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# **Infrastructural projects and the difficulties of project applying**

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## **1 Introduction**

In this paper I want to present the geotechnical and other difficulties which are present for implantation of the project .Arber Road Project is a multi-year project that has started since 2005 and is still unfinished, even a segment of it is without a project. The reckoning of some governments and also the attraction of some companies to design, implement and maintain this road segment has greatly hampered the implementation of this project.

This segment has a total length of 73.5 km, the width of the road will be 10.5 m, with a maximum slope of 6.99% and the speed of movement should not be higher than 80km / h.

This road is designed as it will enable a better connection between Tirana and Dibra, as well as all the areas where the project will pass. Also this road will shorten the distance by nearly 60 km, considered one of the most difficult projects that have faced our country, and also is an important corridor for Albania.

## **2 Project Specifications**

The project is divided into 6 segments, of which about 20.12 km are completed, part of which is built 15.175km, there is a project for 26.372km of which no construction has begun and 11.8km have no project, the total length of this project is 73.5 km. This project has started construction in 2008 to complete in 2013, 43meanwhile we are in 2018 and half of this project has not been implemented.



**Fig. 1:** Scheme of the corridor

**Segment 1.** Starts at the exit of Tirana, where the existing road ends, and ends at Brari Bridge, where construction works have started. Its length is 1,153 km.

The road follows a new footprint, different from the existing road leading to Brari Bridge. This is done to avoid the road that the community uses, as well as to have a fair track, thus facilitating early traffic to the Arbr Road. This segment ends before entering Brari Bridge, exactly where road construction work has started on this trail. There is no existing project here. The width of the road will be: 2 x 3.5m crossing line + 2 x 1.25 asphalt pavement + 2 x 0.75 knots or unpaved rope. So, we have an 11m width road, where asphalt will be 9.5m

**Segment 2:** Brari Bridge - Zall Bastar, with a length of 5.46 km.

In this segment some of the works have been carried out with state budget funds, and these works are currently under construction, as well as works of art, scaffolding and the construction of a short tunnel. The road width according to the existing project is 2 x 3.75 m crossing + 2 x 1.25m asphalted pit or kite + 2 x 1.0m

unpaved rope. The road will be 12 m wide and the width of the asphalt will be 10m.

**Segment 3:** Zall Bastar - Output of Vasha Bridge, according to the project idea is the length of 23 188 km.

This is the main segment of the Arber Road, because it is the longest, about 1/3 of the way, permeates most difficult terrain from topographical standpoint, hydrological, and geological and is completely unaffected by the construction.

In the project, the length of this segment is 23,188 km. The concept has been designed and developed based on the topographic investigation, careful engineering and geological terrain across the footprint of existing projects Arber road.

The maximum height above the sea level where the road will pass is 872 m, the minimum radius of curves will be 80 m, and the maximum longitudinal slope is 6.99%. It provides for the construction of four bridges with a total length of 1214 meters and construction of Murrizi Tunnel with a length of 3246 meters.

**Segment 4:** Output of Vasha Bridge - Bulqizë, with a length of 9715 km.

At a length of 2.7745 km, only the roadway (without the substrates) was opened and works of art, such as carpets and retaining walls were built. The road has a width of 11m with a width of asphalt 9m. While for 6.94km, the work is in a layer of light, the width of the road is 3 crossing lines, 2 climbing and 1 downhill, ie 14 meters width and 12m asphalt.

In this segment is the tunnel of Qafë Bualli with a length of about 470m, which should be supplemented with lighting works, signage as well as the layer of stabilizer and asphaltic.

**Segment 5:** Bulqizë-Çerenec Bridge, with a length of 20.12 km.

In this road segment the works have been completed in 2009 and 2011. Road width is 11 m and asphalt 9 m. This segment has been introduced but is not part of the Project Idea.

