

Summary of Findings from the Evaluation of the Current Periphery Building Environment for Lezha City's Future Vision.

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Introduction- The city of Lezha has been traced along the Drini's riverbanks since antiquity, not far from its estuary. There are two different hills to the east of this territory, each with ruins of historical defences. Lezha's historical role as a well-fortified harbour was characterized by its geographical location. It has always been separated into two parts, the upper and lower city, due to its location.

As a result of uncontrolled urban development after the 1990s and the phenomena it brought as a result in the territory, such as urban dispersal, extinction or damage to public spaces, construction in areas of sensitive natural and agricultural lands, as well as the endangerment of specific ecosystems, harmonization of sustainable urban development, appears to be necessary as a priority action. Sustainable urban development attempts to provide a high quality of life for all residents and users in urban areas by providing public services that meet certain criteria.

The plan establishes the norms, conditions, and necessary criteria for development and well-being through hierarchization, consolidation, specialization, and centre regeneration, ensuring the construction of sustainable communities and the preservation of cultural and traditional values.

Lezha, as the region's most developed metropolitan centre, has a degree of morphological complexity. The presence of the river and territorial topography, on the other hand, are city-forming elements that have shaped its morphology. The city, logically, chooses to develop linearly in

the straits formed by the river and the hill radius and to expand in a funnel-shaped pattern on the plains. The train station on the western part of the river sets the tone and demonstrates the potential for the city to split into two functional poles, but the eastern side of the river looks to be the most articulated at the moment.

An architectural identity in terms of the perception of Lezha city

In time, neo-rationalism, minimalism, and other comparable tendencies (all of which have formal laconicism) create a communication aesthetic. The employment of archetypes and decor scales outside the framework of the time was due to references to classical or neo-classical components. The usage of formal and aesthetic cues from other cultural and historical settings is likewise discouraged. Regarding the materials for the façade, there are encouraging coatings with natural or composite elements (tiles/panels), whereas the use of plain plaster is discouraged. Due to the lack of connection with the existing context and landscape of the historic region, as well as its rapid degradation, paints in neutral tones such as white, beige, grey, and similar tones are recommended when using plaster facades.

The city's new development regions are in the heart of the metropolis. They develop the southern half of central Skanderbeg Square in particular. The town hall is positioned in the eastern section of the plaza, while the river Drin flows through the western part, creating a landscape with significant urban potential in connection to the city. The silhouette of



Fig 1 / The actual state of the boundary zones. Source/ Google Earth

the castle of Lezha, on whose foundation the city is created, is equally interesting for the city's image.

Both zones are defined by the city's primary movement axes. Aside from actual structures, the occurrence of expansions is highly common, as seen in practically every community housing. Buildings, scenery, and public space are all deteriorating, in addition to the formed urban framework.

During the socialist era, traces of urban forms were mostly read on which construction forms were built in an unconstrained manner to consolidate texture and height amplification of the urban silhouette.

The aesthetics of the reinforced concrete frame

With the exception of unstable buildings and temporary dwellings, these items are built to last; they have a variety of features, but the fact that they are produced with reinforced concrete framed structures is a common denominator.

Many of them are bare and faceless skeletons waiting to be inhabited, ready to be closed, covered, shielded, softened, and enriched, old building sites, abandoned wrecks, and ruins that have never been inhabited. Overall, they create a distressing situation, almost recognizable in their ugliness, that speaks the same language as modern industrial landscapes, with their rough osteological character and skyline of visible rebars.

These houses could be perceived as a hybridization of the Maison Domino if

viewed via the architect's critical lens. Apart from the basic motions of excavating, fencing, and covering, Le Corbusier attempted to elevate aesthetically the operations that man makes to live: erecting and closing frames, typical of lightweight construction, were identified as the most symbolic of modernity. Due to the gap between acts of support and enclose introduced by new technologies, vital elements may become great in accordance with modern man's sensibility and manner of existence.

Le Corbusier was against "paralyzed plant" masonry, which he considered hard and inflexible, and he demonstrated how a house prototype for the future, the Maison Domino, could be regarded as a system of slabs similar to trays on which to freely articulate spaces. The liberation from the limitations of the base and roof, the formal freedom of the facades, and the flexibility of the inner spaces were all considered great successes of modernity, all of which were influenced by the usage of the concrete frame.

Aware of inherited culture's irreversible crisis and the urgency of the "home of their own time," Le Corbusier saw the "machine for living" as the materialization of a standardized prototype, almost a return to the "architecture without architects" of the past, which was powered by the common sense of living. However, he was aware of the persistent persistence of an archetypal formal world in the concept of home, which is linked to places, climates, and cultures. The Maison Domino, which distinguishes itself in a variety of ways, might serve as a foundation for local



Fig.2 / The actual state of the boundary zones. Source/ Google Earth

quirks. The Maison Domino was also a unit that could be repeated in a complicated set of forms, a "tessera" that could be used to create vast multi-family groups or even cloth. In today's suburbs, the skeletons of that generous vision are only skeletons blocks waiting to be gradually closed, like beehive cells: a principle of space appropriation, however, that Le Corbusier approved and declined in many of his ideas.

