

FLOOD PROTECTION EDUCATION NETWORK IN THE DANUBE BASIN ?!



Viktor György Oroszi, PhD
PA5 senior advisor

EUSDR Pillar-B Stakeholder Seminar



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Targets of PA5 (environmental risks)

1. To address the challenges of water scarcity and droughts in line with the Danube River Basin Management Plan – Update 2015, the report on the impacts of droughts in the Danube Basin in 2015 (due in 2016) and the ongoing work in the field of climate adaptation.
2. **Provide and enhance continuous support to the implementation of the Danube Flood Risk Management Plan – adopted in 2015 in line with the EU Floods Directive – to achieve significant reductions of flood risk events by 2021, also taking into account potential impacts of climate change and adaption strategies.**
3. To continuously update the existing database of accident risk spots (ARS Inventory), contaminated sites and sites used for the storage of dangerous substances.



Effects of 2013 and 2014 floods

- In **May and June 2013**, much of Central Europe was affected by **extreme flooding** causing damages to houses, infrastructure, and services. Total **direct damage was 9.6 billion EUR in Germany, Czech Republic and Austria**.

2014

Country	Affected	Evacuated	Casualties	Damage	Cause
Serbia	1.6 million	32,000	51 (25 drown)	1.35 billion €	Torrents, landslides, levee breach
Bosnia-Herzegovina	1 million	90,000	25	2.04 billion € (15% of GDP in 2013)	Torrents, landslides, levee breach
Croatia	38,000	15,000	3	297.6 mil €	Levee breach

Serbia



Bosnia - Herzegovina



Croatia



Contents of this slide is taken from Dr. Marina Babic and Dejan Vladković's presentation at the 26th ICPDR FP EG Meeting in Bucharest and modified with the data of UNDP Human Risk Development Report 2016 („Risk-proofing the Western-Balkans”)

The Flood Survey of EUSDR PA5

The meetings and visits of the EUSDR PA5 Flood Survey

Hungary in Budapest	30/05/2013 and 10/07/2013
Czech Republic in Prague	02/08/2013
Germany (Baden-Württemberg) in Stuttgart	10/10/2013
Germany (Bavaria) in Munich	11/10/2013
Austria in Vienna	27/11/2013
Croatia in Zagreb	06/02/2014
Slovenia in Ljubljana	06/02/2014
Slovakia in Bratislava	26/02/2014
Serbia in Belgrade	05/03/2014
Bulgaria, in Sofia	17/03/2014
Ukraine in Nyíregyháza (HUN)	29/04/2014
Romania, in Budapest (HUN)	04/06/2014
Bosnia and Herzegovina in Sarajevo	19/08/2014
Montenegro in Podgorica	19/08/2014
Moldova in Chisinau	24/09/2014

Discussion of needs and challenges on Danube basin level



Adoption of the Danube Region Operative Flood Management and Cooperation Programme



- **DR Oper & Cooper was adopted in 28/04/2015 by EUSDR PA5 SG**

EU Strategy for the Danube Region Priority Area 5
- „to manage environmental risks” -

