



**REPORT ON DEVELOPMENT OF  
TRAINING'S CONTENT  
CORRESPONDING  
EDUCATIONAL MATERIALS AND  
SELECTION OF TEACHING STAFF**

Project number: 573806-EPP-1-2016-1-RS-EPPKA2-CBHE-JP

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## List of abbreviations

EU	European Union
HEI	Higher Education Institution
KPA	Academy of Criminalistics and Police Studies
NatRisk	Development of master curricula for natural disasters risk management in Western Balkan countries
TCASU	Technical College of Applied Sciences Urosevac with temporary seat in Leposavic
UBL	University of Banja Luka
UNI	University of Nis
UNID	University of Defence in Belgrade
UNSA	University of Sarajevo
UPKM	University of Pristina in Kosovska Mitrovica
WB	Western Balkan
WP	Work package

# 1 Introduction

Report on development of trainings' content corresponding educational materials and selection of teaching staff summarizes information regarding developed trainings' content in Western Balkan (WB) in the framework of WP3 "Development of trainings for citizens and public sector" and activity A3.3 "Development of trainings' content corresponding educational materials and selection of teaching staff" of the Erasmus+ Capacity Building in the Field of Higher Education project „Development of master curricula for natural disasters risk management in Western Balkan countries“ (NatRisk).

All materials are freely available at the NatRisk website ([www.natrisk.ni.ac.rs](http://www.natrisk.ni.ac.rs)).

## 2 Developed trainings' content

Conducted survey of citizens' and public sector awareness tailors to meet the needs of each WB country regarding potential risk of natural disasters. Obtained results were used to develop trainings' content. Four handbooks (format A5) for civil sector training about natural disasters in Serbian, Bosnian were written and also translated into English. UNSA and UBL created two handbooks for Bosnia and Herzegovina, TCASU and UPKM created one related to Kosovo\* as well as UNI, KPA and UNID created one related to Serbia.

Content of the UNSA handbook:

### 1. Earthquakes as natural disasters

- 1.1. Seismicity
- 1.2. Earthquake forecasting
- 1.3. Earthquake effects
- 1.4. Seismic activity on the territory of Bosnia and Herzegovina
- 1.5. Legal framework regarding engagement of different subjects in the protection and rescue system in the case of earthquake occurrence in Bosnia and Herzegovina
- 1.6. Studies, measures and activities for mitigation of earthquake effects before it happens
- 1.7. Measurements and activities after earthquake occurred
- 1.8. Long-term measurements and activities after an earthquake
- 1.9. Place and role of a citizen in case of earthquakes

### 2. Floods

- 2.1. Introduction
- 2.2. Causes and types of floods
- 2.3. Floods in Bosnia and Herzegovina
- 2.4. Damages of flood
- 2.5. Protection from floods
- 2.6. Conclusion

### 3. Landslides

- 3.1. Introduction
- 3.2. Landslides and nature in BIH

- 3.3. The role of individuals and community in the prevention of the landslide occurrence and risk management
- 3.4. Emergency response and landslide remediation process
- 3.5. Landslides mitigation measures
- 3.6. The role of individuals before and after landslide occurrence
- 4. Drought**
  - 4.1. Introduction
  - 4.2. Drought in Bosnia and Herzegovina
  - 4.3. Planning the fight against drought
  - 4.4. Conclusions

Content of the UBL handbook:

- 1. Introduction**
  - 1.1. Natural disasters in the Republic of Srpska
  - 1.2. Creation of a system of prevention and education of specialists
- 2. Floods**
  - 2.1. Causes that lead to floods
  - 2.2. Main flood areas in the Republic of Srpska
  - 2.3. Analysis of the May flood 2014 in the lower Vrbas area
    - 2.3.1. Impact of Cyclone Tamara on flooding in 2014.
    - 2.3.2. Consequences of the May flood 2014 on the catchment area of the Vrbas river, Srpska and BiH
  - 2.4. Risk maps
    - 2.4.1. Flooding cultural-historical and natural heritage
  - 2.5. Flood protection
    - 2.5.1. The institutional framework for water management
    - 2.5.2. Legal framework
    - 2.5.3. The existing level of protection from flooding in Srpska
    - 2.5.4. Modern measures to combat floods and their consequences
  - 2.6. The role of the individual in the event of a flood
  - 2.7. A positive example of the Republic of Austria in flood protection measures
  - 2.8. Personal story: „Today in the bedroom instead of flooring we have ceramic tiles“
- 3. Earthquakes**
  - 3.1. The types of earthquakes
  - 3.2. Scales for earthquakes measuring
  - 3.3. Seismic areas in Srpska and risk maps
    - 3.3.1. Banjaluka seismic area
    - 3.3.2. Seismic activity in the territory of the Srpska
  - 3.4. Risk maps
  - 3.5. Seismic monitoring of the Republic of Srpska
  - 3.6. Measures for preventing damages from earthquakes in Srpska
    - 3.6.1. Normative-legal framework of engagement the subjects of protection system in case of an earthquake in the BiH
    - 3.6.2. Republic Hydrometeorological Institute - measures and activities for emergency protection
  - 3.7. The role of citizens in the event of an earthquake
  - 3.8. A positive example of Japan

## **4. Drought**

- 4.1. Drought definition
- 4.2. Characteristics of drought
- 4.3. Types of drought
- 4.4. Drought indicators
- 4.5. Effects of drought
- 4.6. Droughts in the Republic of Srpska
- 4.7. Monitoring and prevention of drought
- 4.8. A good example of the Republic of Israel in the fight against drought

## **5. Landslides**

- 5.1. Types of landslides
- 5.2. Causes of landslides in the Republic of Srpska
  - 5.2.1. Natural causes of landslides
  - 5.2.2. Technogen causes
- 5.3. Risk maps
- 5.4. Actions for preventing landslides
  - 5.4.1. Preventive measures
  - 5.4.2. Permanent measures
- 5.5. Effects of landslides
- 5.6. A review of legislation in Srpska
- 5.7. Citizenship behavior in the event of landslides
- 5.8. Personal story – Landslides

## **Literature and internet sources**

Content of the UNI, KPA and UNID handbook:

### **1. Introductory remarks**

### **2. Earthquakes as natural disasters**

- 2.1. Briefly on earthquakes – general terms and definitions
- 2.2. Seismic activity on the territory of Serbia
- 2.3. Seismic hazard, seismic risk, and emergency management
- 2.4. Normative-legal framework for the engagement of subjects of the protection and rescue system in case of earthquake event in the Republic of Serbia
- 2.5. Pre-earthquake studies, measures, and activities for reduction of earthquake consequences
- 2.6. Post-earthquake measures and activities
- 2.7. Civil protection role of citizens in case of earthquake event

### **3. Floods**

- 3.1. Introduction
- 3.2. Causes of floods
- 3.3. The effects of floods
- 3.4. Flood protection
- 3.5. Conclusion

### **4. Landslides, rockfalls and erosions as natural disasters**

- 4.1. General on landslides and rockfalls
- 4.2. Landslides and rockfalls on the territory of the Republic of Serbia
- 4.3. Formation and elements of the landslide
- 4.4. Recognition of the landslide

- 4.5. Prevention and repair of the landslides
- 4.6. System of protection and savings in external situations in the Republic of Serbia
- 4.7. Plans of protection and safety in the case of landslide, rockfalls and erosion
- 4.8. Place and role of the uniter before and after the landslide and rockfall

## 5. Drought

- 5.1. Introduction
- 5.2. Drought consequences
- 5.3. Planning the drought mitigation
- 5.4. Normative-legal framework in drought mitigation
- 5.5. Measures for preventing and reducing the effects of drought
- 5.6. Procedure in case of drought
- 5.5. Conclusion

## 6. Epidemics and emergencies

- 6.1. Introduction
- 6.2. Epidemics which have changed the courses of history
- 6.3. Basic concepts related to infectious disease outbreaks
- 6.4. Actual epidemiological situation in the Republic of Serbia
- 6.5. Conclusion

