INTERNATIONAL WORKSHOP ON FLOOD PROTECTION EDUCATION NETWORK IN THE DANUBE RIVER BASIN

Common Findings

Budapest, 29/06/2017

EU Strategy for the Danube Region Priority Area 5 („to manage environmental risks") and National University of Public Service Hungary

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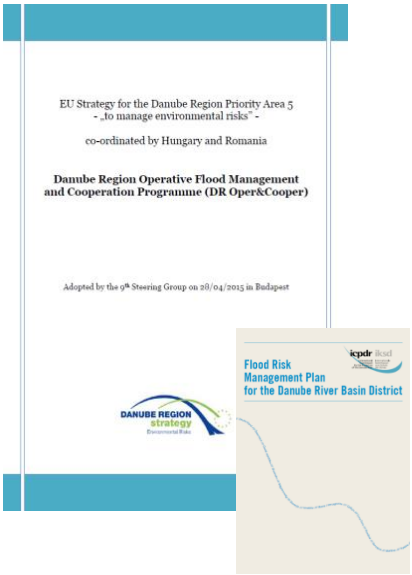
CONCEPT OF THE WORKSHOP

Following the severe floods of 2013 and 2014 after a series of consultation with experts of water directorates EUSDR PA 5 (to manage environmental risks) members realized the need of the 14 Danube countries in 2015 to establish an international training and education network on flood protection. The topic was also included into the first Flood Risk Management Plan of the Danube Watershed prepared by ICPDR and endorsed by the ICPDR Ministerial Meeting within the Danube Declaration in February 2016. Last year with the coordination of the Danube Region Strategy (EUSDR PA5) the National University of Public Service Hungary signed a Collaboration Framework Agreement with German, Slovakian and Serbian universities in order to develop an international curriculum on flood protection engineering as the core of the proposed education network.



The objectives of the workshop were the following:

- Providing information on recent activities related to flood protection in the Danube basin and its relation to transnational initiatives (e.g. EUSDR PA5, ICPDR);
- Starting discussions and strengthening the networking activities of university representatives and vocational schools in the field of flood protection education and research;
- Update on project financing possibilities (e.g. ERASMUS+, CEEPUS, DAAD, Horizon2020) and teacher/student exchange;
- Support future initiatives related to flood protection education, training and research;
- Enabling participating institutes to share promotional materials and brochures about their educational portfolio and main research activities.

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PRELIMINARY DISTRIBUTED DRAFT GUIDANCE FOR WORKSHOP DISCUSSION

For university/vocational school representatives:

1. What kind of need in your country has towards flood protection education (in vocational school, academic level) on legal basis, or related to national strategies?
2. What kind of flood protection education exist in your country/institute on which level (course only, specialization under a degree programme, separate BSc/MSc/postgraduate degree programme) and how long experience you have?
3. How flood protection related education connected to the labour market (e.g dual education with water directorates and other related organizations, field trips organized with relevant organizations together etc.) by your Institute?
4. What kind of future plans you have related to flood protection education?
5. Participated your Institute in any international project related somehow to flood protection education (organizing training/seminar, development of learning materials etc.)
6. In what kind of project cooperation is your University interested (e.g. teacher/student exchange, curricula development within ERASMUS+, CEEPUS, a H2020 research project, INTERREG CE/DTP transnational project or CBC projects, other)?
7. What are the main obstacles that you experience or face within the field of education of water engineering? Is the need for the courses increasing, constant or decreasing? How would you evaluate the status of this profession in your country?

For other stakeholders:

1. What kind of need your organization has related to flood protection education?
2. How can your Institute support the development of an education network on flood protection?
3. In what kind of project cooperation is your organization interested (e.g. dual education within ERASMUS+, CEEPUS, a H2020 research project, INTERREG CE/DTP transnational project or CBC projects, other)?
4. How would you evaluate the status of the water engineer profession in your country?

PARTICIPANTS AND PRESENTATIONS

32 participants represented 6 countries during the event. The agenda is enclosed as annex. All the presentations have been uploaded to the following website:

https://www.danubeenvironmentalrisks.eu/files/directory/102

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FOLLOW-UP OF THE WORKSHOP

The workshop has been successfully organized on the Danube Day in Budapest by the financial support of the Ministry of Foreign Affairs and Trade of Hungary (PA5 Environmental risks project of the Interreg Danube Transnational Programme) from the Interreg Danube Transnational Programme. The event was opened by Mr. István Joó ministerial commissioner.

The findings of the workshop have been collected and the key messages will be communicated to the PA5 Steering Group to enhance the PA5 action plan respectively and to ICPDR FP-EG in order to find proper measures to be included in the Flood Risk Management Plan of the Danube Region (update).

COMMON FINDINGS OF THE WORKSHOP PARTICIPANTS

- Water engineering is too technical, needs to turn for social-hydrology and green measures; the need for practitioners is decreasing; secondary school level technical education is disappearing enhanced dual education needed; very hard to keep the level of quality that used to exist before; therefore in some case (e.g. in Bratislava) water supply companies started to set up postgraduate and secondary level courses; education of people in municipalities to be prepared and effectively cooperate with water resources, disaster risk management and urban planning sectors in order to see the flood problem on an integrated way and avoid incorrect acts; future plans to supply engineering technologies hydro informatics is a demanding task; an international technology and research oriented course would be able to integrate synergy of know-how from different countries and attract people (like former UNESCO courses in Budapest, Belgrade, Prague, Moscow etc.) also from developing countries where there is a gap nowadays. (SK)
- Elder teachers in the secondary schools many of them just before retirement within few years, they do not speak English. Not enough full time teachers, younger teacher come-and-go, leaving this profession, causing a huge fluctuation and results the lack of continuity. One of the most popular specializations is IT engineering nowadays. (HU)
- More social issues of hazards (e.g. social memory in natural hazards, resilience of landscapes, participatory planning methods, remote sensing and GIS to map hazards) should be in focus, new postgraduate school established focusing on natural hazard modelling (SLO)
- Training of inhabitants and volunteers is important (HU)
- Mainly general hydrology knowledge is given during bachelor studies and hydraulic engineering displayed only as one specialization, no special education (e.g. on sanitary engineering, or floods) exist, flood risk/management is just one of the tasks for students which should generate some problems by students careers. Flood management topic is covered mainly within other subjects (e.g. hydrology, hydraulic structures, river regulation and economy) therefore students cannot see this issue in an integrated way as a complex whole problem. In Osijek approximately 10-12 students enrolled to water management/engineering course on diploma study and 1-3 students on the postgraduate course. These problems can be overcome with good cooperation of water directorates, giving special courses and organizing technical excursions, therefore cooperation with water institutions should be sustained or enhanced. Specialized studies have no popularity nowadays, reduced interest in water problems can be highlighted through decreasing number of students and less educated people on this field. (HR)

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- Mainly master studies are focusing on flood issues and climate change induced problems, or urban floods and related EU legislation. Usage of high standard software (e.g. MATLAB, HEC-RAS, MIKE, ArcGIS, ECOLAB etc.) are essential nowadays. Already have many experiences with international courses of EDUCATE! project which had a 15 weeks Integrated Flood Management module. Low interest for technical studies (RO)
- Changing political background and missing long-term strategy of water policy results interference in the sector (also can influence project implementation, investments). Having experience participating ERASMUS Mundus Master Programme on Flood Risk Management which has been finished already by 200 students. Also a Summer School on Natural Disasters was organized in Ljubljana in May-June 2017 preparing around 20 e-learning tools and video presentations with on-line access. 'More room for water' concept should be pushed in a broader scale but expensive solution and has significant effect on private properties. Interdisciplinary research on the field of victims and real estate should be in focus. Previous research showed that 60% of victims lost their life just because people stay in their car on the flooded road. Nowadays rather climate change is mainly blamed for floods but present conditions of riparian vegetation also cause much larger roughness of the channels than earlier. Lack of knowledge in the administration corresponded sciences. (SLO)
- Despite the big floods the political attention on the topic is very low and it ends in ignored topics. The 1970's 1980's well generalized system is lost, not fragmentation persists. The traditional education and knowledge is disappearing and implementation of education in small communities needed. Take for instance the case of Tilly Smith to highlight the importance of education. She was a 10 years old British girl in 2004 when she warned others before a tsunami arrived to Phuket shoreline (Thailand) recognizing the signs of the phenomena based on her geography lessons studied two weeks before and saving hundreds of people. The missing step is the implementation of the learnt knowledge, because educated people are not on the field (e.g. by municipalities). Destroying of VITUKI was a huge mistake but other great institutes also lost their position. Several discussions on how to apply Water Framework Directive 2nd, 3rd and other cycles. Flood Directive is also not complete at all. They do not consider many of the major issues and how to apply it in every settlement which was flooded several times. Flood Directive is not enough to re-establish education. Re-establishment of the Danube hydrology discussion is necessary. Very few good experts exist in hydrology, therefore networking should be emphasized. (SRB)
- Environmental engineering needs to be introduced; life-long learning program was introduced for water management experts of relevant institutes, water management and flood risk management summer school was organized for Master students with Czech Republic and Poland (SK)
- The recruit of the prospective students is a constant problem. There is a lack of proper marketing and people (students) simply don't know these fields of expertise. (HU)
- Cooperation among the secondary schools is important. Danube Sediment project can support a better knowledge on the hydrology of the Danube. Stakeholder involvement is crucial during river basin management and flood risk management planning. One goal of the newly started JOINTISZA project is to organize train the planner seminar by WWF and also applying the Shared Vision Planning method from the United States. InterFloodCourse and DAREFFORT projects were submitted for different funds with the support of EUSDR PA5 and are under evaluation at the moment. Both projects comprise activities related to flood management related education, or curricula and e-learning material development. (EUSDR)

FLOOD PROTECTION EDUCATION RELATED INTERNATIONAL TEACHING PROGRAMME AND PROJECT DATABASE

Project Title	Funding Instrument	Duration	Participating organization	Info/Contacts/Outputs/E-learning materials
CAPHAZNET	FP7	06/2009 – 05/2012	Anton Melik Geographical Institute, Research Centre of the Slovenian Academy of Sciences and Arts	http://cordis.europa.eu/project/rcn/91264_en.html http://www.dialogik-expert.de/en/forschung/CapHaz-Net.pdf
DAREnet	Horizon2020	09/2017 – 08/2022	Hungarian Civil Protection Association	http://cordis.europa.eu/project/rcn/210227_en.html
CIVPRO	INTERREG IVC	01/2010 – 03/2013	Hungarian Civil Protection Association	http://www.civpro-gr.eu/ http://www.interreg4c.eu/projects/project-details/index-project=107-regional-strategies-for-disaster-prevention&.html
REDCODE (Regional Disaster Common Defence)	INTERREG IIIB CADSES	2000 - 2006	Hungarian Civil Protection Association	https://www.keep.eu/keep/project-ext/351/Red%20Code
Flood Risk Management Master Programme	ERASMUS MUNDUS	2 years course	University of Ljubljana	http://www.floodriskmaster.org/
Summer School on Natural Disasters, Ljubljana		21/05/2017 – 10/06/2017	University of Ljubljana	http://www.let-group.com/summerschool.html
4th World Landslide Forum, Ljubljana		29/05/2017 – 02/06/2017	University of Ljubljana	https://www.wlf4.org/
EDUCATE! – postgraduate course in Water Resources and Environmental Management	INTERREG III B CADSES Neighbourhood		Technical University of Civil Engineering Bucharest	www.water-msc.org

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(Integrated Flood Risk Management module)	Programme			
JOINTISZA	Interreg DTP	01/2017-06/2019	General Directorate of Water Management (Hungary)	http://www.interreg-danube.eu/approved-projects/jointisza
DAREFFORT (Danube River Basin Enhanced Flood Forecasting Cooperation)	Interreg DTP (2nd Call)	under evaluation (project start expected in March 2018)	VIZITERV Environ Ltd. (Hungary)	https://www.danubeenvironmentalrisks.eu/dareffort
InterFloodCourse	Danube Strategic Project Fund	under evaluation (project start expected in October 2017)	National University of Public Service	https://www.danubeenvironmentalrisks.eu/interfloodcourse

PARTICIPATING EXPERTS/ORGANIZATIONS

	Name	Country	Position	Organization	Email	Address
1	Andrea Boros	Hungary	Teacher	Technical Vocational Center Szolnok - Pálfy Water Management Secondary School	remes@citromail.hu	H-5000 Szolnok, Tiszaparti st. 2-3.
2	Bence Fülöp	Hungary	Researcher	National University of Public Services, Centre for Sustainability Studies	fulop.bence@trinityenviro.hu	H-1118 Budapest, Ménesi út. 5.
3	Enikő Anna Tamás	Hungary	Head of Institute	National University of Public Service, Faculty of Water Sciences, Institute for Hydraulic Engineering and Water management	tamas.eniko.anna@uni-nke.hu	H-6500 Baja, Bajcsy-Zsilinszky utca 12-14.
4	Gergely Szabolcs Gál	Hungary	Flood protection referent	Middle-Tisza River District Water Directorate	gal.gergely.szabolcs@kotivizig.hu	H-5000 Szolnok, Boldog Sándor István krt. 4.
5	György Leskó	Hungary	Project manager	Hungarian Civil Protection Association	pvszovetseg@katved.gov.hu	H-1131 Budapest, Zsinór u. 8-12
6	István Endrődi	Hungary	President	Hungarian Civil Protection Association	pvszovetseg@katved.gov.hu	H-1131 Budapest, Zsinór u. 8-12
7	Jan Szolgay	Slovak Republic	Professor	Slovak University of Technology in Bratislava	jan.szolgay@stuba.sk	810 05 Bratislava, Radlinskeho 11,
8	János Szabó	Hungary	General manager	HYDROInform Ltd.	janos.szabo@hydroinform.hu	H-1029 Budapest, Tompa M. u. 12.
9	Jovan Despotovic	Serbia	Professor	University of Belgrade Faculty of Civil Engineering	jdespotovic@grf.bg.ac.rs	11000 Belgrade, Bulevar kralja Aleksandra 73
10	Kevin Mátyás	Hungary	Assisstant lecturer	Szent István University	matyas.kevin@sze.hu	H-9026 Győr, Egyetem tér 1.
11	László Busi	Hungary	Flood	Middle-Tisza River District Water Directorate	busi.laszlo@kotivizig.hu	H-5000 Szolnok, Boldog Sándor

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			protection referent			István krt. 4.
12	Lidija Tadić	Croatia	Head of Department	University of Osijek, Faculty of Civil Engineering Osijek, Department of Hydraulic Engineering and Environmental Protection	ltadic@gfos.hr	31000 Osijek, Ulica Vladimira Preloga 3.
13	Martina Zeleňáková	Slovak Republic	Associate Professor	Technical University of Košice	martina.zelenakova@tuke.sk	042 00 Košice, Vysokoškolská 4
14	Mateja Breg Valjavec	Slovenia	Research fellow	Anton Melik Geographical Institute, Research Centre of the Slovenian Academy of Sciences and Arts	mateja.breg@zrc-sazu.si	SI-1000 Ljubljana, Gosposka 13
15	Mitja Brilly	Slovenia	Senior researcher	University of Ljubljana FGG UNESCO CHAIR: Water related Disaster Risk Reduction	mbrilly@fgg.uni-lj.si	SI-1000 Ljubljana, Jamova 2.
16	Péter Bakonyi	Hungary	Project director	Budapest University of Technology	bakonyi.peter@outlook.com	H-1031 Budapest, Lőpormalom u. 3.
17	Radu Drobot	Romania	Professor	Technical University of Civil Engineering Bucharest – Dept. of Hydr. Eng.	drobot@utcb.ro	020396 sector 2, Bucharest, Bd. Lacul Tei 124
18	Rastislav Fijko	Slovak Republic	PhD Student	Technical University of Košice	rastislav.fijko@tuke.sk	042 00 Košice, Vysokoškolská 4
19	Tibor Bíró	Hungary	Dean	National University of Public Service, Faculty of Water Sciences	biro.tibor@uni-nke.hu	H-6501 Baja, Bajcsy-Zsilinszky utca 12-14.
20	Zoltán Bálint	Hungary	Lead engineer	VIZITERV Environ Kft.	balint.zoltan@environ.hu	H-4400 Nyíregyháza, Széchenyi u. 15.
21	Zsolt Galgóczy	Hungary	Professor assistant	Szent István University, Department of Soil Science and Water Management	galgoczy.zsolt@kertk.szie.hu	H-1118 Budapest, Villányi út 29-43.
Representatives of EUSDR and Invited Presenters of Funding Programmes						
22	István Joó	EUSDR	Hungarian	Ministry of Foreign Affairs and Trade	DunaStrategia@mfa.gov.hu	H-1027 Budapest, Bem rakpart 47.

			National Coordinator			
23	Károly Gombás	EUSDR PA5	Priority Area coordinator	North Transdanubian Water Directorate	gombas.karoly@eduvizig.hu	H-9021 Győr, Árpád út 28-32.
24	Viktor Oroszi	EUSDR PA5	Senior advisor	Ministry of Foreign Affairs and Trade	viktor.oroszi@mfa.gov.hu	H-1027 Budapest, Bem rakpart 47.
25	Félix Moldován	EUSDR HUN Presidency	Coordination officer	Ministry of Foreign Affairs and Trade	felix.moldovan@gmail.com	H-1027 Budapest, Bem rakpart 47.
26	Gergely Szadai	EUSDR HUN Presidency	Referent	Ministry of Foreign Affairs and Trade	gergely.szadai@mfa.gov.hu	H-1027 Budapest, Bem rakpart 47.
27	Iveta Rusinová	EUSDR PA7	PA7 coordination team	Ministry of Education, Science, Research and Sport of the Slovak Republic	iveta.rusinova@minedu.sk	813 30 Bratislava, Stromová 1,
28	Jaroslava Szüdi	EUSDR PA7	PA7 coordination team	Ministry of Education, Science, Research and Sport of the Slovak Republic	jaroslava.szudi@minedu.sk	813 30 Bratislava, Stromová 1,
29	Matthias Makula	EUSDR PA9	PA9 coordination team	Kulturkontakt Austria	matthias.makula@kulturkontakt.or.at	A-1010 Vienna, Universitätsstraße 5
30	Nuber Jörn	DAAD	Head of Office, DAAD-Information Centre Budapest	German Academic Exchange Service (DAAD)	nuber@daad.info.hu	H-1075 Budapest, Madách Imre út 13-14
31	Gergely Mészáros	Horizon2020	Counsellor	National Research, Development and Innovation Office	gergely.meszaros@nkfih.gov.hu	H-1077 Budapest, Kéthly A. tér 1.

32	Márton Beke	ERASMUS + and CEEPUS	Deputy Head of Unit	Tempus Public Foundation	marton.beke@tpf.hu	H-1077 Budapest, Kéthly A. tér 1.
Not participated the workshop but expressed their interest towards further cooperation						
33	Livia Nistor-Lopatenco	Moldova	Dean	Technical University of Moldova, Faculty of Constructions, Geodesy and Cadastre	livia.nistor@fcgc.utm.md	MD-2004, Chisinau, 16, Stefan cel Mare Blvd., Dacia bd. 39, block of study nr. 8
34	Nelli Amarfii-Railean	Moldova	Vice Rector for International Relations	Alecu Russo Balti State University	amarfii.nelli@usarb.md	MD-3100, Balti, Puskin str. 38.
35	Mirjana Horvat	Serbia	Professor Assitant	University of Novi Sad, Faculty of Civil Engineering Subotica	isicm@gf.uns.ac.rs	24000 Subotica, Kozaracka 2a

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