



Milorad Jovanovski<sup>1</sup>

Igor Peševski<sup>2</sup>

Jovan Br. Papić<sup>3</sup>

Sead Abazi<sup>4</sup>

## **PRISTUP ZA ZAŠTITU KOSINA NA PRILAZNOM PUTU ZA LUČNU BRANU „SVETA PETKA“ NA RECI TRESKI, REPUBLIKA MAKEDONIJA**

### **Sažetak:**

*Poznato je da je problem zaštite kosina u stenskim masama izuzetno težak, jer zahteva kombinovanje geoloških i geotehničkih podataka, primenu odgovarajućih projektnih pristupa i adekvatnih zaštitnih mera u analiziranom regionu. U radu je prikazana metodologija razrađena na osnovu rezultata iz faza istraživanja, projektovanja i izvođenja radova na prilaznom putu za lučnu branu „Sveta Petka“ na r. Treski u R. Makedoniji. Date su primenjene metode za analizu stabilnosti zasnovane na teoriji verovatnoće, čime je formirana osnova za projektovanje zaštitnih mera. Na osnovu projektne i benefit-cost analize, definisano je nekoliko tipova zaštita kosina. Posebna pažnja posvećena je benefit-cost analizi sa aspekta tolerantnog nivoa rizika. Sakupljena iskustva mogu poslužiti kao dobar primer pri radu na sličnim problemima u praksi.*

### **Ključne riječi:**

*zaštita kosina, teorije verovatnoće, benefit-cost analiza, tolerantno nivo rizika.*

## **AN APPROACH FOR SLOPE PROTECTION ON THE ACCES ROAD TO ARCH DAM „SVETA PETKA“ ON RIVER TRESKA, REPUBLIC OF MACEDONIA**

### **Summary:**

*Slope protection of rock cuts is extremely complex task, where it is necessary to combine geological and geotechnical data, use appropriate design methods and implement protection measures suitable for the specific area of interest. The approach presented in this paper is based on results from phases of investigation, design and performing of slope protection measures for the access road for the arch dam „Sveta Petka“ on the river Treska in Republic of Macedonia. Analytical methods for stability analyses that are based on probabilistic theory were used in the design of support measures. Based on design and benefit-cost analyses, several slope protections schemes are defined. The methodology of cost estimation for slope protection types is explained, combined with proposals in definition of tolerable level of risks based on collected experiences during construction. The experiences can serve as a good basis for some future similar projects.*

### **Key words:**

*slope protection, probabilistic theory, benefit-cost analysis, tolerable level of risk.*

---

<sup>1</sup>Prof. Milorad Jovanovski, Ph.D., University “Ss. Cyril and Methodius”, Faculty of Civil Engineering, blvd. Partizanski odredi No.24, 1000 Skopje, R. Macedonia, jovanovski@gf.ukim.edu.mk

<sup>2</sup>Ass. prof. Igor Peševski, Ph.D., pesevski@gf.ukim.edu.mk

<sup>3</sup>Ass. prof. Jovan Br. Papić, Ph.D., papic@gf.ukim.edu.mk

<sup>4</sup>Ass. Sead Abazi, M.Sc., sead@gf.ukim.edu.mk