscapes of Industrial Production: Documenting and Assessing 20th century (post)Industrial Landscapes as Resources (Land-In-Pro)" that deals with the tangible and intangible legacy left by the 20th-century (de)industrialization processes in the landscape of the Liguria region, Italy, envisioning it as a living testimony of the past and a potential resource for a sustainable and resilient future.

The conservation and management of modern architectural heritage and landscape dilemma has been a pivotal discourse since the last decades of the 20th-century, increasing its importance up to present whilst seeking to embrace urban planning and socio-economic sustainable development perspectives in an integrated strategy towards a conscious conservation/transformation approach. The (post)industrial heritage and landscapes are part of this discourse and should be addressed not as relics of the past, but as local resources for the future able to trigger conscious transformation that create liveable and sustainable places for their communities.

To address Land-In-Pro overall questions, the Bormida Valley located in the Savona district, North-West of Italy, has been chosen as a case study due to its peculiar industrial past in the chemical industrial sector since the very beginning of the 20th-century that also coincided with the development of the roads and rail networks in support of the industries. In order to reach its objectives, Land-In-Pro will explore, document, and assess the legacy of the (de)industrialization processes in the selected case study aiming at critically unfolding new perspectives on conservation and adaptive re-use strategies of (post)industrial heritage for a sustainable development that consider both conservation and transformation needs. This contribution intends to illustrate an overview about Land-In-Pro methodology, objectives, and case study by combining different perspectives and providing preliminary insights to question, initiate, and advance further research developments within the project's field of study.

KEYWORDS: Industrial Heritage, (post)Industrial Landscape, Bormida Valley, Architectural Preservation, 20th-Century Heritage, Land-In-Pro

INTRODUCTION

All over Europe, 20th-century modernization processes shaped diverse industrial landscapes that became direct protagonists in the active and incessant production processes linked to the extraction and refining of raw materials, and to an ever-evolving technological renewal, but also to the social dynamics and socio-economic policies of the time.

The research project "Landscapes of Industrial Production: Documenting and Assessing 20th-century(post)Industrial Landscapes as Resources" focuses on the tangible and intangible legacy left by the 20th-century (de)industrialization processes in the landscape, envisioning it as a living testimony of the past and a potential resource for a sustainable and resilient future (Pompejano 2023).

Moving beyond the tangible instantiation of cultural heritage and its physical evidence, industrial heritage and landscapes constitute a contentious subject within the domains of land management, architectural and urban planning, as well as in the domains of cultural heritage and socio-economic policies. Certainly, numerous European nations grapple with the task of safeguarding their architectural and historical (post)industrial assets, concurrently necessitating the adaptation and transformation of derelict industrial heritage sites and structures dispersed across the landscape.

Many sites representing outstanding examples of the important industrial turn, despite encompassing architectural, historical, and technological values, are still not considered as heritage. The question of how to assess and what to do with them is highly relevant to present-day, especially considering the European Green Deal. The ICOMOS and Europa Nostra document titled European Cultural Heritage Green Paper put at the centre of the European Green Deal the focus on heritage and climate change (Potts 2021). For what concerns the immovable cultural heritage it should be stressed the importance of maintaining, repairing, reusing and retrofitting existing historical buildings rather than to demolish and build new and the role of heritage in succeeding the achievements set out in the European Green Deal (European Commission. Directorate General for Education, Youth, Sport and Culture. 2022). To address its overall questions, Land-In-Pro draws its methodology from preservation of landscape and heritage studies, ethnographic methods, and spatial analysis, intending to generate significant knowledge through an interdisciplinary approach. Land-In-Pro is going to explore, document, and assess the legacy of the (de)industrialization processes in the peculiar Ligurian landscape taken as representative case study. The aim is to head toward the drafting of an adaptable assessment tool based on the comparative analysis of multi-level and multi-sectoral urban and landscape planning and conservation policies and practices, to support the evaluation of the (post)industrial landscapes/sites actual conditions and inform and regulate the implementation of future transformation strategies and policies. This contribution intends to frame the ongoing project research context introducing also the case study.

INDUSTRIAL HERITAGE AND LANDSCAPE: THE CONSERVATION/ TRANSFORMATION DILEMMA

The consideration of landscape within the purview of 20th-century legacy denotes a multifaceted heritage, encapsulating both landscapes emblematic of distinct stages of modernization characterized by a withdrawal from past traditions, exemplified by large infrastructural, agrarian, and contemporary urban landscapes, as well as landscapes embodying historical-economic realities and dynamics that unfolded

over the course of the last century, such are those reflecting the industrial and post-industrial developments.

The discourse pertaining to the preservation and management of 20th-century architectural heritage, and the challenges associated with evolving landscapes, has assumed a pivotal role since the final decades of the last century. Its significance has progressively increased, concurrently endeavouring to incorporate perspectives from urban planning and socio-economic sustainable development within an integrated framework, oriented towards a reliable approach that harmonizes conservation, safeguarding, and transformation necessities (The International Committee for the Conservation of the Industrial Heritage 2003; Brown, Mitchell, and Beresford 2005; Agnoletti 2006; ICOMOS General Assembly 2011; Douet 2012; Kolen, Renes, and Hermans 2015; Antrop and Van Eetvelde 2017; ICOMOS International Scientific Committee of Twentieth Century Heritage 2017; Han and Zhang 2022). Industrial heritage and landscapes are integral components of this discourse and warrant consideration not as past remnants but as resources with future-oriented potentialities. Recognizing their capacity to instigate purposeful and conscious transformation, this legacy holds the prospect of prompting sustainable environments for local communities.