co-ordinated by Hungary and Romania

**Danube Region Operative Flood Management
and Cooperation Programme (DR Oper&Cooper)**

Adopted by the 9th Steering Group on 28/04/2015 in Budapest



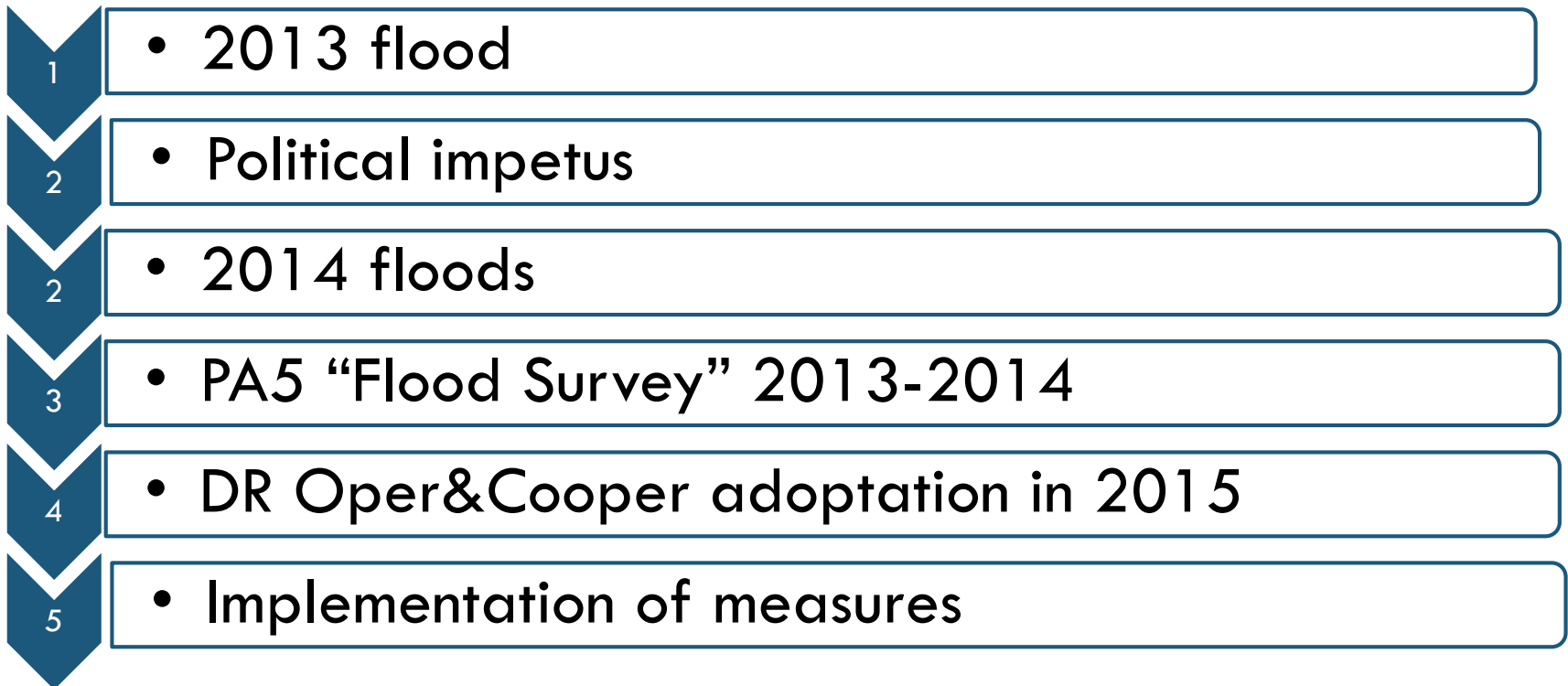
Needs on Danube region level

6

Measures identified within the DR Oper & Cooper

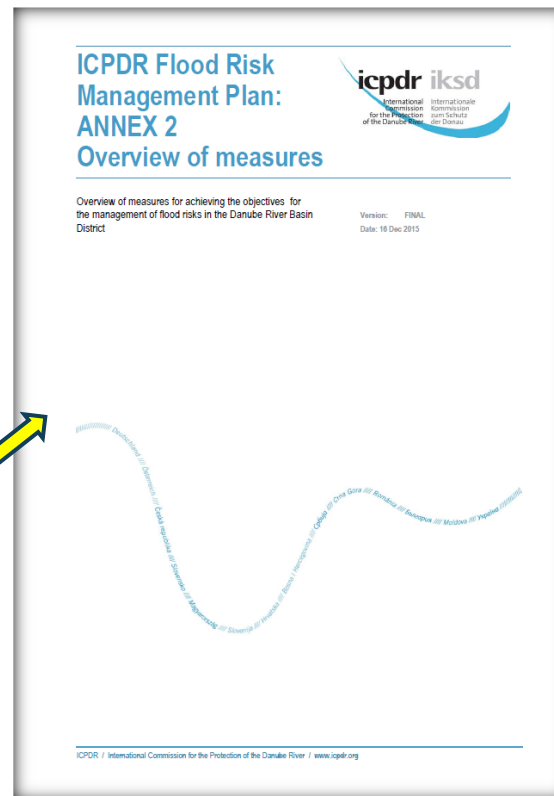
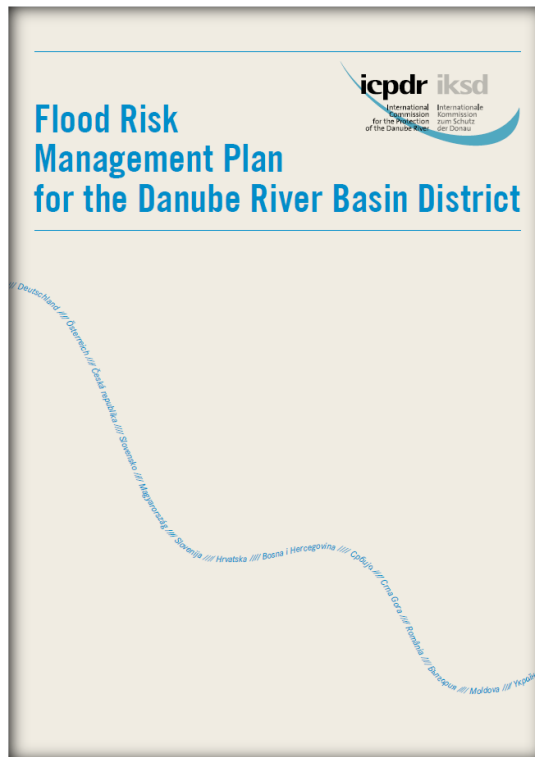
Measure	Action
1 & 2	Improvement of flood forecasting
3	Coordination of the operation of hydraulic structures
4	Coordination of operative flood management plans
5	Development of common flood risk management plans for trans-boundary rivers
