



SETOF Soil Erosion and TOrrential Flood
*Prevention: Curriculum Development at the
Universities of Western Balkan Countries*

WP2

DEVELOPMENT OF CURRICULA

Deliverable 2.6

Harmonization of the proposed changes

Participating Organisations:

UB; UNS; UNI; UBL; UNSA

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- The main aim of the project is the development and improvement of curricula for the education of professionals in the Western Balkans (Serbia and Bosnia and Herzegovina) who will solve problems of soil erosion control and protection against torrential floods in compliance with EU directives
- The stated goals of the project will be achieved through the improvement of existing bachelor and master programs and through the development of a new master program established by five partner universities





- Bachelor and master study programs at universities in Serbia and Bosnia and Herzegovina are improved by creating new and modernizing the existing subjects
- The changes that are made in the bachelor and master study programs are within the so-called small changes (up to 20% ECTS)
- According to the Laws on Higher Education of Serbia and BiH, based on the Bologna Declaration, such changes in study programs do not require accreditation





Improvement of existing bachelor and master programs

Number of modernized subjects on Bachelor study:

UB-3; UNS-4; UNI-1; UBL-4; UNSA-3

UB: Soil conservation, Organization of anti-erosion works, Management of soil and water resources in protected areas

UNS: Engineering Hydrology, River engineering, Bioregulation, Soil Conservation Structures

UNI: Soil protection

UBL: Forest ecoclimatology, Forest soils, Forest utilization II, Land degradation

UNSA: Torrent control, Methods of rehabilitation of eroded terrains, Pedology 2



Improvement of existing bachelor and master programs

Number of modernized subjects on Master study:

UB-2; UNS-1; UNI-1; UBL-2; UNSA-5

UB: Quality management in the protection of soil and water resources,
Valuation of natural resources

UNS: Soil and Water Conservation

UNI: Climate change adaptation

UBL: Syndinamic of Forest phytocaenosis, Forest utilization technologies

UNSA: Degradation and remediation of soil, Soil protection, Sustainable land
management in space planning, Melioration of degraded forests,
Reforestation of bare karst land



New subjects introduced on Bachelor study: UB-5

UB: Revitalization of Small Water Flows, Climate change and natural hazards management, Basics of forest hydrology, Hydraulics of open channel flow, Economics of the soil and water resources protection





Improvement of existing bachelor and master programs

New subjects introduced on Master study:

UB-2; UNS-2; UNI-1; UBL-1; UNSA-1

UB: Surface water resources, Stabilization of the terrain

UNS: Decision making in soil erosion and torrent control, Application of GIS in protection against torrential floods

UNI: Soil erosion and torrential floods protection

UBL: Sustainable Land management and global trends

UNSA: Conservation of karst terrains





New master program

- The goals, competencies and outcomes of the new master program are in line with the basic recommendations of the Bologna Declaration
- The master program have a workload of 60 ECTS [4+1, 240+60 ESPB]
- The master program includes: 6 subjects (4 compulsory, 2 electives selected from 12 offered), study-research work, professional practice and master work
- Syllabus for subjects includes: land degradation, soil erosion protection, torrential watershed management, land melioration, natural disaster risks management, organizational and socioeconomic aspects of protection from torrential floods, etc.





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New master program

Compulsory subjects are:

- Soil and water degradation,
- Soil erosion protection,
- Torrential flood protection,
- Integrative torrential watershed management

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New master program

Electives subjects are:

Land melioration, Conservation of karst terrain, Climate change adaptation, Project management for natural resources protection, Sustainable land management, Bioremediation of barren land, Natural disasters risks management, Land degradation and ecosystem services, Torrent monitoring and early warning system, Decision making in soil erosion and torrent control, Modelling of soil and water degradation, Melioration of degraded forests

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Conclusion

The consequences of torrential floods would have been significantly reduced if preventive measures were taken, and they imply an integrated regulation of torrential basins by performing biological, biotechnical and technical works

On the basis of the adopted study programs with new syllabuses, new experts will be educated, whose approach to erosion control and protection against torrential floods will be harmonized in the wider Balkan region

The mutual cooperation of HEI's for curriculum improvement will influence the adoption of a uniform methodology in solving the problems of land degradation and the prevention of torrential floods at the regional level





Conclusion

The proposed changes in the existing bachelor and master curriculum will comply between the universities

The proposed new master curricula are compiled at the level of universities in each one of the states and at the level of the countries

The syllabi of compulsory and elective courses are structured as joint courses and are defined by harmonization between all universities

This will ensure that graduate students have one unique methodology for solving problems of flood prevention





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Thank you for your attention!

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