**Segment D (6):** Bllatë – Maqellarë

To meet the needs of future traffic, the existing road Maqellarë-Bllatë border point should be reconstructed in the standard of urban roads for distribution to all of Arber road traffic towards Peshkopi (Maqellarë) and Macedonia (Bllatë border point). This segment connecting the village Bllatë customs point at which length

of 0557 km, as well as Maqellarën with a length of 2,438 km. This segment will be reconstruction of the existing road.

**Segment K (7)** is branching Exit Vasha Brigde - Klos.

This road segment has a length of about 3,092 km and connects the Arbr Road with the Burrel - Klos road, at the exit of the Vasha Bridge. The construction of this ramification is important as it will connect Burrel with Tirana at a short distance from the existing axis that is today Burrel - Milot-Tirana. This road will have the transverse section type C3, a total width of 10.5 m and a width of asphalt 9 m.

### 3 The difficulty of the project application

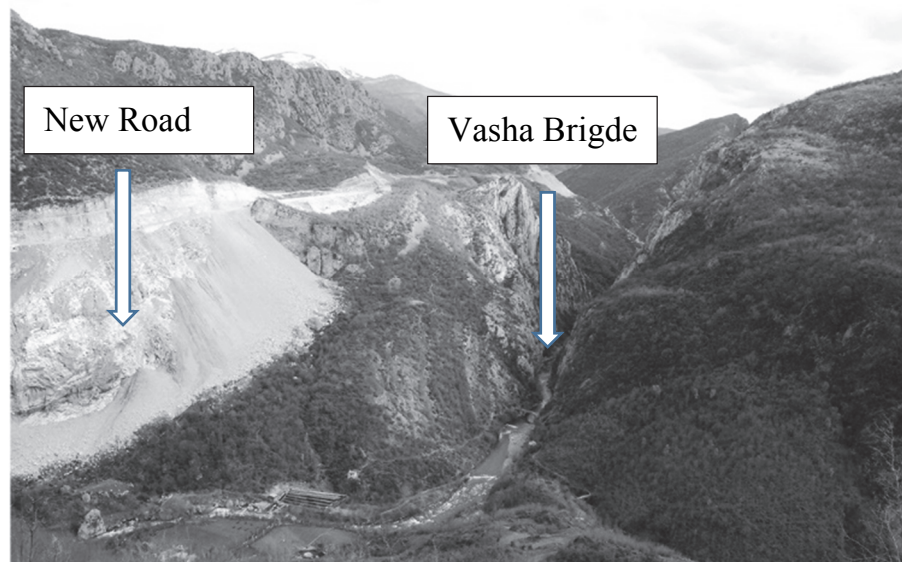
- One of the main reasons for applying for projects is the difficult terrain that Albania has, the terrain is very rugged, and this brings great difficulties in design and implementation. Large dangers of sliding, erosion, rock rolling etc are present. In the picture above we can see some difficult terrain of this project.



**Fig. 2:** Terrain of the Aber Road

- Then there are the geological-engineering conditions that require a long time and special funds to carry them out.

- The construction near the Vasa Bridge has several problems: relatively large height (like canyon shape), strong erosion, slipping etc.
- From geological point of view, in the same segment of this road we have flysh formation, weathered carbonatic rocks, unstable slopes etc.
- Tunnel construction in rock formation where are large tectonic movements is another difficulty .In these zones the rock can pass from elastic to plastic state(tunnel of Murrizi and Qaf Buall). In other part these tunnels passes near a very active and big tectonic fault: Dibra- Tepelena
- Vasha bridge is a slipping terrain. So there can have many problems with stability of slopes.



**Fig. 3:** The Canyon of Vasha Brigde

## 4 Conclusion

- The need for better field and project study, analysis and consideration of all geo-risk.
- There is a need for a review of projects that have not been implemented.
- Professionals in the relevant field should undertake sound infrastructure studies to find the key problem of not implementing these projects.
- Drafting policies to penalize firms that do not endorse projects.
- Design of this road is very difficult problem

## 5 Literature

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