6	Exchange of flood protection techniques, technologies and experiences
7	Develop an education/training network
8	Harmonisation of operative flood protection methods and equipment

Overview of the process of DR Oper&Cooper elaboration



DFRMP – overview of measures

2015



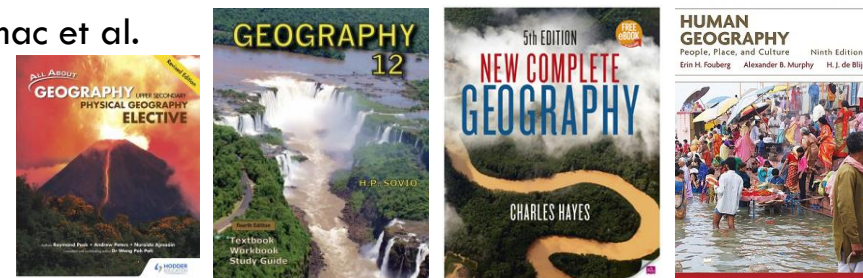
Danube Declaration adopted at the ICPDR Ministerial Meeting **on 09/02/2016 by the Ministers welcomed and supported DR Oper&Cooper**

Including the measures of DR Oper & Cooper

12 out of 13 countries highlighted the need towards trainings for experts and education of the inhabitants

