INDUSTRIAL HERITAGE IN ALBANIA AND THE OPPORTUNITIES FOR REGENERATION AND ADAPTIVE RE-USE

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ABSTRACT

The industry as one of the sectors of economic development in Albania has been one of the main engines of growth in the period of communism. After the 1990s, industrial areas suffered major structural changes that were associated with the closure of many economic activities especially the industries that failed to resist to the new market economy. Inappropriate industrialization caused many environmental problems. Abandoned industrial heritage areas have been transformed into centers of urban degradation. These areas need sustainable regeneration to recall their importance for the community, but in a way not to lose their use. The purpose of this paper is to assess industrial heritage areas, to develop a clear picture of the existing situation, as well as the potentials and possibilities for their regeneration. It deals with the typological analysis and morphological development of industrial facilities, the extent of their damage and disconnection with the urban structure of the city. It analyzes three case study proposals of industrial brown field regeneration and adaptive re-use that aim the protection of historical heritage, as well as the sustainable development of these areas. It is argued that regeneration and adaptive re-use of industrial facilities are seen as an opportunity and a new tendency to turn attraction to this heritage.

KEYWORDS: Industrial Heritage, Brownfield Regeneration, Adaptive Re-Use, Sustainable Development

INTRODUCTION

Albania has inherited some industrial facilities, which have functioned until the beginning of 1990, period of changing economic and political system, which already have lost their productive destination, a result of technical and economic factors, in front of the regional free market competitiveness. Although industrial heritage is an important proof of the economic, social and architectural development of the country, nowadays this heritage is forgotten and in risks of extinction.
HISTORICAL BACKGROUND OF INDUSTRIAL DEVELOPMENT IN ALBANIA

During the second half of the nineteenth century, Albania was characterized by economic growth in the shape of small craft workshops of artisanal character. Promote to free economic competition, locally between local artisans or on the European scale, was born the need to set up the first workshops based on technical manufacturing more advanced than that of craft workshops. Development of industrial processes in Albania has launched at the 70s of XIX century. The beginning of first elements of motor industry coincided with the period of performance of the second phase of industrialization of European countries (Frashëri et. al., 1976). The process of industrialization was expanded further in the beginning XX century and especially during the World War II and the occupation of Albania by Italian fascists, who invested for their interests by increasing the number of industrial enterprises in the country (Grup Autorësh, 1976).

The rapid industrial development, Albania had after the release of the country by the Nazi fascists and the establishment of the communist regime. Like any other sector in the country, the industry was involved in a centralized planned economy and run by state policies. After 1950, began the industrialization of the country through five years plans. In 70s, the development of light industry shifted in the development of the heavy industry with the support of China of Mao Tse-tung. Heavy industry and its massive development were characterized by the construction of the largest industrial complexes (Civici, 2012). During the five years plans for economic development, industrialization and urbanization took place concurrently. The construction of new factories and industrial complexes built were accompanied by the relocation of urban population in the former urban centers and the newly build industrial cities. The planning, design and construction of industrial facilities involved the most advanced intellectual and human resources of the time. Innovative structural systems, materials, special prefabrication systems were used. In the period 1980-1990, the decreases industrial economic development of the country was recorded prior to the levels of economic growth.

The collapse of the communist system in the early 90th hardens slowly production in almost all industrial facilities in the country. The industrial sector was a self-skeleton of its former, beyond any technological standard and competitive in a free market economy (Parangoni, 2010). After the 1992 economic reforms were undertaken to include industrial working facilities in a market economy. In this stage began the privatization of the large former industrial complexes, which were dissolved in separate production units. Various
factors, including lack of proper training management, lack of financial capital, the incorrect application of contractual agreements, leaving passive mineral resources have brought degradation of industrial activity. By the last decade until today, the country's industrial heritage has lost its primary manufacturer destination. The transition to the inefficient privatization has reduced the opportunity for investment in manufacturing. Facilities are left abandoned by increasing the opportunity for increasing the degree of degradation, environmental pollution, and to their complete destruction.