Regarding the current periphery building environment, the table below are demonstrating four different locations of four representative building typologies that follow the perspective view of the and cultures. The Maison Domino, which distinguishes itself in a variety of ways, might serve as a foundation for these local quirks.

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Regarding the current periphery building environment, the table below are demonstrating four different locations of four representative building typologies that follow the perspective view of the Domino system. For each of them is given some technical aspects from the number of floors to the functionality of the building and also the technical system sketch.

Several distinctive elements of the Albanian territory have been identified based on the process of people's free mobility, the shape and level of informal developments, as well as their spatial and building features. During the communist period, the house was subdued owing to a lack of sufficient revenues; however, during the liberalization phase, the house was re-dimensioned in spaces much larger than the necessities, thanks to family remittances. The quality structural materials are mostly achieved in a chaotic morphology, in the form of villas, as seen from an undefined and inconclusive perspective.

Across the peripheries of Lezha county, mute concrete skeletons are a typical sight. They come in a variety of shapes and sizes, eliciting feelings of abandonment and despair in some situations, but also a sense of something missing, a desire for atonement, anticipation, and hope in others. This concrete skeleton isn't completely inelegant; in fact, it has an intimate sense of proportion that lends it respect, a sense of pride in its undeniable presence in the Albanian countryside as it flows toward the sea, without revealing any particularly identifying or characteristic aspects. It appears to be well constructed. It also shows some foresight: the external structure to the right is half the breadth of its counterpart, allowing for future extensions without having to change the proportions of the rest of the construction. The structural frame appears to be solid, and the columns appear to be strong. Following an initial examination of the structural frame-infill subject, which

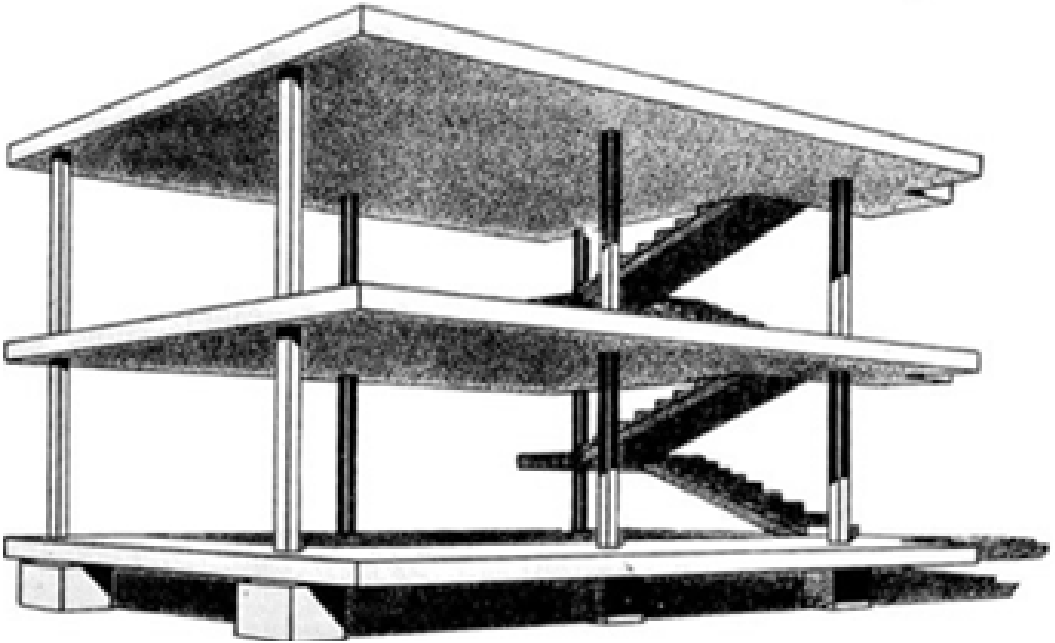


Fig.3 / Perspective view of the Dom-ino system, 1914. Image from Le Corbusier & Pierre Jeanneret, *Oeuvre Complète Volume 1, 1910-1929*, Les Editions d'Architecture Artemis, Zürich, 1964.

contains several well-known instances, it can be noticed the quest for a scale that respects the building's overall proportions. It can also be recognized as an attempt to define an articulate envelope in stages, with the goal of renewing the structure without disowning it, instead enhancing its perception and recognizability through transparency.

An emphasis on the vulnerability of the built environment

A variety of approaches, ranging from sophisticated probabilistic quantitative analysis to qualitative analysis, are being used to study a built environment. There is no "best" model to apply; instead, the best model should be chosen depending on a variety of considerations, such as the stakeholders involved, the severity of the issue, and the availability of data. It is more crucial to properly analyze the built environment to determine the level of vulnerability, which roughly indicates the degree to which specific buildings or areas are susceptible to being affected by a potential future event (seismic, flood, landslide, etc.) causing a disaster. The goal is to gather relevant data in a qualitative and/or semi-quantitative manner to characterize the risk, which can then be used for a variety of decision-making purposes by authorities and specialists, or even communities on a local territorial scale. This is done in light of the fact that Lezha is vulnerable to many natural hazards, particularly earthquakes and flooding, bearing in mind that it was hit in 2019 by a powerful earthquake. Since each structure responds to an

earthquake differently, it is important to carefully examine each building's performance using the appropriate methodology, and depending on the findings of the evaluation, appropriate reinforcement measures must be adopted when necessary. It is essential to categorize buildings based on their construction period, material quality, and structural systems in order to do this. In addition to classification, it is essential to have maps with PGA and geological configuration values. Based on the thorough approach the purpose is to provide an overview of the collapse mechanism while taking into account their structural system.

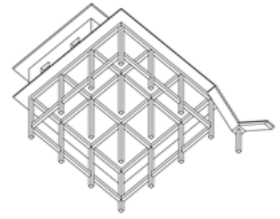
Conclusions and Recommendations

Only visual inspection was used for the evaluation, and site visits and examination of images and photographs were also used. Following are some of the interventions and actions the municipality can take, taking into account the aforementioned results and recommendations:

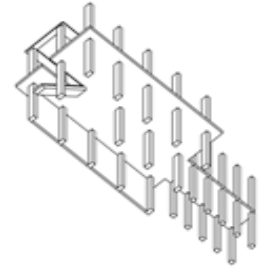
1. The construction of a database with many crucial facts about the buildings. This database should contain data in the form of tables, graphs, and particularly maps that provide a thorough overview of the buildings in terms of their structural typologies, construction dates, and potential existing interventions for performance upgrades.
2. To achieve the establishment of the database and reduce the risk imposed, it is crucial to use structural engineers with specialized training.



1. Dajç, Lezhë, Albania
 41° 54' 9" N 19° 36' 21" E
 floors: 2
 function: residential / storage
 state of occupation: abandoned
 built-up area: 72,1 m²
 distance from the coast: 10 km



2. Kallmet, Lezhë, Albania 41° 50' 47" N 19° 38' 33" E
 floors: 2
 function: -
 state of occupation: abandoned
 built-up area: 99,18 m²
 distance from the coast: 4 km



3. An assessment of the danger presented to each of these structures by a future earthquake can be given based on the data from the database and the advanced analysis described in the methodology at the beginning of the report. Instead of post-earthquake interventions, a pre-earthquake evaluation might be carried out. These decision-making authorities will be informed of this risk.

4. Even the Lezha municipality may find it useful to consider the expertise New Zealand has to offer when determining whether or not a structure is earthquake-prone. The engineers employed by the municipality must carefully determine the percentage of these buildings that are regarded as earthquake-prone (34 per cent for New Zealand). This percentage is significant since it has a direct impact on the economy. After the results are acquired, the building needs to be adequately upgraded within a certain amount of time (in case intervention is required). The municipality's council sets the time, and if the owner doesn't make the necessary improvements, the item will be demolished.

5. The buildings in the examined region are similar in terms of building age and building typology. There are mostly brand-new structures that are no older than 20 years old, including cases of masonry buildings as well as frame-reinforced concrete structures.

6. The majority of the zone is built along the road axis, making it easy for people

to use infrastructure and reducing danger because entry is quick in an emergency. However, certain sites are a little more difficult to get to due to their mountainous terrain.

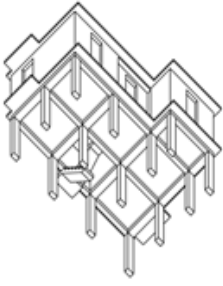
7. To account for the complex nature of urban and non-urban systems, it is crucial to combine information on a building scale with additional data characterizing the surrounding built environment (infrastructure and open space). Such a link is crucial both during the crisis and in the long-term aftermath of a disaster.

8. One of the simplest and most understandable ways to display the data is through mapping. Various stakeholders, including municipality specialists, engineers, and planners, as well as the general public, which is the major stakeholder because it would be most directly impacted by these potential disaster scenarios, may easily interpret and understand such information. Information, perception, and education are essential for preventing losses and getting ready for upcoming events.

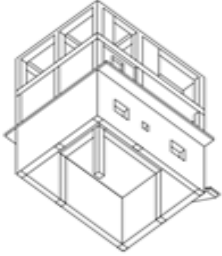
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3. Shëngjin, Lezhë, Albania 41° 45' 19" N 19° 38' 28" E
floors: 2
function: residential
state of occupation: work in progress
built-up area: 79,36 m² distance from the coast: 3,2 km



4. Lezhë, Lezhë, Albania
41° 47' 9" N 19° 37' 39" E
floors: 3
function: residential /storage state of occupation: Abandoned
built-up area: 75,6 m²
distance from the coast: 1,4 km



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