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## UZROCI FORMIRANJA I STABILIZACIJA KLIZIŠTA NA LOKALITETIMA U OPĆINI NOVI GRAD, SARAJEVO

### Sažetak:

U ovom radu analizirana su dva klizišta na području općine Novi Grad u Sarajevu, koji svojim različitim mehanizmom klizanja, odnosno pokrenute mase ugrožavaju individualne stambene objekte, prateću infrastrukturu a time i ljudske živote. U radu su prikazani rezultati istraživanja prirodnih uslova u kojima se odvijaju procesi klizanja, antrpogeni uzroci, kao i mjere sanacije za iste. Zbog različitog mehanizma pokrenute mase, primjenjene su različite metode istraživanja od inženjerskogeološkog i hidrogeološkog kartiranja, geomehaničkih istraživanja terena, sukladno problematici predmetnog područja. Utvrđeno je stanje njihove trenutne aktivnosti sa morfometrijskim elementima. Za potrebe detaljnije analize uticaja klimatoloških elemenata na pojavu klizišta koja su se aktivirala na predmetnim lokalitetima sa aspekta padavina korišteni su podaci od Federalnog hidrometeorološkog zavoda BiH (period 2012-2014). U posmatranom periodu zabilježen je trend povećavanja broja klizišta pri čemu je uspostavljena veza između hidroloških prilika i promjene hidrogeoloških i inženjerskogeoloških karakteristika tla u uslovima antropogenih djelovanja. Na osnovu utvrđenog inženjerskogeološkog i hidrogeološkog sastava i svojstava terena, stepena zastupljenosti egzogenih geoloških procesa i endogenih pojava, reonizacije terena, definisanog mehanizma klizanja, predstavljene su bitne preporuke i uslovi načina sanacije nestabilnog i uslovno stabilnog terena.

### Ključne riječi:

antrpogeni uzroci, morfometrijski elementi, egzogenih, endogenih pojava

## CAUSES OF FORMATION AND STABILIZATION OF LANDSLIDES ON SITES OF MUNICIPALITY „NOVI GRAD“ SARAJEVO

### Abstract

In this work two landslides were analyzed on area of municipality „Novi Grad“, Sarajevo which endangers individual residential buildings, associated infrastructure as well as human lives by it's different mechanism of slidings namely launched mass. This work shows result of a research of natural conditions in which processes of landslides have taken place, anthropological reasons as well as resolution measures. Due to different mechanisms of launched mass, different methods of research have been applied, from engeneering geological and hydrogeological mapping, geomechanical field research, in accordance with subject area issues. A state of current activity with morphometrical elements have been determined. For the purposes of more detailed analysis of the impact of climatological elements of emersion of landslides that have been activated on locations from aspect of precipitation, Federal weather bureau of state data have been used (period between 2012-2014). In the period of observance the trend of increasing the number of landslides has been recorded, whereat connection between hydrological conditions and change of hydrogeological and engeneering geological soil characteristics in anthropogenic activity conditions has been established. Based on fortified engeneering geological and hydrogeological composition and field characteristics, level of exogenous geological representation of processes and endogenous occurrences, field zoning, defined mechanism of sliding, important referrals have been introduced and conditions of sanation of unstable and conditionaly stable ground.

### Key words:

anthropogenic samples, morphometrical elements, exogeneus, endogeneus occurances.

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