*Date: 27.01.2020.*
*Place: Skopje*

# Knowledge FOr Resilient soCiEty

## K-FORCE PROJECT MEETING
## REPORT ON APPLIED STUDENT CENTERED TEACHING SKILLS

*University of Tuzla*

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*One of the crucial objectives of K-FORCE project, of which depend a large number of indicators of success, is teachers' training and course/programe development.*
*These objectives were achieved through exchange of knowledge and expertise on DRM&FSE education and training among PA and Program partners (PR), resulted in:*

- *improved learning and teaching tools*
- *improved methodologies and pedagogical approaches*
- *implemented blended learning methodologies and*
- *created learning material.*

*WBC staff have been trained in teaching methodology on the K-FORCE project, through a combination of* ***study visits*** *to EU partner institutions,* ***workshops*** *held and* ***literature provided*** *on the project website.*

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*Training of dr. Edisa Nukić, Mr. Damir Malkočević, Mr. Abaz Velić and Aneta Jokić in teaching methodologies were successful preparation for new Master study programme "Disaster Risk Management and Fire Safety Engineering".*

*In the beginning of new school year 2018/19 teachers and teaching assistants were asked to apply student-centered and problem based learning. At same time ICT platform is launched as well.*

*Professors Zvjezdan Karadžin and Edisa Nukić* ***applied SCL and PBL*** *into their two courses in summer semester. Students were* ***divided into two groups (****due to small number of master students) and they worked on chosen topics.*
*Their papers were* ***presented and defended*** *in July during summer semester exams.*

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## *COURSE TITLE: Community resilience to hazards*

*Topic:* ***Floods 2014.***

*Students were working in two groups:*
- *1st group conducted case study related to Serbia*
- *2nd group conducted case study related to Bosnia and Herzegovina.*

- *Teacher mentored students work*
- *Task loads were even*
- *All students were graded equally*

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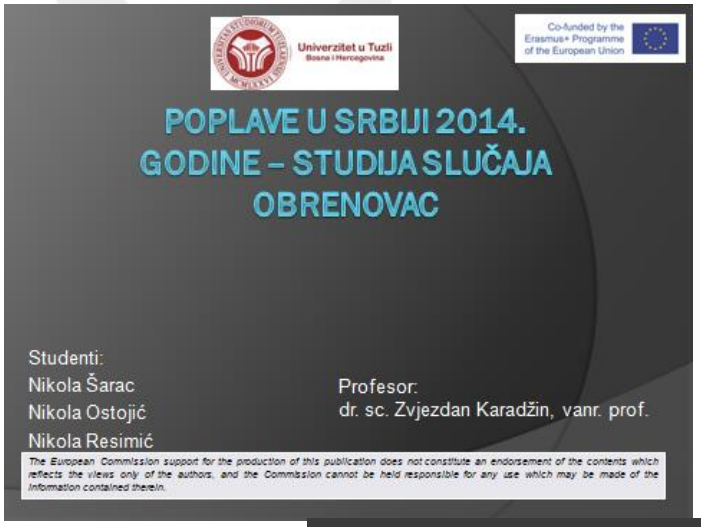
# PAPER 1. FLOODS IN SERBIA 2014, CASE STUDY OBRENOVAC







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# *PAPER 1. FLOODS IN SERBIA 2014, CASE STUDY OBRENOVAC, STUDENTS PRESENTATIONS*