The current global approach to industrial heritage and landscapes advocates transcending extant regulatory and management frameworks, proposing a reassessment of local urban planning governance practices and safeguarding policies to align with contemporary European challenges (European Commission. Directorate General for Education, Youth, Sport and Culture. 2022).

The imprint of authorship and identity is discernible within even the most modest landscapes, manifesting not only through historical human presence, absence, and activities but also through the experiential facets associated with contemporary landscapes' perception. Furthermore, each constituent element defining a specific landscape contributes to the generation and dissemination of knowledge within sociological and anthropological frameworks and narratives. This phenomenon is attributable to the authorial role implicitly assumed by the communities responsible for continuously shaping the landscape (Kolen, Renes, and Hermans 2015). In the Italian legislative framework the significance of this authorship is highlighted in Art. 131 of the Code of Cultural Heritage and Landscape, wherein landscape denotes the inseparable intertwinement of culture, history, and nature that characterizes every environment in diverse proportions (Presidenza della Repubblica Italiana 2004), also recalling the European Landscape Convention.

If, as previously mentioned social, economic, cultural, and historical-political contextual shifts have precipitated the configuration of contemporary landscapes, ongoing and inexorable transformations persist in shaping them in the present. This is particularly true with respect of (post)industrial landscapes. Consequently, challenges arise in the discernment of indicators facilitating accurate identification, comprehension, and management of these landscapes.

The primary obstacle to the governance of transformation of these landscapes lies in the complexity associated with acknowledging the 20th-century landscapes as heritage. This complexity is evident both concerning the territorial and socio-economic-cultural milieu and the professionals and experts operating in the field of preservation and protection of cultural heritage. The latter necessitate unambiguous and efficient procedures and directives to effectively carry out protection and management measures. There is

the need to harmonizing heritage conservation, protection, and development initiatives, especially concerning (post)industrial legacy.

In this context, the potential of industrial heritage in terms of sustainable transformation and adaptive re-use is intricately linked to the region's and locality's ecological, economic, and socio-cultural challenges. As Antrop stresses, preserving historical-cultural landscapes denotes controlling their functionality in the modifying spatial setting of society (Antrop 2005). Hence, the challenge encompasses the promotion of local identity, the integration of cultural heritage conservation and adaptive re-use policies and strategies into urban planning and landscape governance tools, as well as the renewal and enhancement of blue and green infrastructures and the advancement of regional sustainable economies.

RECOGNIZING (POST)INDUSTRIAL LANDSCAPES

The comprehensive examination of the contemporary (post)industrial landscape extends beyond superficial aesthetic attributes, necessitating an exploration of the historical and socioeconomic components that differentiate already various scenario. Land-In-Pro approach to recognising (post) industrial landscapes as heritage is informed by the principles expressed in the European Landscape Convention, wherein landscape is elucidated as an outcome of the interaction between natural and human factors, as well as their intricate interrelationships (Council of Europe 2000). Consequently, in developing ongoing research, Land-In-Pro puts emphasis on acknowledging the significance of connections, perception, and experience, transcending the sole focus on aesthetics, in the recognition and delineation of what defines a (post)industrial landscape. The significance of using the hyphen 'post' lies in its capacity to signify a distinct rupture within linear temporality, concurrently augmenting the influence attributed to the industrial past (Rhodes II and Fayen Scarlett 2023). In other words, the hyphen indicates an evident temporal crack from the industrial past. This also implicates that (post)industrial landscape are imbued of absences and presence and present a dialectic relationship between the will of remembering and forgetting.

Hence, it is evident how the very most important act of identifying and recognising what characterises a (post)industrial landscape, as a 20th-century landscape, by delineating the defining tangible and intangible factors or aspects that signify the state of modernity. In other words, it is essential to establish the parameters that encapsulate the concept of landscape within the context of the modernity conditions that significantly shaped our recent historical past.

Which are the qualitative and quantitative indicators that defines the character of a (post) industrial landscape and inform conservation/transformation interventions? What kind of development intervention is acceptable? How much change can be tolerated with respect to the historic tangible evidence? How to assess the change? What about the scale factor, i.e., the territorial and the pilot site-related scale, in determining the set of indicators? These are the main core questions at the basis of the Land-In-Pro objectives that led to the identification of the case study area and representative pilot site.

IDENTIFYING THE TANGIBLE AND THE INTANGIBLE

The Land-In-Pro research methodology is grounded in a comprehensive approach encompassing the acquisition, processing, and critical interpretation of both qualitative and quantitative data. This is achieved through the systematic implementation of literature and policy reviews, historical research methods, architectural analysis, ethnographic methods, and fieldwork investigations. To ensure the production of meaningful results derived from a thorough and reliable data collection and analysis campaign, a representative case study and a corresponding pilot site are selected and subjected to in-depth research.