Economic analyzes carried out show that the country has potential for sustainable intervention in these industrial structures, to restore the primary function for which they were built, or their adaptation to new functions, suitable in areas where they are.

PROBLEM OF INDUSTRIAL HERITAGE REGENERATION OF ALBANIA

The transformation which the economy of Albania, after 90s, has been going through the restructuring of its industry and reorganization of its production, have resulted in a large number of unused, abandoned and neglected industrial brownfield sites, some of which are also in environmentally unsustainable condition. Industrial facilities built during the period of socialism until 1990 have the following common features (Nepravishta, 2013):

- Were established on the outskirts of cities, but with the rapid urbanization occurring after the 90s, these structures remain within the urban area.
- Constitute a group of buildings linked or not with each other, sometimes built with various construction technologies and materials.
- Standardization was one of the key elements that were used for saving and to increase efficiency in construction.
- After 70s in the construction was used the reinforced concrete skeleton and later the use of pre-strained elements.
- Are designed and built without minimum standards of comfort (no heating, lack of thermal insulation).
- They were subject to a higher level of use and abuse, and the maintenance standards have been low.
- High level of pollution. Sometimes were used and harmful building materials like asbestos, lead, etc.
- Systems were fully amortized.
The majority of inherited industrial sites, previously developed as a built space nowadays, are evidently inefficiently used, but they have the potential for urban renewal and sustainable development. The majority of the sites that possess significant values and revitalizing possibilities are mostly owned by government institutions (Parangoni, 2010). Nowadays, the phenomenon of industrial heritage that marched the social and economic development of Albania has not been sufficiently explored or they're potential carefully evaluated; no official definition and classification are in use, and no formal approach to this rather complex problem is used by the national and local authorities.

**INDUSTRIAL HERITAGE AND SUSTAINABLE REGENERATION**

Conservation of industrial artifacts and technologies began in Europe and the US in the 1950s and focused on the archeological preservation of the relics of the industrial revolution (Wang & Jiang, 2007). Industrial heritage regeneration has been the focus of the urban debate, both theoretical and practical, since the 1980's. A number of European countries and cities began the process of rebuilding and revitalizing their brownfield sites at different times in the past, while countries of the former Eastern Bloc have dealt with the problem of brownfield regeneration only since 2000 (Đukić et al. 2014).

According to the Nizhny Tagil Charter, industrial heritage refers to the remains of an industrial culture that possess historical, technological, social, architectural and scientific value. These sites describe and exhibit industrial histories, industrialism and the universal value of engineering, design, and planning. In principle, the Charter advocates 'preservation in situ' and thus, it recommends re-use that respects the functional integrity and offers psychological stability for local communities (TICCIH, 2003).

RESCUE defines sustainable regeneration of degraded areas such as process management, rehabilitation and return to profitable use in such a way as to ensure the attainment and continued satisfaction of human needs for generations present and future about environmental sensitivity, economic stability, strong and institutionally acceptable by society, and in a balanced way within a specific regional context (RESCUE, 2003). Significantly, this concern of sustaining local cultural contexts and transforming obsolete spaces into viable places within industrial heritage conservation connects itself with urban regeneration, which basically seeks historic, aesthetic and economic elevation of degenerated areas (Choa & Shin, 2014).
VALORIZATION AND ADAPTIVE RE-USE OF INDUSTRIAL HERITAGE SITES

Industrial heritage is a relatively new compared to other cultural heritage objects. Social consensus on acknowledging industrial spaces as heritage sites are not yet widely reached while they are under the pressure of remodeling, demolition and redevelopment (Choa & Shin, 2014). The first step toward the reactivation of this resource concerns in Albania is the formulation of a national strategy for the regeneration of industrial heritage, as an alternative to a society that continuously grows and heavily depletes its natural resources. For this it is necessary:

- Registering an listing of industrial properties,
- Identifying, inventorying and evaluating the condition of industrial properties,
- Classification, assessment of their development potential,
- Regeneration and adaptive re-use.