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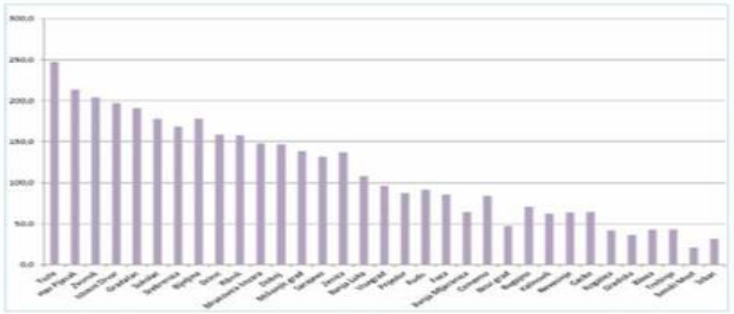
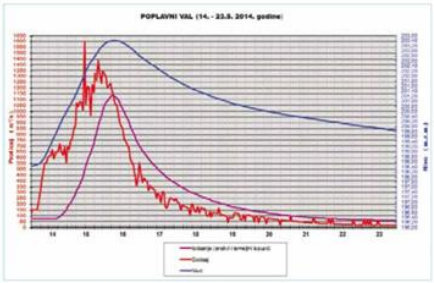
# PAPER 2: RESPONSE TO FLOODS IN BOSNIA 2014, ANALYSIS


Period sa padavinama počeo je već u aprilu 2014. godine i nastavio u maju. Većina padavina pala je u periodu između 13. i 16. maja 2014., kao što je prikazano u Tabeli i Slici 2.



Slika 2: Ukupne količine oborina (mm) po gradovima u BiH, maj 2014.g.

PREGLED, PRIKAZ I ANALIZA POPLAVNOG VALA 2014.g. NA BRANI MODRAC



Slika 5: Nivogram-dotok 13sječanje na brani Modrac od 14-23.05.2014.g


Slika 6: Količine oborina koje su mjerene na meteorološkoj stanici Modrac

Slika 7: Brana Modrac za vrijeme max. nivoa vode (205,42 m.n.m.)

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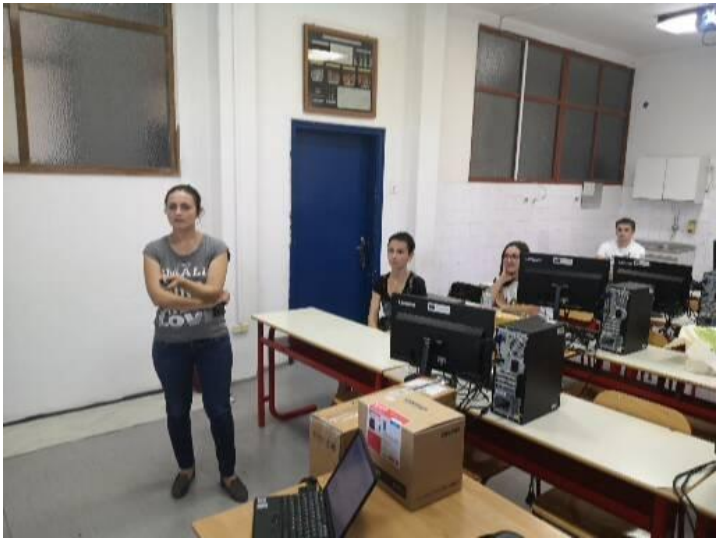
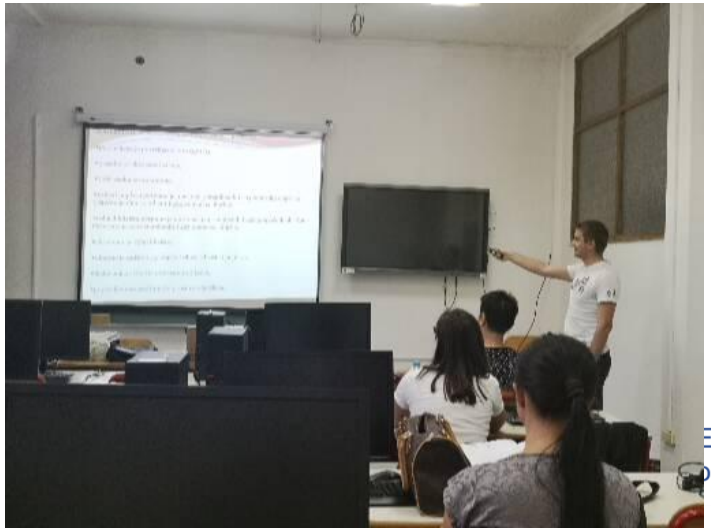
# *PAPER 2: RESPONSE TO FLOODS IN BOSNIA 2014, ANALYSIS STUDENTS PRESENTATION*