The criteria for case study selection are guided by the consideration of suitable indicators pertinent to the genesis and development of industrial settlements in the landscape, existing ethnographic studies, (de)industrialization policies, as well as heritage, landscape, and urban planning management policies and strategies. Additionally, attention is directed towards factors such as land exploitation and socio-cultural practices, ensuring a comprehensive exploration of the intricate interplay between these elements in the research context.

As Stuart points out, to many the term industrial landscape is familiar as a way of visualising and referring to a large area which extends beyond the size of a single industrial site or building (Stuart 2016). In fact, a (post)industrial landscape may be defined as a cultural landscape in which the main agent in terms of tangible and intangible transformation of the existing built environment are the (de) industrialisation processes and the economic-social-cultural context in which they develop.

Indeed, the coherence of particular characteristics and aspects contribute to the definition of an identity (Antrop 2005). The identification of a landscape as industrial suggests also a qualitative interpretation wherein the territory and former industrial buildings and sites are assessed from functional, social, cultural, and historical perspectives, recognising patterns of industrial activities in time and place (Loures 2008).

The practice of landscape identification at the large territorial scale, combines diverse approaches and methods in diverse countries. In England, the Historic Landscape Characterisation (HLC) method, pioneered by English Heritage (now Historic England), serves as a framework for identifying and interpreting diverse historical characteristics within a given area. This methodology surpasses concentration on singular heritage assets, engendering a holistic comprehension of the complete landscape and/or townscape through the classification of such entities into recurrent Historic Landscape Character (HLC) Types. The characterization procedure reveals spatial and temporal patterns and interconnections intrinsic to the landscape, encompassing elements such as structures and diverse configurations. This facilitates the examination of interrelationships among different locations and establishes a structured framework for the systematic documentation and assessment of individuals' perspectives and perceptions, incorporating their experiences and memories (Aldred and Fairclough 2003; Clark, Darlington, and Fairclough 2004; Fairclough 2016). Especially in systematically visualising the tangible aspects of a landscape, the use of Geographical Information Systems (GIS) tools makes possible to record, and then display, information at the territorial scale (Grava, Berti, and Gabellieri 2020; Gioia and Danese 2022).

Intangible aspects can be investigated and interpreted by means of non-representational approaches that emphasize the ways in which communities and people interact with landscapes in their everyday lives (Waterton 2013).

Within the sphere of intangible, the gathering and analysis of landscape perception, values, and uses necessitates the implementation of qualitative data collection methods. Approaches such as questionnaires, semi-structured interviews, Go-along interviews, and participation-based methodologies not only afford the acquisition of relevant information but also provide the additional advantage of situating the research in its immediate context. This contextualization facilitates a nuanced understanding of the perceptive dimensions associated with engagement with the landscape, fostering closer interaction between the researcher and the participants in the research process (Ward Thompson 2013).

THE CHEMICAL INDUSTRY FORTUNE IN THE BORMIDA VALLEY

To explores, documents, and assesses the legacy of the (de)industrialization processes in the peculiar Ligurian landscape and the (post)industrial legacy against the multi-level and multi-sectoral urban planning and landscape management policies, the Land-In-Pro research project considers the territory of the Bormida Valley, as a case study that well exemplify the high pace of 20th-century (de)industrialization processes causing a profound transformation of the pre-existing landscape characteristics and dynamics.

From mid-19th century and up to mid-20th century, the Ligurian coastal areas as well as the rural hinterland, became the sites for the building of modern factories, placing the region at the competitive international level in the raw materials processing sector, in the metallurgical and mechanical, but also in the chemical, naval, textile and food industries. Industrial development was significant, also coinciding with the development of the roads and rail networks in support of industries.

The historical evolution of Ligurian industry, moving from an initial long dominance of metallurgy and related heavy industry to their integration with coal processing and carbo-chemistry, culminated with full-cycle steelmaking and the mass oil industry. During this evolution, the criterion for the location of plants, either on the coastline or further inland, evolved according to the progressively available transport networks from the Genoa and Savona ports towards the Po Valley through the most mild passes of the Ligurian Apennine chain, the Giovi and the Cadibona ('Relazione del Comitato Promotore' 1971).

The decline of the Italian economic expansion phase in the 1970s and the new competitive economic global scenarios, heavily impacted the Ligurian industrial structure, gradually leaving behind former productive landscapes of relevant size and complexity.

As Tolaini and De Maestri points out, the tangible challenge of repurposing former industrial zones manifests distinctly in a region characterized by spatial constraints, emerging as a focal issue in the public discourse, intricately interwoven with concerns pertaining to land management, industrial reclamation, and mobility (De Maestri Merello and Tolaini 2011). Frequently, radical interventions, such as demolition interventions, were often employed, potentially obliterating the tangible evidence and collective memory associated with sites' industrial past, consequently jeopardizing the formation of future cultural stratifications and interpretation integral to the transmission of values associated to those legacy.

Land-In-Pro research considers the Bormida Valley, in the Savona district, located in the inner Ligurian Apennine Mountain, North-West of Italy, as a representative case study. The Bormida Valley includes several small municipalities among which the most important for the chemical industry development were the municipalities of Cengio and Cairo Montenotte. It has been chosen due to its peculiar industrial fortune in the chemical industrial sector since the very beginning of the 20th-century.