Adequate evaluation and planning processes, expert advice, and appropriate funding are required to facilitate good intentions of conservation (Pearson & Sullivan, 1995). Public initiatives and governmental intervention, which could coordinate financial resources and long-term management planning, are required for sustainable maintenance (Choa & Shin, 2014). Regeneration of industrial heritage has sought to find a way that obsolete industrial buildings and sites without damaging the embedded cultural and historical significance can be preserved and accommodate new socio-economic demands. In this respect, adaptive re-use has been regarded as one of the desirable conservation options, which could maintain physical forms and pursue their continuous utilization in a cost-effective way (Bullen & Love, 2010; Nepravishta, 2013; Yildirim & Turan, 2012; Yung & Chan, 2012). Re-use and regeneration of obsolete industrial spaces has been discussed and practiced as a new method for changing negative images of declining areas, promoting public participation in conservation and boosting regional development (Andrei, 2010; Hopers, 2002; Mansfeld, 1992; Olgethorpe, 1987; Pretes, 2002; Ronchetta & Trisciuglio, 2008; Tagliaferri, 2006; Wang, 2009).

In contrast to the dwellings and commercial facilities, adaptive re-use of industrial facilities was less common in Albania. Reuse of industrial facilities for other purposes has not been as numerous as in other buildings. It is because the size, condition and structural composition, in many cases, were not suited to adapt to other functions. Mainly existing industrial facilities are reused for a new industrial function, and some of these structures were reused as small workshops, offices, shopping centers, housing for the homeless people.
Economic problems and technological backwardness have to inherit physically depreciated and outdated industrial buildings that have lost their functions. Regeneration and adaptive reuse of this property is a possible option for preservation of this heritage, but this is dependent on the financial and legal factors. Today, some of local government policies tends to encourage the regeneration of industrial areas (e.g. the adaptive re-use of the former Auto-tractors Factory in Tirana for social housing, etc.), since it is one of the interventions that have positive effects on sustainable urban development.

Some industrial heritage sites can be used for the same purpose, and other can change the use to other ones. In question is the feasibility of the intervention were economic one is the most important. New functions and usages might better reinforce heritage values and promote future sustainability. Adaptive re-use can foster the economic regeneration of industrial areas by creating and establishing cultural values of obsolete spaces and their social recognition and viability of the heritage sites. The question of which functions can best convey social memories embedded in such spaces emerges as an important issue. For these reasons a set of assessments has to be done in different phases of an adaptive re-use project (Fig. 1).

**Figure 1:** Comparison of functional requirements in relation to the building data

(Nepravishta, 2013)
CASE STUDIES: PROPOSAL FOR INDUSTRIAL REGENERATION AND ADAPTIVE RE-USE

Former iron-nickel extraction and processing factory Guri i Kuq, Pogradec

Industrial complex of extraction and processing of iron-nickel was built with Chinese support in the years 1976-1980. The area interacts as a full-cycle industry, starting with the extraction of iron in the tunnels of the mine and 16 processing facilities of the industrial complex. It was used for 15 years for producing Ferro-nickel. Since 1992, the complex is abandoned and is going to the buildings physical degradation. The slope of the terrain favored the land sliding, bringing soil inside the facilities, and therefore damaging of retaining structures. The iron ore, stored for years in the shape of industrial stocks of thousands of tones, is a major pollution problem of soil, groundwater in the surrounding area.

For this reason, it is necessary to propose a future transforming of the area and integrated with the city, to bring back the memory of the community, as one of the most populated areas of the former time. Identification of the current state of the Guri Kuq area was essential for finding ways to regenerate it. In this regard, the activities that are proposed to be incorporated, for the preservation of the identity of existing buildings and site are recreational, social and cultural character, for the tourism and economic development of the area supported by advanced technology that are capable to provide a high quality environment (Fig. 2).