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## *COURSE TITLE: RISK ANALYSIS IN DESICION MAKING PROCESS*

*Students were working in two groups:*

- *1st group collected and prepared landslides data*
- *2nd group visualisation of collected data*
- *Together: risk assesment*

*Topic:* ***Landslides – task: identify directly and indirectly endangered structures, perform terrain analysis, identify potentially new landslides and produce a report***

*Task:*

- *Digitalize landslides, determine their spatial distribution,*
- *Determine terrain stability based on the available bases,*
- *Determine: how many buildings are directly threatened by landslides, how many are located on non-stable and conditionally stable terrains,*
- *Define: the degree of vulnerability of construction land, vulnerability of economic zones, vulnerability of agricultural land, the degree of threat to forest land,*
- *Create a report with a graphical attachment in "pdf" format.*

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# *COURSE TITLE: RISK ANALYSIS IN DESICION MAKING PROCESS LAB WORK AND GROUP WORK*

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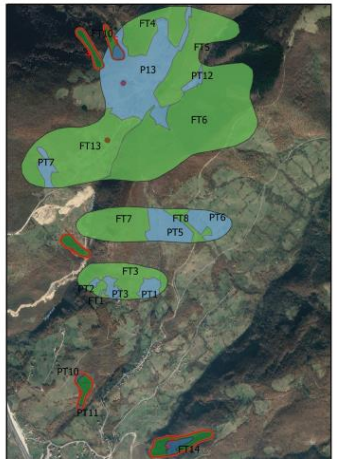
# PAPER : LANDSLIDE STABILITY ANALYSIS WITH GRAPHICAL PRESENTATION

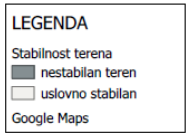
Na uslovno stabilnim i nestabilnim terenima za dato područje nalaze se 1708 objekta, od čega 1373 objekta na uslovno stabilnim terenima i 335 objekta na nestabilnim terenima.

KARTA STABILNOSTI TERENA




| Tabela atributa sloja klizište | | | | |
|---|---|---|---|---|
| id | broj | status | povrsina | napomena |
| | 1 | aktivan | 41257 | |
| | 2 | aktivan | 16514 | |
| | 3 | saniran | 13425 | |
| | 4 | aktivan | 14508 | |
| | 5 | aktivan | 13707 | |


Tematska karta stabilnosti terena

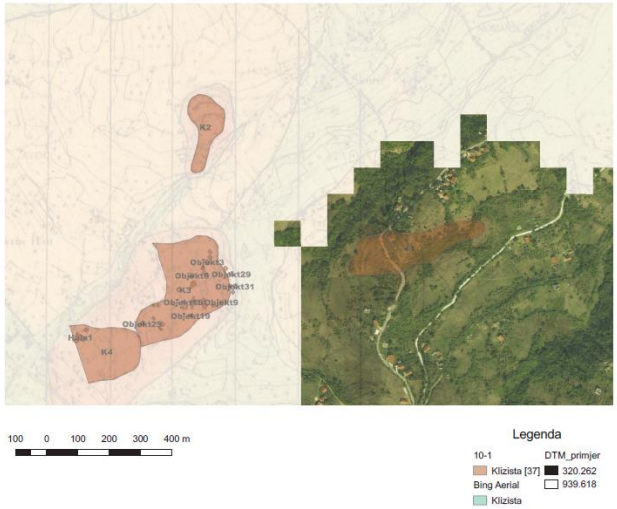




Klizište sa oznakom A1 zauzima površinu od 41462,45 m2, na klizištu se nalaze 2 objekta, zemljište koje zauzima klizište je šumsko zemljište.


Klizište sa oznakom A2 zauzima površinu od 16791,18 m2, na klizištu nema objekata, zemljište koje zauzima klizište je šumsko zemljište.


Klizište sa oznakom A3 zauzima površinu od 13531,87 m2, na klizištu nema objekata, zemljište koje zauzima je klizište je šumsko i poljoprivredno zemljište. Klizište sa oznakom A4 zauzima površinu od 14050,35 m2, na klizištu nema objekata, zemljište koje zauzima klizište




| id | Oznaka | Povrsina | Napomena |
|---|---|---|---|
| 1 | K1 | 80000 | aktivno_klizište |
| 2 | K2 | 32000 | aktivno_klizište |
| 3 | K3 | 121180 | aktivno_klizište |
| 4 | K4 | 59200 | kontura_aktivnog_klizista |
| 5 | Objekt1 | | ugrozeno_klizistem |
| 6 | Objekt2 | | ugrozeno_klizistem |
| 7 | Objekt3 | | ugrozeno_klizistem |
| 8 | Objekt4 | | ugrozeno_klizistem |
| 9 | Objekt5 | | ugrozeno_klizistem |
| 10 | Objekt6 | | ugrozeno_klizistem |
| 11 | Objekt7 | | ugrozeno_klizistem |
| 12 | Objekt8 | | ugrozeno_klizistem |
| 13 | Objekt9 | | ugrozeno_klizistem |
| 14 | Objekt10 | | ugrozeno_klizistem |
| 15 | Objekt11 | | ugrozeno_klizistem |
| 16 | Objekt12 | | ugrozeno_klizistem |
| 17 | Objekt13 | | ugrozeno_klizistem |
| 18 | Objekt14 | | ugrozeno_klizistem |
| 19 | Objekt15 | | ugrozeno_klizistem |
| 20 | Objekt16 | | ugrozeno_klizistem |
| 21 | Objekt17 | | ugrozeno_klizistem |
| 22 | Objekt18 | | ugrozeno_klizistem |
| 23 | Objekt19 | | ugrozeno_klizistem |
| 24 | Objekt20 | | ugrozeno_klizistem |
| 25 | Objekt21 | | ugrozeno_klizistem |
| 26 | Objekt22 | | ugrozeno_klizistem |
| 27 | Objekt23 | | ugrozeno_klizistem |
| 28 | Objekt24 | | ugrozeno_klizistem |
| 29 | Objekt25 | | ugrozeno_klizistem |
| 30 | Objekt26 | | ugrozeno_klizistem |
| 31 | Objekt27 | | ugrozeno_klizistem |
| 32 | Hala1 | | ugrozeno_klizistem |
| 33 | Objekt28 | | neposredna_blizina_klizista |
| 34 | Objekt29 | | neposredna_blizina_klizista |
| 35 | Objekt30 | | neposredna_blizina_klizista |
| 36 | Objekt31 | | neposredna_blizina_klizista |
| 37 | Objekt32 | | neposredna_blizina_klizista |

| KLIZIŠTE | OBJEKTI | PRIVREDNI OBJEKTI | ŠUMSKO ZEMLJIŠTE | POLJOPRIVREDNO ZEMLJIŠTE | PUTEVI I GRAĐEVINSKO ZEMLJIŠTE |
|---|---|---|---|---|---|
| K1 | - | - | 50% | 50% | - |
| K2 | - | - | 50% | 50% | - |
| K3 | 100% | - | - | 50% | 50% |
| K4 | 100% | 100% | - | 50% | 50% |

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*OUTCOMES*

- Mastering academic content
- Learning to think critically and solve problems
- Working collaboratively
- Improved communications skills
- Abillity to define assessment criteria and to collect and analyse data
- Responsibillity to work and to the co-workers

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*CONCLUSIONS*

- University of Tuzla has small number of students - 6 last year and 4 this year (Master students)
- Limited number to create groups for SCL approach
- So far preferred traditional and individual approach
- Most important outcome of SCL approach: satisfied student

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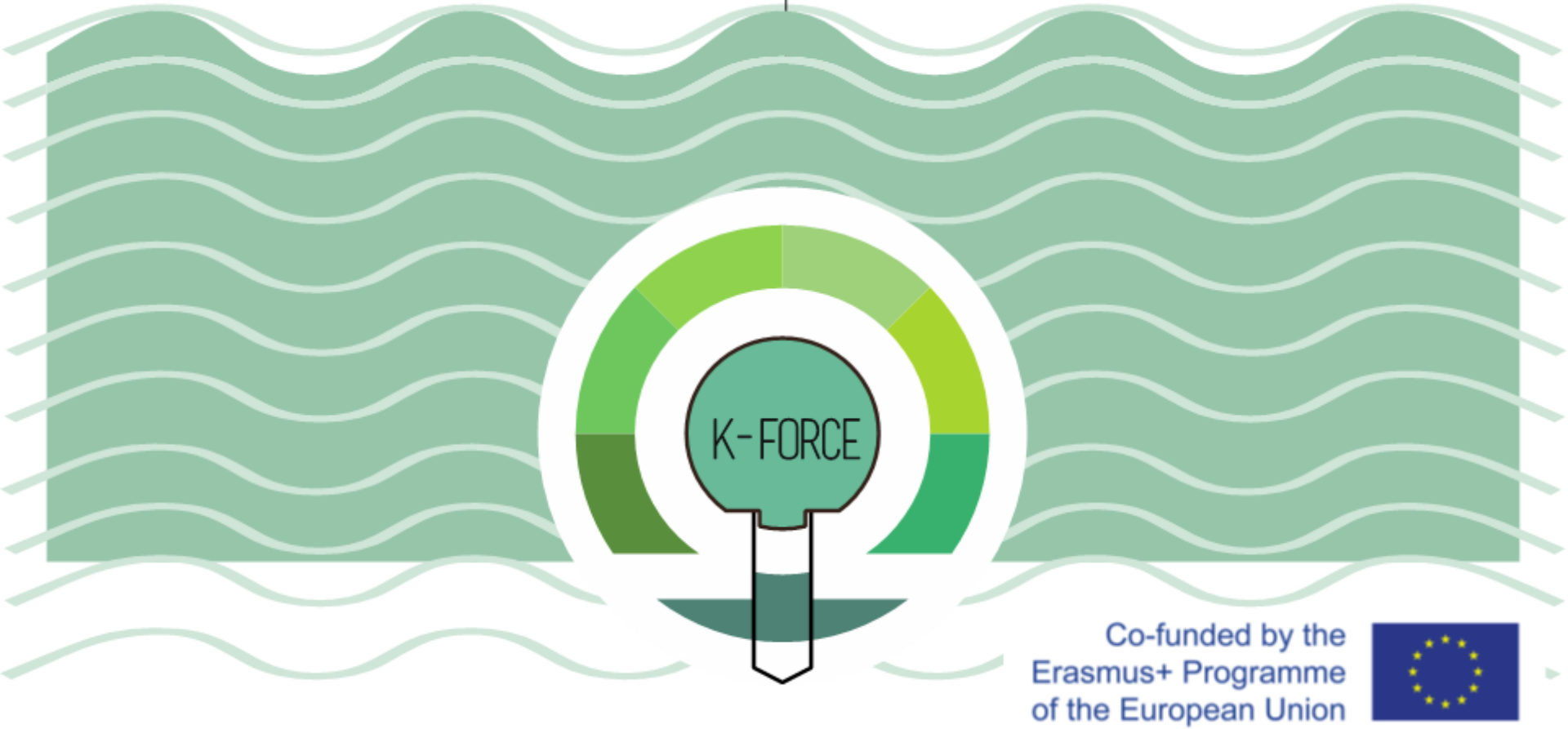


# Thank you
# for your attention

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**K**nowledge **FO**r **R**esilient so**C**i**E**ty