In the mid-19th-century, the modernization of the territory, instigated by significant road infrastructure projects after the former Napoleonic campaigns, caused settlement interests in the Bormida Valley plain areas. This phenomenon was further accentuated by the introduction of new railways, favouring the imminent 20th century industrial development of extensive flat regions along the river' sides (Stringa 1995). In fact, from the 1880s until the late 1960s, the Bormida Valley experienced a substantial industrial growth.

Towards the mid-1960s, the major industrial settlements in the Bormida Valley were all related to the chemical industry and were mainly located in the Ferrania area, where the plants of the new Ferrania-3M gave continuity to the production of photographic film; in Bragno, where the arrival station of the Savona-S. Giuseppe Coal Cableway (Figure 1) together with the Montecatini and Cokitalia plants had interlinked production cycles; finally in Cengio, where the A.C.N.A. (Azienda Coloranti Nazionali e Affini) plant born from the former S.I.P.E. (Società Italiana Prodotti Esplodenti) evolved as pivotal centre for the heavy chemical industry production (Figure 2). Other settlements of moderate interest in the immediate vicinity are those of Altare, Carcare, Millesimo, Cairo and Dego, where the artisan glass, ceramics and mechanical industries were developed (Barile 1964).

Figure 1: View of the Savona-S. Giuseppe Coal Cableway from one of the intermediate stations in Ciantagalletto, Savona, Liguria. Photo by F. Pompejano (©Land-In-Pro, 2023 - CC BY-NC 4.0).

The processes of (de)industrialization that gave birth to the above factories distinctly affected the Bormida Valley's society and territory, involving aspects such as economic development, employment, cultural and environmental issues.

Nowadays, passing through the Bormida valley allows the encounter with partially dismissed industrial complexes emerging amidst the river sides and the surrounding Apennine mountains like echoes from the recent industrial past. Making use of historical-architectural research methods, the Land-In-Pro project investigates the main urban planning tools and the related socio-cultural and economic dynamics that led to the (de)industrialisation processes in the Valley. At a smaller scale, the historical-architectural research methods will be integrated with ethnographic research methods to consider and investigate the impact of (de)industrialisation processes at the pilot site level. The fieldwork activities, foreseen at distinct phases of the project, will engage with a series of activities within a methodological framework encompassing both qualitative and quantitative data collection methods. Through systematic inquiries and representations, the aim is to elucidate the impact of the indicators at both landscape and site scales. This includes an examination of spatial morphologies, predominant building typologies, architectural articulations, and the current perception of this legacy by local communities.

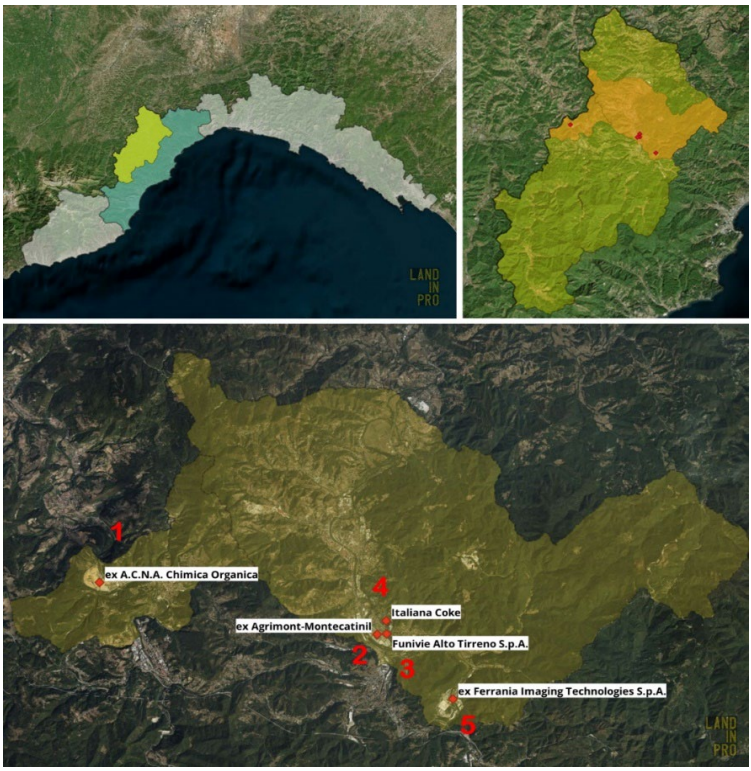

Figure 2: The location of Bormida Valley within the Liguria region (top-left), the location of the Cengio and Cairo Montenotte territorial administrative boundaries within the Bormida Valley (top-right), and the location of the chemical industry sites in the Cairo Montenotte and Cengio municipalities boundaries (down centered). GIS maps elaborated by F. Pompejano (©Land-In-Pro, 2023 - CC BY-NC 4.0)

THE PILOT SITE: THE FORMER FERRANIA FACTORY

The published contributions pertaining to Ferrania's industrial history are mainly directed towards issues related to the photosensitive technologies and situates the narrative and encounters of this industrial site mainly within the 1960s, a period characterized by Italy's prominence as a locus of pioneering innovation and experimentation in emerging photosensitive technologies in parallel with the proliferation of amateur photography and graphics, with cinema representing a forefront domain of exploration (Giuliani 2006).

In Land-In-Pro research focus, the story of the former Ferrania factory and its current conditions make it a suitable pilot site.

The factory's story traces back to the end of the 19th-century, when the Milanese Società Italiana Prodotti Esplodenti – S.I.P.E., i.e. the Italian Society of Explosive Products, presided by the engineer Ferdinando Quartieri, establishes a new factory on the riversides of the Bormida River, in Cengio, near the border between the two North-West Italian regions of Liguria and Piemonte. To face the high-pace production demand, in 1915 new S.I.P.E. industrial buildings are built in the near vast Ferrania estate (Salmoiraghi 1992; Bezzola 1994; Giuliani 2006; Manzini 2014). During the World War I, managing ballistite, picric acid, trinitrotoluene, nitronaphthalene and schneiderite (a mixture of nitronaphthalene and ammonium nitrate), black powder, nitrocellulose smokeless powder, S.I.P.E. produces 100,000 kg of explosives every day at its plants in Cengio, Ferrania, Forte dei Marmi and Spilamberto in Italy (Molinari 1917). Following the October Revolution led by the Bolshevik Party of Vladimir Lenin in 1917, S.I.P.E found itself with surplus nitrocellulose and shifted its manufacturing focus of the factory in Ferrania to celluloid production. The company was renamed F.I.L.M. (Fabbrica Italiana Lamine Milano), and started a collaboration with the Pathé Brothers, Europe's leading producer of photosensitive materials at that time that provided the technological knowledge by supplying the machinery designs (Salmoiraghi 1992; Giuliani 2006). However, after a few years the collaboration ended, and the Pathé Brothers relinquished their stake to the Italian bank Credito Italiano. The engineer Franco Marmount du Hautchamp assumed leadership, with the specific task of liquidating F.I.L.M., implementing strategies such as price reduction and costcutting. Due to strategic financial decisions made by Marmount, F.I.L.M. Ferrania seized the opportunity presented by the industry shift, diversifying its product portfolio to include x-ray items, and introducing various new roll film formats. The early 1930s marked a pivotal period, both financially and in terms of production. Within a span of three years, the company underwent three corporate restructuring phases.

In 1932, recognizing the necessity to promote photographic products, Marmount started a collaboration with the esteemed Milanese photographic company Cappelli, resulting in the inaugural use of the name Ferrania: Fabbriche Riunite Prodotti Fotografici Film e Cappelli (Salmoiraghi 1992; Giuliani 2006). Despite this collaboration propelled the company's momentum forward, in 1937 the company was renamed "ferrania"(Figure 3).

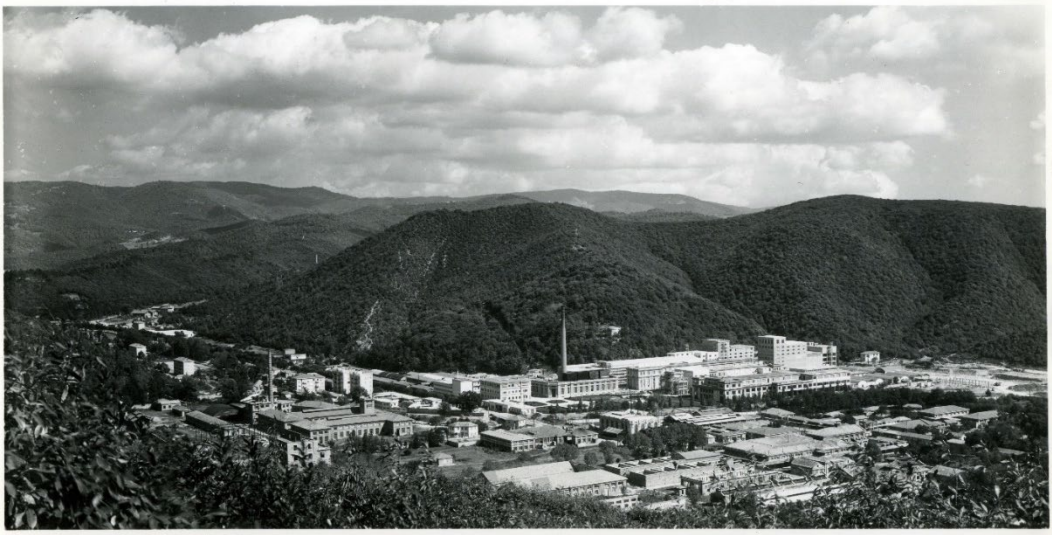

Figure 3: View of the former Ferrania plant in Ferrania, Cairo Montenotte (Savona), Bormida Valley, Liguria (Italy). End of 1940s ca. (Courtesy of © Ferrania Film Museum).

As World War II loomed on the horizon, crucial raw materials such silver, as gelatine, and cotton fundamental for the photographic industry become scarce, causing production slowdowns. Despite these obstacles, research efforts persisted and between 1943 and 1945, the company was referred to as Stabilimento Ausiliario Germanico, and production came to a halt in the final year of the conflict. In the aftermath of the World War II, normal production activity resumed, marking the beginning of Ferrania's post-war rebirth (Giuliani 2006; Giusto 2022a). From the end of the 1940s and throughout the 1950s, the factory established itself commercially not only in Europe, but also worldwide with the opening of branches and workshops (Giuliani 2006).

At the beginning of the 1960s, the departure of Marmount marked a transitional phase for ferrania, leading, in 1964, to the sale of its stake to the American multinational Minnesota Mining and Manufacturing Company, known as 3M. This initiated a synergistic collaboration between ferrania, equipped with extensive expertise in sensitive materials production, and 3M, boasting a global sales network. The 1973 merger of Ferrania-3M and 3M formed 3M Italia s.p.a. company, reaching its apex in size and employment. However, the subsequent decades witnessed the proliferation of innovative technologies rendering the production of sensitive materials obsolete. This context impacted the 3M Italia company that in 1996, decided for the company restructuring which led to the creation of a subsidiary company, Imation. By 1999, Imation, disinterested in the industrial production carried out in Ferrania, spun off its activities, giving rise to Ferrania Imaging Technologies (Giuliani 2006; Giusto 2022b; 2022a).

Despite efforts to revitalize the company under the Solaris brand, economic challenges persisted. In 2003, Ferrania declared bankruptcy, leading to layoffs. In 2004, the Messina Group acquired the plant, converting it to the photovoltaic sector with Ferrania Solis and the ecological sector with Ferrania Ecologia,

featuring a biodigester for waste disposal in subsequent years. The year 2009 saw the official suspension of production (Giusto 2022a; 2022b).

Nowadays, the industrial buildings of the former Ferrania factory constitutes the tangible remnants of a former important industrial past that left its tangible and intangible legacy in the landscape and in the memories of a local community (Figure 4).

The industrial activity is now limited to a small area of the former industrial plant, called Ferrania Chemicals that makes use of chemical or biological processes for the manufacturing of basic pharmaceutical products.

With the specific intent of constructing the new Solis warehouses dedicated to solar panel production, some historical structures within the original F.I.L.M. plant underwent demolition between 2008 and 2010. These structures included the departments B, C, and the distillery units, dating from the years 1917 to 1920, as well as the department F (Ministero dei Beni e delle Attività Culturali e del Turismo 2016). Fortunately, the 1917's S.I.P.E. power plant, the 1930s entrance building and square, the former directorate office building, the former thermo-electric and refrigeration power plant building and the former Dopolavoro, i.e., a building conceived for the after-work recreational activities, were declared "[…] to be of cultural interest pursuant to Article 10, paragraph 3, letter a) of Legislative Decree no. 42 of 22/01/2004, and are therefore subject to all the protection provisions contained in the aforementioned Legislative Decree" (Ministero dei Beni e delle Attività Culturali e del Turismo 2016).

The history of industrial architectural planning finds in the residual tangible traces of the former factory the reflection of the architectural and urban planning trends at the building and territorial levels. The remaining industrial buildings are part of a scrupulous planning at the architectural and urban planning scale constituting a testimony of the excellent industrial architectural planning that, especially in the case of the former Ferrania factory industrial site, spanned from the end of the 19th century throughout the expansion phase lasted up to the beginning of the 1960s. The industrial site's plan comprises not only the still standing industrial buildings, but also the edifices of several workers' villages: the Filmania, Oltrebormida, Ferranietta, and Pra Sottano workers villages.

Within the Land-In-Pro project, the studying of the former Ferrania plant from the architectural, urban planning and landscape, and ethnographic points of view is fundamental in order to identify the main aspects that might address the research in establishing the indicators useful to inform the conservation/protection and transformation initiatives at site level. While a few of the historical buildings were demolished in recent periods, certain the remaining buildings, within and outside the wall of the plant, and their spatial relation within the Bormida Valley, are worthy of protection and conservation efforts . This imperative stems not only because of their architectural, historical, and technological values, but especially due to their socio-cultural values related to memories and narratives that might lead to possible new heritage interpretation processes.

The willing to establish the Ferrania Film Museum ('Ferrania Film Museum', n.d.) in Cairo Montenotte, inaugurated precisely 100 years after the factory's inception, together with a few cultural tourism initiatives implemented by networks of professionals such is the TrattoPunto, a network of professionals established with the aim of increasing awareness on industrial heritage through the organisation of sightseeing itineraries in Ferrania that "[…] integrate historical narratives with local traditions"('Industrial

Tourism by Trattopunto | Italian Network for Industrial Tourism', n.d.), and the establishment in 2013 of the FILM Ferrania s.r.l. start up in the former Laboratory for Photographic Research building, are nowadays the only efforts which commemorate the history of the former Ferrania plant.

Figure 4: View of the former Ferrania factory today. In the foreground the old office building and the thermo-electric and refrigeration power plant building. Photo by C. Moggia (©Land-In-Pro, 2023 - CC BY-NC 4.0).

CONCLUSION

Recognizing the potential of (post)industrial heritage and landscapes as sustainable resources requires a holistic and collaborative approach, involving communities, governments, businesses, and heritage conservation organizations and research institutions.

The (post)industrial heritage and landscapes as legacy of 20th-century modernisation processes bear witness to the historical, economic, and social development of a specific region.

The Land-In-Pro research project explores and documents the tangible and intangible legacy left by 20th-century (de)industrialization processes in the landscape. Focusing on the Bormida Valley in Liguria, Italy, as a representative case study at the territorial level, the project adopts an interdisciplinary approach, drawing methodologies from landscape preservation, heritage studies, ethnography, and spatial analysis. The Bormida Valley witnessed substantial industrial growth from the mid-19th-century to the late 1960s, particularly in the chemical industry. The study examines the impact of (de)industrialization processes on

the landscape considering architectural, urban planning, socio-cultural and environmental aspects. It also addresses the challenges of repurposing former industrial zones and the potential loss of tangible evidence and collective memory associated with industrial sites.

The methodology involves a comprehensive approach, combining literature and policy reviews, historical research, architectural analysis, ethnographic methods, and fieldwork investigations. Qualitative and quantitative data collection methods are employed to assess both landscape and site scales. The research aims to identify qualitative and quantitative indicators defining the character of (post)industrial landscapes and inform conservation and transformation interventions.

At the site level, the project considers the former Ferrania factory as a suitable pilot site due to its rich industrial history testifying the importance of the industrial development in the Valley throughout the 20th century. From its inception in the late 19th century as S.I.P.E. (Italian Society of Explosive Products) to its transformation into F.I.L.M. (Italian Factory for Laminates Milano) and later Ferrania, Ferrania-3M and Imation, the factory played a significant role in the production of photographic film both at the national and worldwide levels. Land-In-Pro is exploring and documenting the architectural, urban planning, and landscape aspects of the remaining industrial buildings, workers' villages, and the overall planning of the former Ferrania plant both in relation to the spatial link with the other industrial sites in the Valley and at the site level. Furthermore, combining different perspectives to provide a comprehensive overview, the project also emphasizes the importance of collecting and interpreting memories in the definition of policy and tools aiming to inform balanced conservation and transformation initiatives.

It is important to stress out the role that (post)industrial legacy can play in the economic and environmentally sustainable regeneration of local communities and economies. Adaptive re-use implemented through a careful approach in preserving cultural heritage attributes and values, align with recommendations given in the major documents on climate change mitigation and the integration of (post) industrial sites into urban planning strategies promotes a sustainable development at the territorial level carefully balancing economic, social, and environmental issues.

Finally, heritage tourism, community engagement and education advocacy initiatives can be effective in raising awareness about the importance of preserving industrial heritage while boosting the sense of community identity and cohesion thorough different generations.

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REFERENCES

Agnoletti, M. 2006. The Conservation of Cultural Landscapes. Wallingford: CABI.

Aldred, O., and Fairclough, G. 2003. 'Historic Landscape Characterisation. Taking Stock of the Method. The National HLC Method Review 2002.' London: Somerset County Council; English Heritage.

Antrop, M. 2005. 'Why Landscapes of the Past Are Important for the Future'. In: Rural Landscapes: Past Processes and Future Strategies 70 (1): 21–34. https://doi.org/10.1016/j.landurbplan.2003.10.002.

Antrop, M., and Van Eetvelde, V. 2017. Landscape Perspectives. Vol. 23. Landscape Series. Dordrecht: Springer Netherlands. http://link.springer.com/10.1007/978-94-024-1183-6.

Barile, A. 1964. 'Relazione'. In Convegno sui problemi economici e urbanistici della Valle Bormida, 25–31. Millesimo.

Bezzola, G. 1994. Dalla Ferrania alla 3M. Una storia di cultura umana e imprenditoriale. Milano: Gruppo 3M Italia.

Brown, J., Mitchell, N., and Beresford, M. 2005. The Protected Landscape Approach: Linking Nature, Culture and Community. Gland, Switzerland: IUCN--The World Conservation Union.

Clark, J., Darlington, J., and Fairclough, G. J. 2004. Using Historic Landscape Characterisation: English Heritage's Review of HLC Applications 2002-03. Swindon: English Heritage.

Council of Europe, (CoE). 2000. European Landscape Convention.

De Maestri Merello, S., and Tolaini, R. 2011. Storie e itinerari dell'industria ligure. Genova: De Ferrari.

Douet, J., (ed). 2012. Industrial Heritage Re-Tooled: The TICCIH Guide to Industrial Heritage Conservation. Lancaster [United Kingdom]: Carnegie Publishing Limited.

European Commission. Directorate General for Education, Youth, Sport and Culture. 2022. Strengthening Cultural Heritage Resilience for Climate Change: Where the European Green Deal Meets Cultural Heritage. LU: Publications Office.

Fairclough, G. 2016. 'Essentially Cultural: Perspectives on Landscape from Europe'. In: Landscape Journal 35 (2): 149–66.

'Ferrania Film Museum'. n.d. Accessed 26 December 2023. https://www.ferraniafilmmuseum.net/.

Gioia, D., and Danese, M. 2022. Spatial Analysis for Landscape Changes. MDPI. http://www.mdpi.com/books/pdfview/book/4797. Accessed 26 December 2023.

Giuliani, L. 2006. 'Una volta si scriveva così: ferrania'. In La materia dei sogni. L'impresa cinematografica in Italia., Buccheri, Vincenzo; Malavasi, Luca. Roma: Carocci.

Giusto, L. 2022a. 'Kodak, Fujifilm, Agfa: Storia dell'industria del fotografico e la valorizzazione del proprio heritage museale. Il caso Ferrania.' Laurea magistrale in Storia dell'Arte e Valorizzazione del Patrimonio Artistico - Prof. Guido Gandino, Prof. Leo Lecci, Università degli Studi di Genova, Scuola di Scienze Umanistiche, Dipartimento di Italianistica, Romanistica, Antichistica, Arti e Spettacolo (DIRAAS).

———. 2022b. 'La Ferrania Raccontata Attraverso Il Suo Patrimonio Documentale'. In Stati Generali Del Patrimonio Industriale 2022. Venezia: Marsilio.

Grava, M., Berti, C., and Gabellieri, N. 2020. Historical GIS: strumenti digitali per la geografia storica in Italia. Studi monografici Associazione italiana di cartografia 4. Trieste: EUT, Edizioni Università Trieste.

Han, S. H., and Zhang, H. 2022. 'Progress and Prospects in Industrial Heritage Reconstruction and Reuse Research during the Past Five Years: Review and Outlook'. In: Land 11 (12): 2119. https://doi.org/10.3390/land11122119.

ICOMOS General Assembly. 2011. The Dublin Principles.

ICOMOS International Scientific Committee of Twentieth Century Heritage, ISC20C. 2017. 'Approaches for the Conservation of Twentieth-Century Cultural Heritage: Madrid - New Delhi Document 2017'. International Council of Monuments and Sites (ICOMOS).

'Industrial Tourism by Trattopunto | Italian Network for Industrial Tourism'. n.d. Trattopunto. Accessed 26 December 2023. https://trattopunto.com/en/.

Kolen, J., Renes, J., and Hermans, R. (eds). 2015. Landscape Biographies: Geographical, Historical and Archaeological Perspectives on the Production and Transmission of Landscapes. Landscape and Heritage Studies. Amsterdam: Amsterdam University Press.

Loures, L. 2008. 'Post-Industrial Landscapes as Renaissance Locus : The Case Study Research Method'. In , 293–302. Skiathos, Greece. https://doi.org/10.2495/SC080281.

Manzini, A. 2014. 'Architettura Industriale in Valle Bormida: La SIPE e l'architetto Cesare Mazzocchi'. Patrimonio Industriale. Rivista AIPAI VII–VIII (12–13): 88–93.

Ministero dei Beni e delle Attività Culturali e del Turismo, Segretariato Regionale per la Liguria. 2016. Decreto Di Vincolo Architettonico Ai Sensi Dell'art. 10 Comma 3 Lettera a) Del D. Lgs. 22/01/2004 n. 42. D. Lgs. 22/01/2004.

Molinari, E. 1917. 'Lo sviluppo di alcune grandi industrie chimiche in rapporto alla guerra'. Le industrie italiane illustrate, no. 5 (May): 55–68.

Pompejano, F. 2023. 'Land-In-Pro, a Research Project on (Post)Industrial Landscapes'. TICCIH Bulletin 101 (3rd Quarter 2023): 32–34.

Potts, A. 2021. 'European Cultural Heritage Green Paper'. The Hague & Brussels: Europa Nostra & ICOMOS.

Presidenza della Repubblica Italiana. 2004. Decreto Legislativo n. 42 del 22 gennaio 2004. Codice dei Beni Culturali e del Paesaggio.

'Relazione del Comitato Promotore'. 1971. In Convegno per lo Sviluppo dell'Industria Chimica nella Provincia di Savona in preparazione della Conferenza per le Partecipazioni Statali indetta dalla Regione Liguria, March 27, 1971. Cairo Montenotte.

Rhodes II, M. A., and Fayen Scarlett, S. 2023. 'Post-Industrial Landscapes'. In: The Routledge Companion to the American Landscape, by Chris W. Post, Alyson L. Greiner, and Geoffrey L. Buckley, 1st ed., 325–36. London: Routledge.

Salmoiraghi, A. 1992. Ferrania: dalle antiche ferriere all'industria dell'immagine : storia, economia e sviluppo di una realtà industriale. Savona: Marco Sabatelli editore.

Stringa, P. 1995. 'Valori Storico-Culturali e Sistema Insediativo'. In Qual è il patrimonio architettonico e artistico da salvare in Val Bormida?, 9–20. Millesimo: Edizione della Comunità Montana Alta Val Bormida.

Stuart, I. 2016. 'Identifying Industrial Landscapes'. In: Industrial Heritage Re-Tooled. The TICCIH Guide to Industrial Heritage Conservation, 75–84. Routledge, Taylor & Francis Group.

The International Committee for the Conservation of the Industrial Heritage. 2003. The Nizhny Tagil Charter for the Industrial Heritage.

Ward Thompson, C. 2013. 'Landscape Perception and Environmental Psychology'. In: The Routledge Companion to Landscape Studies, First Edition, 25–42. London; New York: Routledge Taylor and Francis Group.

Waterton, E. 2013. 'Landscape and Non-Representational Theories'. In: The Routledge Companion to Landscape Studies, First Edition, 66–75. London; New York: Routledge Taylor and Francis Group.

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