## 7. Fires as natural disasters

- 7.1. Briefly about fires - general terms, causes and conditions of their occurrence
- 7.2. Normative - legal framework for the engagement of protection system entity and rescue in case of large scale fire
- 7.3. Preventive measures for fire protection and rescue
- 7.4. Fire extinguishing agents
- 7.5. Procedures in the event of fire and its extinguishing

Content of the TCASU and UPKM handbook:

### 1. Introduction

### 2. Earthquakes as natural disasters

- 2.1. Earthquakes - general terms and definitions
- 2.2. The elements of the earthquake
- 2.3. Effects and consequences of the earthquake
- 2.4. Seismic activity on the territory of Kosovo\*
- 2.5. Emergency situation management in the case of earthquakes
- 2.6. Studies, measures and activities for reducing the effects of the earthquake prior to the occurrence of a natural disaster
- 2.7. Integrated assessment of seismic risk
- 2.8. Requirements for the earthquake-resistant design criteria
- 2.9. Studies for planning, design, and construction of critical infrastructure
- 2.10. Immediate post-earthquake emergency measures and actions
- 2.11. Short-term post-earthquake studies and activities
- 2.12. Long-term post-earthquake measures and activities **Error! Bookmark not defined.**

### 3. Floods

- 3.1. Floods - general terms and definitions
- 3.2. Floods - general



- 3.3. The consequences of floods
- 3.4. Flood protection
- 3.5. Flood prevention measures
- 4. Landslides and rockfalls on the territory of Kosovo\***
  - 4.1. Formation and elements of the landslide
  - 4.2. Prevention and repair of the landslides
  - 4.3. Plans of protection and safety in the case of landslide, rockfalls and erosion
- 5. Drought**
  - 5.1. Introduction – general definition
  - 5.2. Drought indicators
  - 5.3. The occurrences of Drought in the territory of Kosovo\*
  - 5.4. Planning the drought mitigation
  - 5.5. Procedure in case of drought
- 6. Epidemics and emergencies**
  - 6.1. Actual epidemiological situation in Kosovo\*
  - 6.2. Procedures in the case of epidemic
  - 6.3. Measures of protection and rescue of the population from infectious diseases
- 7. Fires as natural disasters**
  - 7.1. Procedures in the event of fire and firefighting

## Bibliography

In general, besides the introductory remarks on natural disasters, the handbooks include the following important chapters for the formation of lifelong courses for the civil sector: earthquakes, floods, landslides and erosion, droughts, epidemics and fires. The general conclusion perceived by reading the handbooks is that reducing the risk of natural disasters can be achieved through strengthening the capacity of society and by providing common institutional support from various national ministries, agencies and offices at all levels.

Table 1 illustrates the number of pages per handbook and also the number of printed handbooks. It can be seen that 490 copies were printed in total and will be delivered during activity 4.4 Implementation of trainings for citizens and public sector.

**Table 1.** Number of pages and printed handbooks

Handbook	Number of pages (in English)	Printed (pcs)
UNSA	108	70
UBL	103	70
UNI, KPA, UNID	136	210
TCASU, UPKM	52	140
<b>TOTAL:</b>		<b>490</b>

Printed material is presented in Figure 1. Only material in mother tongue was printed, but both versions are freely available at the project website.



Figure 1. Printed material

In Figure2 book covers for all handbooks are presented.





**Figure 2. Book covers**

The authors believe that the handbook will be useful literature for the academic and professional public, as well as decision-makers, and will contribute to further awareness raising on the need for continuous improvement and upgrading capacities for responding to natural disasters at the national and regional level and cooperation that is a prerequisite for these steps.

### 3 Selection of trainers

Before the trainings for civil sector, all WB HEIs selected 34 professionals i.e. trainers/teaching staff in the field of natural disasters risk management (Table 2). The selection criteria are: the previous experience in the field of natural disasters risk management, teaching or training experience, communication skills and availability to respond after the training. Also, WB HEIs take care about gender equality.

**Table 2.** Selected trainers

HEI	Trainer	E-mail
KPA	Boban Milojković	<a href="mailto:boban.milojkovic@kpa.edu.rs">boban.milojkovic@kpa.edu.rs</a>
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