![Figure 2: Existing situation and adaptive re-use for youth center; hotel and spa. Source: DA archive](image)

Former factory for extraction and processing of iron mineral in Përrenjas

The industrial city of Përrenjas was established in 1961 with the construction of the iron processing plant. It was built according to a well-defined plan and the creation of all ancillary elements of the city Geology and Mining in 1963, hospital workers, workers' houses and
cultural buildings. After the bankruptcy and closure of the industrial activity since 1992, the industrial facilities remain unusable and are deteriorated. The industrial dumps are turned to an environmental threat, because they are located too close to the inhabited area.

Intervention in this industrial area is efficient because the physical condition of the facilities is good, in general because the structure of the buildings has resisted in time. One possible option is to restore the original function, but the restoration of the mine creates environmental problems because it is very close to the inhabited area. Proximity to the urban area will be defined the strategy for the regeneration of the contaminated area. Adaptive re-use of existing structures in public facilities like cultural feature, social and educational would be appropriate solution by bringing local economic development, employment, education and youth activity (Fig. 3).

![Existing situation and adaptive re-use for social activities. Source: DA archive](image)

**Figure 3:** Existing situation and adaptive re-use for social activities. Source: DA archive

**Industrial area of the Thermo Power Plant in Fier**

In the period 1960-80, city of Fier turns into one of the most important industrial centers of the country. The industrial zone of chemical and energetic complex is positioned on the southern edge of the city. It has provided great opportunities for employment and development of the city and the entire region. Thermo Power Plant was built in 1966 with the help of China and Czechoslovakia. Building typology represents a grouping based on two units, manufacturing facilities; administration and maintenance facilities. In a general plan, this industrial area conceived as a very flexible and with good morphological development.

Since 2007 TPP of Fier was not in function as the entire industrial complex. The current technical condition leaves much to be desired; over 90% of the equipment does not function.
The industrial complex represents degradation of facilities and disposition to the creation hazardous areas and with high content of harmful substances. In general conclusion, this area has lost compactness to work as a whole.

Despite numerous claims that are a result of the drop, the area offers the potential and real value, which can be exploited for various purposes. Among the values that represent this area, we can mention the presence of a regular orthogonal network, placement of objects and roads, significant surface and strategic positioning against national road network. Sustainable adaptation of the industrial zone would consist in the realization of some poles with different functions of incubators with research laboratories in the field of sustainable energy and agribusiness (Fig. 4).

**Figure 4:** Existing situation and adaptive re-use for science incubators. Source: DA archive

**CONCLUSIONS**

The social, cultural, environmental and economic potential inherent to some of the industrial heritage sites in the main industrial cities of Albania indicates their importance for the urban community and points out the necessity for their regeneration. These abandoned and disused sites represent an exceptional strategic reserve of space and urban resources. Industrial heritage reactivation is an economical solution that supports sustainable urban development based on more efficient exploitation of these resources.

The assessment system can be applied by heritage institutions (Institute of Cultural Monuments, Ministry of Culture) to suit the needs of the industrial heritage preservation in
the wider context of Albanian to better manage the entire built heritage resources. Preservation of industrial heritage, as a key strand of the country’s history, could be part not only of cultural institutions but it needs to be very important part of the local and the national planning policies.

The analysis of three case studies noted that despite political factors, economics and technology that led to their breakthrough, has brings to the conclusion that such industrial areas offer great potential and opportunities for adaptive re-use. These potential and development opportunities compared with different needs and concerns of the site and surrounding areas, such as pollution, degradation, informality, and backwardness, can be translated into possible practical solutions. It can be seen as a new opportunity for return to function not only of these abandoned areas but also for the overall economic and social development of the entire region.

REFERENCES
19. Internet source: