

The continuity of Tirana boulevard through Paskuqan Lake

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Abstract - This report is prepared as part of the Joint International PhD Program IDAUP by POLIS University (Tirana, Albania) and Ferrara University (Italy), focusing on urban planning and architectural solutions for sustainable urban development. The workshop addresses traffic congestion in Tirana, Albania, caused by rapid urbanization, inadequate infrastructure, and centralization of activities. By reconfiguring urban form, we aim to mitigate congestion without solely relying on expanding road networks or improving public transport but create new centres in different areas of Tirana. The output of our group of this workshop includes the development of alternative urban centres to decentralize traffic flows, enhancing liveability and sustainability, more specifically the area at the end of New Boulevard and Paskuqan. Inspired by the concept of the linear city, our vision for the proposed area focuses on extending the New Boulevard to terminate at Paskuqan Lake. This extension is envisioned as a reflection of the current Tirana city center, with the assumption that the new area will develop similar functional dynamics. By doing so, we aim to address Tirana's critical need for a mobility transformation that aligns with the urban challenges of the 21st century.

Keywords - Urban Form, Traffic Mitigation, Tirana

Introduction

Traffic congestion is a persistent challenge in many rapidly urbanizing cities, and Tirana, the capital of Albania, is no exception. Even though the total population in Albania has been decreased during the year Tirana's population continues to grow from 594,706 in 2001 to 925,268 in 2023 with a growth rate of percentage of 54.1% (Tab.1 population) and urban activities become increasingly centralized. (Fig.1 map of the actual situation) , the existing infrastructure struggles to accommodate the rising demand for mobility (Fig.2 map of the actual mobility) and the result is unsustainable levels of congestion, long travel times, and increased pollution, which together diminish the quality of life. While different solutions, such as expanding road networks, new rings and public transportation, are in place, they fail to address the deeper, systemic issues of urban form and spatial organization. Tirana was developed as a monocentric city from the urban plan of the Italian architect A.Brasini in 1926. The proposed road network was a combination between the orthogonal network

and the series of concentric rings. The general structure of the city was presented by the Italian master plan and is still present in Tirana today as it has formed the way of its current development. The strong centralization and concentration of the main functions of the city has produced traffic in the road circulation of the central streets and at the same time the gap of services (Fig.3 traffic analysis) in the peripheral neighborhoods by concentrating all in the center. This work explores an alternative approach to traffic mitigation in Tirana by focusing on the reconfiguration of its urban form. By decentralizing economic and social activities and enhancing peripheral urban centers, this strategy aims to reduce the dependence on the city's historic routes. A key aspect of this strategy involves developing the Paskuqan area as a new urban pole, positioned to alleviate pressure on the city's historic centre. By extending the boulevard to the end of the Paskuqan Lake, this initiative aims to create a new peripheral centre, offering new economic, social, and recreational opportunities.

The New Boulevard recently constructed is linked to the New Ring is a key strategic north-south within Tirana but still the extension of it till the River of Tirana creates a physical border for the city. Tirana is a city of two rivers and two lakes in its ends and surrounding by mountains our aim is to extend the city further this new boulevard to the end of the Paskuqan Lake with the idea of mirroring the actual centre due to its similarities (Fig.4 first draw of the boulevard). This transformation also includes the redesign of the actual roads also adding a new ring which relates to the actual ring and with direction to the airport.

Vision

Our vision is to strengthen the urban identity of the city by reinforcing its primary spatial axis through the development of a new multifunctional district that both complements and reinterprets the existing urban fabric. This approach is grounded in the idea of continuity and extension, where the new development is not conceived as an isolated intervention, but as an integral part of Tirana's evolving metropolitan structure.

The proposed district is designed to seamlessly integrate with the current city layout, adopting an organic urban form that responds to the natural morphology and cultural context of the Paskuqan area. Particular emphasis is placed on resilience, ensuring that the spatial and infrastructural solutions are capable of addressing both natural hazards and human-induced risks. In this regard, the extension of the city's main boulevard towards Paskuqan Lake acts as a structuring element, creating a cohesive urban flow and reinforcing the perception of a continuous and legible urban system.

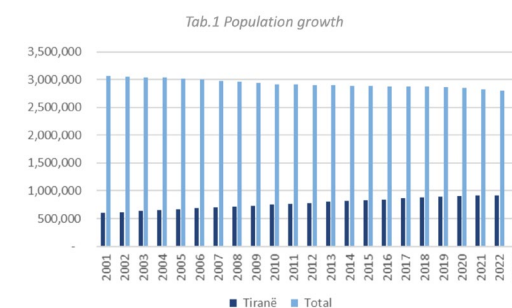
Three main strategic components underpin this vision:

1. Establishment of a green-blue ecological belt

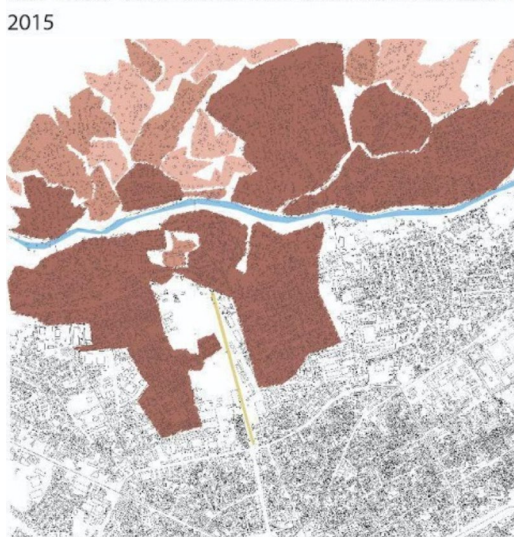
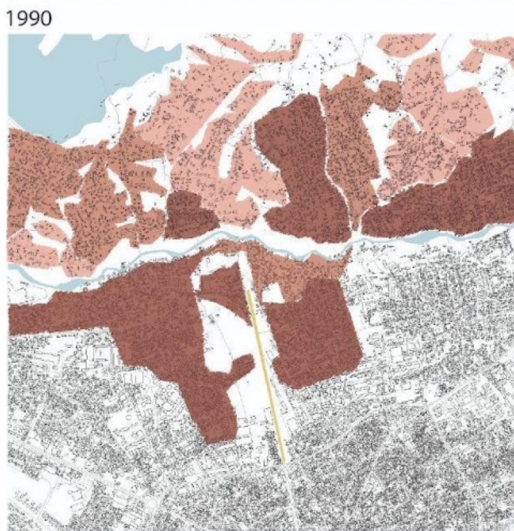
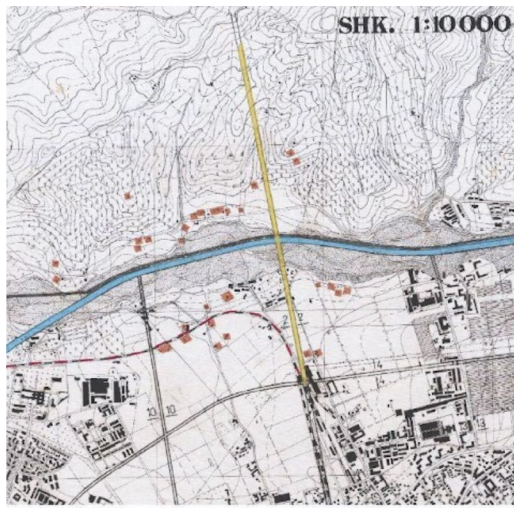
A continuous green corridor is proposed along the river and the lake, functioning as both an environmental and spatial backbone for the new district. This green belt enhances ecological sustainability by supporting biodiversity, improving air quality, and regulating microclimates. At the same time, it serves as a natural buffer against flooding, mitigating the impacts of climate change and extreme weather events. By preserving and revitalizing natural landscapes, the project strengthens the relationship between urban life and nature, while embedding disaster risk reduction strategies within the spatial structure of the city.

2. Provision of integrated public services and community infrastructure

The new district is envisioned as a hub for essential public services, including educational institutions, ecological museums, cultural facilities, and recreational spaces. These functions are carefully embedded within the landscape, creating a strong dialogue between built and natural environments. Beyond improving quality of life, these facilities support social cohesion, environmental awareness, and inclusive urban development. The planning approach prioritizes resilience by incorporating



Tab. 1. Population growth
Source/ Instat (2023)



2024
Fig 1. map of the actual situation
Source/ authors (2025)

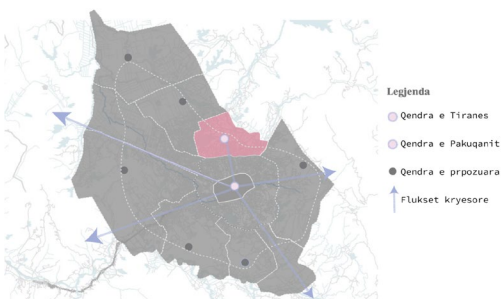


Fig 2. map of the actual mobility
Source/ authors (2025)

adaptive design principles, such as flexible public spaces and infrastructure capable of responding to future uncertainties.

3. Resilient infrastructure and mobility-oriented development

A key aspect of the vision is the integration of robust infrastructural systems designed to withstand natural hazards such as floods and earthquakes. Advanced urban planning strategies are employed to enhance adaptability and long-term sustainability, including risk-sensitive land use planning and resilient building typologies. The proposal also includes a new road connection linking the ring road to Kamza and the airport, which will redistribute vehicular traffic and reduce congestion along existing routes.

In parallel, the spatial organization promotes transit-oriented development, with higher-density residential and commercial areas strategically located near the tram line and train station. This encourages the use of public transport and reduces dependency on private vehicles. Mixed-use neighbourhoods, combining housing, retail, and office functions, are designed to minimize travel distances, enhance walkability, and support vibrant street life.

The tram line is envisioned as a key element of the mobility system, seamlessly integrated with existing transportation infrastructure to create a unified, efficient, and sustainable network. Together, these interventions contribute to a more balanced and accessible urban structure.

Overall, this vision aims to create a vibrant, inclusive, and environmentally responsive urban environment that not only addresses present-day needs but also ensures long-term resilience. By integrating ecological systems, public services, and sustainable mobility within a coherent spatial framework, the project positions the city towards a future that is both adaptable and regenerative, safeguarding its communities against emerging environmental and urban challenges.

Methodology

The methodology process involves site visits, diverse representational techniques such as sketching, parametrics, and collage. During our work and desk review of demographics were conducted. Deliverables include physical models, planimetric and altimetric representations, and perspectives of proposed solutions. This initiative contributes to a broader discourse on urban rehabilitation and sustainable city planning as the new center of Tirana.

Results

The proposed idea aims to decentralize urban activities by creating a new urban hub in the Paskuqan area, thereby alleviating pressure on Tirana's historic core and its already congested primary corridors. In response to the rapid urban growth and increasing mobility demands, the project envisions a polycentric development model, where new centers of activity redistribute



Fig 3. traffic analysis. Source/ authors (2025)



Fig 4. first draw of the boulevard. Source/ authors (2025)



Fig 5. proposed roads and connection of the tram. Source/ authors (2025)

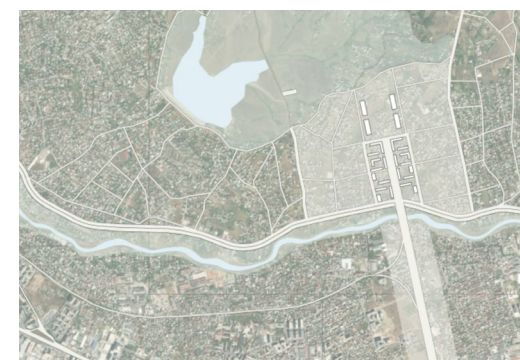


Fig 6. proposed plan Source/ authors (2025)

economic, social, and cultural functions across the metropolitan area.

A key spatial intervention is the extension of the main boulevard towards Paskuqani Lake, transforming this axis into a strategic connector between the existing urban fabric and the emerging district. This extension not only enhances physical accessibility but also establishes a new focal point for economic development, public life, and recreational activities. The lakefront becomes a central element of the project, integrating landscape design with urban functions and creating a strong identity for the area. In parallel, the proposal includes the development of a new ring road connected to Tirana International Airport, which is expected to significantly improve regional connectivity and divert transit traffic away from the inner city. This infrastructure intervention will contribute to a more efficient distribution of traffic flows, reducing congestion and travel times across the metropolitan network.

To further support sustainable mobility, the integration of a tram line linking the new district to the train station and other key urban nodes is proposed. This public transport system is designed to provide a reliable, low-emission alternative to private car use, encouraging modal shift and supporting a more environmentally sustainable urban mobility system.

From the perspective of urban development and public service provision, the project emphasizes the introduction of key social infrastructure, including educational institutions, ecological museums, cultural spaces, and recreational facilities. These functions aim to enhance community well-being, promote environmental awareness, and foster social interaction, contributing to a higher quality of life for residents.

The new district is conceived as an extension of Tirana's urban identity, reflecting its spatial patterns, vibrancy, and mixed-use character, while carefully responding to the natural landscape and cultural context of Paskuqan. Particular attention is given to the integration of green and blue infrastructure, ensuring ecological continuity and resilience to environmental challenges.

Overall, the proposed development provides a comprehensive framework for sustainable urban growth, addressing critical issues such as traffic congestion, spatial imbalance, and lack of public amenities. By promoting decentralization, enhancing connectivity, and prioritizing sustainable mobility and public services, the project contributes to building a more resilient, inclusive, and livable metropolitan Tirana.

Conclusions

Key outcomes of the proposed plan include a significant reduction in traffic congestion and a more balanced distribution of mobility flows across the metropolitan area. By shifting from a mono-centric to a more polycentric urban structure, the plan alleviates pressure on Tirana's central corridors and introduces alternative routes and destinations that redistribute daily movements more efficiently.

A major contribution of the proposal lies in the improvement of mobility through the integration of multimodal transport systems. The combination of road infrastructure, public transport (including the proposed tram line), and pedestrian and cycling networks creates a more cohesive and accessible mobility framework. This integrated approach not only enhances connectivity between key urban nodes but also promotes a shift towards more sustainable modes of transport, reducing dependency on private vehicles and lowering environmental impacts.

In parallel, the establishment of a new vibrant district introduces a diverse mix of public services, cultural institutions, and recreational spaces. This mixed-use development supports everyday urban life by bringing essential functions closer to residents, encouraging social interaction, and strengthening local economic activity. The presence of educational, cultural, and leisure facilities contributes to the creation of a dynamic and inclusive urban environment that responds to the needs of different user groups.

The extension of the main boulevard towards Paskuqani Lake represents both a spatial and symbolic transformation, redefining the relationship between the built environment and natural landscapes. Together with the creation of a continuous green belt, this intervention enhances the ecological performance of the area by improving air quality, supporting urban biodiversity, and providing climate-responsive spaces. At the same time, it elevates the aesthetic and experiential quality of the city, offering accessible green and blue spaces that promote well-being and recreation.

Overall, these outcomes contribute to fostering a more resilient and adaptable urban system, where mobility, environment, and urban life are integrated into a cohesive framework. The plan supports a harmonious coexistence between urban development and natural systems, positioning Tirana towards a more sustainable, livable, and future-oriented urban model.

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