Natural hazards in Education

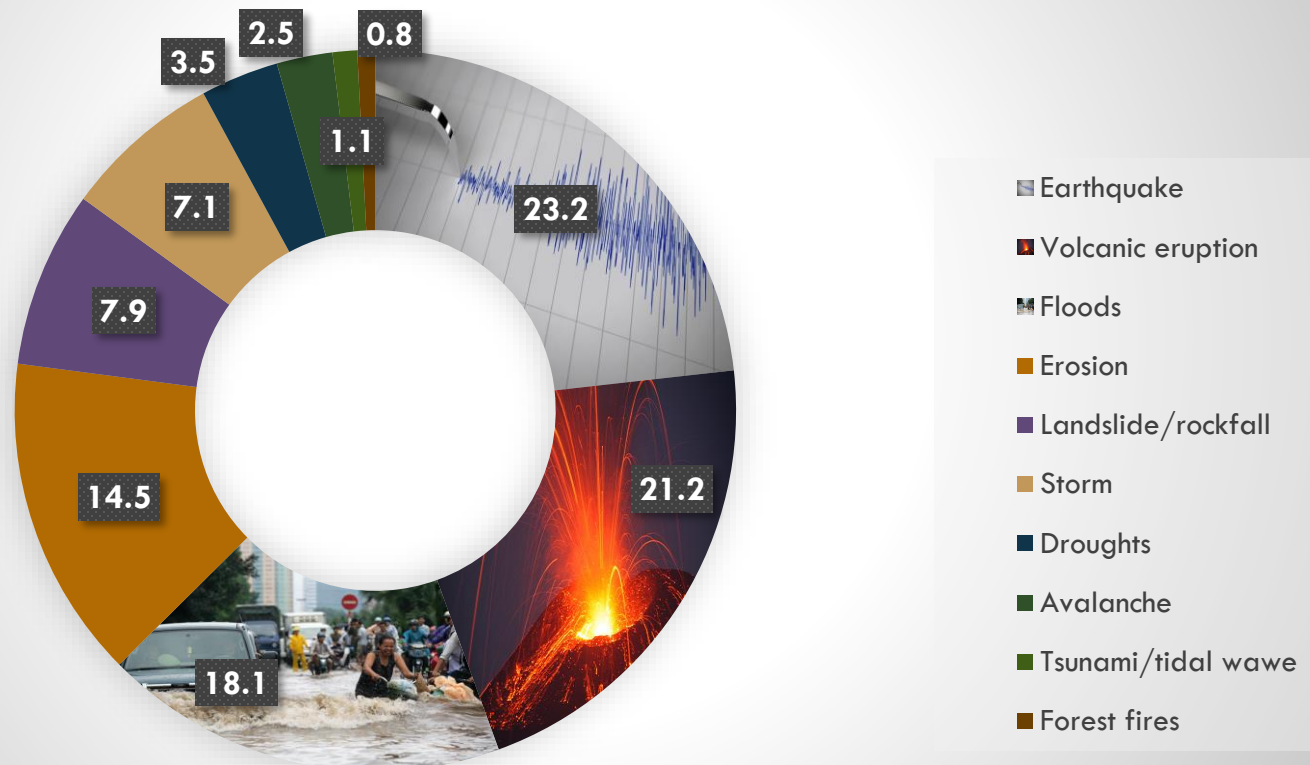
- Content analysis of 166 secondary-school geography textbooks from 36 countries – including 12 from the Danube basin – was conducted in 2013 by Komac et al.



Country	No. of Geography textbooks investigated	No. of textbook pages investigated	No. of pages containing descriptions of natural disasters	Share of pages containing descriptions of natural disasters
Austria	4	911	19	2,09
Bosnia&Herzegovina	6	1 083	21	1,94
Bulgaria	no data	no data	no data	no data
Croatia	4	748	11	1,47
Czech Republic	3	374	2	0,53
Germany	10	2 226	105	4,72
Hungary	7	1 225	35	2,86
Moldova	3	714	14	1,96
Montenegro	no data	no data	no data	no data
Romania	3	399	24	6,02
Serbia	5	1 020	36	3,53
Slovakia	3	254	0	0
Slovenia	7	831	34	4,09
Ukraine	6	1 514	5	0,33

Natural hazards in Education

Share of different natural hazards in secondary-school Geography textbooks in 36 countries (%)



Development of an education/training network

- ❑ **Flood protection training** in June 2015 for 70 Bosnian municipality and civil protection experts who have essential role to direct the protection in the event of floods.
- ❑ The representatives of National University of Public Services Hungary and Technische Hochschule Deggendorf signed a **Collaboration Framework Agreement** (6/10/2016, Budapest)
- ❑ The cooperation was enlarged in 2017 with one Serbian and one Slovakian Universities



Development of an education/training network

- **InterFloodCourse project submission** for DSPF call with the support of EUSDR PA5

Lead partner: National Univ. Of Public Service (HU)

Partners:

- Technische Hochschule Deggendorf (DE)
- Slovak University of Technology in Bratislava (SK)
- University of Belgrade (SRB)

Observers:

- General Directorate of Water Management (HU)
- Transcarpathian Hydrometeorological Center (UKR)

97.156 EUR budget

Activities:

Conference, curricula and course material development

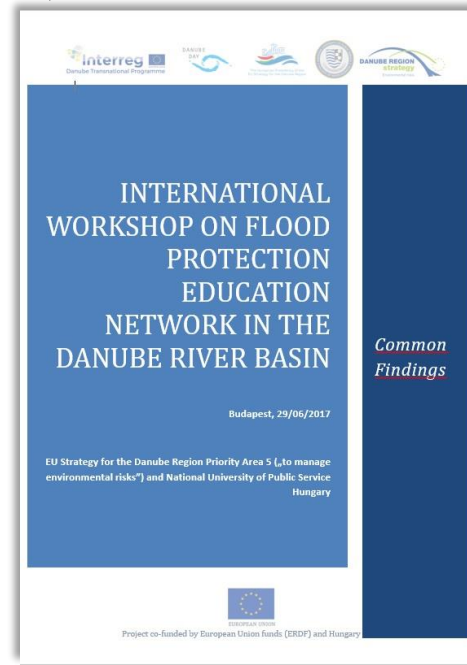
Priority area	Projects submitted
PA1a	0
PA1b	1
PA02	2
PA03	5
PA04	4
PA05	1
PA06	3
PA07	4
PA08	3
PA09	8
PA10	5
PA11	1
Total	37

Decision expected in October 2017

Development of an education/training network



- **Workshop for universities** on flood protection education network development and financial support
- EUSDR PA5 event with the **invitation of PA7** (Knowledge Society) and **PA9** (People&Skills)
- **Promoting together with the Danube Day 2017** (Budapest, 29/06/2017)
- Information about ERASMUS+, CEEPUS, HORIZON2020, DAAD **funding possibilities**
- Starting the **discussion, networking** possibilities
- 32 experts from 6 countries
- **Common Findings**



Common findings of the workshop 1.

- Secondary school level technical education is disappearing - aging of teachers and their limitations in speaking foreign languages (mainly English), the attrition of young professionals, the low number of full time teachers - huge fluctuation
- Low interest for technical studies and a decreasing number of university students in general
- Dual education needed



Common findings of the workshop 2.

- At university level, the topic of flood management is covered mainly within other subjects (e.g. hydrology, hydraulic structures, river regulation, economy), that is why students are not able to see this issue in an integrated way as a complex whole problem
- Social issues of hazards (e.g. socio-hydrology, social memory in natural hazards, resilience of landscapes and population, social aspects of floods, participatory planning methods), victim research, and green measures should be more in focus
- co-operation with water institutions should be sustained or enhanced (giving special courses and organizing technical excursions)



32
Hungarian
graduated
flood
protection
engineers
in 2016



Common findings of the workshop 3.

- ❑ Local knowledge is disappearing and education in small communities is needed
- ❑ Training of volunteers and inhabitants is important
- ❑ Lack of knowledge on floods in administration-related sciences results in inadequate education of municipal experts

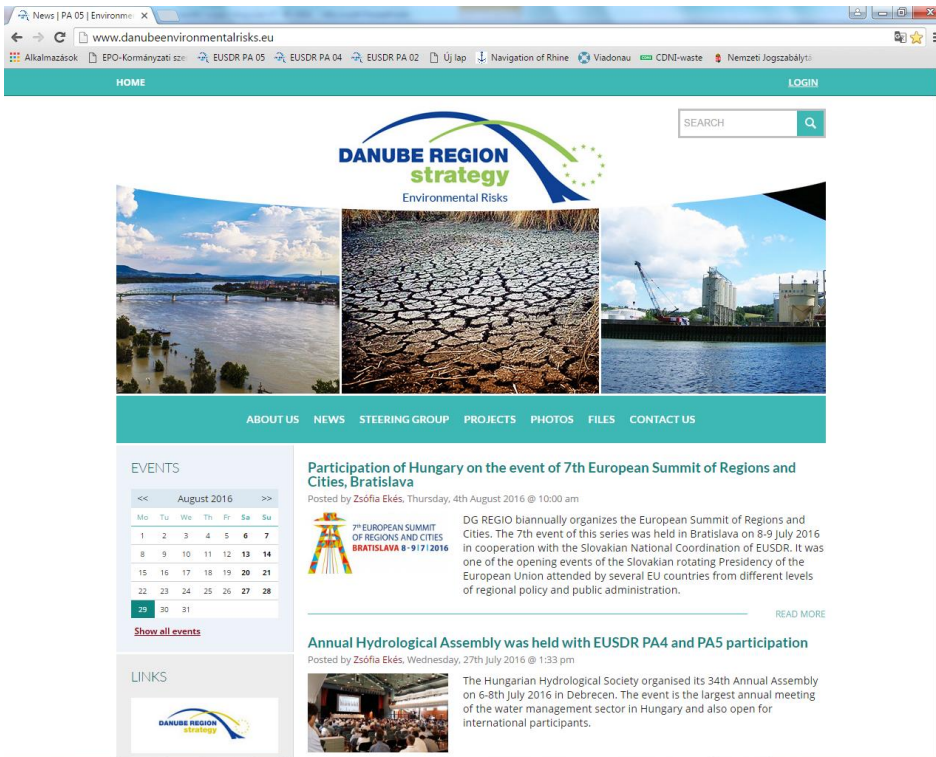


Common findings of the workshop 4.

- Changing political background, or a missing long-term strategy of water policy are able to hinder strategic thinking or project implementation in some countries (but Kvassay Plan, or New Vásárhelyi Plan e.g. in Hungary)
- Flood Directive and its cycles of revision is not enough to re-establish education
- Re-establishment of the Danube hydrology discussion - networking



Thank you for your kind attention!



The screenshot shows the homepage of the website www.danubeenvironmentalrisks.eu. The page features a header with the 'DANUBE REGION strategy Environmental Risks' logo and a search bar. Below the header is a navigation menu with links for HOME, LOGIN, ABOUT US, NEWS, STEERING GROUP, PROJECTS, PHOTOS, FILES, and CONTACT US. The main content area is divided into two columns. The left column contains an 'EVENTS' section with a calendar for August 2016 and a 'LINKS' section with the website logo. The right column contains two news articles. The first article is titled 'Participation of Hungary on the event of 7th European Summit of Regions and Cities, Bratislava' and is dated Thursday, 4th August 2016 at 10:00 am. The second article is titled 'Annual Hydrological Assembly was held with EUSDR PA4 and PA5 participation' and is dated Wednesday, 27th July 2016 at 1:33 pm.

Viktor György OROSZI
PA5 senior advisor

+36 70 197 5765

viktor.oroszi@mfa.gov.hu

Danube.envirisks@mfa.gov.hu

<http://www.danubeenvironmentalrisks.eu/>